JACARANDA HUMANITIES ALIVE VICTORIAN CURRICULUM | SECOND EDITION

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JACARANDA HUMANITIES ALIVE VICTORIAN CURRICULUM | SECOND EDITION

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Second edition published 2020 by John Wiley & Sons Australia, Ltd 42 McDougall Street, Milton, Qld 4064

First edition published 2017

Typeset in 11/14 pt TimesLTStd

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ISBN: 978-0-7303-7277-6

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Illustrated by various artists, diacriTech and Wiley Composition Services

Typeset in India by diacriTech

Printed in Singapore by Markono Print Media Pte Ltd



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1098765432

This textbook may contain images and names of Aboriginal and Torres Strait Islander people who are, or may be, deceased. The publisher appreciates that this inclusion may distress some Aboriginal and Torres Strait Islander communities. These images and names have been included so that the young multicultural audience for this book can better appreciate specific aspects of Aboriginal and Torres Strait Islander history and experience. It is recommended that teachers should first preview resources on Aboriginal and Torres Strait Islander topics in relation to their suitability for the class level or situation. It is also suggested that Aboriginal and Torres Strait Islander parents or community members be invited to help assess the resources to be shown to Aboriginal and Torres Strait Islander children. At all times the guidelines prescribed by the relevant educational jurisdictions and curriculum bodies should be followed.

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HOW TO USE

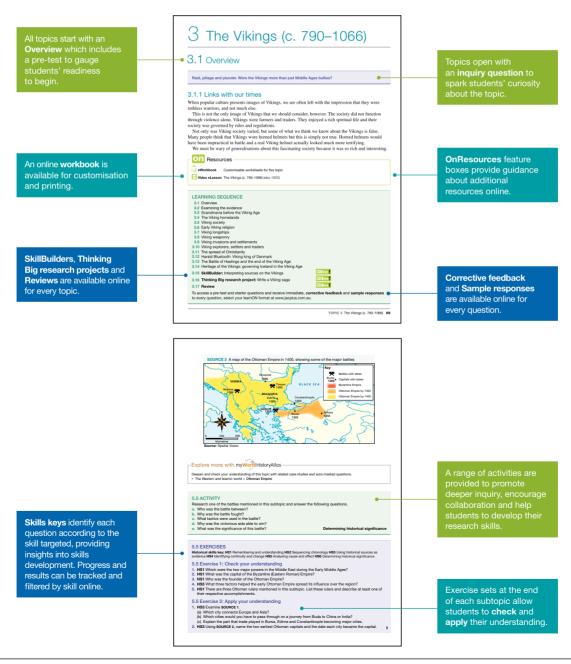
the Jacaranda Humanities Alive resource suite

The ever-popular *Jacaranda Humanities Alive 8* has been re-published for the Victorian Curriculum. It is available as a single, 4-in-1 title and as subject-specific titles: *Jacaranda History Alive 8*, *Jacaranda Geography Alive 8*, *Jacaranda Civics and Citizenship Alive 8* and *Jacaranda Economics and Business Alive 8*. The series is available across a number of digital formats: learnON, eBookPLUS, eGuidePLUS, PDF and iPad app.

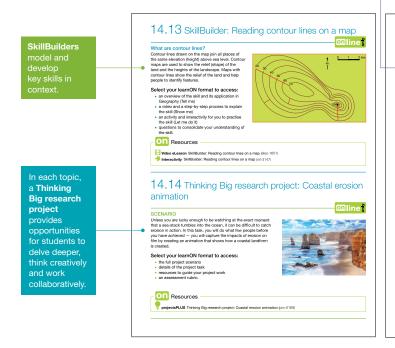
Skills development is integrated throughout, and explicitly targeted through SkillBuilders and dedicated skills topics for History and Geography.

This suite of resources is designed to allow for differentiation, flexible teaching and multiple entry and exit points so teachers can *teach their class their way*.

Features



Content is presented using age-appropriate language, and a wide range of engaging sources, diagrams and images support concept learning.



21.3.2 Limits on our freedom of speech

Our right to freedom of speech in Australia is said to be limited by the bounds oflaw. The word bounds of an odd-balloaned form of the word bounds; an odd-balloaned form of the word boundaries; we understand boundaries to be limits of boundaries. We understand boundaries to be limits on the best limits or boundaries on our freedom of speech are limits or boundaries on our freedom of speech are limits are boundaries on our freedom of speech and the limits of boundaries on our freedom of speech design of the limits of boundaries on our freedom of speech design of the limits of the limi

toncenny.

Hato speech

Australia's laws against racial discrimination place
a limit on our right of free speech. It is illegal in

Australia to publicly use language that is likely

to offend, insult, humilate or inimidate anyone
because of that person's race, colour or national

or ethico right. Very few people have actually
been brought to court under this law, but it sends
a trong message to the community about using

racially abusive language. In February 2019, AFL

forbotaller Edial February 2019, AFL

crockaller Edia crows, wowed to track down the person who posted the abuse and to 'name and shame' them. Unfortunately, social media has become a favourit avenue for mamy people to attempt to abuse others anonymously.

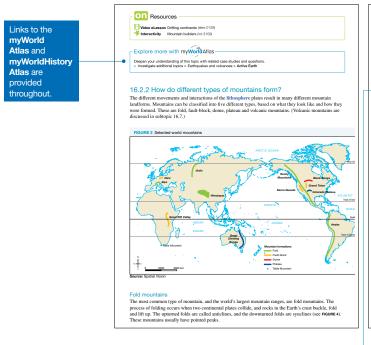


After watching the Je suis Chartle video eLesson in the Resources tab, discuss as a class the meaning of the term 'Le suis Chartle': the phrase used by people showing support for free speech after the termorist attack on the satirical magazine Chartle Hebdo in Parls in early 2015. Discuss whether you think there should be limits on free speech. What are the pros and cons of placing limits on free speech? [Ethicat Capability]



Video eLesson Je suis Charlie (eles-2430)

Bullying and harassment in a recent years, stage governments have acted to protect people from bullying, particularly in the workplace. In February 2010, four men and the company they worked for were fined a total of \$33500 for bullying a young waters who later killed herein. The waterses, Broble Paulock, committed suicide after months of bullying at the calf where she worked. Much of the bullying involved name-calling and using offensive to bullying at the calf where she worked. Much of the bullying involved name-calling and using offensive bullying at the calf where she worked. Much of the bullying involved name-calling and using offensive bullying at the calf where the workplace bullying, allowing for prison sentences of up to 10 years for anyone found guily of this offence. In creed years, we can harassment in the workplace has become a



14.15 Review online : 14.15.1 Key knowledge summary
Use this dot point summary to review the content covered in this topic. 14.15.2 Reflection Reflect on your learning using the activities and resources provided. On Resources eWorkbook Reflection (doc-\$1346)
Crossword (doc-\$1347)

interactivity Landscapes formed by water crossword (nr.7596) KEY TERMS

availanche a sudder downhill movement of material, especially snow and ice
backwash the movement of water from a troken wave as it man down a beach returning to the ocean
barge a long flat brothom does used for transporting goods.

dilivernistry as instrument used for measuring the angle or elevation of slopes
cilivernistry as instrument used for measuring the surple or elevation of slopes
dilivernistry as instrument used for measuring the surple or elevation of slopes
distructive wave a large proxeded storm were that the as already as a long backwash
downstream nearer the mouth of a river, or going in the same direction as the current
consystem an interconnected community of plants, similars and other organisms that depend on each other
erusion the watering away and removal of soll and noto by realized elements, such as which and water, and by
human activity
entaury the wide part of a river at the place where it is jins the sea
find divistric a stagen and the going profile flatures backed or anotated
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A range of questions and a test students' understanding of the topic.

Key terms are available in every topic review.



Jacaranda Humanities Alive learnON is an immersive digital learning platform that enables student and teacher connections, and tracks, monitors and reports progress for immediate insights into student learning and understanding.

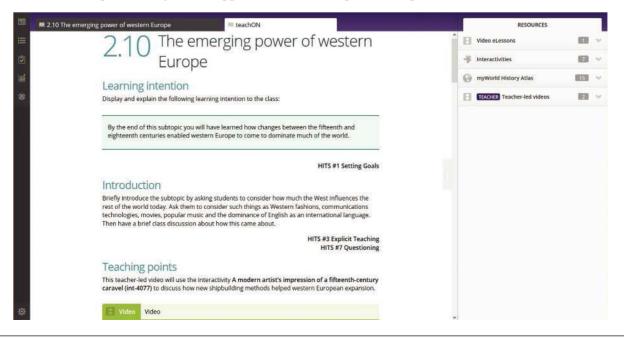
It includes:

- a wide variety of embedded videos and interactivities
- questions that can be answered online, with sample responses and immediate, corrective feedback
- additional resources such as activities, an eWorkbook, worksheets, and more
- Thinking Big research projects
- SkillBuilders
- teachON, providing teachers with practical teaching advice, teacher-led videos and lesson plans.



teach on

Conveniently situated within the learnON format, teachON includes practical teaching advice, teacher-led videos and lesson plans, designed to support, save time and provide inspiration for teachers.



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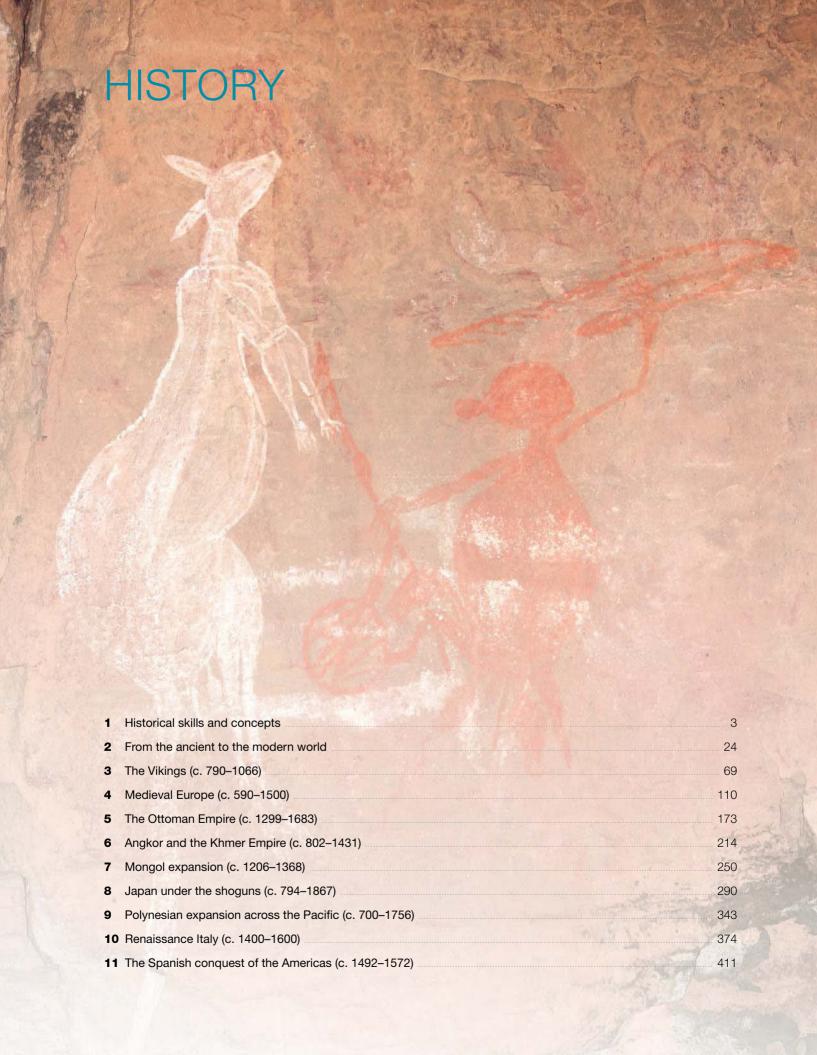
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Historical skills and concepts

1.1 Overview

1.1.1 Links with our times

The people in samurai costume here are re-enacting a battle on Honshu Island, Japan. You probably know about samurai from watching films or television, or from reading books or comics. Some of your ideas about this class of warriors may be based on fact and some may be based on misconception.

We know that the samurai were highly skilled Japanese warriors who served a daimyo (a great feudal lord of Japan). The term samurai in Japanese literally meant 'those who serve'. We know that the samurai had to follow a code of conduct known as bushido. This called for loyalty and obedience



to the daimyo lord, as well as self-discipline, honour and respect. A samurai's armour was elaborate and decorated, yet designed to be strong and to allow the wearer to move easily in battle. We also know that many women were samurai warriors.

We know these things because archaeologists and historians use clues like skeletons, coins and weapons as well as many other historical sources to bring the past to life. History uses evidence that includes all kinds of traces, from stone fragments to old books, paintings and photographs. History involves using such evidence in an attempt to find the truth about what happened in former times.



eWorkbook

Customisable worksheets for this topic

Video eLesson Investigating the past (eles-1057)

LEARNING SEQUENCE

- 1.1 Overview
- 1.2 Why we study history
- 1.3 Historical skills
- 1.4 Ages, time and chronology
- 1.5 Detective work and archaeology
- 1.6 Dating historical evidence
- 1.7 Perspectives and empathy
- 1.8 SkillBuilder: Sequencing events in chronological order
- 1.9 Review



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1.2 Why we study history

1.2.1 How and why do we study history?

History is a journey of discovery through time. Often it will excite you, and sometimes it will shock and amaze you. Sometimes it will seem as though the people of past societies were from another planet. At other times their actions and ideas will be as familiar to you as those of your friends and neighbours.

What is a historian?

In our own times there are many links with the past. For example, many people in modern societies attend performances of plays. This art form originated in some city-states of ancient Greece, where it was an important aspect of their culture. Research into past civilisations, cultures and societies is the work of historians. They try to build up a picture of how people in other times lived and acted. Historians try to make sense of past ideas, customs and beliefs, the ways people were ruled and how they made their living. Historians inquire into the past by examining sources. Historians also try to understand and explain how people's lives were shaped by other people and events, what they thought about their times and how they brought about changes in their own world.

SOURCE 1 A woodblock ukiyo-e print by Utagawa Kunisada II of a puppet in kimono being manipulated by two bunraku puppeteers, c. 1850



DID YOU KNOW?

Bunraku puppetry was founded in Osaka, Japan, in the seventeenth century. The puppets are life-sized and hand-carved. Visible puppeteers manipulate them to perform a play.

1.2.2 The value of history

Some people question the need to understand the past. But there are many very good reasons for studying history. Knowledge of history helps us to understand our **heritage**. We start to understand where our ideas, languages, laws and many other aspects of our lives came from. We can also develop more open minds and learn to appreciate cultures that are different from our own. Conservation work similar to that shown in **SOURCE 2** is one of the key responsibilities of archaeologists.

History, the present and the future

Perhaps you already know that we can never understand the time we live in or what the future may hold if we do not understand the journey that brought us to this point. Human societies did not appear in the present as if from nowhere. They developed over many thousands of years. By understanding the past we might just be able to avoid repeating past mistakes and make our world a better place in the future.

History, work and leisure

The kinds of skills you will learn while studying history are also important in many careers. These skills will help you to:

- carry out research
- draw conclusions and make decisions based on evidence
- recognise the difference between fact and opinion
- understand that there is usually more than one way of thinking about any problem
- think critically
- communicate effectively.

A knowledge of history is important in our everyday lives too. And history gives many people great personal pleasure. How much more enjoyment do people experience from travel, books and movies when they know about the history that shaped the places involved!

SOURCE 2 Conservation work on Bodiam Castle, in East Sussex, England. The moated castle was built during the medieval period in 1385 CE.



History and democracy

In Australia we live in a democratic society. This means we have the right to choose our political representatives and leaders through voting. We cannot vote responsibly, however, unless we can make our own judgements about the ideas these leaders put forward. To do that, we need to know something about the past.

DISCUSS

How may understanding our past help us avoid repeating mistakes?

[Ethical Capability]

1.2 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

1.2 Exercise 1: Check your understanding

- 1. HS1 What is history?
- 2. HS1 Fill in the spaces in the following passage by choosing words from the box below.

civilisations research beliefs cultures events and societies. Historians try to build Historians conduct _ __ into past up a picture of the ideas and ___ of people in the past, how they lived and acted and how their lives were shaped by _

- 3. HS1 Why is it important to learn historical skills?
- **4. HS4** What can we gain from understanding our heritage?
- 5. HS1 Explain what you understand to be the difference between fact and opinion. Give an example from your own experience.

1.2 Exercise 2: Apply your understanding

- **1. HS3** Bunraku, as seen in **SOURCE 1**, was created towards the end of the Tokugawa Shogunate. What might you be able to understand about Japan under the Shoguns just by using this source as evidence?
- 2. **HS3** Look closely at **SOURCE 2**. The United Kingdom's National Trust relies on memberships and donations to preserve the remains of this medieval castle. Why do you think so much effort goes into conserving such traces of the past?
- **3. HS4** Today we live in a world where people are sometimes killed over differences in religion. How might a knowledge of history help bring understanding between different religions?
- **4. HS6** Suggest why any one of the following possible events might have historical significance in the future for a historian researching and writing about the age we are living in.
 - (a) There was an increase in the number of Australians who did not practice religion.
 - (b) Inequality (the gap between rich and poor) increased in Australia.
 - (c) The Australian Government took in more refugees.
- **5. HS4** Think of at least one event from the past where the people involved have *not* learned from earlier experiences and events. Explain what happened.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

1.3 Historical skills

1.3.1 What are historical skills?

There are a number of historical skills shown in **SOURCE 1** that you will learn and use throughout your study of history. You will quickly learn some of these skills in this topic, and become more proficient in all of them as you explore later topics. Each historical skill is explained in more detail below.

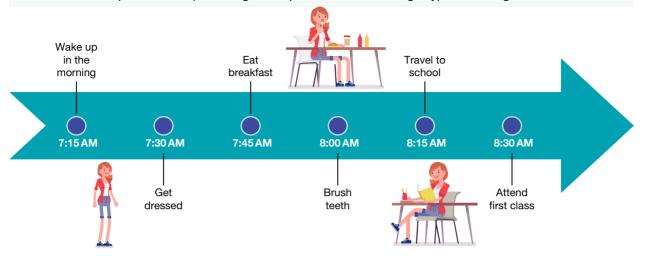


1.3.2 Sequencing chronology

Chronology involves recording events in order of time. It is an important skill in history because historians need to know the sequence of how things occurred in order to make sense of what happened. A story will make more sense if we start at the beginning and work towards the end. For example, your morning routine is likely to consist of waking up in the morning, getting dressed, eating breakfast, then brushing your teeth. After this you might travel to school then attend your first class for the day. This is an example of chronology; it is your sequence of events in order of time for your morning.

A historian will use a **timeline** to see how one event might have contributed to another. A timeline representing the sequence of events in your morning can be seen in **SOURCE 2**. However, there is much more to history than putting events in order and understanding the sequence and flow of events. As a history student you will also need to be aware of continuity and change, and cause and effect, as well as long-term causes and short-term triggers.

SOURCE 2 A simple timeline representing the sequence of events during a typical morning



1.3.3 Using historical sources as evidence

It is important to analyse sources from the time we are studying to judge how reliable they are and explore the different points of view, or perspectives, of people from the past. This also involves questioning later sources that are interpretations of that time.

Primary and secondary sources

Evidence refers to the available facts or information that indicates whether something is true or really happened. Evidence can come from two types of sources: **primary sources** and **secondary sources**. Primary sources were created or written in the period of time that the historian is investigating. Secondary sources are reconstructions of the past written or created by people living at a time after the period that the historian is studying.

Depending on the event and place, primary sources might include bones, stone tools, letters, newspapers, art, photographs or many other traces. For most periods of history we can divide primary sources into written and archaeological sources. Written primary sources can include such things as poems, songs, letters, myths and legends. They might have been written on paper, painted on stone walls or inscribed in stone, metal or clay in ancient languages. Archaeological sources are objects that were made in the past. They include many kinds of **artefacts** such as tools, weapons, pottery, coins, games, toys and jewellery. Some artefacts have written sources inscribed on them. Archaeological sources also include works of art such as sculptures and paintings, and constructions such as tombs, temples and sometimes entire cities.

Secondary sources include books and articles. They can also include websites, models, timelines, computer software and documentary films. To create secondary sources, historians often:

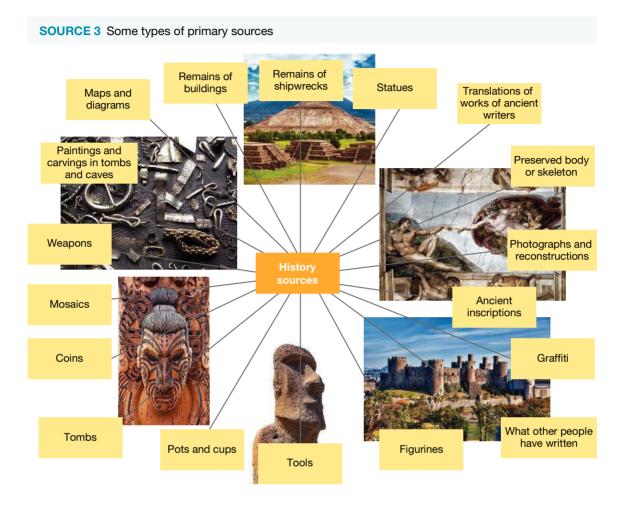
- locate information in primary sources
- interpret that information
- use it to explain what happened.

Analysing and evaluating sources

Historical sources are valuable but they do not explain themselves. When using historical sources as evidence, historians will need to ask questions of each source, such as where did the source come from (origin) and why was it created (purpose)? A source may be fact or someone's opinion — that is, it could be biased. One way to test sources for reliability is to compare them with other sources. If this evidence leads to the same conclusion, we call it supporting evidence. If it leads to different conclusions, we have contradictory evidence. When we use sources to try to find out about the past, we have to ask some questions. For example:

- What type of source is this?
- Who wrote or created this source and when was it written or created?

- Why was this source written or created?
- What evidence does the source provide?
- What was happening at the time the source was written or created?
- Can I trust the source?



Using evidence from sources, historians form a **hypothesis** (a possible theory to explain what happened). To test the hypothesis we look for evidence that supports it. We also look for other evidence that contradicts it. We need to be careful. We have to ask: What other information do I need to support my theory?

Just as in the investigation of a modern crime, we look at what contributed to an event and how those things fit together. We ask questions that begin with who, what, where, when, how and why. In this way, history is like any other kind of investigation, but it is more difficult because there are often gaps in our evidence. We usually cannot find all the clues we need. It can be like trying to solve a jigsaw puzzle when many pieces have been lost.

Wherever historians find sources and whatever methods they use to test their hypotheses and interpret the past, there will always be differing interpretations that are debated and contested. The issue of **contestability** is a very important concept in the study of history. Historical debates are ongoing. They occur when, for example, there is a lack of evidence or when different perspectives (points of view) lead to different conclusions. There are ongoing debates on many things, including the causes of particular wars and the roles of particular individuals, groups and ideas in bringing about significant changes.

1.3.4 Identifying continuity and change

Historians study the changes that have occurred over time. However, some things remain constant over periods of time. It is important to be able to identify when a change has occurred and when things have continued unchanged. This ability is known as identifying **continuity and change**.

Change refers to something that is different from what has occurred in the past. This may occur over a long period of time and, in this case, it may be difficult to detect the precise moment of change. Change can also occur dramatically or suddenly. Such changes are often associated with single events and are referred to as turning points in history. Continuity refers to the things that endure, relatively unchanged, over time. You will find that many things remain the same across long periods of time in history. Sometimes these continuities last into the modern world.

We can make comparisons between and among historical events occurring at the same time, between and among historical periods, and between present time and the past.

SOURCE 4 Edinburgh Castle located on Castle Rock, in Edinburgh, Scotland. The buildings of the castle date from the twelfth to the twenty-first centuries.



SOURCE 5 Modern townhouses in Clayton, Melbourne. Today, most of us do not live in castles or need their protection. However, some things do stay the same.



1.3.5 Analysing cause and effect

In history, events do not simply occur without reason. Every event will have a cause and is likely to be the cause of subsequent effects or consequences. Being able to identify patterns of cause and effect is an essential skill for historians that allows them to explain how and why things happened in the past. This skill can also make it possible to predict what may take place in the future.

Causes may include people, societies, politics, beliefs, economics or any other historical factor. Likewise, effects can include impacts on people, societies, politics, beliefs, economics or any other historical factor. It is important to understand that not all causes leading to a specific event are as equally significant as each other — some causes may have more influence than others.

The ability to analyse cause and effect requires a good understanding of sequencing chronology. We can identify series of historical events and developments over time, both in the short term and in the long term. Some causes occur immediately before an event began, while others may have existed for several years, decades or centuries before they caused the event. Some effects occur immediately after an event or action, while others may occur years, decades or centuries following the event or action.

Feudalism was the social order established in medieval Europe. This system involved the king owning all the land in a kingdom and a

SOURCE 6 An illustration featuring medieval peasants. Peasants were at the bottom of the feudal social order in medieval Europe.



hierarchy of members of society, arranged in order of importance. Following the king, the next most powerful class were the nobles. In return for the right to land and control over peasants who worked it, the nobles gave the king their loyalty, and provided him with a proportion of taxes collected from the peasants. Below the nobles were the knights. In return for land, they gave loyalty to their lord, fought for him and provided him with taxes from their peasants. Peasants were at the bottom of the feudal hierarchy.

Feudalism had a number of causes. Following the collapse of the Roman Empire in 476 CE, tribal groups including the Vikings increasingly invaded Western Europe. Common people who had no protection moved onto the land of wealthy and powerful landowners. In return for working the land, they received protection.

Feudalism also resulted in a number of effects. The nobles became responsible for the people lower down in the hierarchy. The peasants sustained the land and therefore drove the economy. However, most of the peasants were bound to the land and were unable to obtain their freedom. Their lives were dictated by the landowner.

1.3.6 Determining historical significance

Historical **significance** relates to the importance that is assigned to particular aspects of the past. These aspects may include events, individuals or groups, developments in the past, ideas or movements, and historical sites. There is far too much history to study or learn all of it. We need to make judgements about what is important and what is less important. For this reason, this is an essential, yet challenging, historical skill.

When we try to establish the significance of an aspect of the past, we have to consider a number of questions. For example:

- How relevant was it to people living at that time?
- How many people were affected?
- How did it change people's lives?
- How long were people's lives affected?
- How important and long-lasting were the consequences?
- How relevant is it to the contemporary world?

SOURCE 7 A statue of emperor Charlemagne (Charles the Great) in Germany



SOURCE 8 A line engraving by Theodor de Bry showing Spanish conquistadors leading Native American slaves on an expedition, c. 1590



1.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

1.3 Exercise 1: Check your understanding

- 1. **HS1** Identify the five historical skills.
- 2. HS1 Explain what is involved in sequencing chronology.
- 3. **HS1** Describe the difference between primary sources and secondary sources.
- 4. HS1 Provide two examples of written sources and two examples of archaeological sources.
- 5. **HS1** How do historians create secondary sources?
- 6. **HS1** Explain what the term biased means and why we might not be able to trust a primary source.
- 7. **HS1** Describe a way to test primary sources for reliability.
- 8. **HS1** Complete the following sentences by choosing words from the box below.

| | contestability | theory | debate | contradict | evidence | | |
|---|--|---------|-----------------------|--------------------------|----------|--|--|
| | (a) A hypothesis is a | or poss | ible explanation that | has to be tested by look | ing for | | |
| | (a) A hypothesis is a or possible explanation that has to be tested by looking for that might support it and other evidence that might it. | | | | | | |
| | (b) is the situation when particular interpretations of the past are open to | | | | | | |
| 9. HS1 Explain what a historian is doing when identifying continuity and change. | | | | | | | |
| 10. | 10. HS1 Outline the difference between short-term causes and effects and long-term causes and effects. | | | | | | |
| 11 | 1 HS1 Describe a way to establish the significance of an aspect of the past | | | | | | |

1.3 Exercise 2: Apply your understanding

- 1. HS3 Look at the mind map in SOURCE 3 and describe each of the sources pictured.
- 2. HS3 Suggest what we might learn about the past from one of the types of primary sources listed in the mind map.
- 3. **HS3** Why would it be wrong to think that primary sources are always more reliable than secondary
- 4. HS3 Make a list of some kinds of primary sources that could be used to create a history of your school (a secondary source). Beside each source in your list, write down what you think you could find out by using it as evidence.
- 5. HS4 Examine SOURCES 4 and 5 closely. Identify the changes that have occurred between the medieval castle and the modern townhouse. Identify the similarities (or continuities) between the medieval castle and the modern townhouse.
- 6. HS5 After looking at the illustration of peasants seen in SOURCE 6, imagine that you have travelled back in time to meet these people. Explain to them the causes of the social system that they are living in and the effects of this society.
- 7. HS6 Examine SOURCES 7 and 8 closely. How significant was the life of a Native American slave as opposed to the life of Charlemagne? Explain your answer.

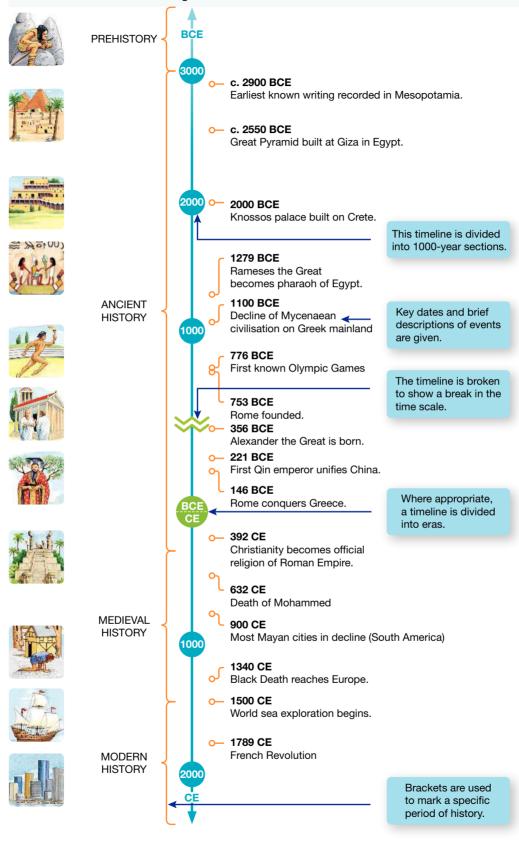
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1.4 Ages, time and chronology

1.4.1 Dividing the past

At Year 8 level we will be investigating the Middle Ages or medieval history and early exploration. To make sense of the past we divide it into ages or periods that have something in common. Prehistory is the prehistoric period (the time before people invented writing as a means of recording activities and events). It ended at different times in different parts of the world. For example, in China it ended thousands of years ago, while in Australia it ended a little over 200 years ago. We also use the terms Stone Age, Bronze Age and Iron Age. These refer to materials that people had learned to shape into tools and weapons in prehistoric and ancient times. Ancient history covers the time from the earliest civilisations around 3000 BCE to around 650 CE.

SOURCE 1 A timeline showing some events from 3000 BCE to modern times



Counting time

In Australia, the system we have traditionally used to count years is one that was first used in Christian countries in AD 525. In this system, AD stands for anno Domini (Latin for 'in the year of our Lord'). The year AD 2012 means 2012 years since the birth of Christ. However, although this system is still commonly used throughout the world, many historians now use the term CE (Common Era) instead of AD. The dates are the same: 2012 CE is the same year as AD 2012. We count forward, so 50 years later the year would be AD 2062 (or 2062 CE).

BC means 'before Christ', and for these years we count backwards. Therefore, 500 BC would be 300 years earlier than 200 BC. Historians now commonly use the term BCE (Before Common Era) in place of BC.

BP and circa

In prehistory many dates are uncertain. It is common to use BP (Before the Present) to indicate about how long ago something happened. For dates BP, the year 1950 CE is agreed upon as 'the present'. When dates are uncertain we put 'c.' before them because it stands for circa (Latin for 'around').

To convert years BP to years BCE, it is close enough to simply subtract the current date and round it off. For example, in the year 2000 CE, a date of 8000 BP would be (8000 minus 2000) — that is, c. 6000 BCE.

Other ways of counting time

There are other ways to count time. For example, Islamic countries start counting from the time of the flight of the prophet Mohammed from Mecca. This occurred in the year Christian countries call 622 CE.

DID YOU KNOW?

There is an easy way of getting it right with centuries. The first 100 years after the birth of Christ is called the first century CE. The first 100 years before the birth of Christ is called the first century BCE. To work out what century a date is in, you simply add one (1) to the number of hundreds in a date. So the year 2011 is in the twenty-first century CE. The year 705 BCE is in the eighth century BCE.

1.4 ACTIVITY

Using SOURCE 1 as a model, make a timeline of your life up to the present. On it, write the important events of your life. Use the terms AD or CE, century and decade. Then explain how your timeline helps you to present an overall picture of your life so far. Sequencing chronology

1.4 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

1.4 Exercise 1: Check your understanding

- 1. **HS1** Explain how the prehistoric period differs from ancient times.
- 2. **HS1** What is medieval history?
- 3. HS1 Explain how Islamic countries count time.
- 4. HS2 Write the meaning of the terms ages, BC, AD, BCE, CE and BP.
- 5. HS2 Identify two events that occurred during the medieval period.

1.4 Exercise 2: Apply your understanding

- 1. HS2 Calculate the number of years between 195 BCE and 755 CE.
- 2. HS2 The year 2020 is in the twenty-first century CE, so work out in which century each of the following years occurs: 705 CE, 1890 CE, 315 BCE.
- 3. HS2 Why do you think the date for the building of the Great Pyramid has 'c.' (for 'circa') before it?
- 4. HS4 We use the terms Stone Age, Bronze Age and Iron Age to refer to ages in which people used those materials as their most advanced materials. Suggest an appropriate name (based on materials) for the age in which we now live.
- 5. HS3 Study SOURCE 1. Why do you think that the medieval period is also known as the Middle Ages?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

1.5 Detective work and archaeology

1.5.1 Written sources and archaeological sources

As you know, our evidence for the past comes from primary sources — sources that were created in the time we are investigating. Depending on the event and place, primary sources might include bones, tools, weapons, letters, newspapers, works of art or photographs. For prehistory we have no written primary sources, but for most periods of history we can divide primary sources into written sources (including poems, songs, letters, myths and legends) and archaeological sources (including tools, pottery, coins, toys, paintings, jewellery, tombs and entire cities).

As a historian tests their hypothesis, he or she will compare sources with other sources to assess reliability and to ensure that the theory is supported by evidence. Historians often draw on the work of other experts for their sources.

1.5.2 Archival research

When historians research historical periods during which written records were kept, they often find many of their primary sources in archives. These are organised collections of records. For example, historians researching the history of Christianity in medieval times might carry out their research in the Vatican Archives. These records of the Roman Catholic Church are held at its headquarters in Rome.

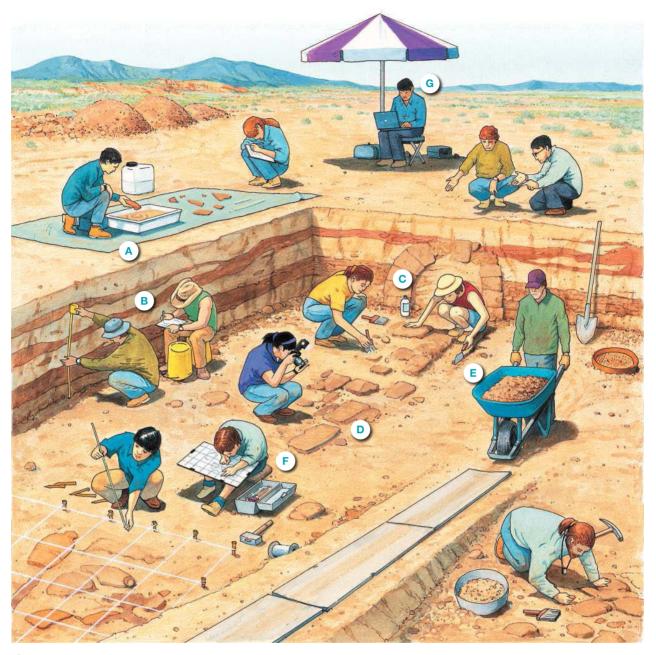
1.5.3 Digging up the past

Historians also draw on the work of archaeologists. These experts examine the physical remains of the past; they collect or record and interpret them. Sometimes we already know where to find such archaeological sources. Very often, however, archaeologists have to dig to find evidence of the past. Generally, the older the site, the deeper the dig has to be.

Deciding where to dig

The first decision archaeologists have to make is where to dig for remains of past times. Many remains are buried over time by wind-blown sands, sediments from floods or volcanic ash. Some remains are hidden but there may be clues to their whereabouts in sources such as old documents.

SOURCE 1 Activities at an archaeological dig



- A Finds are carefully washed and labelled to record the trench and layers in which they were found.
- B Strata revealed by the trench help archaeologists to date the various layers of the dig.
- © Brushes and trowels are used to carefully uncover objects.
- D Objects and sections of the site are photographed.
- **E** After the site has been searched for objects, earth is removed from the trench.
- F Positions of objects are recorded using drawing frames divided into squares.
- G An ongoing record of progress at the dig is kept.

Modern archaeologists also use a number of scientific techniques. Aerial and satellite photography can locate patches of earth that have different temperatures or different vegetation caused by buried settlements or tombs. Sonar equipment can be used to locate relics, including sunken boats, that lie beneath seas.

Excavating remains

Once the site for an excavation, or dig, has been decided there are several steps to follow. Archaeologists have to obtain permission to dig from the government of the country in which the site is located. They then survey the site, marking it out in squares with pegs and strings. When digging commences the archaeologists

SOURCE 2 Remains of a ditch called a moat that was dug around a castle at Old Sarum in England in the eleventh century CE



must be careful not to damage remains. The remains might be close to the surface. But in sites that have been occupied for a long time there can be several layers of remains. These layers are called strata and the oldest remains will normally be in the deepest strata. As they remove earth, the archaeological team searches carefully for remains. They label each find to record the square and level in which it was found.

Help from other scientists

Other scientific experts and new technologies are frequently used to help archaeologists to interpret their finds. Such experts include forensic pathologists who examine human remains to find evidence of what people ate and what might have caused their deaths. Technologies include computer programs that can analyse remains of buildings to create 3D images suggesting how they once looked.

DID YOU KNOW?

When archaeology began in the eighteenth century, some archaeologists were wealthy amateurs. They had no real training, and some of their expeditions destroyed more than they saved when they dug up ancient treasures. Among the greatest of all twentieth-century scientific archaeologists was an Australian, Vere Gordon Childe (1892–1957). He became a leader in the archaeology of prehistoric times.

1.5.4 Survival by chance

Only some archaeological traces of the distant past have survived. Many more have been destroyed by a range of causes. These include:

- · demolition and rebuilding
- natural decay and erosion by wind, rain and floods
- theft. Almost all of the tombs of the Egyptian pharaohs were robbed of their treasures in ancient times.
- war. Many ancient towns and cities were smashed and burned in wars.

1.5.5 Clues from pottery

One of the most common and important sources of archaeological evidence is pottery. Pottery is made by shaping wet clay and then baking the clay so that it hardens and keeps the shape the potter has given it. Pottery has been made for about 10 000 years in much of East Asia, the Middle East and the Mediterranean region. It was used in much the same way that we use glass and plastic bottles and jars today — mainly for holding and storing food and drinks. There is a lot of evidence from pottery because people threw away their broken pots. The broken pieces are called sherds and even small pieces can help in building up a picture of the past.

SOURCE 3 Painted pottery from ancient Greece, fifteenth or sixteenth century BCE



1.5 ACTIVITY

Working in small groups, list reasons why there would usually be more archaeological evidence from medieval times than from ancient and prehistoric times. Analysing cause and effect

1.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

1.5 Exercise 1: Check your understanding

- 1. **HS1** Complete the following sentences:
 - (a) Primary sources include ____ sources (including poems, letters and legends) and _ sources (including tools, pottery, paintings, jewellery and entire cities).
 - (b) Archives are organised of
- 2. **HS1** What three tasks describe the main work of archaeologists?
- 3. HS1 List the kinds of clues that help archaeologists to decide where to dig.
- 4. HS1 Name two technologies that help archaeologists to locate sites for digs.
- 5. **HS1** List two causes of destruction of archaeological traces.

1.5 Exercise 2: Apply your understanding

- 1. HS1 Write descriptions of four activities that people are performing in SOURCE 1.
- 2. HS3 Examine SOURCE 2.
 - (a) Describe what you see in the photograph.
 - (b) Explain why it is obvious that humans did something to change the landscape shown in the photograph.
 - (c) What might an archaeologist expect to find on a dig at this site?
- 3. HS3 Look closely at the details in SOURCE 3. Use these details and information in the caption to form a hypothesis about the civilisation that made these items.
- 4. HS3 Imagine you are one of the people in SOURCE 1 and that the site you are excavating is thought to be the remains of a city that was destroyed in a war. Describe in a diary entry your feelings about your day's work, what you might hope to find and what you might actually have found.
- 5. HS6 Why is pottery such an important source of evidence for archaeologists?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

1.6 Dating historical evidence

1.6.1 Dating techniques

Being able to date evidence allows historians to place events and human behaviours in time order. It also helps to identify any links between past groups of people. Sometimes it allows experts to detect fakes. Some dating methods will not reveal how old something is — just whether it is older or younger than something else. These methods are called **relative dating techniques**. Two of these are stratigraphy and fluorine dating.

Stratigraphy is the study of the different **strata** or layers revealed when a slice is cut down through the earth. Fluorine testing is used to determine how long an object has been underground. For example, the longer that bones lie in the earth, the more fluorine they absorb from the soil. So the more fluorine it has, the older the bone.

Absolute dating techniques are used to work out the actual age of something or someone. Archaeologists combine these with relative dating techniques. For example, if absolute dating techniques prove that an object is 1000 years old, and the object was found in a particular stratum (or layer), then archaeologists can generally assume that any objects found in strata below this will be more than 1000 years old.

There are many different absolute dating techniques, including radiocarbon dating and tree-ring dating.

1.6.2 Radiocarbon dating

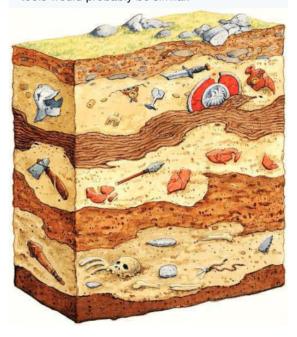
All living things absorb C14, which is a radioactive form of carbon. This chemical process stops when the human, plant or animal dies. Then any C14 in the once-living tissue starts to decay. Scientists know the rate at which C14 breaks down. By working out how much of it still remains, they can work backwards to establish the likely date of death, and hence the approximate age.

1.6.3 Tree rings tell stories about the past

What might seem like one of the strangest of all dating methods involves using tree rings and so we call it tree-ring dating. The scientific name for this method is dendrochronology. All trees have tree rings and they can help with dating old objects. But the technique only works if the objects were made of wood. The age of a tree is worked out by counting the number of rings in the wood. A new ring is formed every year in a tree's life. The width and shape of each ring depend on environmental conditions such as rainfall and soil type.

SOURCE 1 Limitations of radiocarbon

dating. This diagram indicates different types of objects that might be found during the excavation of a site that has been occupied over thousands of years. Radiocarbon dating gives approximate dates before the present. There is a 95 per cent chance that the true date falls within 200 years either side of any estimated radiocarbon-dated age. However, radiocarbon dating cannot date anything that died more than about 40 000 years ago. In such remains there will not be enough C14 left for radiocarbon dating to work. Artefacts such as stone tools cannot be dated this way because they were never alive. But if they were found alongside a layer of plant remains or charcoal, that material could be dated, and the age of the tools would probably be similar.



SOURCE 2 Tree growth rings



All trees of the same type growing in the same area will have the same environmental conditions, so the pattern of their growth rings will be very similar.

Sometimes the age of wooden items such as spear handles and roof beams can be worked out by matching the growth rings in the wood with those in a dated sample from trees in the same area — as long as they are of the same species.

DID YOU KNOW?

In recent years, DNA evidence has become another important scientific method for discovering information that can be used by archaeologists and historians. DNA samples can tell us who people's ancestors were. Using DNA analysis, scientists have found that the ancestors of all modern humans came from Africa.

1.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

1.6 Exercise 1: Check your understanding

- 1. HS1 What are strata?
- 2. HS1 Will objects found in a lower stratum be older or newer than those found in a higher stratum?
- 3. **HS1** What is radiocarbon dating, and how can knowing the rate at which C14 breaks down help in finding out the likely age of any once-living remains?
- 4. **HS1** What is another name for dendrochronology (see **SOURCE 2**)?
- 5. **HS1** Explain the difference between stratigraphy and fluorine dating.

1.6 Exercise 2: Apply your understanding

- 1. **HS1** How might dendrochronology help in finding out the age of wooden objects?
- 2. HS3 Look at the artefacts illustrated in SOURCE 1. Describe the kinds of changes that must have happened in ways people lived at this site over many ages.
- 3. HS4 Imagine you are an archaeologist investigating a recently discovered medieval site. You have found pottery, books, wooden furniture and bones. Identify and describe the dating techniques you could use to work out the ages of each item and which of them is older than others in order to discover what changed over the centuries during which the site was occupied.
- 4. **HS6** Explain why it is important for historians to be able to date evidence.
- 5. HS6 Identify what you consider to be the most accurate dating technique. Justify your response.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

1.7 Perspectives and empathy

1.7.1 Understanding how they thought and felt

It is very important for historians to empathise with those they study. This means trying to understand how people thought and felt at different times in the past. At different points throughout this book you will be asked to put yourself in the situation of someone in the past. This is not a creative writing task, in which you can let your imagination run wild. Rather, you will be using historical imagination. This requires using your imagination, but basing your ideas on evidence.

We try to understand the perspectives of people in the past through exploring their points of view, attitudes and values. Often we can get a sense of the way people thought and felt through primary sources such as diaries or through visiting museums and historical sites. Using empathy, we work with all the evidence we have in order to imagine what the past was like for people who were there at the time.

We need to consider such questions as:

- Who were these people?
- Where did they live?
- How did they live?
- What mattered to them?
- What did they believe in?
- What did they see, hear, taste, smell and feel?
- What did they fear and what did they hope for?
- Did they have feelings similar to or different from ours?
- Did they all think and feel the same as one another, or did they have differing perspectives?

How should we judge people in the past?

When we learn about some of the things people did in the past, it is natural that we make moral judgements. For example, it would be easy to dismiss the Vikings as bloodthirsty raiders. Viking raids began in England at the end of the eighth century; raids, attacks and then invasions in Britain and Ireland continued for more than 200 years. The behaviour of pillaging and looting Vikings might be considered to be cruel, violent or ruthless by today's standards. However, we should try to avoid judging people in the past by beliefs or standards that did not exist in their time. There are a number of possible reasons why Vikings raided and colonised other regions. These reasons include the pressure of growing population and limited farmland, fighting among different Viking groups and an awareness of the availability of great wealth in foreign lands.

SOURCE 1 An artist's impression of Vikings raiding the coast from their beached longship

SOURCE 2 The Oseberg ship (a well-preserved Viking ship discovered in a large burial mound in 1903) on display at the Viking Ship Museum in Oslo, Norway



It is also worth noting that Vikings were explorers, farmers, fishermen, poets and traders. They were spiritual people and their society was governed by a primitive form of democracy. We should remember that in the future, people may think that many kinds of behaviour we consider normal are, by their standards, wrong.

SOURCE 3 A reconstructed Viking Age harbour settlement at Bork Vikingehavn, a living history museum in Denmark



DISCUSS

Working in small groups, think of something that happens in our own time that some people believe is wrong. An example could be the way some countries are wealthy while in others children die of starvation and preventable diseases. Do you think that at some time in the future people might consider ours to have been an unjust age?

[Ethical Capability]

1.7 ACTIVITY

Using the internet and/or other information sources, find the meaning of the word 'sympathy'. Explain how Remembering and understanding empathy is different from sympathy.

1.7 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

1.7 Exercise 1: Check your understanding

- 1. **HS1** What does it mean to empathise with people you study?
- 2. HS1 How is historical imagination different to just letting your imagination run wild?
- 3. HS1 Why could it be wrong to judge people from past times by the standards of our times?
- 4. HS1 Outline your understanding of historical perspective.
- 5. HS1 Identify the questions that might be asked when using empathy in order to imagine what the past was like for people who were there at the time.

1.7 Exercise 2: Apply your understanding

- 1. HS3 Compare SOURCES 1 and 2. What are the similarities between these sources? What are the differences?
- 2. HS3 Examine SOURCE 2.
 - (a) Imagine that you are living in the past and can see this ship sailing towards your home in England. Describe how you feel.
 - (b) How do you think that modern visitors to the Viking Ship Museum in Oslo feel when looking at the ship?
 - (c) How would you explain any changes in attitudes over time?
- 3. HS3 Imagine you are one of the Vikings shown in SOURCE 1 and describe:
 - (a) what you can see, hear, taste and smell
 - (b) how you feel about what you are doing and your chances of survival
 - (c) how you feel about the people living in the region that you are raiding.
- 4. HS3 Look closely at SOURCE 3. What conclusions might visitors to Bork Vikingehavn make about the Vikings?
- 5. HS6 Why do you think that it is important for historians to empathise with the people that they study?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

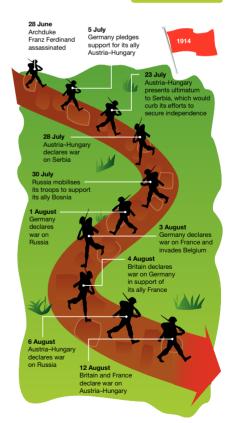
1.8 SkillBuilder: Sequencing events in chronological order

What is a timeline?

A timeline is a diagrammatic tool for placing events in chronological order (the order in which they happened). A simple chronology would be one, for example, that showed in sequence, or time order, key events of a day in your life. Generally, timelines are constructed using a sequence of dates with the addition of descriptive labels. A timeline may cover a short period or many centuries. Timelines may be as simple as a horizontal or vertical line, or highly visual with use of colour and images.

Select your learnON format to access:

- · an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.





1.9 Review



1.9.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic

1.9 Exercise 1: Review

Select your learnON format to complete review questions for this topic.



Resources -



eWorkbook Crossword (doc-31320)



Interactivity Historical skills and concepts crossword (int-7583)

KEY TERMS

absolute dating techniques methods used to assess the age of something (e.g. radiocarbon dating, tree-ring dating)

anno Domini Latin for 'in the year of our Lord'

artefact an object made or changed by humans

biased one-sided or prejudiced, seeing something from just one point of view

cause and effect the concept that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences

chronology a record of past events in order of time, from Latin chronos meaning time and logos, meaning to work out

civilisations term used to describe societies that have towns and features such as complex forms of government and religion

continuity and change the concept that while many changes occur over time, some things remain constant contestability when particular interpretations of the past are open to debate

evidence information that indicates whether something is true or really happened

heritage everything that has come down to us from the past

hypothesis (plural: hypotheses) a theory or possible explanation

Latin the language of ancient Rome

Middle Ages or medieval history the period from the end of the Roman Empire in the West in the fifth century CE to the end of the Renaissance around 1500 CE

perspective point of view or attitude

primary sources objects and documents that were created or written in the period of time that the historian is investigating

relative dating techniques methods used to assess whether something is older than something else (e.g. stratigraphy, fluorine dating)

secondary sources reconstructions of the past written or created by people living at a time after the period that the historian is studying

significance the importance assigned to particular aspects of the past, for example, events, developments, movements and historical sites.

strata (singular: stratum) distinct layers of material beneath the ground, built up over time, that provide information for archaeologists and geologists

timeline a diagrammatic tool representing a period of time, on which events are placed in chronological order

1.8 SkillBuilder: Sequencing events in chronological order

1.8.1 Tell me

What is a timeline?

A timeline is a diagrammatic tool for placing events in *chronological order* (the order in which they happened). A simple chronology would be one, for example, that showed in sequence, or time order, key events of a day in your life.

Why are timelines useful?

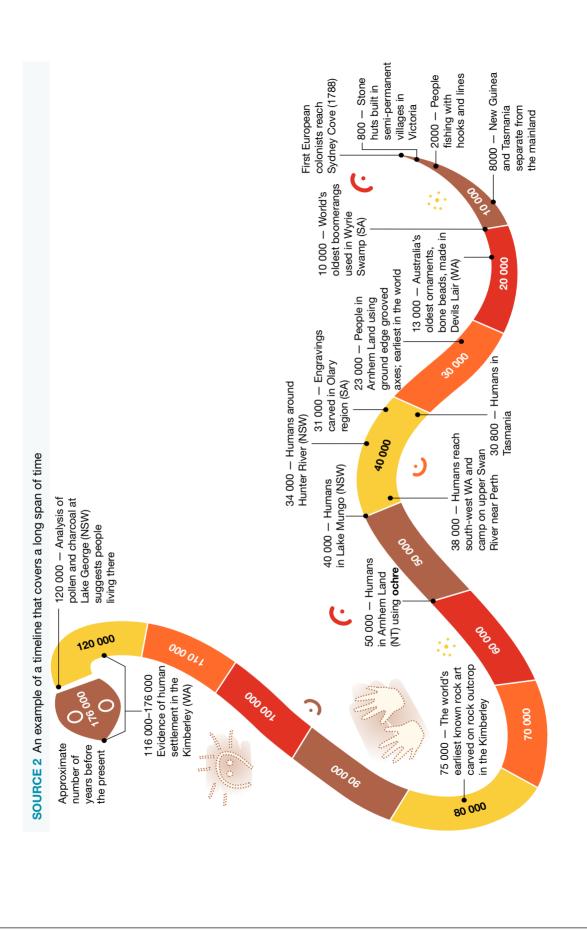
Timelines are useful because they can help us make sense of events in the past. Timelines are particularly useful in the study of history. Creating a history timeline will help to:

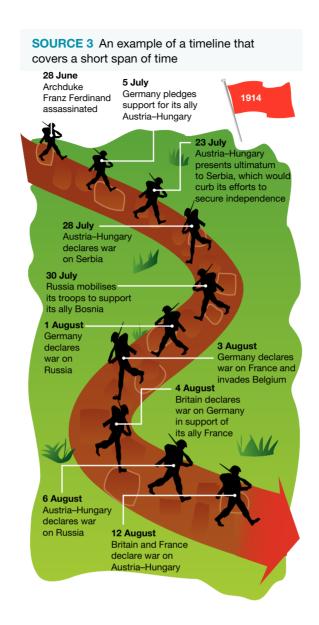
- understand the order in which events occurred
- describe the time distances between events
- identify what has changed over time
- identify what has stayed the same over time
- analyse how one event might relate to other events
- compare what might have been happening in different places at the same time
- assess if one event might have led to another event (cause and effect).

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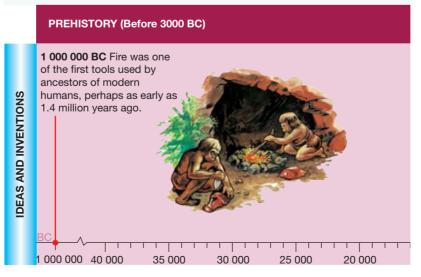
Generally, timelines are constructed using a sequence of dates with the addition of descriptive labels. The timeline may span thousands of years (see **SOURCE 2**) or cover a very short period (see **SOURCE 3**). In print, timelines may be as simple as a horizontal or vertical line, or highly visual with use of colour and images. Using digital technology, online timelines can be interactive, where users can click on a date and see a descriptive label, an image or even hear an audio narrative or sound effects.

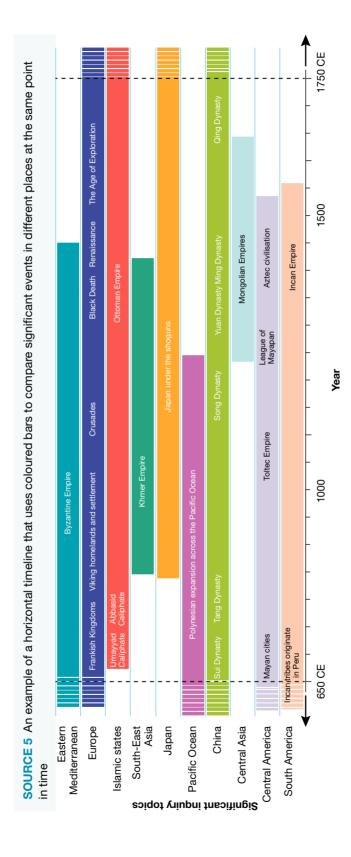
SOURCES 2, **3**, **4**, **5** and **6** show some examples of highly visual timelines that could be presented in printed history text books.



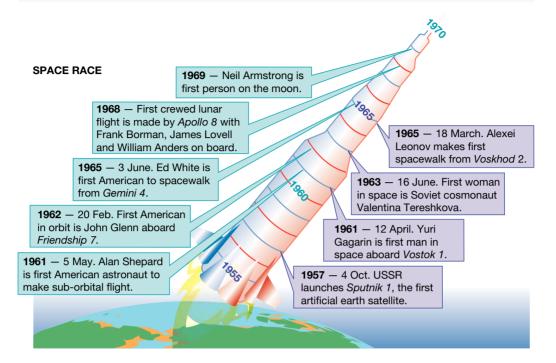


SOURCE 4 An extract from a timeline that provides some illustrative material to accompany descriptive text labels





SOURCE 6 An example of a timeline that uses a drawing of an object related to the subject or theme of the timeline



1.8.2 Show me

How to create a timeline

Timelines can cover very short or very long periods of time.

- They can focus on just a few months or years.
- They can focus on big, sweeping changes over thousands of years.
- In most cases, they are divided up into equal blocks of time, such as decades or centuries. This is not essential but it helps us to see not only the order of events but how close or how far apart they were.
- A break in the timeline (using a zig zag line, for instance) can show a long span of time between one date and the next.
- To make equal blocks of time you need to use a scale for example, 1 centimetre = 10 years.
- Timelines can be horizontal (across the page) with the earliest dates on the left and later dates to the right.
- Alternatively, they can be vertical (down the page), in which case the dates usually run from the earliest at the top to the latest at the bottom.
- Often we have only approximate dates for events in ancient history. In those cases, we put 'c.' in front of the date. It stands for the Latin word *circa*, which is Latin for 'around' or 'about'.

Step 1

Study the below timeline. Look at the way this timeline has been constructed.

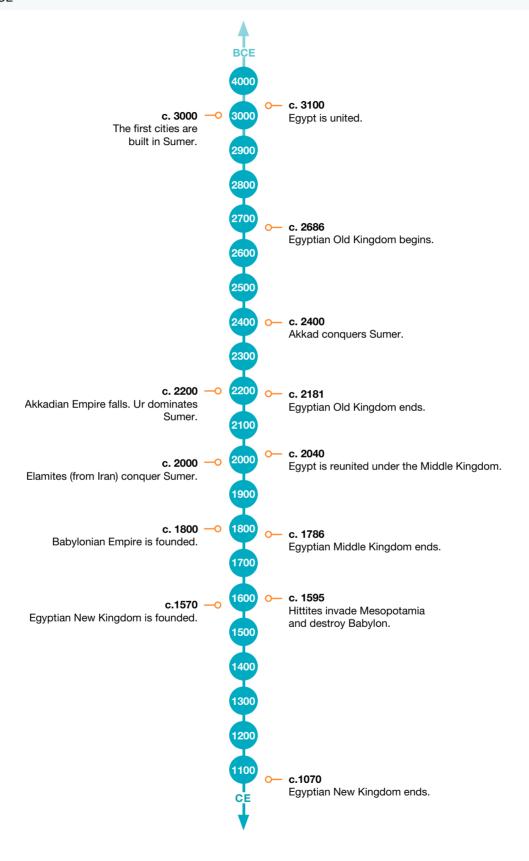
- It is a vertical timeline.
- It has been divided into centuries.
- A scale of 1 centimetre = 1 century has been used.

Step 2

A completed timeline has a clear title.

The title should state:

- the time period covered
- the subject or theme
- the beginning and end dates.



1.8.3 Let me do it

Complete the following activities to practise this skill.

1.8 ACTIVITIES

- 1. Construct a timeline of Europe and the Mediterranean world between 476 CE and 1683 CE.
 - Use a vertical timeline.
 - · Divide it into centuries.
 - Decide on the scale you will use.

Key events for your timeline:

- 1066 CE William of Normandy wins the Battle of Hastings and becomes King of England.
- 476 CE Western Roman Empire ends.
- 1096 CE The Crusades start.
- 711 CE Islamic forces conquer Spain.
- 1215 CE King John of England is forced to sign the Magna Carta
- 787 CE First recorded Viking raid on England.
- 1298 CE Osman I founds the Ottoman Empire.
- 1347 CE The Black Death breaks out in Europe.
- 1429 CE Joan of Arc drives the English out from Orleans.
- 1453 CE Crusades come to an end when the Ottomans take Constantinople.
- 1529 CE Advancing Ottoman forces defeated at Vienna.
- 1683 CE Ottoman forces again defeated in Vienna. Many see this as the beginning of the decline of the Ottoman Empire

Your timeline will help you to analyse and compare events.

- 2. Answer the following questions based on the timeline you have drawn.
 - (a) What time span does your timeline cover (i.e. how many years in total are covered by your timeline)?
 - (b) Which event on your timeline was the earliest?
 - (c) How many years elapsed between the start and the end of the Crusades?
 - (d) How many years elapsed between the start of the Ottoman Empire and the beginning of its decline?
 - (e) What event of significance took place in the fifth century?

1.9 Review

1.9.1 Key knowledge summary

1.2 Why we study history

- Historians investigate and interpret the past.
- History helps us to understand our heritage and appreciate other cultures.
- History helps us to understand the present and what the future may hold.
- History provides us with essential skills.

1.3 Historical skills

- Sequencing chronology refers to recording past events in order of time.
- Using historical sources as evidence relates to analysing sources to judge how reliable they are and explore the different points of view, or perspectives, of people from the past.
- Identifying continuity and change is the ability to recognise that, while many changes occur over time, some things remain constant.
- Analysing cause and effect relates to understanding that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences.
- Determining historical significance is the ability to make judgements about the importance assigned to particular aspects of the past, for example, events, developments, movements and historical sites.

1.4 Ages, time and chronology

- Historians divide the past into ages and periods.
- In Australia we count time using a system that was developed in Christian countries, but there are other systems.
- Using chronological order and timelines helps us to recognise cause and effect.

1.5 Detective work and archaeology

- There are several different kinds of sources we can use.
- Sources need to be assessed for reliability as historians test their hypotheses.
- Archaeologists use several techniques to find remains of the past.
- The skills of other scientists contribute to discoveries in archaeology.
- Pottery is an important source of archaeological evidence.
- Some archaeological remains survive while others are destroyed.

1.6 Dating historical evidence

- Relative dating techniques help us determine if a source is older or newer than another source.
- We can find the age of many sources using absolute dating techniques.

1.7 Perspectives and empathy

- Historians try to discover how people thought and felt at different times in the past.
- Using historical imagination requires using your imagination but basing your ideas on evidence.
- We should avoid judging people from the past by the standards of our own age.



KEY TERMS

absolute dating techniques methods used to assess the age of something (e.g. radiocarbon dating, tree-ring dating)

anno Domini Latin for 'in the year of our Lord'

artefact an object made or changed by humans

biased one-sided or prejudiced, seeing something from just one point of view

cause and effect the concept that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences

chronology a record of past events in order of time, from Latin chronos meaning time and logos, meaning to work out

civilisations term used to describe societies that have towns and features such as complex forms of government and religion

contestability when particular interpretations of the past are open to debate

continuity and change the concept that while many changes occur over time, some things remain constant **evidence** information that indicates whether something is true or really happened

heritage everything that has come down to us from the past

hypothesis (plural: hypotheses) a theory or possible explanation

Latin the language of ancient Rome

Middle Ages or medieval history the period from the end of the Roman Empire in the West in the fifth century CE to the end of the Renaissance around 1500 CE

perspective point of view or attitude

primary sources objects and documents that were created or written in the period of time that the historian is investigating

relative dating techniques methods used to assess whether something is older than something else (e.g. stratigraphy, fluorine dating)

secondary sources reconstructions of the past written or created by people living at a time after the period that the historian is studying

significance the importance assigned to particular aspects of the past, for example, events, developments, movements and historical sites

strata (singular: stratum) distinct layers of material beneath the ground, built up over time, that provide information for archaeologists and geologists

timeline a diagrammatic tool representing a period of time, on which events are placed in chronological order

2 From the ancient to the modern world

2.1 Overview

Ideas, religion and exploration. How did the changes of the Middle Ages reshape the world?

2.1.1 Links with our times

In this topic we will examine the enormous changes that reshaped the world from about 650 to 1750 CE. Following the fall of the Western Roman Empire new forces shaped the old civilisations of Europe, western Asia and North Africa. Change also came to the old civilisations of East and South Asia while newer civilisations emerged in Africa, the Americas and other parts of Europe and Asia.

Great changes began in the fifteenth century, as Europeans rediscovered the learning of the ancient world and made great advances in arts and sciences. This time was also called the Age of Exploration. It was a time when voyages of discovery brought into contact peoples who had not known of each other's existence.



LEARNING SEQUENCE

- 2.1 Overview
- 2.2 Examining the evidence
- 2.3 People on the move
- 2.4 Religions on the move
- 2.5 A different way of life
- 2.6 Rulers, religion and the changing map of medieval Europe
- 2.7 Migrations, invasions and empires in Asia
- 2.8 Population, cities and trade
- 2.9 Muslim traders and Africa
- 2.10 The emerging power of western Europe
- 2.11 Portuguese and Spanish voyages of discovery
- 2.12 Vasco da Gama opens the East
- 2.13 Consequences of the discoveries
- 2.14 SkillBuilder: Explaining different historical interpretations
- 2.15 Thinking Big research project: Time travel brochure
- 2.16 Review

To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.

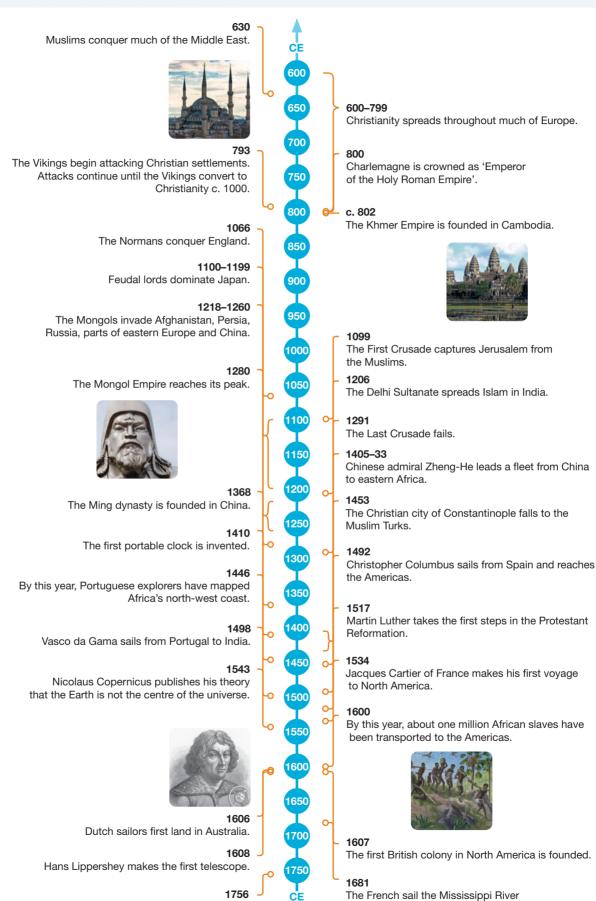
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The Seven Years' War begins between Britain and

France.



and claim a vast territory in North America.

2.2 Examining the evidence

2.2.1 How do we know about the world between c. 650 and 1750?

Generally we know more about the period between ancient and modern times than about many ancient societies because more evidence has survived. However, we know less about many medieval societies than we know about some ancient societies such as China and Rome. As you know, history is based on evidence from primary sources. There are gaps in our evidence because some societies in the period from around 650 to 1750 did not keep written records, some sources have been lost and most people could not read or write.

Can we always trust written sources from this period?

We have to be very careful about what written sources we trust. Very often we only have the recorded evidence of one side in a conflict. Also, the people who made written records usually came from the privileged groups in a society. For example, in China during this time, most written records were made by scholars who served as government officials. In Europe, especially during the Dark Ages, most written records were made by monks and other church people. Although such people did not all see things the same way, we need to look out for bias.

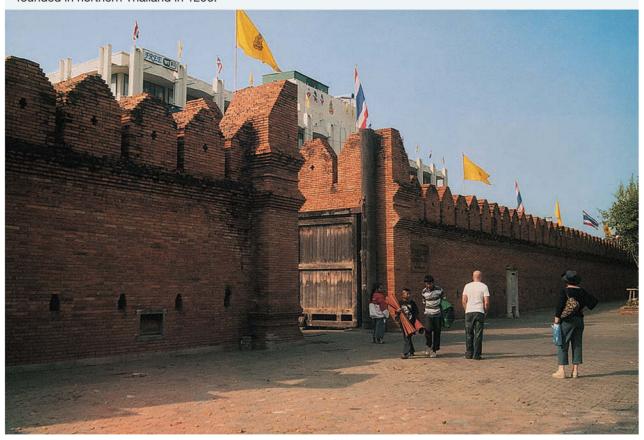
Archaeological sources

We have many archaeological sources from these times. Some medieval sources have been discovered by archaeologists. Some still stand where they were built. Many of them tell us about religious beliefs. There are Christian churches, Muslim mosques, Buddhist and Hindu temples, Jewish synagogues, the sacred sites of other religions and the art that represents the ideas of these faiths. Other remains tell us about everyday life, work and trade. These include towns, their walls and marketplaces, and traces of medieval villages. Sources like castles, weapons and armour tell us about war, which was a constant feature of these times.



SOURCE 1 Medieval stocks at Stow-on-the-Wold, England. As punishment for small crimes during the Middle Ages, people had their feet locked in stocks like these.

SOURCE 2 The Tha Phae Gate is one of five original gates still in the walls of the city of Chiang Mai. This city was founded in northern Thailand in 1296.



Unsolved mysteries

There are still unsolved mysteries about these times and you will encounter some of these in other subtopics. Perhaps in time we will know more through the discovery of lost archaeological traces, but we will probably never know the answers to some questions. Here are a few examples of mysteries or problems that historians have continued to investigate and debate:

- Why were the followers of a new religion, Islam, able to conquer huge areas during the seventh century?
- Why was western Europe backward compared with the Byzantine and Islamic Empires during the Early Middle Ages?
- What happened in societies where there were no written records, such as in Australia, parts of Asia and Europe, and most of Africa, America and the Pacific?
- Why was western Europe able to begin to dominate the world from the sixteenth century?

Using the sources

You will begin to gain an understanding of these times from just a few sources. Remember that to analyse a source you need to ask historical questions, for example:

- What is this source?
- When was it made or built or created?
- Where is it from?
- Who created this source?
- Why did it exist?

SOURCE 3 From the journal of Christopher Columbus, written for the King and Queen of Spain during Columbus's voyage of 1492, during which he accidentally discovered America

Your Highnesses, as Catholic Christians, and princes who love and promote the holy Christian faith, and are enemies of the **doctrine of Mahomet**, and of all **idolatry** and **heresy**, determined to send me, Christopher Columbus, to . . . India to see the said princes, people, and territories, and to learn their disposition and the proper method of converting them to our holy faith; and furthermore directed that I should not proceed by land to the East, as is customary, but by a Westerly route, in which direction we have . . . no certain evidence that any one has gone. So after having expelled the Jews from your dominions, your Highnesses, in the same month of January, ordered me to proceed with a sufficient armament to the said region of India . . .

2.2 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

2.2 Exercise 1: Check your understanding

- 1. **HS1** Why do we know less about many medieval societies than we do about some ancient societies such as China and Rome?
- 2. **HS1** History is based on evidence from primary sources. Why are there gaps in our evidence about some ancient societies?
- 3. HS1 Explain why written sources from the period 650–1750 CE are quite likely to be biased.
- **4. HS1** How can archaeological sources provide us with information about the period from 650 to 1750 CE and in many cases provide evidence of aspects of the period?
- 5. **HS1** There are still unsolved mysteries about the period from 650 to 1750 CE. What are historians doing about this?

2.2 Exercise 2: Apply your understanding

- 1. **HS3** Analyse **SOURCE 1** using the following questions.
 - (a) What is it?
 - (b) What was it used for and how would it have been used?
 - (c) Where is it located?
 - (d) During what period of history was it used?
 - (e) What conclusions about that time can you draw from this source?
- 2. HS3 Using question 1 as a model, frame at least three questions that you could use to analyse SOURCE 2.
- 3. HS3 Read SOURCE 3.
 - (a) Who instructed Columbus to make this voyage?
 - (b) What was their attitude to Muslims, Jews and other non-Christians?
 - (c) When did the voyage take place?
 - (d) In which direction was Columbus ordered to sail to reach India?
 - (e) Refer to a world map to find out what undiscovered continent would have stood in his way.
- 4. HS3 What evidence do we have about medieval societies?
- 5. HS3 What do we need to be careful of when analysing sources from the medieval period?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.3 People on the move

2.3.1 Civilisations under attack

During the fourth century CE, great empires existed in Europe, Asia and Africa. These were the Roman Empire, the Sassanian Empire of Persia, the Gupta Empire of India and the states that replaced the Han Empire of China. These civilisations were based on farming. Most of their people were peasants whose work supported ruling classes of nobles, warriors and priests. Outside these empires, most people were nomadic herders. Migrations of nomads would cause centuries of chaos and bring enormous changes to the empires.

India and China

The Gupta Empire was founded in India in 320 CE when Prince Chandragupta defeated his rivals. His son went on to create an empire stretching across northern India. This great civilisation was destroyed at the end of the fifth century by the White Huns, barbarian nomads who massacred entire populations.

DID YOU KNOW?

The time of the Gupta Empire was considered a golden age in India. It saw great advances in art, literature, mathematics and science. Indian scholars revolutionised mathematics by developing a symbol for zero and the numerals we now use in place of Roman numerals. They knew the Earth was round and that it orbited the Sun.

Printing was invented in China under the Tang dynasty. The earliest printed book was produced in 868 CE, long before printing was first used in Europe.

In China, the Han dynasty had controlled a vast empire that had trading links with Rome and Persia, but the Han were overthrown in 220 CE. It took over 360 years of civil wars between the Chinese states, and invasions by Turkish and Mongolian nomads, before China was restored under the Sui dynasty (580-618 CE) and the Tang dynasty (618–907 CE).

The fall of the Western Roman Empire

The Roman Empire weakened from about 180 CE. Over the following three centuries, Rome's power collapsed as people the Romans called barbarians swept into its territories. In 476 CE, a German chieftain named Odoacer deposed the last Western Roman emperor. Historians often use this event to mark the end of the ancient world and the beginning of the Middle Ages.

The Byzantine and Persian empires

Despite constant attacks by their nomadic enemies, two great empires remained. These were the Eastern Roman (Byzantine) Empire in Europe and the Sassanian Empire in Persia. The Goths, Franks and others who formed kingdoms in the former lands of the Western Roman Empire regarded themselves as Roman and acknowledged the authority of the Eastern Roman emperor in Constantinople (see **SOURCE 1**).

For centuries the Byzantine Empire kept ancient Roman culture alive. For a short time in the sixth century it managed to regain territories of the Western Roman Empire. But the Persian and Byzantine empires were weakened by destructive wars with each other. Persia was conquered by Muslim Arabs in 651 CE. A shrinking Byzantine Empire survived until 1453 CE when its capital, Constantinople, was overrun by the Turks.

SOURCE 1 A relief sculpture in the Hippodrome of Constantinople. The Hippodrome was the centre of Byzantine political, social and sporting life. This sculpture, erected in 390 CE, portrays Roman Emperor Theodosius I among his court.



-<mark>Explore more with</mark> my**World**HistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Expanding contacts > China: the Middle Kingdom
- · Overview > Transformation of the Roman World
- Overview > Byzantine Empire

2.3.2 Invaders and migrations

The Early Middle Ages were times of conflict caused by violent invasions by nomadic tribes who burst out of the **steppes** of Central Asia, the deserts of the Arabian peninsula and the cold lands of northern Europe. Among the invaders were groups fleeing others who had invaded their homelands. Land occupied by significant groups is shown in **SOURCE 2**.

Germanic peoples

The Goths, Vandals, Burgundians and Franks were Germanic peoples. The Goths migrated south to the Black Sea coast in the third century. Invasion by the Huns in 372–5 CE forced the Goths to flee into Roman territory. From the fifth century, the Goths divided into Ostrogoths and Visigoths while the Vandals and Burgundians occupied Roman territories. In the following century the Franks conquered most of **Gaul**.

Huns

From about 370 CE, Central Asian nomads called Huns invaded eastern Europe. These ferocious fighters attacked their enemies by firing arrows from horseback. They carved out a huge empire from Central Asia to Germany before an alliance of Romans, Visigoths and Burgundians defeated them in 455 CE.

Celts

Celtic tribes had spread to Britain and Ireland after 500 BCE. Following the Roman invasion of Britain in 43 CE, the Celts (Britons) lived under Roman rule until the Roman army left Britain in 410 CE. The Britons were then overrun by invading Saxons, Angles and Jutes.

Saxons, Angles and Jutes

These tribes from Germany and Denmark invaded Britain in the fifth century. The Britons fought back but they were steadily driven into the western corner of their island. In most of Britain, the invaders destroyed every trace of Roman civilisation.

The word *England* comes from a phrase meaning 'Angle people's land', and the invaders came to be known as Anglo-Saxons. They lived in villages in small kingdoms. Each Anglo-Saxon king was a war leader who ruled with the help of thanes (nobles) and the Witan (a kind of early parliament or council of advisers). Anglo-Saxon England united as a nation only in the tenth century after it was almost completely conquered by Danish Vikings.

The Anglo-Saxons spoke the earliest form of English, which is called Old English. However, they had no written language until they became Christians from the seventh century. Among their few written records is the Anglo-Saxon Chronicle, a year-by-year record of events in their kingdoms. It was commenced four centuries after the invasions. Another famous Anglo-Saxon text is the epic saga Beowulf. This legend of a Scandinavian warrior was handed down by word of mouth until it was written down between the eighth and eleventh centuries (see 3.2 Examining the evidence).

Rouran (also called Juan-Juan) and Avars

The Rouran were nomadic tribes who raided China's northern borders from the fourth century to the sixth century. They expanded westwards, causing other tribes to flee before them. In 552 CE, their power was broken by Turkish tribes, who revolted against them, and northern Chinese armies. It is possible that the Avars who moved into eastern Europe about this time were the Rouran. The invading Avars caused Slavic peoples (Serbs and Croats) to flee south. They, in turn, pushed the Greeks further down the Balkan Peninsula. The Avar state was finally destroyed by Franks and Bulgarians in 796 CE.

Turks

In the sixth century, the Turks spread south almost to India and west to the Caucasus, where they became known as Khazars. From the eighth century, their ruling classes adopted Judaism as their religion. In the tenth century, the Russians destroyed the Khazar Empire.

Bedouins

In the seventh century following the rise of Islam, Bedouin nomads poured out of the deserts of the Arabian Peninsula, conquering all before them.

Norse (or Vikings)

From the eighth century to the eleventh century, the Norse peoples from Sweden, Norway, Denmark and Finland created new terrors. They plundered and settled coastal areas as far apart as Ireland, Russia, the Byzantine Empire and Italy (see topic 3 The Vikings).

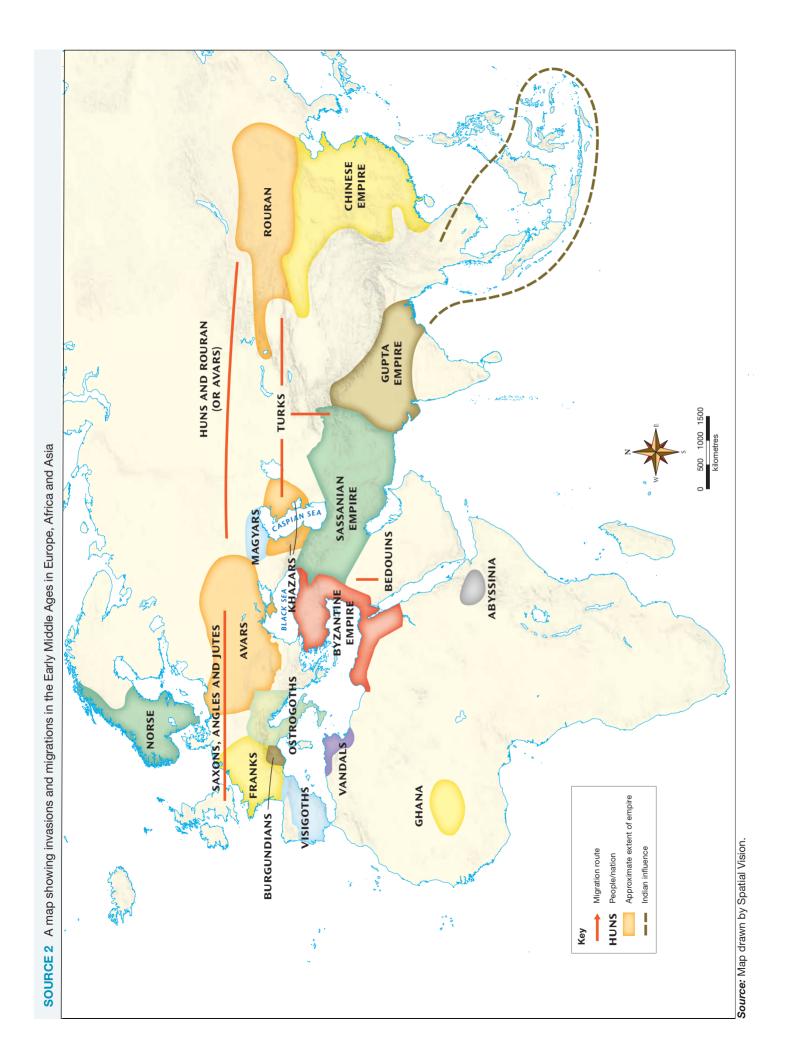
Magyars

In the ninth and tenth centuries, Hungarian nomads called Magyars attacked central and western Europe. In 955 CE, German forces inflicted such a massive defeat upon them that the Magyars fled back to Hungary.

-Explore more with my World HistoryAtlas-

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

• Overview > Invasion of Britain



2.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

2.3 Exercise 1: Check your understanding

- 1. HS1 Which Asian empires suffered invasions from nomadic peoples?
- 2. HS1 What event do historians often use to mark the end of the ancient world?
- 3. **HS5** What developments caused the collapse of the Persian and Byzantine empires?
- 4. HS1 In the civilisations that suffered invasions, the peoples' way of life was based on farming. How did the way of life of the invading tribes differ from that?
- 5. HS1 Identify three geographical regions that invading tribes came from.

2.3 Exercise 2: Apply your understanding

- 1. HS3 Look closely at SOURCE 1. Explain why it is useful as evidence of the continuity of Roman culture through the Byzantine Empire.
- 2. HS3 Using information from SOURCE 2, the text in this section and a modern map, draw up two columns. In the first column place the names of each invading or migrating group. In the second column, write down the place that each group threatened, invaded or occupied.
- 3. HS3 Describe the main changes brought to the world by invasions and migrations between the fifth century and the eleventh century CE.
- 4. HS6 Explain why the fall of the Roman Empire is regarded as an event that is of great historical significance.
- 5. HS4 Explain why the history of the Byzantine Empire can be regarded as an example of continuity in a period of great changes.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.4 Religions on the move

2.4.1 Islam's spread

The spread of Islam and Christianity in the Early Middle Ages shaped the world we live in today. From the seventh century, the rise of Islam in the Arabian Peninsula created a powerful new civilisation that expanded into three continents while Christianity gradually spread throughout Europe.

The religion of Islam was founded in Mecca (modern-day Saudi Arabia) by the prophet Mohammed (570-632 CE). Its followers were called Muslims, and by the time of Mohammed's death all the Arabian tribes had converted to Islam. Within just over one hundred years, Muslim Arabs conquered vast areas of Asia, Africa and even south-western Europe.

- Between 630 CE and the early eighth century, the Muslims conquered Syria, Jordan, Palestine and Iraq. They took Egypt from the Byzantine Empire and overthrew the Sassanian Empire in Persia. Muslims came to rule most of Spain and Central Asia up to the borders of China.
- Generally, conquered peoples were not forced to become Muslims. Many continued to practise other religions.
- Muslim expansion threatened Christian states. Constantinople, the capital of the Byzantine Empire, withstood Arab sieges during the 670s and in 717. In 718, the Bulgarians blocked Arab advances into south-eastern Europe and, in 732, the Franks stopped the Muslim advance into France.
- In the ninth century, Muslim armies pushed into southern Italy. The Muslim Turks conquered Constantinople in the fifteenth century, ending the Byzantine Empire.

DID YOU KNOW?

In 607 CE, the Bishop of Rome, Boniface III, became the first leader of the Christian Church to use the title 'Pope'. The Byzantine Empire did not recognise his authority and held that the Byzantine Emperor was the Church's head.

SOURCE 1 The Byzantine Christian church of Hagia Sophia was converted to a mosque by Constantinople's Turkish Muslim conquerors.



Explore more with my World HistoryAtlas

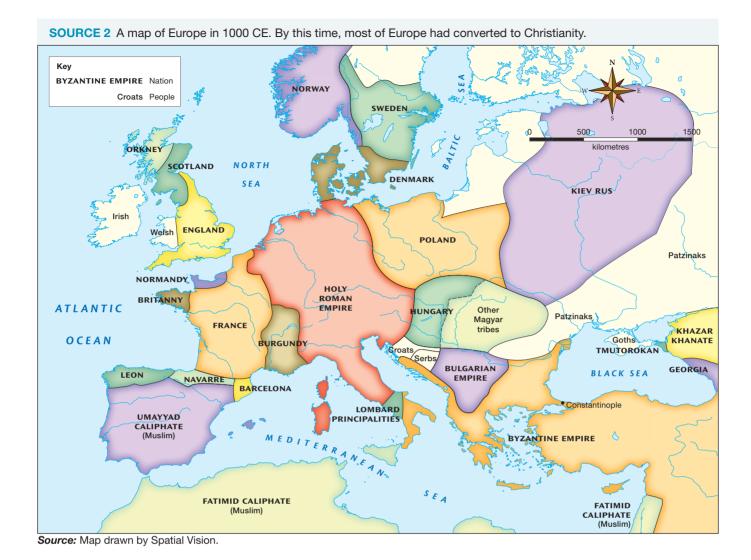
Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > Spread of Islam
- The Western and Islamic world > Medieval Christendom
- The Western and Islamic world > Holy Roman Empire

2.4.2 Spreading Christianity

Christianity became the state religion of the Roman Empire in 391 CE. It had spread throughout the Roman Empire and into Ethiopia and Nubia (now known as Sudan) in Africa by the time Rome fell. Islam overwhelmed Christian rule in the Middle East and North Africa but Christianity was to spread through Europe during the Early Middle Ages.

- The Germanic kingdoms that replaced Roman rule all became Christian, beginning with the Goths in the fourth century and ending with the Franks, whose king, Clovis I, was converted in 479 CE.
- Christianity had been brought to Britain during the Roman occupation, and Ireland was converted in the fifth century.
- Christian missionaries began converting Anglo-Saxons in England and the Frisians in the Netherlands in the late seventh century.
- Christianity expanded further when Charles the Great, known as Charlemagne, came to be king of the Franks in 768 CE. He crushed the Saxons in Germany and forced them to become Christians, defeated the Lombards in Italy, attacked the Muslim Moors in Spain and crushed the Avars.
- Charlemagne united much of France, Italy and Germany under the Carolingian Empire. In 800 CE, the Pope crowned him 'Emperor of the Holy Roman Empire'. However, Charlemagne's empire broke up quickly after his death.
- From 793 CE, Vikings attacked Christian settlements. They sacked **monasteries** and churches and carried off Christian prisoners to be sold as slaves.
- By the end of the Early Middle Ages, Europe was almost completely Christian. The Bulgarian Empire
 adopted Christianity in 864 CE. Byzantine priests converted the Russians of Kiev Rus about 990 CE.
 In approximately 1000 CE, the Magyars and Vikings became Christians and Viking raids ended.



SOURCE 3 A high cross at a Christian monastery site founded in 547 CE at Drumcliffe, Ireland. The carved Bible scenes were originally painted in bright colours.



SOURCE 4 The broken round tower of a monastery at Drumcliffe, Ireland. Monks used such towers for storage, as bell towers, and as lookouts and refuges during Viking raids.



2.4 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

2.4 Exercise 1: Check your understanding

- 1. HS2 When and by whom was Islam founded?
- 2. HS2 What areas did Muslims conquer between the seventh and ninth centuries?
- 3. HS2 Which Muslim invaders destroyed the Byzantine Empire in the fifteenth century?
- 4. HS1 Who was Charlemagne and why did the Pope crown him 'Emperor of the Holy Roman Empire' in 800 CE?
- 5. HS1 Make a list of European peoples who had converted to Christianity by 1000 CE.

2.4 Exercise 2: Apply your understanding

- 1. HS3 Look closely at SOURCE 1. What clues does it provide for the conversion of this church to a mosque?
- 2. HS3 Examine SOURCE 2. What part of Europe was still under Muslim rule in 1000 CE?
- 3. HS3 Explain why the Christian high cross in SOURCE 3 would have been covered in brightly painted Bible scenes.
- **4. HS3** Look closely at the features of the round tower in **SOURCE 4**. Explain how the design of this tower would have helped to protect Irish Christian monks from Viking raiders.
- 5. **HS4** Describe the changes brought to the world between ancient and modern times by the spread of Islam and Christianity.
- HS6 Explain how the spread of Islam and Christianity in the Early Middle Ages was significant for the modern world.

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2.5 A different way of life

2.5.1 Life in the countryside

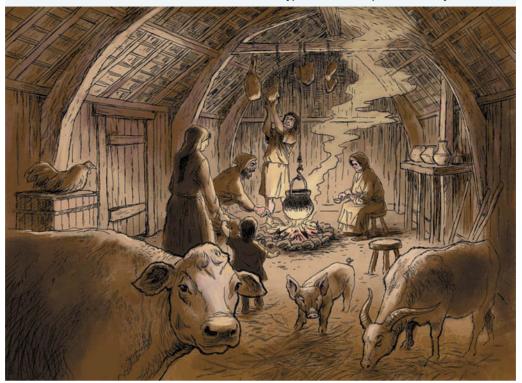
In Europe during the Early Middle Ages, smaller, weaker states replaced the Roman Empire. A new kind of **self-sufficient** society developed. Some big cities declined while others grew and population levels changed. There was less trade and learning; wars were frequent and destructive; and plagues could be devastating.

As the Roman Empire collapsed, landowners could no longer prevent their slaves from leaving. The huge plantations worked mostly by slaves broke down and, about 500 CE, the amount of farmed land shrank. But between 700 and 1000 CE, farm production grew. Warmer weather during those centuries probably helped. From about 800 CE, a new way of farming, known as the three-field system, developed on the manors of big landowners.

A new social system

Local power and loyalties replaced the central power of the former Western Roman Empire. The new states did not have ancient Rome's power to collect taxes and to keep professional armies, so kings depended on local landowners to fight for them. This made big landowning families increasingly powerful and local rulers weaker. With such changes came feudalism. Under the feudal social system, peasants worked land and received protection in return for serving a landowner — usually a lord or a knight. The landowner held land in return for serving a king (see topic 4 Medieval Europe).

SOURCE 1 A modern artist's reconstruction of a typical medieval peasant family house



2.5.2 Population, learning, cities and trade

At the beginning of the Early Middle Ages, population levels fell because of wars, shrinking food production, epidemics and loss of jobs in manufacturing and trade. In 542 CE, over 230 000 people died of a plague in Constantinople. This same epidemic may have killed 100 million people worldwide. However, from the sixth century, population levels rose and they continued to rise until the early fourteenth century.

Literacy and learning

Charlemagne (see **SOURCE 2**) was the first 'Emperor of the Holy Roman Empire' (see 2.4 Religions on the move). He made his capital, Aachen, a great centre of learning. However, in most of western Europe during much of the Early Middle Ages, learning survived only in monasteries.

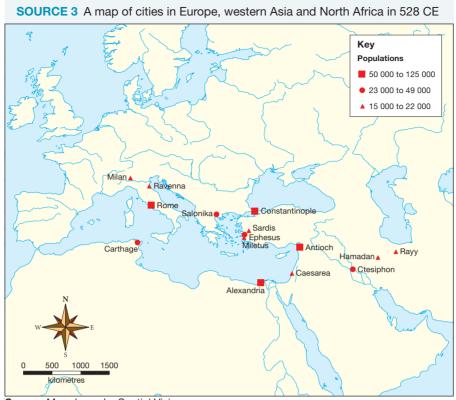
In contrast, literacy and the learning of ancient Greece and Rome were kept alive in the Byzantine Empire. In the same period, Islamic societies experienced a golden age of learning as ancient books from Egypt, Greece, Rome, Persia and India were translated into Arabic. This helped the Islamic world to advance further in science and medicine than Christian Europe.

SOURCE 2 A statue of Charlemagne in Vatican City

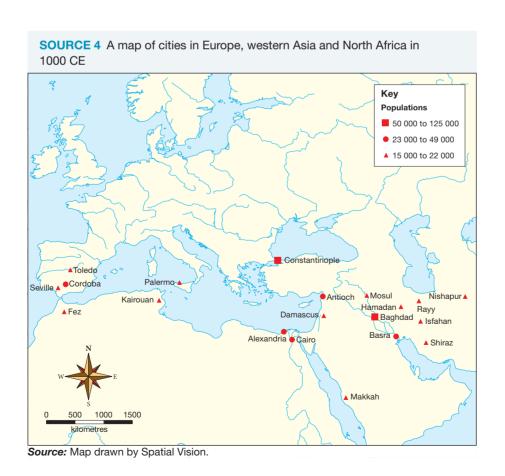


Cities and trade

Under the Roman Empire, cities had administered provinces, raised taxes and been centres for trade and the production of goods. Cities no longer served these purposes, and so their populations declined. However, by the tenth century, many European cities were growing again. Trade became difficult because there was no longer a big and powerful central state to construct and maintain roads. Wars and lawlessness also made it dangerous to travel or transport goods over long distances. By the eighth century, Europe's trade had fallen to a tiny fraction of the level of the first century. This was partly because Muslim expansion had cut Europe's trade routes to the east. In contrast, Islam's network of caravan trade routes was huge.



Source: Map drawn by Spatial Vision.



DID YOU KNOW?

Arab conquests in Central Asia and Africa gave Muslims control of gold and silver mines. Some of this wealth was used to purchase weapons, timber, furs and slaves from Europe. Vikings supplied the slaves by kidnapping people during raids. European merchants did the buying and selling that delivered the slaves to the Arabs.

2.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

2.5 Exercise 1: Check your understanding

- 1. HS1 What happened to the ancient Roman system of farming on plantations worked by slaves?
- 2. HS4 Why were the new local rulers weak compared to those who once held power in the Roman Empire?
- 3. HS1 Explain what epidemics are and what effects they could have.
- 4. HS1 What role did monasteries play in preserving learning?
- 5. HS4 List reasons why population levels fell in the first centuries of the Early Middle Ages.

2.5 Exercise 2: Apply your understanding

- 1. HS3 What can you tell about the way of life of medieval peasants from SOURCE 1?
- 2. HS3 Look at SOURCE 2.
 - (a) Describe the way Charlemagne is portrayed in this statue.
 - (b) What were his achievements that would have led to him being considered worthy of such a statue? You may need to refer to 2.4 Religions on the move to answer this question.
- 3. HS3 Compare SOURCES 3 and 4 and check them against SOURCE 2 in subtopic 2.4.
 - (a) List the cities with populations over 23 000 people in the year 528 CE.
 - (b) List the cities with populations over 23 000 in the year 1000 CE.
 - (c) Which of the second group of cities were under Christian control?
 - (d) Which of the second group of cities were under Muslim control?
 - (e) As cities were centres of trade and learning, what conclusions can you draw about changes in trade and learning in the Muslim and Christian worlds during the Early Middle Ages?
- **4. HS4** Create a mind map to demonstrate the main changes in Europe between the fall of the Roman Empire and around 1000 CE in:
 - (a) farming
 - (b) population levels
 - (c) learning
 - (d) cities
 - (e) trade.
- HS5 Identify and describe the reasons why the Muslim world was more advanced than the Christian world during the Early Middle Ages.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.6 Rulers, religion and the changing map of medieval Europe

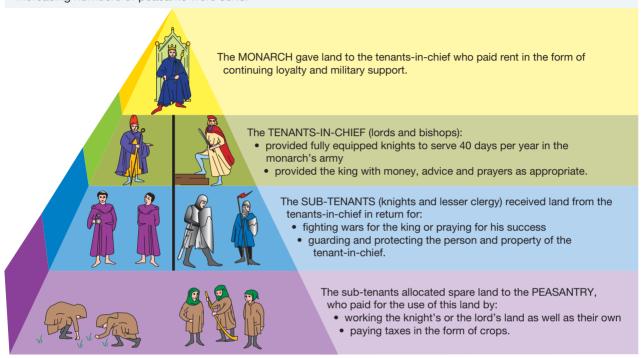
2.6.1 Rulers and the people

Later medieval times saw the growing power of rulers and big landowners, increased inequality, the further spread of major religions and an increase in the scale and destructiveness of warfare.

Under feudal systems in medieval times, kings were at the top of societies. In many kingdoms, all land theoretically belonged to the king. The next most powerful class was made up of tenants-in-chief (big noble landowners). They were followed by sub-tenants (knights and lesser clergy). Each of these groups received lands from those above them in return for serving or fighting. At the bottom of society were the peasants, who worked to provide a surplus for those above them (see **SOURCE 1**).

Inequality was common to all medieval civilisations. In most societies, slaves were only a small proportion of the population. However, by around the tenth century, **serfdom** became the lot of most peasants. Conditions varied from place to place, but generally, serfdom meant that peasants were not free to leave the land. It also meant that feudal lords had the right to force serfs to work for them, to tax them and to place other burdens on them. It was a kind of slavery that ended in most of western Europe by the fifteenth century, but continued in eastern Europe and much of Asia and Africa until much later.

SOURCE 1 A diagram showing the organisation of medieval society under feudalism. From the tenth century, increasing numbers of peasants were serfs.



War

Wars continued to be frequent and many were fought on a bigger scale. New technologies made them even more destructive. The invention of the stirrup enabled heavily armed knights to fight on horseback. New weapons such as the crossbow and longbow caused high casualties. Castles and walled cities offered some protection until gunpowder was adopted for war. By the fourteenth century, wealthy kings could hire **mercenary** armies to fight their rivals and crush rebellious nobles by using cannons to smash castle walls. Peasants were the main victims — armies killed and maimed them, stole their food and animals, and destroyed fields and villages.

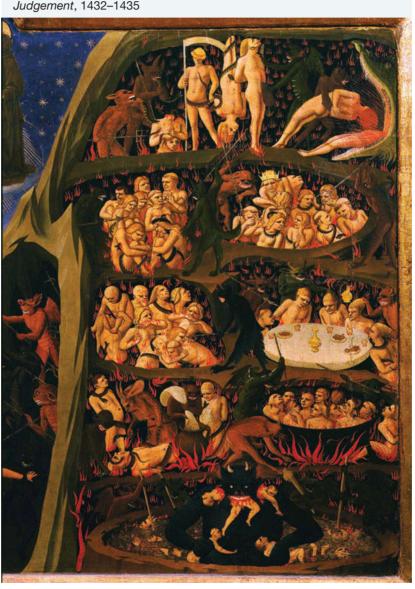
2.6.2 Religion and rulers

Traditional local religions declined due to the spread of Islam, Christianity and Buddhism. Increasingly, rulers claimed to be chosen by gods. In Christian Europe, kings claimed to rule by 'divine right'; that is, they were God's chosen representatives on Earth. In Africa and in the Buddhist and Hindu kingdoms of Asia, rulers claimed to be demigods.

DID YOU KNOW?

In 1054 CE, the Christian Church split, creating a division that has lasted to the present. Western Europe followed the Catholic Church while most of eastern Europe followed the Orthodox Church.

In societies where rulers claimed such powers, religious leaders usually supported them. This meant that attempts to overthrow a ruler could be seen as rebellion against a society's god or gods. In Christian Europe, priests taught ordinary people that their unequal position in society was God's will and that they must accept it. Generally, people did as the Church told them. Life was short and the promise of heaven offered hope of a better life after death. The threat of burning in hell was a big incentive to obey the Church (see **SOURCE 2**). However, such threats did not prevent nobles and kings waging war against one another. Nor did they prevent members of royal families murdering each other to gain power.



SOURCE 2 Detail from medieval Italian artist Fra Angelico's The Last Judgement, 1432-1435

DISCUSS

In small groups, discuss what you think each social class in a feudal society would have gained from [Intercultural Capability] religious ideas.

In small groups discuss ways in which religious beliefs helped rulers to maintain their power.

[Intercultural Capability]

2.6.3 The changing map of Europe

The map of Europe changed often during later medieval times. Kings of strong states increased their power while some new kingdoms also became powerful. From 1095 CE, Europe launched Crusades to take the **Holy Land** from the Muslims (see topic 4 Medieval Europe). Crusader states were set up in the Middle East, but Acre, the last crusader stronghold, fell to the Muslims in 1291. By the end of the Middle Ages, Christians had driven the Muslims out of Spain. However, Muslims came to dominate Europe's Balkan Peninsula.



Source: Map drawn by Spatial Vision.

Western Europe

In 1066, William, Duke of Normandy, invaded and conquered England with an army of Norman knights. In the following centuries, Norman England invaded Ireland, conquered Wales and fought to dominate Scotland, From 1337, England fought the Hundred Years' War with France over English claims to the French throne. The war saw the weakening of the power of feudal lords because kings came increasingly to depend on standing armies of peasant infantry armed with longbows, rather than mounted knights. From 1445 to 1485, England was divided by civil war (the War of the Roses) over rival claims to its throne.

Southern Europe

In the eleventh and thirteenth centuries, the Muslims were driven out of Portugal, southern Italy and Spain, with the last stage being the capture of Granada in 1492. In Italy, independent city-states grew wealthy through control of trade in the Mediterranean Sea.

The Byzantine Empire and the Balkans

In the eleventh and twelfth centuries, the Byzantine Empire was powerful. However, Bulgaria had a successful rebellion in 1185 and crusaders captured Constantinople in 1204. The Byzantine Empire disappeared when the Ottoman Turks captured Constantinople in 1453. By the end of the Middle Ages, the Turks controlled the entire Balkan Peninsula.

Central Europe

Throughout later medieval times, the area that is now Germany and other modern central European states formed the Holy Roman Empire. It was made up of several kingdoms, principalities and city-states. Hungary became powerful and Poland formed a huge state through a union with Lithuania, the last part of Europe to be converted to Christianity.

Eastern Europe

In the thirteenth century, the Mongols (Tartars) from Central Asia invaded eastern Europe, conquering huge areas of Russia and creating vassal states. In the sixteenth century, the Tartars were driven out of Russia.

-Explore more with my World HistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > Byzantine Empire
- Overview > Invasion of Britain

2.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

2.6 Exercise 1: Check your understanding

- 1. HS1 Explain what it meant to be a serf.
- 2. HS1 Rulers and nobles waged wars but which class usually suffered regardless of which side won?
- 3. HS1 Why do you think rulers claimed to be chosen by gods or claimed to be demigods themselves?
- 4. HS1 What did 'divine right' mean?
- 5. HS1 Suggest why rulers might have felt less fear of hell than their subjects felt.
- 6. HS1 Against which countries did Norman England make war?
- 7. HS4 How did the Hundred Years' War change the nature of medieval warfare?
- 8. **HS1** When were the Muslims driven out of most of south-western Europe?

2.6 Exercise 2: Apply your understanding

- 1. HS3 Referring to SOURCE 1, explain how people at each level of medieval society benefited from those below them.
- 2. HS3 Which social class really provided everything for all higher classes?
- 3. **HS3** Analyse **SOURCE 2** using the following guestions.
 - (a) Who created this source?
 - (b) For what reasons might it have been created?
 - (c) Describe the tortures suffered by the sinners in this depiction of hell.
 - (d) How do you think believing in the possibility of such an afterlife would affect people's behaviour?
- 4. HS3 Examine SOURCE 3.
 - (a) What were the main states in central Europe?
 - (b) Which part of Europe was controlled by the Mongols in the thirteenth and fourteenth centuries?
- **5. HS2** Create a timeline of events in Europe during later medieval times using the dates and references in this subtopic.
- **6. HS2** Outline the conclusions you can draw from your timeline about territory gained or lost in medieval Europe by Christians and Muslims.
- 7. **HS4** Describe how rulers, war and religion changed Europe during late medieval times.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.7 Migrations, invasions and empires in Asia

2.7.1 Change in Asia and the Pacific

Outside the Islamic and Christian worlds, other peoples were on the move. From about the eighth century, great migrations and invasions took place and new empires arose far from the old centres of civilisation.

East Asia

On the islands of Japan, a social system developed that was similar in many ways to European feudalism. From 794 to 1192, the powerful Fujiwara family dominated Japan. Rulers depended on local lords called daimyo to control local areas (see topic 8 Japan under the shoguns).

In China, the Tang dynasty fell in 907 because of rebellion and invasions by nomads. The Chinese empire fell apart until its southern territories were restored under the Song dynasty (960–1279). Under the Song, China experienced a golden age in literature, the arts and sciences, and produced new inventions including gunpowder and printing with moveable type.

South and South-East Asia

From the seventh century, most of India was divided into Hindu kingdoms that were often at war with each other. However, Muslims from Afghanistan came to dominate the north-west. By 1206, they had captured most of northern India, which became known as the Delhi Sultanate.

Indian traditions also influenced civilisations that emerged in much of South-East Asia from the sixth century. This

SOURCE 1 The Longhua pagoda in Shanghai is a seven-storey Buddhist temple. It was constructed in the tenth century during the Song dynasty.



region came to be dominated by the Khmer Empire with its centre at Angkor in Cambodia from the beginning of the ninth century to the early fourteenth century. Distinct from the rest of South-East Asia, northern Vietnam was strongly influenced by Chinese culture, as it was part of the Chinese empire from the fourth century until it broke away and formed the state of Dai Viet in 939.

The Pacific

Also during this period, and unknown to the peoples of the continents, there were big movements of Polynesian peoples who navigated over vast distances across the Pacific Ocean. Their first migrations probably started from Malaya and Indonesia. Polynesians left no written records, but it is believed they reached Easter Island and Hawaii about 500 CE and New Zealand about 1000 CE (see topic 9 Polynesian expansion across the Pacific).

Explore more with my World History Atlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Asia-Pacific world > Khmer Empire
- The Asia-Pacific world > Japan under the shoguns
- The Asia-Pacific world > Polynesian expansion

2.7.2 The rise and fall of the Mongol Empire

Arguably the most amazing event of these times was the eruption of hordes of ferocious mounted warriors from Central Asia. In 1206 CE, a chief called Temujin became **khaghan** of the Mongol and Turkic tribes. He took the title Genghis Khan and united the tribes into a disciplined army that fell upon surrounding civilisations, killing and conquering over an enormous distance.

Why did the Mongols conquer?

One theory is that the Mongols needed to expand the territory they controlled. Low rainfall had reduced the amount of grass available for their stock, and the Jin and Xia dynasties that controlled northern China had cut off the trade upon which the Mongols depended. These states and China became Genghis Khan's first targets for invasion.

How did the Mongols conquer?

As they conquered other societies, they took some of the defeated men into their own armies; foremost among these were the Turkic Uighurs. The Mongols used cavalry, consisting of lightly-armed, fast-moving archers and lancers. They used giant catapults to bombard town and city walls. But their main weapon was terror. If a city or town refused to surrender, the Mongols would massacre everyone. It is possible that 90 per cent of Eastern Persia's population died in Mongol invasions. Many millions were also killed in China and Russia.

SOURCE 2 From the Muslim scholar Ibn al-Athir, The Complete History, written c. 1231

This thing involves . . . the greatest catastrophe . . . which befell all men generally, and the Muslims in particular

For . . . these Tatars spared none, slaying women and men and children, ripping open pregnant women and killing unborn babies . . .

Tatars conquered most of the habitable globe, and the best, the most flourishing and most populous part . . . in about a year; nor did any country escape their devastations which did not fearfully expect them and dread

Moreover they need no . . . supplies, for they have with them sheep, cows, horses . . . the flesh of which they eat . . .

Stories have been related to me . . . as to the terror of the Tatars . . . so it is said that a single one of them would enter a village or a quarter wherein were many people, and would continue to slay them one after another, none daring to stretch forth his hand against this horseman . . .

The Mongols in East Asia and South Asia

Genghis Khan advanced into China in 1207 after defeating the Jin and the Xia empires north of China. His grandson, Kublai Khan, completed the invasion in 1260 and founded the Mongolian Yuan dynasty. In 1368, the Chinese rebelled and founded the Ming dynasty. Over the next thirty years, the Chinese drove the Mongols out. Under Ming, China's prosperity was restored, manufacturing and trade increased, and thousands of peasants were conscripted to build vast palaces and to strengthen the Great Wall.

In 1281, Kublai Khan sent a huge fleet with 150 000 soldiers to invade Japan. While the Japanese were desperately fighting to prevent the landing, a typhoon destroyed the Mongol fleet.

The rulers of several states decided that it was better to become vassal states and pay tribute to the Mongols rather than be conquered. These states included Burma, the Khmer Empire and some Thai states.

Mongol forces led by Timur the Lame captured Delhi and massacred its people in 1398. After Timur left, India broke up into warring states. In 1526, Babur, another descendant of Genghis Khan, defeated India's Hindu and Muslim kings and founded the Mughal dynasty.

SOURCE 3 The sacking of Suzdal by Batu Khan from a sixteenth century Russian chronicle. In February 1223, Suzdal, the capital of a Russian principality, was captured by a Mongol army led by Batu Khan and burned to the ground.



The Mongols in eastern Europe and western Asia

In 1218, Genghis Khan ordered his generals to complete China's conquest while he led other Mongol forces west. Mongol armies invaded Russia and penetrated eastern Europe as far as Hungary and Poland by 1241. Lithuania, Bulgaria and Serbia became vassal states.

Other Mongol armies invaded the Muslim lands of western Asia, including Persia. They destroyed the Abbasid Muslim dynasty and occupied its capital, Baghdad, in 1285.

Running the Mongol Empire

The Mongol Empire was the largest **contiguous** empire in human history. At its peak, it was four times the size reached by the Roman Empire. The Mongols encouraged trade because of the benefits it brought them, and they tolerated different religions. Their own religion was **shamanism** but they provided tax benefits to Buddhist, Daoist, Islamic and Christian clergy to win support.

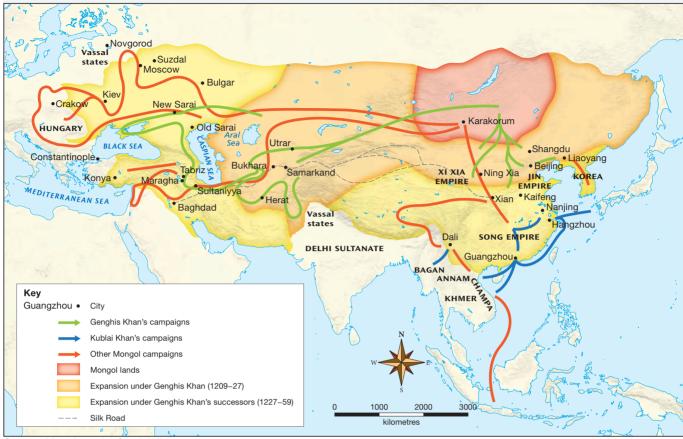
The collapse of the Mongol Empire

After Genghis Khan's death, his empire was divided between his sons and grandsons, creating four **khanates**. From 1269, the khanates often fought each other. There was also division within khanates as some Mongols wanted to adopt the settled ways of the people they ruled while others wanted to keep their nomadic traditions. Gradually, the Mongols lost control of lands they had conquered.

DID YOU KNOW?

In China, Kublai Khan and his successors encouraged painting, theatre, and advances in science, engineering and medicine. They employed Confucian scholars and Buddhist monks as advisers; oversaw the construction of palaces, roads and postal stations; and encouraged travel, trade and the exchange of ideas between the East and the West.

SOURCE 4 A map of the Mongol Empire near its peak in 1280



Source: Map drawn by Spatial Vision.

Explore more with my World History Atlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

• Expanding contacts > Mongol Empire

2.7 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

2.7 Exercise 1: Check your understanding

- 1. HS1 What did the social system of Japan have in common with that of medieval Europe?
- 2. HS1 Which older civilisations influenced South-East Asia?
- 3. HS1 What were the Mongols' motives for invading countries in the beginning of the thirteenth century?
- 4. HS1 How were the Mongols able to overwhelm many great civilisations?
- 5. HS1 Why were the Mongols tolerant of different religions in their empire?

2.7 Exercise 2: Apply your understanding

- 1. HS3 In what ways does SOURCE 1 provide evidence to support the view that the Song dynasty was a golden age in China?
- 2. HS3 Use SOURCES 2 and 3 to answer the following questions and to support your answers.
 - (a) How did the Mongols strike fear into their enemies?
 - (b) Why were Mongol armies able to advance without waiting for supplies?

- 3. HS3 To appreciate the vast size of the Mongol Empire, compare SOURCE 4 with a modern atlas to identify at least 10 modern countries that occupy lands that were part of the Mongol Empire or dominated by it by 1280. List them roughly from east to west.
- **4. HS4** Referring to the sources and other information in this subtopic, explain why the age of the Mongol Empire can be regarded as a turning point in Asian and European history.
- 5. **HS6** Explain why the Mongol Empire has great historical significance.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.8 Population, cities and trade

2.8.1 The rise of the cities

Many of the great changes that occurred between the 1400s and about 1750 resulted from events or ideas from later medieval times. These included the spread of Islam to India and parts of South-East Asia, the opening of trade under the Mongol Empire and the fall of Constantinople. Later medieval times also saw advances in farming and sailing technologies, and the growth of populations, cities and trade. All of these changes would influence the world in the centuries to come.

World population grew because changes in technology enabled more food to be produced. New technologies spread across Europe, Asia and Africa through trade routes. Important technological changes included:

- the mouldboard plough, which enabled heavy European soils to be turned and drained
- better irrigation methods
- improved breeds of farm animals, providing more meat from each animal
- the horse collar, enabling horses to pull heavier loads without choking
- improving crops and enriching soils
- cultivation of rice in areas such as the huge Ganges Delta in India
- the spread of techniques for growing crops such as corn in the Americas.

The population of Europe, Asia and Africa reached about 235 million by 1250 CE. But in the early fourteenth century, population levels fell due to:

- epidemics, especially the Black Death (bubonic plague) that began in 1347 and reduced the population by possibly a third
- the Little Ice Age (a cold period in the Northern Hemisphere), which caused many famines because much less food could be grown.

However, the population again grew rapidly after about 1350, reaching about 400 million by 1500. Environmental problems also grew. Forests were cut down for wood and to clear more land for farming, which increased soil erosion and flooding.

The number of big towns and cities once again grew. This was possible because:

- improved agriculture provided a surplus to feed people in towns and cities
- towns and cities were growing centres of trade, populated mainly by merchants and skilled craftsmen and their families.

As cities became wealthy, their power grew. In some European countries, representatives of cities sat alongside lords and church leaders as advisers to kings. Some trading cities came to be almost independent states, governed by wealthy citizens.

SOURCE 1 Cities like Genoa in Italy became wealthy trading ports from the fifteenth century.



2.8.2 Trade routes

Trade expanded along ancient trade routes including the Silk Road, and new trade networks were opened. Goods traded included spices, silk, tea, salt, horses, gold and slaves. Land trade routes criss-crossed Europe, Asia and North Africa. Sea trade routes crossed Europe's Atlantic coast; Africa's east coast; the Baltic, Mediterranean, Black, Red and Arabian seas; the Bay of Bengal; and the South China Sea. Long-distance voyages were very dangerous but they were helped by new technologies in ship-building and inventions such as the mariner's astrolabe and the sternpost rudder. The Chinese developed large ships that could carry hundreds of sailors and merchants. Between 1405 and 1433, Chinese admiral Zheng-He took a fleet all the way from China to east Africa.



SOURCE 2 A map of trade routes of Europe, Asia and Africa in later medieval times

Source: Map drawn by Spatial Vision.

DID YOU KNOW?

Towns could be dangerous places to live. There were few effective ways of getting rid of wastes, so the smell in towns was usually terrible. Also, fires in workshops and houses spread quickly and often. The city of Rouen in France was destroyed by fire eight times in 25 years.

Explore more with my World History Atlas-

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

Overview > Non-European exploration

2.8 ACTIVITY

Conduct research and write a brief account of the reasons for the wealth and power of one trading city in this period.

Analysing cause and effect

2.8 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

2.8 Exercise 1: Check your understanding

- **1. HS2** Many of the real changes that occurred between the 1400s and about 1750 resulted from events or ideas from which time period?
- 2. **HS1** Copy the following sentences and complete them by filling in the gaps.
 - (a) The world's population rose until the early _____ century because _____ enabled agriculture to produce more _____.
 - (b) In the early fourteenth century, population levels fell in Europe, Africa and Asia due to _____ and
 - (c) Clearing forests for agriculture caused problems such as _____ and flooding.
- 3. HS5 Give two reasons for the increase in the number of large towns and cities in the Late Middle Ages.
- **4. HS1** Name some of the goods that were exchanged along trade routes.
- 5. HS1 How did the mariner's astrolabe and the sternpost rudder improve travel by sea?

2.8 Exercise 2: Apply your understanding

- 1. **HS3** Look closely at **SOURCE** 1. Identify and describe the features that provide evidence of Genoa's past prosperity as a trading port.
- 2. **HS3** Imagine you are a merchant who is about to set out along one of the trade routes shown in **SOURCE 2**. Make a plan for your journey. Include:
 - (a) a copy of the route you will take
 - (b) a list of provisions for your journey
 - (c) a list of places where you will get fresh supplies of food
 - (d) an estimate of the distance of your journey. (Hint: Use the scale in SOURCE 2.)
- 3. HS3 Choose one of the trade routes in SOURCE 2.
 - (a) Name the medieval cities along the route.
 - (b) Use a modern atlas to list the countries and/or seas crossed by this trade route.
 - (c) Make a list of at least five questions that a historian could ask about this trade route.
- 4. HS5 How might the location of a city along a trade route contribute to its prosperity?
- 5. HS5 Why would some cities such as Genoa and Venice have gained huge advantages from their locations?

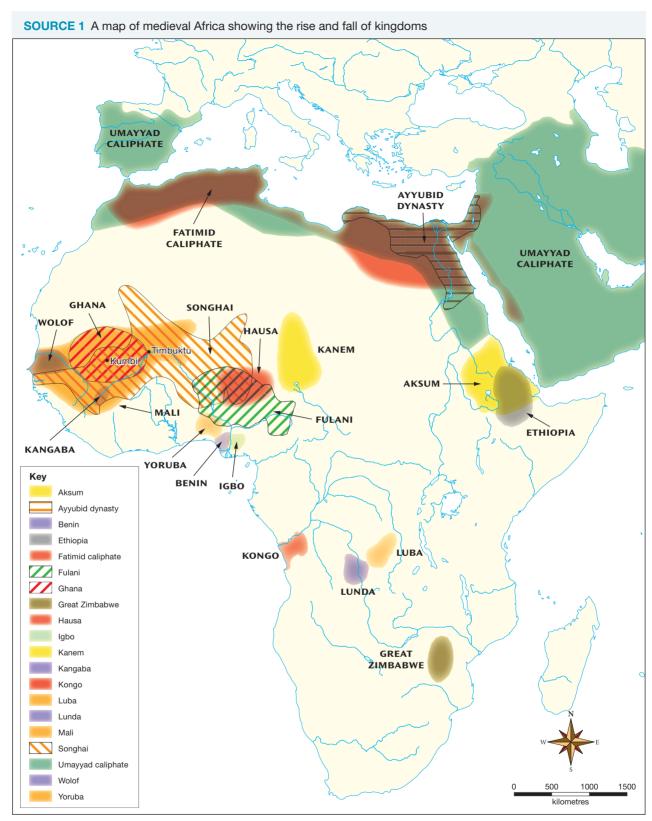
Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.9 Muslim traders and Africa

2.9.1 Trade, wealth and slavery

In the seventh century, Muslim Arabs conquered coastal North Africa. From there, Arab traders gradually spread along the east coast. Because traders could cross the deserts with camels, Arabs were able to spread Islam south of the Sahara into several West African kingdoms.

By the thirteenth century, Arab Muslims lived in and traded from bases in African coastal towns, from modern-day Somalia to Tanzania. Arab **dhows** brought manufactured goods to Africa from the Arabian Peninsula and India. Goods included weapons, tools, cloth, glass and pottery. The boats sailed back carrying slaves, ivory and gold.



Source: Map drawn by Spatial Vision.

Ghana

Ghana was the strongest of the farming kingdoms that arose in West Africa from the ninth century. Ghana was located north of the modern state of Ghana in what is now Mali. In 1062 CE, Muslim Amazigh (Berber) nomads attacked Ghana, but it took 14 years before they captured its capital, Kumbi. Ghana collapsed but Mali rose in its place in the thirteenth century.

Mali

The first ruler of the Mali Empire was Sundiata (1230–1255). He expanded its territory and gained control of the gold trade, in which Arab traders transported gold north through caravan routes. Mali's rulers became Muslims and gained great wealth. When Mana Musa, who ruled Mali from 1312 to 1327, went on a pilgrimage to Mecca, he took a huge party with him, including 12 000 slaves dressed in silk. Arab scholars were brought to Mali and, in the fourteenth century, they built a university at Timbuktu that operated until the sixteenth century, when invaders from Morocco destroyed it.

SOURCE 2 Conical tower within the ruins of Great Zimbabwe



Other African civilisations

By the fifteenth century, Islam also influenced other wealthy African trading states, including the Hausa city-states, Kanem and the Songhai Empire. City-states also emerged in Guinea. In the sixteenth century, Portuguese and Dutch explorers visited some of their towns, including Benin. Between the thirteenth century and the fifteenth century, Great Zimbabwe became a wealthy African kingdom by trading gold through Muslim merchants on the coast.

2.9 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

2.9 Exercise 1: Check your understanding

- 1. HS1 In which parts of Africa did Arab influence spread in medieval times?
- 2. HS1 How did the camel and the dhow help Muslims to trade and spread their influence in Africa?
- 3. HS1 What types of cargo did Arab traders bring into and take out of Africa in their dhows?
- 4. **HS6** What did Sundiata accomplish as ruler of the Mali Empire?
- 5. HS6 Why is Timbuktu significant?

2.9 Exercise 2: Apply your understanding

- 1. **HS2** Create a timeline of medieval milestones in Africa using the information in this subtopic.
- 2. HS3 Using SOURCE 1 and a modern atlas:
 - (a) make a list of West African kingdoms in the Middle Ages
 - (b) find out which modern countries occupy the sites of these kingdoms.
- 3. HS3 Look carefully at SOURCE 2 and explain how it provides evidence of a great civilisation.
- 4. HS4 Using the sources and other information in this subtopic, identify what changed in Africa due to the activities of Muslim traders.
- 5. **HS5** Explain how Muslim traders were able to spread their influence in Africa between the seventh century and the sixteenth century.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.10 The emerging power of western Europe 2.10.1 New ways of thinking

Western Europe was changed by three great movements during early modern times. The first was the Renaissance that began in the fifteenth century. The second and third were the Scientific Revolution and the Enlightenment of the eighteenth century. Early modern times also saw western Europeans spread their power by finding new sea routes, exploring, taking control of trade, conquering new lands and founding **colonies**. Three things — new ideas, the quest for riches and new uses for inventions — made this possible.

When Marco Polo visited China in the thirteenth century, he was amazed by its wealth and culture. Nobody in his time could have imagined that western Europe would come to dominate the world. The changes that made this possible started with the Renaissance in Italy in the 1400s. It was a period of renewed interest in the learning and arts of ancient Greece and Rome. It led to a movement in which some people began to think more independently and to seek a better understanding of their world.

The Scientific Revolution

The Renaissance brought a scientific revolution that encouraged thinkers to challenge authority and be guided by observation and reason. But such thinking was dangerous as the Catholic Church still expected people to follow its interpretations of science. Among the most famous of the new scientific thinkers were Leonardo da Vinci (1452–1519) and Galileo Galilei (1564–1642). Galileo proved by observations that the Earth rotated around the sun and he published his findings in 1632. But the Church still insisted that the Earth was the centre of the universe; they put him on trial and threatened him with torture. Galileo was forced to recant (take back what he had proved) and was kept under house arrest for the remainder of his life. However, challenges to old beliefs could not be stopped completely. Increasingly, the Church found it harder to crush new ways of thinking, especially after printing presses helped new ideas to spread.



SOURCE 1 The trial of Galileo, painted in the seventeenth century

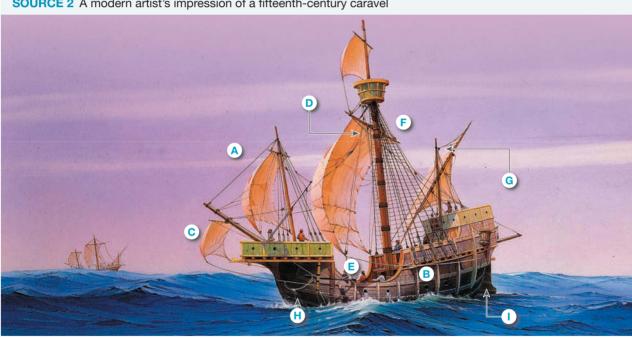
The Enlightenment

By the eighteenth century, educated Europeans were influenced by what came to be known as the Enlightenment. In this period, a number of remarkable Europeans carried out their own experiments in the search for greater understanding. In this 'Age of Reason', thinkers criticised old systems of power. Their ideas would inspire others to overthrow the power of the Church, kings and nobles in the French Revolution, which began in 1789.

2.10.2 The guest for riches and the use of inventions

In the thirteenth century, the Mongols had encouraged trade and foreign contacts throughout their empire. European merchants had travelled along the Silk Road, creating a growing European demand for luxury goods from Asia. This demand contributed to the search for a sea route to Asia, especially after 1453 when the Ottoman Turks captured Constantinople and took control of overland trading routes linking Europe and Asia. By the 1400s, many merchants had become very wealthy. Some became bankers who lent money to rulers. Merchants encouraged artists and architects and saw that great profits might be made by funding exploration to find a sea route to Asia.

Western Europe's expansion was also made possible by its use of inventions from other cultures. Many inventions that Europeans adopted originated in China and had been in use for hundreds of years. These included gunpowder, the compass and printing. Clockwork had been invented in the Byzantine Empire. Modern mathematics had spread from fourth century India through the Islamic world to Europe. Lateen sails had been used for centuries on Arab dhows. But Europeans put such inventions to better use. Printing spread rapidly after Johannes Gutenberg produced the first European book on a printing press using moveable type in 1445. By 1500, there were about a thousand printers in Europe and new ideas were spreading widely through printed books. The first portable clock was made in 1410. Hans Lippershey, a Dutchman, made the first telescope in 1608.



SOURCE 2 A modern artist's impression of a fifteenth-century caravel

- A Caravels were about 15 metres long and weighed about 80 tonnes. They were smaller, lighter and faster than the later Spanish galleons.
- B Food supplies included salted fish, pickled meat, weevil-infested biscuits, rice, dried beans, chickpeas and raisins. On long journeys, sailors often became very sick with scurvy (caused by a lack of vitamin C) as they had no fresh fruits and vegetables.
- © Water and wine were stored in casks and often went 'off' on long journeys.
- Square sail
- (E) As well as ordinary seamen, a ship's crew included carpenters, cask makers and sailmakers.
- F A mix of square and lateen (triangular) sails made caravels easy to manoeuvre, especially when sailing into headwinds.
- G Lateen sail
- (H) Wooden planks were fixed side by side onto the hull with wooden pegs. To keep the ship steady under sail, the bottom of the hull was often filled with gravel.
- 1 A rudder at the back of the ship (adapted from the Chinese) meant the ship could steer without oars.

Mathematics, compasses, telescopes and clockwork were very important for navigating ships. In the fifteenth century, a new shipbuilding method emerged in Europe. It used the lateen sails of Arab dhows with the fixed square rigged sails that had been used in ancient galleys to produce the world's first real ocean-going ship, the caravel (see SOURCE 2). From the beginning of the sixteenth century, carracks were developed from caravels. These new ships were bigger, faster and could be sailed under different wind conditions.

DID YOU KNOW?

The first paperback books were printed in Venice by Aldus Manutius. They were made without heavy covers so that they could be carried in saddlebags.

DISCUSS

Form small groups to discuss ways in which the printing press, gunpowder and the compass could have contributed to the growth of European power. **Determining historical significance**

Hold a class discussion on how history might have been different if the printing press had never been invented. [Critical and Creative Thinking Capability]

Explore more with my World History Atlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

Overview > The West visits the East

2.10 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

2.10 Exercise 1: Check your understanding

- 1. HS1 What new attitudes marked the Renaissance, the Scientific Revolution and the Enlightenment?
- 2. **HS1** Describe the attitude of the Catholic Church to these new ways of thinking.
- 3. HS1 Why was the Church unable to stop the spread of scientific thinking?
- 4. HS1 Why was the Silk Road important for trade?
- 5. **HS1** What motivated Europeans to find a sea route to Asia?
- 6. **HS1** Describe the role of merchants in the guest for a sea route to Asia.

2.10 Exercise 2: Apply your understanding

- 1. HS3 Look closely at SOURCE 1.
 - (a) Describe what is happening in this painting.
 - (b) Why was Galileo on trial?
 - (c) How would you explain the different perspectives of Galileo and the people who were prosecuting him?
- 2. HS3 Using SOURCE 2, identify three features of the caravel that would have made it more suitable than earlier ships for sailing across oceans.
- 3. HS6 Draw a mind map to show how new ways of thinking, the quest for trade and the use of inventions contributed to Europe's expansion from the fifteenth century.
- 4. HS5 How would the invention in 1445 of printing presses with movable type have made the spread of new ideas quicker and easier?
- 5. HS5 What advantages would Western Europe have gained from the invention of the telescope?

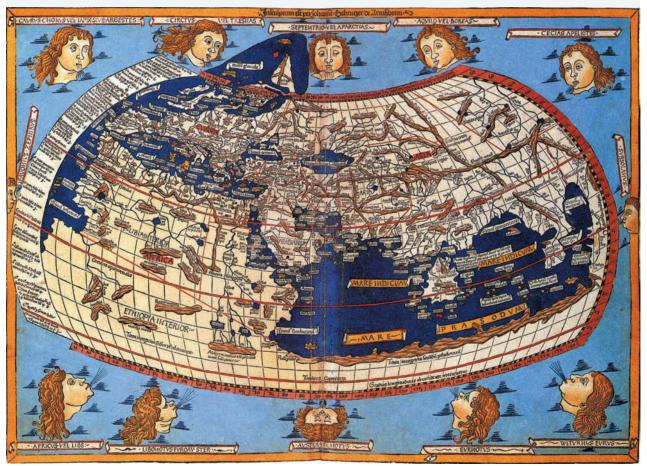
Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.11 Portuguese and Spanish voyages of discovery 2.11.1 Diaz, Columbus and Magellan

The spirit of inquiry that marked the Renaissance also contributed to European exploration and the expansion of Europe's influence throughout the world. Sea travel was extremely dangerous but there were huge profits to be made, and so the Portuguese and Spanish sailed through unmapped waters towards what many thought were the edges of the Earth.

Between the seventh and thirteenth centuries, Muslims had been the world's leading explorers and traders. But from the fifteenth century the lead was taken by the Portuguese and soon after by the Spanish. The small kingdom of Portugal took the first steps. Prince Henry, the governor of Portugal's southern coastal region from 1419, encouraged shipbuilders, sailors and cartographers. He founded a school for navigation and obtained funds from Italian and German bankers. Henry wanted to take over the African coastal trade from the Muslims. By 1446, Portuguese expeditions had explored and mapped the northwest coast of Africa and brought back cargoes of gold and slaves.

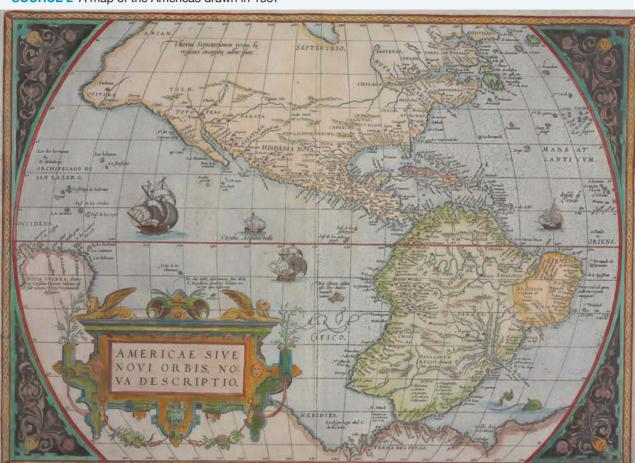
SOURCE 1 A map from *Cosmographia* printed in Germany in 1482. The map shows what Europeans knew of the world at that time.



In 1487, Portugal sent Bartholomew Diaz to find an eastern route to India by sailing around Africa. Diaz sailed down the west coast and reached the bottom of Africa but he had to turn back because many of his crew had died from diseases and the others refused to sail on. Ten years later, Vasco da Gama would succeed where Diaz had failed.

Columbus

With financial backing from Spain, Christopher Columbus, an Italian explorer, set out in August 1492 to find a western route to Asia. At that time, nobody in Europe knew that the Americas existed. So when Columbus reached the Americas in October, he believed he had reached Asia. Between 1493 and 1504, Columbus made three more voyages to the 'New World', as the Americas were called. He established Spain's first American colony on the island of Hispaniola and set the pattern of brutal Spanish treatment of the Native Americans.



SOURCE 2 A map of the Americas drawn in 1587

Magellan

Ferdinand Magellan was a Portuguese sailor but, like Columbus, he worked for Spain. Magellan believed that he could travel west to Asia if he sailed south of the route Columbus had taken. In 1519 he set out with five ships. Three reached the Philippines and the Moluccas but only one ship survived to return to Spain through the Indian Ocean in 1522. That ship had circumnavigated the world.



Source: Map drawn by Spatial Vision.

-<mark>Explore more with my**World**HistoryAtlas</mark>

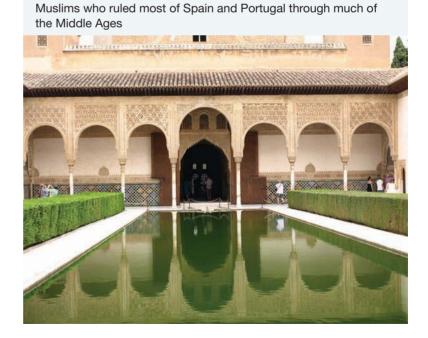
Deepen and check your understanding of this topic with related case studies and auto-marked questions.

• Overview > European exploration

2.11.2 Motives for empire-building

In the sixteenth century, Portugal gained an empire that included Brazil and ports in Africa, India, Malaya and China. Spain's empire included the Philippines and much of the Americas. Forces that motivated

- Portugal and Spain included:
 - rivalry with Muslim countries and the desire to take trade from the Muslims
 - the search for legendary but non-existent Christian kingdoms in Africa and Asia
 - growing demand for luxury goods from Asia
 - the search for gold and silver that could increase European wealth and be exchanged for Asian luxury goods such as spices, silks, cotton and porcelain
 - the desire to convert non-Christians to Catholic Christianity.



SOURCE 4 Part of the Alhambra, built near Granada in Spain by

2.11 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

2.11 Exercise 1: Check your understanding

- 1. HS1 Why might Columbus have believed that he was in Asia when he reached the Americas?
- 2. HS1 Of the five motives for empire-building listed in this section, which were mainly concerned with wealth and trade?
- 3. HS1 What were Spain's and Portugal's religious motives for conquests and empire-building?
- **4. HS1** Which of the five motives do you think were the most important to the Spanish and Portuguese? Give the reasons for your choice.
- 5. HS6 What did Diaz accomplish for Portugal?

2.11 Exercise 2: Apply your understanding

- 1. **HS3** Read the information on Magellan's voyage and look at **SOURCE 3**. Imagine that you are a member of the crew on the sole surviving vessel of Magellan's five ships. Describe how you would feel about the hazards of your voyage.
- 2. HS3 Compare SOURCES 1 and 2 and explain what Europeans knew about the world in 1587 that they did not know in 1482.
- **3. HS3** Look closely at the small section of the Alhambra in **SOURCE 4**. How would such achievements of the Muslims have influenced Spain's and Portugal's desire to take international trade from them?
- 4. HS4 Explain how voyages of discovery enabled Europeans to redraw the map of the world.
- HS6 Describe why Columbus's discovery of the Americas was historically significant even though it was accidental.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.12 Vasco da Gama opens the East

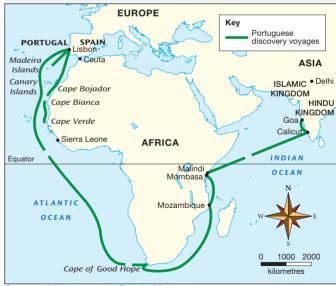
2.12.1 Vasco da Gama captures the spice trade for Portugal

In 1497, Vasco da Gama commanded the first ships to sail from Portugal to India. Da Gama returned to Calicut in India in 1502 and captured the city as a trading port for Portugal. The Portuguese set up other trading posts along Africa's west coast and along the sea route to China. This enabled Portugal to dominate the trade in spices and luxury goods.

Vasco da Gama grew up at a time when Portugal's aim was to sail around Africa's southern tip and on to India. Reaching India by sea would enable Portugal to take control of the very profitable trade in India's spices.

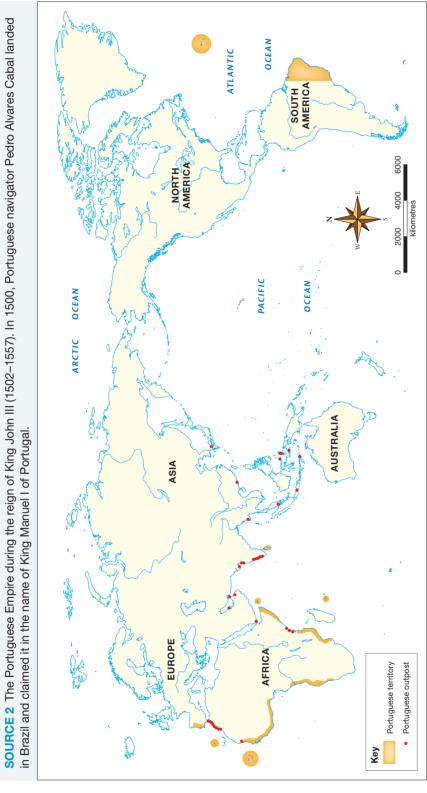
On 8 July 1497, da Gama set out with four Portuguese ships and 170 men along the route that Diaz had taken down the west coast of Africa. Rather than sticking close to the coast, da Gama sailed south from present-day Sierra Leone to reach the westerly winds of the South

SOURCE 1 A map showing Portuguese voyages of discovery in the fifteenth century



Source: Map drawn by Spatial Vision.

Atlantic Ocean. Diaz had discovered these winds a decade earlier and da Gama judged that they could blow his ships towards the bottom of Africa. It worked, but by the time the fleet reached the Cape it had travelled for more than three months over 8000 kilometres on the open ocean completely out of sight of land (see **SOURCE 1**).



Da Gama's fleet then sailed up Africa's east coast to the Muslim trading port of Mozambique where he clashed violently with the local Muslims. Further up the coast, da Gama robbed Arab trading ships. The fleet stopped briefly at Mombasa, provoking more hostility. The next stop was Malindi. Here, da Gama gained help from an Arab guide. With this man's knowledge of the winds, the fleet reached Calicut in India in May 1498. When he was unable to persuade the Hindu king of Calicut to grant trading rights, da Gama kidnapped several locals and set sail for Portugal with a valuable cargo of spices. When he returned to Portugal in 1499, da Gama had lost two ships and over half of his crew had died of scurvy.

Da Gama's second voyage

In his subsequent voyages, da Gama showed how ruthless he could be. In 1502, he led a fleet of fifteen ships with 800 men to capture Calicut. After capturing several Arab trading ships, da Gama bombarded Calicut with cannon fire. He also captured several rice boats and cut off the hands, ears and noses of their crew members. In the Indian Ocean, he seized a Muslim ship returning from Mecca. After robbing the 400 passengers — including women and children — of their valuables, da Gama ordered his men to lock them in the ship's hold, where they all died when da Gama had the ship set on fire. Vasco da Gama received many rewards from Portugal's King Manuel I. In 1524, he was made governor of Portugal's Indian trading colonies but he died of malaria soon after arriving there.

DISCUSS

For centuries, Vasco da Gama was regarded as a hero in Portugal. Form small groups to discuss the following question: 'Should Vasco da Gama be regarded as a hero or as a brutal criminal?' [Ethical Capability]





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Deepen and check your understanding of this topic with related case studies and auto-marked questions.

Overview > European exploration

2.12 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

2.12 Exercise 1: Check your understanding

- 1. HS1 Which type of winds did Diaz discover when he sailed from Sierra Leone to the South Atlantic Ocean?
- 2. HS6 What did Vasco da Gama's voyages achieve for Portugal?
- 3. **HS1** Why did Portugal want trading posts along Africa's west coast and India?
- **4. HS1** On 8 July 1497, when da Gama set out along the route that Diaz had taken down the west coast of Africa, what change did he make to the journey?
- 5. HS1 Describe da Gama's return to Portugal in 1499.

2.12 Exercise 2: Apply your understanding

- 1. HS3 Refer to SOURCE 2 and make a list of the modern-day places in which Portugal had colonies by about the mid-sixteenth century.
- 2. **HS4** Using both the sources and information in this subtopic, explain why Vasco da Gama's voyages can be considered significant turning points in world history.
- 3. HS3 Look very closely at SOURCE 3.
 - (a) Describe what is happening in this scene.
 - (b) What really happened when da Gama was in Calicut?
 - (c) Why should paintings not always be trusted as historical evidence for the events they depict?
- **4. HS3** Roughly how many centuries had passed between Vasco da Gama's arrival in Calicut and Gameiro's depiction of the event in **SOURCE 3**?
- 5. HS3 How reliable could SOURCE 3 possibly be and how different might it be had it been painted by a resident of Calicut?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.13 Consequences of the discoveries

2.13.1 The clash of empires

European discoveries and colonisation had huge consequences for the Europeans and for the peoples they came to colonise or dominate.

Under the Treaty of Tordesillas, signed in 1494, Pope Alexander VI divided the rights to new lands between Spain and Portugal. The treaty gave Spain the right to explore and colonise all lands to the west of Cape Verde on the coast of Africa. Portugal was given the right to everything to the east, including Brazil. However, the French, English and Dutch would not let such a ruling stand in their way. All three established American colonies in the first decades of the seventeenth century. As Portugal's power declined, a four-way struggle developed between the Spanish, French, English and Dutch to dominate the New World.

DID YOU KNOW?

The desire to convert non-Christians to Christianity was one among many motives for European exploration and empire-building. This became an even stronger motivation for Roman Catholics after the Protestant Reformation of the sixteenth century, which led to the Catholic Church losing its power in most of northern Europe.

The French in North America

Jacques Cartier led a series of French expeditions exploring Newfoundland and eastern Canada from 1534. The French found that there were riches to be gained from fish, timber and furs. They established their first North American settlement at Ouebec in 1608 and forged a harmonious relationship with the Huron and Algonquin tribes who controlled the supply of furs. This relationship changed the economy of France's indigenous allies without threatening their way of life. However, it made the French the enemies of the powerful Iroquois of the Five Nations, the traditional enemies of the Algonquin and Huron. The Iroquois allied themselves with the English.

The British in North America

In 1607, the Virginia Company of London founded Britain's first successful colony in North America. By the end of the seventeenth century, Britain had a strip of colonies along the east coast of the modernday United States. While searching for an imagined north-west passage to Asia in 1610, Henry Hudson discovered Hudson Bay (in modern-day Canada). Following this, Britain settled much of eastern Canada. Unlike the French, the English were mostly farmers and they soon made enemies of the tribes

SOURCE 1 French and British settlements and areas of interest in North America before 1763



Source: Map drawn by Spatial Vision.

whose lands they took. In the seventeenth and early eighteenth centuries, Britain also founded colonies on several islands in the Caribbean Sea.

DID YOU KNOW?

For many years, early English and French explorers in North America thought they would find a 'north-west passage' through the dangerous American wilderness that would take them to India.

The Dutch Empire

The Dutch East India Company was formed in 1602 to seize control of the eastern trade from Portugal. It established Batavia (modern-day Jakarta in Indonesia) as a trading base. Malacca was an important link along the trade route between India and China, and so the Dutch captured Malacca from the Portuguese in 1641 and took over the eastern trade. To re-supply their ships on the long voyage between Amsterdam and the east, the Dutch founded a colony at the Cape of Good Hope, the most southerly point in Africa, in 1652.

In 1606, 1623 and 1642, Dutch sailors made landings in Australia, but they saw the country as having no value for them. In 1621, the Dutch West India Company was formed to join in the enormously profitable Atlantic trade. By 1642, the Dutch captured many Portuguese forts on the West African coast and took over transportation of African slaves to colonies in the Americas. From about 1650, the English and French joined in the slave trade as, to a lesser extent, did the Danes, Swedes and Germans. The Dutch also gained small colonies in the Americas.

Rivalry between Britain and France

After the 1650s, Dutch sea-power declined and there was increasing conflict between the French and the British in North America. In 1681, a French expedition sailed down the Mississippi River and claimed a vast area, which it called Louisiana. This stood in the way of future British expansion.

The two powers also had conflicting interests in India. By 1647 the British East India Company had 27 trading posts in India, and in 1665 it gained Bombay (Mumbai) from the Portuguese. France set up its *Compagnie des Indes* to expand French influence in India and it soon clashed with the British. The Seven Years' War (1756–63) between Britain and France would lead to the loss of New France in America and the decline of French influence in India.

-Explore more with my World HistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

• Overview > European contact with Australia

2.13.2 Other consequences

The world changed in many ways during this age of exploration and colonisation.

- Colonial powers suppressed indigenous peoples and fought each other over territory and trade. In such
 conflicts, the advantage was often held by those with the best firearms, such as cannons mounted
 on ships.
- Some European traders became wealthier than the land-owning nobility.
- Silver and gold flowed into Spain and beyond. Silver was mined in the Americas and was used to expand Europe's trade with Asia. One of the difficulties of trading with Asia had been the fact that Europe produced very little that Asia wanted to trade for spices and other luxuries.
- Missionaries spread Christianity among indigenous peoples.
- Millions of African slaves were captured in tribal wars. They were sold to European slave traders who
 shipped them to the Americas to work in mines and on sugar, tobacco and cotton plantations. While
 world population rose, the population of Africa fell.
- The impact on the indigenous peoples of the Americas was even worse. From 1500 to 1600, the combined population of Europe, Africa and Asia increased from 418 million to 545 million. In the same period, the population of **Latin America** fell from about 36 million to about 10 million. Many people were worked to death, but most died of diseases brought by the Europeans. This is because indigenous Americans had no immunity to diseases that had previously been unknown in the Americas.

DID YOU KNOW?

Europe's colonies brought great wealth into the hands of a few, but most people's lives changed very little. By 1750, only about 2 per cent of the world's people lived in cities.

The Columbian Exchange

Along with diseases, there was a massive transfer of other life forms between the Old World and the New World. Europe gained new plant products such as tobacco, beans, peanuts and potatoes from the Americas. Into the Americas they brought animals that had not existed there, including horses, cattle, pigs and sheep. Such exchanges along with exchanges of people, technologies, ideas and beliefs have been called the Columbian Exchange. The two centuries after Columbus's 1492 voyage transformed the lives of many people in both worlds.

SOURCE 2 A map showing the triangular trade in the Atlantic Ocean. European traders sailed from Europe to the west coast of Africa, where they sold European goods and bought African slaves. They then transported the slaves to the Americas. There they sold the slaves, loaded their ships with goods and took them to Europe.



Source: Map drawn by Spatial Vision.

2.13 ACTIVITIES

- 1. Working in small groups, identify at least one consequence of the colonisation of the Americas and the Columbian Exchange that you believe had significant effects for the world right up to our own times. Provide evidence for your choices and share your view with the class. Identifying continuity and change
- 2. In small groups, role-play the following situation. Imagine that you are a member of a settler family during the early colonisation of the Americas that followed the voyages of discovery. You have been brought up to believe that all people were created by God and they should be treated with compassion. You live in a settlement that has taken land from its indigenous owners, who once farmed or hunted on that land. Not far from your settlement there are still Native American tribes following their traditional lifestyles.

The leaders of your community have described the Native American tribes as primitive savages who need to be forced off their remaining land or be destroyed so that the settlement can expand and become more prosperous.

These leaders have called on you and your fellow settlers to take part in an armed attack on the neighbouring tribe, to kill those who resist and to take their land. The settlers have called a meeting at which you and others will have a chance to state your opinions in support of or against this armed attack.

In your role-play, different speakers should represent different views about the importance of sticking to religious principles and about the way that your neighbouring Native Americans have been labelled as savages.

After your role-play, examine how various cultural groups are represented, by whom they are represented, and comment on the purpose and effect of these representations. [Intercultural Capability]

2.13 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

2.13 Exercise 1: Check your understanding

- 1. HS1 What rights were given to Spain and Portugal under the Treaty of Tordesillas?
- 2. HS1 At which country's expense did the Dutch expand up to the mid-seventeenth century?
- 3. HS1 While the Spanish and Portuguese colonised South America and Central America, which two European powers became rivals for control of North America?
- 4. HS1 What advantages did colonial powers have over indigenous peoples?
- 5. HS5 How did the flow of silver and gold from the Americas help Europe to trade with Asia?

2.13 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1. Why were Britain and France in conflict in North America?
- 2. HS3 Study SOURCE 2 and explain why this trade route has been called the 'triangular trade'?
- 3. HS6 Describe the historical significance of the colonisation of the Americas for the Native Americans.
- 4. HS4 What changes in patterns of consumption would have resulted in Europe from colonisation of the Americas?
- 5. HS4 How would the lives of many Africans have been changed by the triangular trade?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

2.14 SkillBuilder: Explaining different historical interpretations

What is a historical interpretation?

To explain a past event or change, historians use evidence from historical research to test the hypothesis, or an interpretation of the past.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





2.15 Thinking Big research project: Time travel brochure

SCENARIO

You are part of a company that has discovered the art of time travel. You need to create a brochure that will entice paying time travellers to join you on a tour to witness four exciting historical events.

Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.







projectsPLUS Thinking Big research project: Time travel brochure (pro-0158)

2.16 Review



2.16.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

2.16.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31322)

Crossword (doc-31323)



Interactivity From the ancient to the modern world crossword (int-7584)

KEY TERMS

caravel a type of light, fast ship, used mainly by the Portuguese and Spanish between the fifteenth century and seventeenth century

Caucasus the region where Europe meets Asia between the Black Sea and the Caspian Sea

circumnavigate to sail around the world

clockwork the inner workings of a mechanical clock or a machine that operates in a similar way

colony an area of a country that is ruled by a different country

compass navigation instrument that shows the direction of north

contiguous adjoining, where its parts are not separated by other states or oceans

dhow a traditional Arab sailing vessel

doctrine of Mahomet the religion of Islam; the Muslim faith, which follows the teachings of Mohammed

Gaul most of present-day France and Belgium

heresy any religious opinion that differed from that of the Roman Catholic Church

Holy Land land in the Middle East which has significant importance for Christians, Muslims and Jews idolatry worship of idols

Judaism the religion of the Jewish people

khaghan title equivalent to emperor; Great Khan

khan title of rulers in Central Asia; 'king', 'chief'

khanate territory ruled by a khan

lancers mounted troops armed with lances (spear-like weapons used when charging)

lateen sail a triangular sail rigged at 45 degrees to the mast of a boat or ship

Latin America the part of the Americas that was colonised by the Spanish and Portuguese

mariner's astrolabe a medieval instrument used to navigate while sailing. It was used to find a ship's latitude by measuring the altitude of the Sun or a star.

mercenary a soldier who fights for money rather than for patriotic reasons

monastery a place where Christian monks lived

New World a term used to describe the Americas

nomadic moving around from place to place

Renaissance meaning 'rebirth', it refers to the flowering of the arts and sciences in late medieval Italy and later in north-western Europe

scurvy a painful and often fatal disease caused by lack of vitamin C

self-sufficient able to provide for its own needs

serfdom the position of peasants who were not free to leave the land they worked

shamanism central Asian religion based on a belief in many gods in the natural world and the power of shamans (priests) to influence these gods

steppe a vast plain without trees

sternpost rudder a heavy board hung from the centre of the back of a ship that makes it easier to steer **Tatars** another name for Mongols.

vassal state a state whose ruler acknowledges a foreign ruler as his overlord

2.14 SkillBuilder: Explaining different historical interpretations

2.14.1 Tell me

What is a historical interpretation?

To explain a past event or change, a historian forms a hypothesis (a possible theory to explain what happened and why it happened). The historian uses evidence from historical research to test the hypothesis. The hypothesis is then presented as an interpretation of the past. Through questioning interpretations, you will understand that they may be open to debate.

Why is it important to analyse and explain a historian's interpretation?

To explain an interpretation we need to analyse it. That means to see how its different parts contribute to its general idea. You now know that there is almost always more than one way of interpreting any past event. This is because of gaps in evidence, because sources can be biased and because historians themselves bring different viewpoints or perspectives to most issues.

Differing interpretations in history are similar to what happens in a court of law. In courts, even though all members of a jury are presented with the same evidence, they can come to different conclusions. If we analyse a historian's interpretation and are then able to explain it we are in a better position to judge it and compare it with other interpretations.

It is not always easy to analyse and explain a historian's interpretation. Often the main argument will be developed over several pages along with a discussion of the evidence used for each supporting point. In the examples used here, the points that support the main argument are included but much of the specific evidence for them is not included.

2.14.2 Show me

How to explain a historian's interpretation

When you read a historian's interpretation, you need to:

- 1. identify the main point of the historian's argument
- 2. identify the points that are used to support the main argument.

An example

SOURCE 1 A historian's argument about the significance of the achievements of Spain and Portugal in their voyages of discovery and conquests, from C. H. Haring, *The Spanish Empire in America*, Harcourt, Brace & World, New York, 1963, pp. 1–2

One of the most . . . spectacular movements in the history of civilisation has been . . . the Expansion of Europe . . . [It] saw the rise and fall of great colonial empires . . . , the expansion of maritime trade into a world commerce, and the extension of Christian missionary propaganda to the four corners of the world . . .

In this process Spain and Portugal played the most dramatic role and pointed the way for other nations to follow. Their connection with the New World began with the initial voyage of Columbus, and for a century they pre-empted virtually all of the western hemisphere as well as the seas eastward to China and the Philippines. Before the seventeenth century they were the great . . . colonial powers. Not until after 1600 did the English, Dutch and French seriously challenge their supremacy. Portugal's imperial greatness was to be displayed chiefly in the Orient; Spain reserved to herself the greater part of the two American continents . . . Within three generations Spaniards discovered, subdued and colonised the most extensive territorial empire the world had ever seen . . .

To analyse and explain the interpretation in **SOURCE 1**:

- 1. first look for the main point of the argument
- 2. then look for the supporting points or details used to support the argument.

The sentences or parts of sentences that state the main point have been highlighted in blue; the main words that provide supporting details have been highlighted in green.

One of the most . . . spectacular movements in the history of civilisation has been . . . the Expansion of Europe . . . [It] saw the rise and fall of great colonial empires . . . , the expansion of maritime trade into a world commerce, and the extension of Christian missionary propaganda to the four corners of the world . . .

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In this example we can say:

- 1. The main argument is that Spain and Portugal played the leading role in Europe's expansion.
- 2. The supporting points are:
 - Spain conquered most of the Americas well before other colonisers.
 - Portugal was dominant in the seas towards Asia.
 - Spain created the world's biggest empire in the Americas.
 - The Dutch, English and French were not able to challenge them before 1600.

2.14.3 Let me do it

Complete the following activities to practise this skill.

2.14 ACTIVITIES

- 1. Using the example in the Show me section as a model, try to analyse and explain the interpretation in **SOURCE 2**. Before you read **SOURCE 2**, look at **SOURCE 3** to find the location and extent of the Inca empire.

 (a) Identify the main argument in **SOURCE 2**.
 - (b) Identify the points that the author of **SOURCE 2** has used to support that interpretation.

SOURCE 2 A historian's argument about the motives of the Spanish conquistadores for their conquests, their methods and the reasons for their success, from Niall Ferguson, *Civilization*, Penguin Books, London, 2011, pages 98–101

... landing in northern Ecuador in 1532, were fewer than 200 Spaniards accompanying the man who already claimed the title 'Governor of Peru' [Francisco Pizarro]. Their ambition was to conquer the Inca Empire for the King of Spain and to secure a large share of its reputed wealth for themselves . . .

By the time they reached the Peruvian highlands, Pizarro had just sixty horsemen and ninety footsoldiers at his command . . . The population of the empire they intended to **subjugate** was somewhere between 5 and 10 million.

On the conquistadores' side, however, was an invisible ally: the European diseases to which South Americans had no resistance — the smallpox, influenza, measles and typhus. At the same time, the Spaniards' horses, guns and crossbows were weapons far superior to anything in the Inca armoury; they gave the invaders a terrifying extra-terrestrial aspect. And the Inca themselves were divided. Since the death of Inca Huayna Capac, his sons Atahualpa and Huascar had been battling for the succession, while subject tribes scented a chance to throw off the Inca yoke. The Battle of Cajamarca (14 November 1532) was thus scarcely a battle at all. As Pizarro's brother Hernando described it, Atahualpa walked into a trap when he accepted the Spaniards' invitation to dinner:

'...I had arranged with the captain of the artillery that, when a sign was given, he should discharge his pieces, and that, on hearing the reports, all the troops should come forth at once. This was done, and as the Indians were unarmed they were defeated without danger to any Christians.'

In the words of the sixteenth-century Andean chronicler Waman Poma, the Spaniards killed the panic-stricken Indians 'like ants' . . .

SOURCE 3 A map showing the major Central and South American civilisations — Aztec, Maya and Inca — just before the time of the Spanish conquests



- 2. Based on what you have learned in this SkillBuilder, apply your skills to explain how the interpretation in **SOURCE 2** differs from the interpretation in **SOURCE 1**. Support your answers with examples and quotes from each source.
 - (a) Do they differ about the facts?
 - (b) Have they used different sources?⊠
 - (c) Do they have different perspectives? Or do they each focus on a different aspect of the Spanish conquests?

2.15 Thinking Big research project: Time travel brochure

Scenario

Imagine that you have discovered the art of travelling through time! You have started a business that offers to take customers on exciting tours to witness four significant historical events that took place in the period between the ancient and modern worlds.

The four stops on the tour are as follows:

Stop 1: Killala Bay on the west coast of Ireland in 807

The Vikings first raided Ireland just two years after their first raid on England and started raiding the west coast of Ireland in 807.



Stop 2: Jerusalem in 1099

In the year 1099, the First Crusade captured the city from the Muslims.



Stop 3: The Christian city of Constantinople in 1453

In 1453, Constantinople fell to the Muslim Turks.



Stop 4: Nagasaki harbour in 1640

The Tokugawa Shogunate permitted Dutch merchants to trade from the artificial island of Dejima in 1640.



Task

Create an attention-grabbing brochure that will entice paying time travellers to join you on this remarkable tour. Be sure to provide intriguing information about interesting events that occurred at each of the stops on the tour. Follow the steps detailed in the **Process** section to complete this task.

Process

• Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in groups of four will enable you to share responsibility for the project. Save your settings and the project will be launched.

- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- You should first revisit the timeline in the subtopic 2.1 Overview. Using the resources in the **Media centre**, research and record information about important historical events in each of the four places, in and around the designated year for each stop on the tour.
- Write up your research findings under the heading for each stop in your Research forum.
- You can view, share and comment on other group members' research findings. Be sure to enter the source for any information you find online.
- Give your time travel company a catchy name. Find images to make your brochure colourful and exciting and to help customers understand what they might experience on the tour. Design a pleasing layout.
- Describe what your time travel customers will witness. Explain the short- and longer-term historical significance of each of the events in the places you will visit.
- Submit your brochure to your teacher for assessment and feedback.



2.16 Review

2.16.1 Key knowledge summary

2.2 Examining the evidence

- Some societies in this period did not keep written records.
- Some sources have been lost and most people could not read or write so there are significant gaps in our evidence.
- Sources often provide the recorded evidence of only one section of a society and only one side in a conflict.
- Because sources can often be one-sided we need to look out for bias.

2.3 People on the move

- Migrating nomads caused centuries of chaos in Europe and Asia.
- Invaders took over much of the former Roman Empire.
- The Byzantine Empire kept ancient Roman culture alive.
- The Persian and Byzantine empires were weakened by wars with each other.

2.4 Religions on the move

- In the Early Middle Ages, the rise of Islam created a powerful new civilisation.
- Islam expanded into three continents.
- Christianity spread gradually to dominate almost all of Europe by around 1000.

2.5 A different way of life

- Smaller, weaker states replaced the Roman Empire.
- Cities, learning and trade declined in early medieval Europe.
- Feudalism became the dominant social system.

2.6 Rulers, religion and the changing map of medieval Europe

- By later medieval times, peasants were increasingly forced into serfdom.
- New technologies increased the destructiveness of wars.
- European rulers claimed to be chosen by god.
- Many Asian rulers claimed to be demigods.
- The Muslims were driven out of Spain but Muslim Turks came to control Europe's Balkan Peninsula.

2.7 Migrations, invasions and empires in Asia

- Japan became a feudal society.
- China suffered invasions by nomads but the Chinese Empire was restored under the Song dynasty.
- The Delhi Sultanate dominated northern India from 1206 until it was destroyed by Mongols in 1398.
- Indian traditions influenced much of South-East Asia.
- The Mongol Empire overwhelmed many civilisations in the thirteenth century.

2.8 Populations, cities and trade

- Improved farming technologies enabled more food production so populations grew.
- Populations fell dramatically due to the Black Death in the mid-1300s.
- From the mid-1300s, populations, cities and trade all grew significantly.

2.9 Muslim traders and Africa

- Arab Muslims conquered coastal North Africa in the seventh century.
- By the thirteenth century, Arab Muslims had trading bases along the east coast of Africa and controlled trade between Africa, Arabia and India.
- Several powerful African kingdoms became wealthy through trade between the ninth and fifteenth centuries.

2.10 The emerging power of western Europe

- Western Europe was changed between the fifteenth and eighteenth centuries by the Renaissance, the Scientific Revolution and the Enlightenment.
- European power spread through explorers finding new sea routes, conquering new lands and founding colonies.

2.11 Portuguese and Spanish voyages of discovery

- The quest for huge profits and religious zeal motivated Portugal and Spain to take the African trade from the Muslims and find a sea route to India.
- The discovery of the Americas was an accidental result of Spain's quest to find a sea route to India.

2.12 Vasco da Gama opens the East

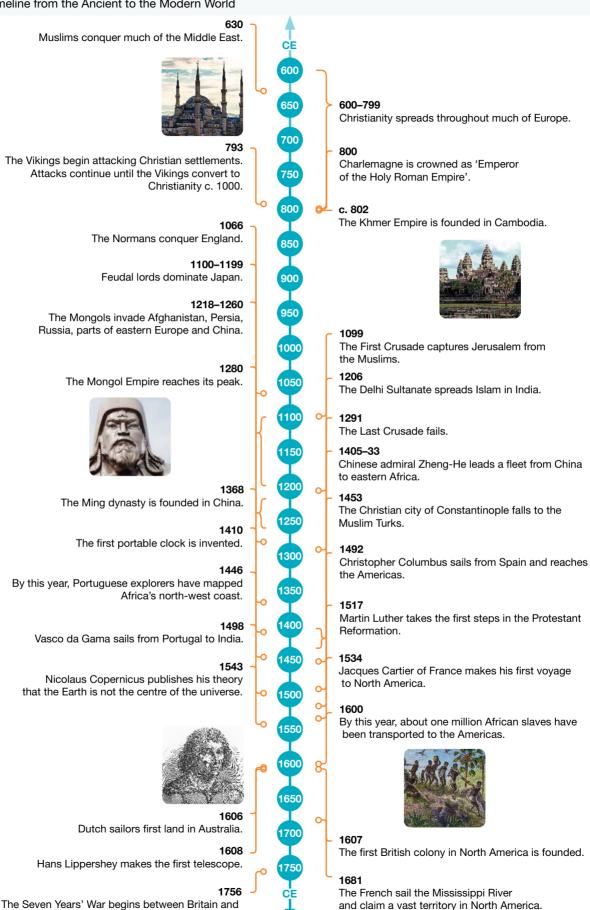
- Vasco da Gama commanded the first Portuguese voyage to India.
- His achievement led to Portuguese domination of the trade between East and West in spices and luxury goods.

2.13 Consequences of the discoveries

- The rising maritime powers of western Europe were the Dutch, French and English, who established American colonies in the seventeenth century.
- The Dutch took control of the eastern trade from Portugal.
- Imperial rivalry grew between the British, leading to war.
- Colonisation had enormous impacts, especially on subject peoples.



A timeline from the Ancient to the Modern World



France.

2.16.2 Reflection

Complete the following to reflect on your learning.

2.16 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Ideas, religion and exploration. How did the changes of the Middle Ages reshape the world?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.





eWorkbook Reflection (doc-31322)

Crossword (doc-31323)



Crossword (000-31323

Interactivity From the ancient to the modern world crossword (int-7584)

KEY TERMS

caravel a type of light, fast ship, used mainly by the Portuguese and Spanish between the fifteenth century and seventeenth century

Caucasus the region where Europe meets Asia between the Black Sea and the Caspian Sea

circumnavigate to sail around the world

clockwork the inner workings of a mechanical clock or a machine that operates in a similar way

colony an area of a country that is ruled by a different country

compass navigation instrument that shows the direction of north

contiguous adjoining, where its parts are not separated by other states or oceans

dhow a traditional Arab sailing vessel

doctrine of Mahomet the religion of Islam: the Muslim faith, which follows the teachings of Mohammed

Gaul most of present-day France and Belgium

heresy any religious opinion that differed from that of the Roman Catholic Church

Holy Land land in the Middle East which has significant importance for Christians, Muslims and Jews **idolatry** worship of idols

Judaism the religion of the Jewish people

khaghan title equivalent to emperor; Great Khan

khan title of rulers in Central Asia; 'king', 'chief'

khanate territory ruled by a khan

lancers mounted troops armed with lances (spear-like weapons used when charging)

lateen sail a triangular sail rigged at 45 degrees to the mast of a boat or ship

Latin America the part of the Americas that was colonised by the Spanish and Portuguese

mariner's astrolabe a medieval instrument used to navigate while sailing. It was used to find a ship's latitude by measuring the altitude of the Sun or a star.

mercenary a soldier who fights for money rather than for patriotic reasons

monastery a place where Christian monks lived

New World a term used to describe the Americas

nomadic moving around from place to place

Renaissance meaning 'rebirth', it refers to the flowering of the arts and sciences in late medieval Italy and later in north-western Europe

scurvy a painful and often fatal disease caused by lack of vitamin C

self-sufficient able to provide for its own needs

serfdom the position of peasants who were not free to leave the land they worked

shamanism central Asian religion based on a belief in many gods in the natural world and the power of shamans (priests) to influence these gods

steppe a vast plain without trees sternpost rudder a heavy board hung from the centre of the back of a ship that makes it easier to steer **Tatars** another name for Mongols. vassal state a state whose ruler acknowledges a foreign ruler as his overlord

3 The Vikings (c. 790–1066)

3.1 Overview

Raid, pillage and plunder. Were the Vikings more than just Middle Ages bullies?

3.1.1 Links with our times

When popular culture presents images of Vikings, we are often left with the impression that they were ruthless warriors, and not much else.

This is not the only image of Vikings that we should consider, however. The society did not function through violence alone. Vikings were farmers and traders. They enjoyed a rich spiritual life and their society was governed by rules and regulations.

Not only was Viking society varied, but some of what we think we know about the Vikings is false. Many people think that Vikings were horned helmets but this is simply not true. Horned helmets would have been impractical in battle and a real Viking helmet actually looked much more terrifying.

We must be wary of generalisations about this fascinating society because it was so rich and interesting.

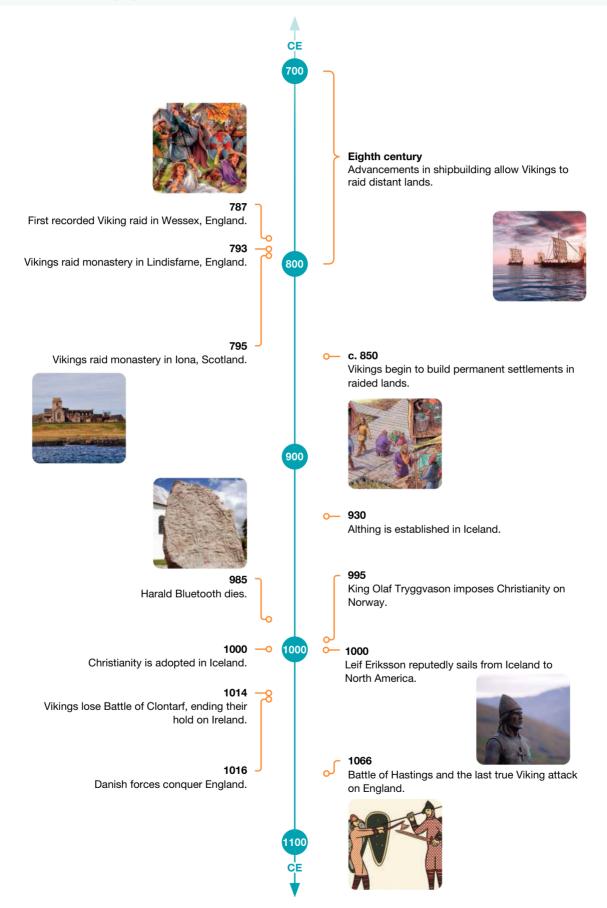


LEARNING SEQUENCE

- 3.1 Overview
- 3.2 Examining the evidence
- 3.3 Scandinavia before the Viking Age
- 3.4 The Viking homelands
- 3.5 Viking society
- 3.6 Early Viking religion
- 3.7 Viking longships
- 3.8 Viking weaponry
- 3.9 Viking invasions and settlements
- 3.10 Viking explorers, settlers and traders
- 3.11 The spread of Christianity
- 3.12 Harald Bluetooth: Viking king of Denmark
- 3.13 The Battle of Hastings and the end of the Viking Age
- 3.14 Heritage of the Vikings: governing Iceland in the Viking Age
- 3.15 SkillBuilder: Interpreting sources on the Vikings
- 3.16 Thinking Big research project: Write a Viking saga
- 3.17 Review

online ? online है on line

To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.



3.2 Examining the evidence

3.2.1 How do we know about the Vikings?

The Vikings were farmers, traders, seafarers and raiders who came from Scandinavia. This is the region encompassing the modern nations of Denmark, Norway and Sweden. The Vikings were also known as Northmen or Norse. Vikings attacked groups of people throughout Europe and raided their property between the ninth and the eleventh centuries. It is these attacks that gained the Vikings a reputation for being violent and ferocious.

3.2.2 Early records of Viking raids

In 787 CE, about 400 years after the Romans left Britain, the country's first recorded Viking raid took place (see SOURCE 1).

SOURCE 1 An excerpt from the Anglo-Saxon Chronicle, written in Old English in the eighth century. The passage reads, 'And during his reign [King Beorhtric of Wessex] there first came three ships . . . Those were the first ships of the men of Denmark that attacked the people of England.'

And on his dagum cuomon ærest Preo scipu . . . Pæt wæron Þa ærestan scipu Deniscra manna Þe Angel-cynnes land gesohton.

Viking raids soon became much more frequent and by around 850 CE the Vikings were using bigger raiding fleets and beginning to occupy permanent settlements. These settlements served as trading posts and as bases from which further raids could be launched against monasteries and villages that were far from the coasts. Dublin in Ireland, for example, began as a Viking settlement.

Kiev and Novgorod, which today are major cities in modern-day Ukraine and Russia, began as trading posts for Swedish Vikings. Called the Varangians, these Vikings had much to do with establishing the first nation in that region, called Kiev Rus. In western Europe, Danish Vikings succeeded in taking Normandy as a duchy from the French king. They became the Normans and went on to conquer England and parts of southern Italy.

3.2.3 Runes and sagas

The Vikings did not commit anything to extensive writing until Christianity arrived in the eleventh century. During the Early Middle Ages, it was usually only members of the Church who had the skills to write. The Vikings were pagans and so they did not have groups of Christians among them to record events in writing. Rather, their storytelling was an oral tradition. However, Viking writing, called runes, did exist; runes were inscribed on bone or carved on rock.

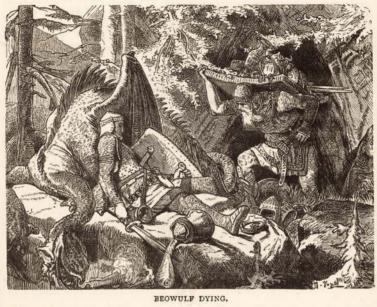
By the time the Viking Age had ended, stories began to appear in writing. These stories are known as the sagas. The sagas were tales and legends about Viking heroes. Although the heroes of the sagas were sometimes based on real people, the sagas themselves were largely fictional tales. They encouraged a romantic and heroic image of the Vikings.

SOURCE 2 A stone from Lingsberg, Sweden, with runes carved on it. The words commemorate a Viking called Ulfrik 'who took two payments of geld in England'.



The only written saga dating back to the Viking Age is not of Scandinavian origin but written by an English poet. This is the oldest known story written in Old English (see **SOURCE 1**). This saga is called *Beowulf* and is set in Sweden and Denmark. It tells of the Viking hero Beowulf who sets out to kill a monster ravaging the kingdom of Denmark. Beowulf also kills the monster's mother and a dragon. The fact that this tale is written in English demonstrates the significant presence Viking culture had in Britain. Despite being largely fictional, such sagas give historians some insights into Viking culture.

SOURCE 3 An illustration showing a scene from the saga *Beowulf*. It shows Beowulf dying from his wounds after slaying a dragon.



3.2.4 Archaeological discoveries

The Viking Age is shrouded in legend and coloured by the gruesome accounts of victims of Viking raids. This is because, unlike the Greeks and Romans, the Vikings left few visible monuments. These were mostly mysterious standing stones. Some were carved with runes, signs and images; others were arranged to outline the shape of boats.

In the nineteenth century, archaeologists began digging at sites believed to harbour relics of the Viking Age. These included mounds and the sites of settlements. Some of the mounds had folktales associated with them. One such mound, in the middle of a farm field in Gokstad, Norway, was called the King's Mound. It was believed a king was buried there with his hoard of treasure. When archaeologists dug into the mound in 1880, it turned out to be just what the folktale had said: the remains of a Viking king with his hoard of treasure, although most of it had been stolen by grave robbers centuries before. More spectacularly still,

SOURCE 4 Objects found at a Viking archaeological dig

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the king and his hoard lay in a huge Viking ship, made mostly of oak. Until then, there had been only pictures of such dragon ships on rocks and in tapestries. In the last 150 years, other such archaeological digs have given us a greater insight into how the Vikings lived.

3.2 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.2 Exercise 1: Check your understanding

- 1. HS1 Describe the Vikings.
- 2. HS2 In what year did the first recorded Viking raid in Britain occur?
- 3. **HS1** Prior to the eleventh century, what religion were the Vikings?
- 4. HS1 What tradition did Vikings use to pass on their stories?
- 5. **HS1** Describe what the sagas were and outline one.

3.2 Exercise 2: Apply your understanding

- 1. HS3 Read SOURCE 1.
 - (a) Describe its origins (where and when it was written).
 - (b) Explain whether it should be considered to be a primary source or a secondary source, and why.
 - (c) Describe its perspective (point of view) on the Vikings.
 - (d) Outline the conclusions you could draw about one aspect of the Viking Age from this source.
- 2. HS3 Study SOURCES 2 and 3 closely and write your own historical questions to analyse each of these two sources.
- 3. HS6 Why do you think the Vikings left fewer visible monuments than the ancient Greeks or Romans?
- 4. HS6 Why have folktales developed around some of the sites of Viking settlements?
- 5. HS6 Evaluate the importance of the discovery of Viking ships in burial mounds. What knowledge would archaeologists have gained from this discovery?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

3.3 Scandinavia before the Viking Age

3.3.1 The Bronze Age in Scandinavia

The period called the Viking Age was fairly short, spanning from about 790 to 1066 CE. During this period, many Viking raids were recorded. However, the Vikings did not spend most of their time going on raids. They had families, and these families needed food and shelter. The Vikings were primarily farmers, tilling

what little soil was available in their heavily forested and rocky homelands. Above all things, their ancestors were farmers.

By 1500 BCE, the pre-Viking culture in Scandinavia began to use **bronze** for making tools and weapons. Like their Viking descendants, these people used boats as a means of transportation. We know this because Scandinavians from the Bronze Age left thousands of rock carvings, many of which show boats. One such vessel was excavated in Hjortspring, Denmark, in 1972. Like the carvings in **SOURCE 1**, it had curious double-pronged prows and was propelled by paddles.

SOURCE 1 Bronze Age rock carvings from Tanum, Sweden, dated 1500-500 BCE



3.3.2 The Iron Age and the Migration period

By the time the Romans made contact with the Scandinavians on the Jutland Peninsula in the fifth year CE, the Scandinavians were using oars in huge boats designed for military transport. However, they had yet to develop the **keel** and the mast. It was these additions to boatcraft that would give their Viking descendants the ability to travel greater distances across the seas. About 500 BCE, the Scandinavians had begun to make weapons and tools from iron, a harder metal than bronze, which made them more effective in battle.

The Roman historian Tacitus observed the customs of these early Iron Age ancestors of the Vikings. He recounts their bloody, religious customs, whereby criminals and innocent victims of sacrifice were killed as an offering to an earth goddess. In recent centuries, such victims' remains, preserved by the acids of **peat** bogs, have been unearthed, as shown in **SOURCE 2**.

It is around this time that Scandinavians began venturing further afield in their boats, trading such goods as walrus tooth ivory, **amber** and furs for luxury items such as glassware and silk from places as far away as Rome. With the fall of the Roman Empire, the various tribes of northern and central Europe began fighting

SOURCE 2 'Tollund Man', a body found in a peat bog in Bjaeldskovdal in Denmark. He was strangled and thrown in the bog where he lay for the next 2000 years.



each other. This time (300–700 CE) is called the Migration period because many of these tribes moved around the continent. However, the Scandinavians did not seem very affected by this, and continued profiting through trade.

SOURCE 3 The Roman historian Tacitus, from Germania, written about 98 CE

[The] communities of the Suiones [Swedes], seated in the very Ocean . . . besides their strength in men and arms, also possess a naval force. The form of their vessels differs from ours in having a prow at each end, so that they are always ready to advance. They make no use of sails, nor have regular benches of oars at the sides: they row, as is practiced in some rivers, without order, sometimes on one side, sometimes on the other, as occasion requires.

The Vendel era, 400-800 CE

The Vendel era, whereby the Scandinavians became more identifiable as the culture we call Viking, is named after an archaeological site in Sweden. In Vendel, and in the nearby site of Valsgarde, archaeologists have excavated a series of graves. Warriors were buried in boats with splendid arrays of weapons and armour. The boats are identifiably Viking in style. The armour is also, although Viking Age armour tended to be less ornate or decorative and probably more practical in battle.

It is probable that the Scandinavians from the Vendel era went on raids like their Viking descendants. However, there is no record of such raids before 787 CE, which is when the Vendel era evolved into the Viking Age.

SOURCE 4 A helmet from a grave in Valsgarde, Sweden from the seventh century CE



3.3 ACTIVITIES

- 1. Use the internet or your library to find pictures of the Bronze Age vessel called the Hjortspring boat and its replicas, which have been tested on the water. Compare the Hiortspring boat to the rock carvings in SOURCE 1. Explain how these carvings, abstract as they are, show similar boats to the Hjortspring boat. Do you think replicas of such boats would have been possible to construct before the finding of the Hjortspring boat? Explain your answer. Using historical sources as evidence
- 2. Using the internet or your library, research 'Tollund Man', shown in SOURCE 2. Imagine he is a modern-day victim of crime and you need to write a police report about the incident. Use headings such as 'Cause of death', 'Age of victim at death', 'Location where body was found' and 'Possible motives for crime'.

Using historical sources as evidence

3. Using the internet or your library, research the archaeological finds in Vendel and Valsgarde. Create a PowerPoint presentation of these archaeological sites for the class, including an itemised list of artefacts found there, such as the helmet shown in **SOURCE 4**. Using historical sources as evidence

3.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.3 Exercise 1: Check your understanding

- 1. HS1 Why was the Bronze Age referred to as such?
- 2. HS1 What evidence is there that the Bronze Age Scandinavians used boats?
- 3. HS5 What development had the Scandinavians made by the time they came in contact with the Romans? How did this support their ability to spread from their homelands?
- 4. HS1 List three items Scandinavian traders exported.
- 5. HS1 According to the Roman historian Tacitus, to whom did the Danes of the Iron Age offer human sacrifice?
- **6. HS1** Why do historians give the Migration period that name?
- 7. HS1 What did archaeologists find at Vendel and Valsgarde in Sweden?

3.3 Exercise 2: Apply your understanding

- 1. HS3 Describe the rock carving in SOURCE 1. What activity is depicted and what artefacts can you see? When was this source created?
- 2. HS3 What do you think may have happened to the 'Tollund Man' in SOURCE 2 that led to his death?
- 3. HS3 What evidence is there in SOURCE 3 that the Swedes were already good sailors in the first century CE, hundreds of years before the Viking Age?
- 4. HS4 Create a timeline for the following periods of Scandinavian history identifying the Bronze Age, the Iron Age, the Migration period, the Vendel era and the Viking Age. Note that some of these periods may overlap with each other.
- 5. **HS4** Explore why historians call certain periods of history the Bronze Age and the Iron Age.
- 6. HS4 Which of the Scandinavian periods overlap? Why would they overlap? Refer back to the timeline created in question 4. (Hint: Think about the activities by which each period is defined.)

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

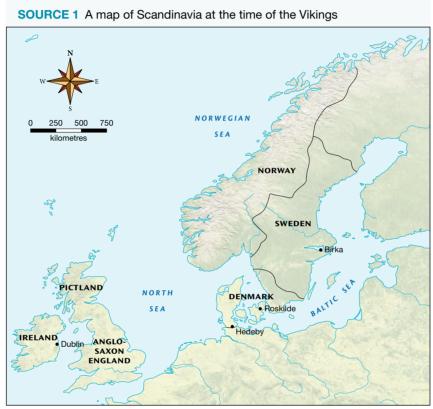
3.4 The Viking homelands

3.4.1 Geography and climate

The geography and climate in Scandinavia meant that life was often harsh for the Vikings. There were limited areas where they could farm and it was sometimes bitterly cold. Geography and climate affected the Viking way of life immensely because it dictated where they lived and what they ate. Geography and climate, ultimately, drove their endeavours, which are arguably their greatest legacies — travel, trading and conquest.

Much of Norway and parts of Sweden are very mountainous and rocky. Mountainous and rocky land is not suitable for farming because crops need **arable** land and animals need accessible food sources. In Norway, only 3 per cent of land was appropriate for farming. This meant that the Vikings could only produce food on a small proportion of the land they controlled, and as people need food to survive, Viking populations centred on food-producing areas. For example, Swedish Vikings tended to live in the southern and central parts of the region where the best farmland was to be found.

The Danes also had problems with arable land, but for different reasons than their northern neighbours. Occupying the Jutland Peninsula, they lived on low-lying land. They tended to use the eastern part of the peninsula for farming because the western part was too sandy.



Source: Map drawn by Spatial Vision.

Another geographical factor that influenced the Viking way of life was the prevalence of water. Norse Vikings occupied the deep-sea canyons called **fjords**, which are protected from Atlantic storms by an extensive buffer of as many as 50 000 tiny islands. Islands surrounding Denmark have a similar effect. Bodies of water also provided the Vikings with seafood — a culinary inheritance that is still significant in Scandinavian cuisine today. Water kept the Vikings relatively isolated from the rest of Europe. This meant that the Vikings developed their own distinct culture, including religious and legal practices. Finally, the prevalence of water, as well as forests, meant that the Vikings became skilled boat builders and seafarers. Over time, this technological innovation allowed the Vikings to access the riches available to them through raiding distant lands.

SOURCE 2 Sognefjord, Norway. This fjord is 160 kilometres long.



The Scandinavian climate was a little kinder than the geography. Although days are short during winter, there may be as many as twenty hours of sunlight a day in summer. The Gulf Stream, a warm ocean current, helps keep temperatures mild and, more importantly, prevents harbours from freezing in winter. This was vital for seafaring people like the Vikings, because the inland regions were far too mountainous for travel.

SOURCE 3 Translated extract from the Orkneyinga Saga, an Icelandic saga written in the 1100s

Winter he would spend at home on Gairsay; where he entertained some 80 men at his own expense . . . In spring he had . . . a great deal of seed to sow . . . Then when his job was done he would go off plundering in the Hebrides and in Ireland on what he called his 'spring-trip', then get back home just after mid-summer where he stayed until the cornfields had been reaped and the grain was safely in. After that he would go off raiding again and never come back until the first month of winter had ended.

Beyond Scandinavia

Many historians have questioned why the Vikings left their homelands to go on raids and establish colonies in other regions. A range of perspectives have emerged:

- There was not enough farmland to support a growing population. Vikings had to raid, trade and explore just to survive.
- The Vikings left their homelands because they were searching for more arable land. This led them to migrate to places like Greenland, the Faroe Islands and Iceland, and conquer places like Normandy
- Some Vikings fought against their own kings and chieftains and fled overseas as a result. With their kings owning most of what little land was available, some Viking people might have desired to search for their own land.

- Vikings noticed and took advantage of the bickering among the states of Europe, raiding them and eventually seizing land that the states could not defend.
- There was great wealth in many of the places that the Vikings raided. When they took these goods, they gained the wealth and associated higher social status.

With few written records from the Vikings' perspective, it is difficult to say which of the many theories is the most accurate. It could even be a combination of many of the reasons.

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Deepen and check your understanding of this topic with related case studies and auto-marked questions.

• The Western and Islamic world >Viking homelands and settlements

3.4 ACTIVITIES

1. Use **SOURCE 1**, the internet and your library to create a map that shows geographical features of Scandinavia. Your map should include mountain ranges, key bodies of water and significant forests.

Using historical sources as evidence

- (a) Draw symbols or images that represent how different geographical factors influenced the Viking way of life.
 - (b) Explain what each of your symbols or images demonstrates.

Analysing cause and effect

3.4 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

3.4 Exercise 1: Check your understanding

- 1. HS5 How did the mountainous landscape affect Viking farms?
- 2. **HS1** How did fjords protect the Vikings?
- 3. HS1 Why did Vikings become expert boat builders?
- 4. HS1 What benefits did the Scandinavians gain from the Gulf Stream?
- **5. HS5** Which perspectives of why the Vikings started to move beyond their homelands does the geographical evidence in this section support? Explain your answer.

3.4 Exercise 2: Apply your understanding

- 1. HS3 Compare SOURCES 1 and 2. Which source is the most useful? Why is this source the most useful?
- 2. HS3 Identify how Vikings used their time in different seasons.
 - (a) Use **SOURCE 3** to help you fill out the chart below.

| Season | Activity |
|--------|----------|
| Winter | |
| Spring | |
| Summer | |
| Autumn | |

- (b) Read **SOURCE 3**. Explain how the climate and associated seasons affected the Viking way of life.
- 3. HS5 To what extent was a lack of arable farmland the main cause of Viking movement beyond Scandinavia?
- **4. HS5** Imagine that you are a Viking from the ninth century CE. Write a statement explaining why you wish to embark on a raid on a nearby country.
- 5. **HS5** Explain the reasons why the Vikings were isolated from the rest of Europe and the effects that this had on the development of their culture.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

3.5 Viking society

3.5.1 Viking social structure

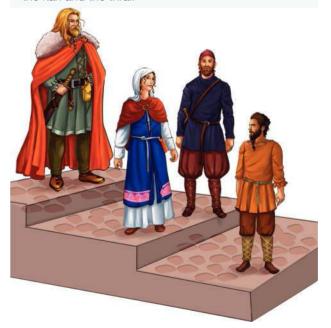
Although Vikings did participate in raids, the majority of Vikings were primarily farmers who lived in longhouses with their families. The family's survival depended on the stocking up of enough food to see the Vikings and their animals through the long, cold, harsh winter. The Vikings lived in farmsteads that were spread out over an area. The group had a fairly clear social structure, with the wealthier powerful jarls (leaders) having the largest farms and multiple buildings.

Viking society was structured into three main layers: earls or jarls (the king and lords), karls (freemen such as farmers and skilled men) and thralls (slaves). The jarls were usually wealthier, owned land and could command raids. Next down the hierarchy were the karls. They were the freemen and were usually farmers. They could vote, hunt, own slaves and participate in raids. At the bottom of the social ladders were the thralls, the slaves. Although sometimes they were born into slavery, they were more often taken during raids or trades. They could not own land, move freely from place to place or choose their own work. They were considered their owner's property and they could do with them what they wanted, even kill them without consequences. The Vikings believed that the god Rig created all three classes, as described in the saga The Lay of Rig (see **SOURCE 1**).

SOURCE 1 The Lay of Rig in which the creation of the thralls is described

Great-grandmother bore a swarthy boy; with water they sprinkled him, called him Thrall. Forthwith he grew and well he throve, bur tough were his hands with wrinkled skin, with knuckles knotty and fingers thick; his face was ugly, his back was humpy, his heels were long. Straightway'gan he to prove his strength, with bast a-binding loads a-making, he bore home faggots the livelong day. There came to the dwellings a wandering maid, with wayworn feet and sunburned arms, with down-bent nose,- the Bond-maid named. She sat her down in the middle of the floor; beside her sat the son of the house: they chatted and whispered, their bed preparing -Thrall and Bond-maid — the long day through. Joyous lived they and reared their children. Thus they called them: Brawler, Cowherd, Boor and Horsefly, Lewd and Lustful, Stout and Stumpy, Sluggard, Swarthy, Lout and Leggy. They fashioned fences, they dunged the meadows, swine they herded, goats they tended and turf they dug. Daughters were there, - Loggy and Cloggy, Lumpy-leggy and Eagle-nose, Whiner, Bondwoman, Oaken-peggy, Tatter-coat and the Crane-shanked maid. Thence are come the generations of thralls.

SOURCE 2 The hierarchy in Viking society: the jarl, the karl and the thrall

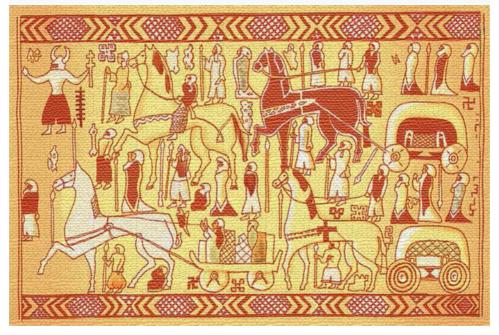


3.5.2 What were Viking farms like?

Generally, Viking farms tended to be a huddle of buildings around the longhouse where the family lived. Archaeologists have found that longhouses in the early part of the Viking Age included not only the living quarters for the family, but also stalls for animals, a workshop, and stores for food and tools. Later, the longhouse was used only as living quarters for the family; everything else was moved to other buildings. Hired hands were often employed to help run the farm. Slaves were also used, probably in the least desirable jobs, such as looking after sheep.

Villages were rare. Where there was a prosperous trade route, farms may have grouped together as a village. Generally, however, Viking farms were isolated. For this reason, they had to be **self-sufficient**, producing all their own food and tools. The Viking farmer had to be a good carpenter, blacksmith, cultivator of crops and breeder of animals. This is because he had to build his own longhouse and any boats or carts he may have needed. He also had to make his own tools.

SOURCE 3 A reconstruction of a Viking tapestry showing various everyday activities. The tapestry was reconstructed from pieces that were found buried with the Oseberg ship.



SOURCE 4 Reconstruction of a Viking longhouse in Stöng, Iceland. The original building is fairly well-preserved because it was buried under volcanic ash when Mount Hekla erupted in 1104.



3.5.3 Livestock and crops

Viking farmers kept cattle, horses, sheep, goats and pigs for meat, dairy products, wool and skins. Horses and oxen were also used for transport. In summer sheep and cattle were taken to higher pastures. But winter was severely cold, so livestock tended to be kept indoors and fed with hay. A poor harvest could mean starvation for both the animals and the Vikings. Besides hay, archaeologists have also found evidence of grain crops like barley, rye and oats, as well as such vegetables as onions, peas and cabbages. Flax and hemp were grown to make linen and rope for the rigging of boats.

SOURCE 5 An archaeological site showing the foundations of a Viking longhouse in Denmark



3.5.4 Women and children

The wife of a Viking farmer was a figure who had much authority in her community. She commanded the work on the farm and dealt with business issues when her husband was away. She wore a belt with a set of keys to the farm's food stores. In the harsh climate, food was the most precious commodity. There is evidence that women accompanied men on rough sea voyages, even to uninhabited places like Iceland and Greenland. Without women, colonies could never have been established there.

Some women enjoyed a degree of power in their communities. As with Viking chiefs and kings, there is evidence of important women being buried with their belongings in longboats. The most spectacular example is the Oseberg ship burial (see subtopic 3.7). The body buried in that magnificent longship was a woman's: she is sometimes called 'the Oseberg queen'. She may or may not have been a queen, but she was certainly a respected and important figure.

Viking women enjoyed rights that women in other European nations at the time did not. For example, they could own property, including land. Women married as equals, could divorce if they wished and were protected from the unwanted advances of men by law. There is some evidence of women warriors as well, although this is not conclusive or extensive.

Of Viking children, there is barely any evidence. It can be hypothesised that girls and boys would have helped with chores around the farm, such as making linen garments (probably a girl's task), milking cows, preparing food and hunting. In a society which Scandinavians themselves regard as prehistoric, school did not exist. It is likely that in such a warrior society, a young boy's practical education came in the form of learning the skills of warfare: handling a bow or a sword. Probably he was also trained in the construction and sailing of boats.

3.5 ACTIVITY

Use the internet and your library to research remains of longhouses in the Viking world, particularly in Iceland. Find a ground plan of a longhouse showing the various features and rooms. Draw the plan and label the features and rooms. Using historical sources as evidence

3.5 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

3.5 Exercise 1: Check your understanding

- 1. HS1 Name the three main classes of Viking society.
- **2. HS1** What type of work did the karls do?
- 3. **HS1** Describe the limits that a thrall faced.
- 4. HS4 How did the use of the Viking longhouse change over time?
- 5. **HS1** Consider the places where Vikings lived.
 - (a) Why did Vikings have to be self-sufficient?
 - (b) What did they need to be able to do to survive?
- 6. **HS1** List three types of animals that lived on Viking farms.
- 7. **HS1** What were three crops cultivated on Viking farms?
- 8. **HS1** Why did the farmer keep his livestock indoors during winter?
- 9. HS1 What work did the wife of a Viking farmer do?
- 10. HS1 What other roles did women hold in Viking society?
- 11. **HS1** What sort of rights did Viking women have?
- 12. HS1 Describe the sorts of jobs children might have completed growing up on a Viking farm.

3.5 Exercise 2: Apply your understanding

- HS3 Transcribe the diagram in SOURCE 2 into your workbooks and add details about each class of Viking people.
- 2. HS3 Read SOURCE 1 carefully.
 - (a) How are the thralls described physically?
 - (b) What does this indicate about the writer's view of them?
 - (c) What were the names of their sons and daughters and what do these signify?
- 3. (a) HS3 Identify the origins of SOURCE 3. Where was it discovered?
 - (b) **HS3** Look at **SOURCE 3**. List four things we are able to find out from this source about how the Vikings lived.
- **4. HS3 SOURCE 4** is a reconstruction of a Viking longhouse. What might be problematic about reconstructions for historians?
- 5. HS3 Study SOURCE 5.
 - (a) Is it a primary or secondary source?
 - (b) What do we learn about Viking farms from SOURCE 5?
- **6. HS3** Re-examine **SOURCE 3**. Can you see any women and children completing everyday activities? Why or why not?
- 7. HS3 How can you judge the truth or reliability of a source like SOURCE 2?
- 8. HS3 Study SOURCES 3, 4 and 5.
 - (a) To what extent do these sources provide supporting evidence about longhouses?
 - (b) Which source do you see as the most reliable? Give evidence to support your answer.
 - (c) How do archaeological finds like SOURCE 5 help to create artists' impressions like SOURCE 3?
 - (d) Use all the sources to help you write a paragraph that describes a Viking longhouse. Aim to identify key features of a longhouse and explain why these features were important.
- 9. HS4 Imagine you are a child living in a Viking longhouse with your family. What is your typical day like?
- **10. HS4** Compare the role of Viking women to contemporary women. What are the similarities? What are the differences?
- 11. (a) **HS4** Design a question starting with 'To what extent . . . ' that focuses on one of the following areas:
 - Viking farms
 - Viking women
 - Viking children
 - · Viking slaves.
 - (b) **HS4** Aim to develop a response to the question you have posed, using the source material and text provided in this subtopic.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

3.6 Early Viking religion

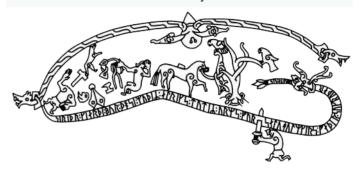
3.6.1 Pagan Viking religion

The Europeans who suffered raids and conquests at the hands of the Vikings saw them as **heathens** — people who did not believe in God. Viking brutality was seen as a mark of paganism. The Vikings certainly followed a pagan religion in the earlier phases of their history, but they were gradually influenced by Christianity. Whether this lessened their perceived 'brutality' is a matter of debate. Therefore, there are two parts to Viking religion: paganism and Christianity (explored in subtopic 3.11).

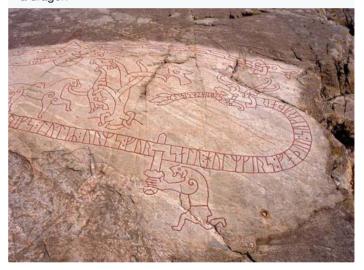
Not much is known about pagan Viking religion because evidence is scarce. The sagas appear to give us some details. However, the sagas were written two hundred years after the Viking Age and so likely contain exaggeration and misinformation. We know for certain that pagan Viking religion was **polytheistic**; that is, the Vikings worshipped numerous gods. The Vikings believed their good fortune in life depended on the gods. Animals and people — even chieftains — were sacrificed to keep the gods happy.

Viking myths are full of their gods who lived in a place called Asgard, which is high up in the sky. They also abound with stories of birds and animals with human qualities, and giants, dwarves and trolls. Belief in such tales would have helped to inspire warriors and to comfort those hoping for love, prosperity, safety and life after death.

SOURCE 1 Line drawing detail of all of the images on the Ramsund Rock. The runes on the dragon's body are a woman's dedication to the memory of her husband.



SOURCE 2 Part of the Ramsund Rock, showing a scene from a Viking myth about a hero called Sigurd who slew a dragon



3.6.2 Gods

Two of the main Viking gods were Odin and Thor. Odin figures prominently in the sagas as a deity who rules from Valhöll, the Hall of the Slain, where those who died in battle are welcomed by his war-maidens known as Valkyries. Thor was the god of thunder and farming and was represented by the hammer he wielded. However, beyond this the sagas contradict each other. Some accounts place Odin as the ruling god while others put Thor as the ruling god.

Scenes from Viking myths and legends, some of them later retold in the sagas, appear as stone carvings. However, many of these were in temples that have long since disappeared. Travellers from other lands sometimes made passing reference to Viking worship but gave few details.

SOURCE 3 Some of the more significant pagan deities were Odin, Freya and Thor.

ODIN

- Chief god; and god of wisdom, war, death and poetry
- Married to Frigg. Sons included Thor (god of thunder and lightning) and Balder (god of light).
- Long grey beard and one eye. He traded one eye to drink at the well of wisdom.
- Invented the runes, using them to communicate and to do magic tricks
- Rode an eight-legged horse called Sleipnir
- Had a spear that always hit its target, and a bow that fired ten arrows at once
- · Had two ravens which flew into the world every day to collect information
- Thought to have inspired the name 'Wednesday' (Woden's Day)



FREYA

- The goddess of love, fertility and war. She and her brother Freyr, the god of crops and fertility, were the children of Njord, the god of the sea and ships.
- When she lost her husband, her tears fell to the ground as amber.
- Rode in a chariot pulled by cats
- Wore a feather coat when she wanted to fly
- Thought to have inspired the name 'Friday' (Freya's Day)



- The eldest son of Odin, and god of thunder and lightning
- Made crops grow and fought giants to protect people from evil
- A quick-tempered, very strong and tall man, with red hair and beard and wild eyes
- Drove a cart pulled by two giant goats. Vikings believed that thunder was the sound of its turning wheels.
- Threw a hammer called Mjollnir (caused lightning) which always hit its target and returned to his hand
- Wore iron gloves so he could throw and catch his mighty
- Wore a belt called Megingjard, which made him ten times
- Married to Siv, the goddess of the cornfields
- Thought to have inspired the name 'Thursday' (Thor's Day)



3.6.3 Death

As pagans, the Vikings believed that death marked the start of a journey to another world. A warrior slain in battle with a sword in his hand travelled to Valhöll — the great hall of the supreme god Odin. There, he would fight by day and feast by night until Ragnarok. On the day of Ragnarok, there would be a terrible war, followed by the death of the gods and a new order of peace.

Vikings who died a less noble death than warriors went to a place called Hel. For most, this was a bit like life on Earth. For the wicked, however, it was a place of punishment. The Viking saga The Seeress's Prophecy describes how people such as oath breakers were made weak and sick with poison in Hel, and had to trudge through rivers filled with sharpened swords and knives.

Wherever they went after their life on Earth, the pagan Vikings believed the dead would need things they used or enjoyed in life. Hence, the dead were buried (or burnt) with items such as food and drink, eating utensils, weapons, tools, combs, jewellery, horses, dogs, wagons or boats — even their slaves. Funeral rituals were often very elaborate.

Burial

Evidence indicates that, at different times in history, Vikings buried their dead in mass graves, in deep pits, in wagons even in boats. Given the importance of the sea to the Vikings, it is not surprising that ships played an important part in some of their funeral practices. They also provided a symbolic means for a person's journey in the afterlife.

It was important to Vikings that their name be remembered after death, as this provided a way in which they could live forever. Hence, burial sites were often marked with a runestone, a cairn (pile of rocks) or, more commonly, a large earth mound called a howe.

Cremation

Cremation was another common burial practice for pagan Vikings. The Arab traveller Ibn Fadlan, who attended a shipburning funeral on the Volga in 922, wrote that Vikings believed that burning a body released the dead person's spirit faster than burying it could do. Hence it was a kind act. The sagas describe tales in which the dead were cremated in treasure-filled ships pushed out to sea. There is as yet no archaeological evidence to confirm this practice.

SOURCE 4 Some grave sites are marked by runestones arranged in the outline of a ship's hull. These were probably the graves of those who could not afford a boat.



SOURCE 5 Many Viking funeral ships were buried whole. Some, however, were first burnt. Then the charred remains were covered with a mound of earth.



3.6 ACTIVITIES

- 2. Imagine you are one of the gods featured in this subtopic. Write a short tale that describes one day in your life. Your tale should be consistent with the description given here for your character. Don't mention your name in the story. Put completed stories in a box. Select one that is not your own and see how long it takes you to recognise the Viking god.
 Analysing cause and effect
- 3. Use SOURCE 3 to create a table with the key characteristics of each of the three gods shown. Using the internet and your library, add the gods Loki, Balder, Hel and Siv.

 Using historical sources as evidence
- 4. Use information in this topic to write a eulogy (a short speech honouring a dead person) for a Viking warrior. Your eulogy should refer to the person's funeral and their journey to Valhöll. You will need to create them their name, personality and achievements. You may like to use software to create a digital eulogy, including appropriate pictures and music.
 Using historical sources as evidence

3.6 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

3.6 Exercise 1: Check your understanding

- 1. HS1 Why do we not have much information about the early pagan Viking religion?
- 2. HS3 How do we know what we do about pagan Viking religion? Should we trust these sources?
- 3. **HS1** Define the word polytheistic.
- 4. **HS1** Where did the Viking gods live?
- 5. **HS1** Draw lines to correctly connect the entries in the following table.

| Viking god | Responsibility |
|------------|-------------------------------|
| Odin | Goddess of cornfields |
| Thor | God of light |
| Freya | God of thunder and lightning |
| Balder | God of wisdom |
| Siv | Goddess of love and fertility |

- 6. **HS1** What were the Viking beliefs about life after death?
- 7. HS1 Why are Viking burial sites often marked with runestones, cairns or mounds?
- 8. HS1 Why did Vikings sometimes choose cremation?

3.6 Exercise 2: Apply your understanding

- 1. HS3 SOURCES 1 and 2 show the Ramsund Rock, which contains a scene from Viking mythology carved into a slab of rock in Sweden.
 - (a) What was the purpose of this carving?
 - (b) Why do you think the Vikings told tales about heroes such as Sigurd?
- HS3 Using the information in SOURCE 3, explain the relationship between our weekdays and Viking mythology.
- 3. HS3 What are some of the ways that historians know about Viking burial practices?
- 4. HS3 What type of people were buried in graves like SOURCE 4?
- 5. HS3 Examine SOURCE 5. What is this person being cremated with? Why did the Vikings send the dead off with their possessions?
- **6. HS3** Look at **SOURCES 4** and **5**. How can we tell that the person buried in the boat in **SOURCE 5** is most likely wealthier than the person buried in the runestone 'boat' in **SOURCE 4**?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

3.7 Viking longships

3.7.1 Technological developments

Vikings are well known for their participation in raids, but raids could not have occurred without innovation and invention. It was technological advancements that allowed the Vikings to develop longboats and it was these longboats that meant Vikings could travel to, and raid, distant shores.

For centuries, Scandinavians sailed in craft that were essentially giant rowboats. Then, in the eighth century CE, they devised several innovations: a keel, a great woollen or linen sail and an oar used as a rudder for steering. With this new technology, they could make longer ocean voyages. It also gave them the means by which to attack lands a long way away.

In 1893, and again in 1998, a replica of the Gokstad ship (see SOURCE 1) demonstrated how quickly such longships could sail across the sea. In both cases, it sailed from Norway to Canada in under a month.

SOURCE 1 A modern artist's depiction of the Gokstad ship, which was excavated from a burial mound in Norway in 1880



SOURCE 2 A reproduction of a dragon ship carved on stone from Gotland, Sweden, in the eighth century CE



At 23 metres long and 5 metres wide, manned by 32 rowers, its size was impressive. It demonstrated that tales about Viking dragon ships were not exaggerated. Since then, the remains of an even longer dragon ship have been found in Roskildefjorde, Denmark. This ship was over 30 metres in length and would have had sixty men manning its oars.

As big as these ships were, their hulls were only about two metres deep. This meant they could be rowed not only at sea but in lakes, fjords, rivers and even shallow creeks. They could be easily dragged up onto a beach like rowboats. There is even evidence that smaller ships were carried overland. This was how Swedish Vikings travelled from one waterway to another in Russia.

Such Viking vessels were built for raids and warfare. They are called longships because of their slender shape. Sometimes they are called dragon ships because the carved head of a mythical monster was occasionally mounted on the prow of the boat. It is remarkable that the timber for these ships was cut with only an axe. Unlike modern shipbuilding, the Vikings constructed the hull first and then cut and inserted the frame.

DID YOU KNOW?

The longest Viking ship ever found, described in this section, was sunk deliberately in Roskildefjorde along with other ships. It is believed this was an attempt to create a barrier against enemy ships trying to attack the harbour. Although it was sunk in Denmark, evidence suggests the boat was built in Dublin, Ireland.

3.7.2 Design and navigation

The prows of Viking ships were often elaborately decorated with figureheads representing dragons (see **SOURCES 1** and **2**) or serpents (see **SOURCE 4**). However, the Oseberg ship, shown in **SOURCE 4**, may not be a typical longship because it was found in the excavated burial site of a Norwegian Viking queen. If you look closely, you will see that its stern also features a finely carved pattern of smaller dragons and vines. Another important feature of the longship is that the woollen sails had patterns, as can be seen in **SOURCE 2**. It is likely this criss-cross stitching had a practical purpose — it gave the sails the strength to withstand strong winds.

SOURCE 3 From the saga *Beowulf*, translated into modern English

Under the sea-girt cliffs the shining ship was readied, laded with coats of mail, swords and gleaming war harness. Bidding farewell to their king, the sturdy warriors embarked . . . [leaning] to the oars.

Like a bird, like a swallow, the glistening ship sped forward. She cut a path through the clear, green sea, her prow wreathed in bubbles and foam. Across unknown waters the light floater lunged and ploughed into the swells. The salt spray blew strong on the warriors' foreheads.

SOURCE 4 The stern of the Oseberg ship on display in the Viking Ship Museum in Norway



What is even more amazing is that Viking ships could cross vast seas without any of the navigation instruments used today. Vikings knew enough about the weather patterns to know when to put to sea, and they navigated by the positions of the stars and by the height of the sun above the horizon.

3.7 ACTIVITIES

- 1. (a) As a class, create the shape of the longest Viking ship found so far. It is 30 metres long and 3.2 metres wide. Do this outside using school bags. Students should sit in places where the rowers would have sat. One bag in the middle of the ship will represent the position of the mast. Don't forget to have someone controlling the tiller. Vikings and their ancestors used rocks in an exercise similar to this to begin creating their ships.
 - (b) What did you find interesting or surprising about the size and shape of the longship?

Using historical sources as evidence

2. Draw a labelled image of a Viking longship. Label the following parts of the Viking longship, clearly identifying the innovations that were specifically Viking: keel, rudder, oars, hull, prow, sails.

Using historical sources as evidence

- 3. (a) Design a question that explores an aspect of Viking maritime technology in further depth.
 - (b) Using the internet and your library, try to find out and report the answer to your question.

Using historical sources as evidence

3.7 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

3.7 Exercise 1: Check your understanding

- 1. HS1 List the three most important developments in Viking shipbuilding in the eighth century.
- 2. HS1 What is the length of the longest Viking longship found so far? How many men manned its oars?
- 3. HS1 Why was it a benefit for Viking longboats to have hulls that were only two metres deep?

- 4. HS1 Why did the Vikings cross-stitch their sails?
- 5. **HS1** How did Vikings navigate across the sea?

3.7 Exercise 2: Apply your understanding

- 1. HS3 Examine the artist's representations of the Gokstad ship in SOURCES 1 and 2. How would the artist have known to depict the ship in these ways? Do you think they are likely to be accurate?
- 2. HS3 Study SOURCE 3.
 - (a) What information can we gather from **SOURCE 3** about Viking longboats?
 - (b) What are the benefits of reading a translated version of a text? What are some of the limitations or problems?
- 3. HS3 Examine SOURCE 4. Why do you think this ship was buried with a Viking queen, or noble woman, and her belongings?
- 4. HS3 Using SOURCE 3 as a reference, describe your impression of the beginning of a voyage in a Viking longship. Be sure to mention what the Vikings brought on their journey, how the ship was powered and how it performed in the water.
- 5. HS3 Compare and contrast SOURCES 1, 2 and 3. What are the similarities between these sources? What are the differences?
- 6. HS3 Compare SOURCES 2 and 4. How did the discovery of the Oseberg ship demonstrate that the carving in **SOURCE 2** is a fairly accurate representation of at least one type of Viking ship?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

3.8 Viking weaponry

3.8.1 Viking armour

The Vikings have often been considered barbarians, particularly by historical European sources. Some Viking raiders took their reputation to extremes. The most barbaric and ferocious of all Vikings were the berserkers. These crazed warriors dressed only in animal skins and charged screaming into battle while biting the rims of their shields. However, the term 'barbarian' is misleading. When considering their weapons and ships, the Vikings can be said to have been at the cutting edge of technology.

The Viking helmet began as an ornate mask constructed of bronze and iron, at least among those who could afford it. By the Viking Age, the helmet had become more simplified. The only authentic helmet from the Viking Age so far discovered by archaeologists is shown in

SOURCE 1. However, pictorial evidence from the Viking Age suggests that the iron, conical helmet with a bar extended over the nose to protect the face was common. Its shape helped deflect the blows of weapons and remained popular among knights well into the Middle Ages.

The shield was held close to the body to protect the warrior from arrows, spears and swords. About a metre wide, it was round and constructed from timber planks. An iron boss reinforced the centre. By the end of the Viking Age, kite-shaped shields became more common. These protected the thighs, especially when the warrior mounted a horse.

Body armour could be a shirt of stiffened leather, overlapping metal scales known as lamellar or mail. Mail was made up of links of chain and was very expensive because it was woven by hand using a pair of pliers and a pile of chain links. Longer mail coats are called hauberks and became more popular towards the end of the Viking Age.

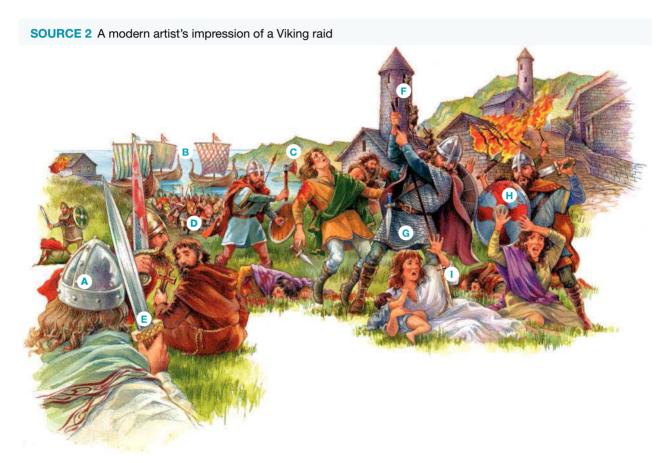
SOURCE 1 An actual Viking helmet found in Gjermundbu, Norway



3.8.2 Viking weapons

The Vikings used a full array of weaponry: bow and arrow, spear, axe and sword. The battleaxe shown in **SOURCE 2** is called the bearded axe, and was used almost exclusively by the Vikings. However, the sword was the most popular weapon among the Vikings. It typically had a broad, double-edged blade, a crossguard to protect the hand and a **pommel** on the end, which could be used for punching at close quarters.

Viking swords were very ornate, sometimes gilded with precious metals. Vikings even gave names to their swords. For example, the fictional Beowulf's sword was called Hrunting. Another saga tells of King Magnus of Norway having a sword gilded with gold and with a grip made from walrus ivory, which he called Leg-biter. The Vikings certainly placed great importance on their swords and the rest of their war gear.



- A Contrary to popular belief, Viking helmets did not have horns attached. They would have been very impractical in hattle!
- B Viking raiding parties struck quickly and unexpectedly, often at dawn, when it was hard for victims to escape or defend themselves.
- C The iron-headed battleaxe was so sharp and heavy it could cut through armour.
- D Sometimes Vikings used the 'svinflyking', or V-shaped boar formation, when attacking. This ensured that their victims were quickly swamped by numbers.
- E Swords were a status symbol among Viking warriors. They were double-edged and often had a highly decorated hilt. Sometimes they were even given grisly nicknames such as 'Leg-biter'.
- As a refuge, some monks built tall, round towers of stone. Rope ladders hung down from openings at the top. After climbing into the tower, monks pulled the ladders up. They stayed there until a Viking attack was over.
- G Usually only raid leaders wore expensive chain mail tunics. Thick padded clothing was worn underneath.
- H The circular wooden shields were about one metre in diameter. They featured brightly painted designs. A metal boss covered the hole in the centre to which was attached an iron hand grip.
- 1 Spears comprised a slim iron blade connected to a long wooden shaft. Some Vikings were so skilled that they could catch spears in mid-flight and toss them back.

DISCUSS

Do you believe that use of weaponry against undefended opponents is ever morally defensible?

[Ethical Capability]

SOURCE 3 An extract from The Battle of Maldon, a late tenth or early eleventh century poem written in Old English about a battle where the Anglo-Saxons were defeated by the Vikings

Then was the fight near, glory in battle. The time had come when fey men must fall there. Clamor was raised there. Ravens circled, eagles, eager for carrion. There was uproar on earth. From hands then they released file-hard spears; ground spears [grim ones] flew. Bows were busy; shield took spear-point. Bitter that battle-rush! Warriors fell; on either hand young men lay.



SOURCE 4 Viking weapons from the tenth century CE



SOURCE 5 A memorial stone from Lindisfarne showing what appear to be Vikings



3.8 ACTIVITY

Use the internet and your library to find out more about one type of Viking armour or weapon. As you discuss Viking armour and weapons as a class, provide expert knowledge on the type of weapon or armour that you have studied further. Using historical sources as evidence

3.8 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.8 Exercise 1: Check your understanding

- 1. HS1 Why have Vikings been regarded as barbarians?
- 2. HS1 How might berserkers have added to the Vikings' barbarous image?
- 3. HS1 Fill in the gaps.
 - (a) Evidence suggests that the Viking helmet was a _____
 - (b) Viking shields were about _____ metre(s) wide and were made of _
 - (c) Viking armour was made of _____ or ___ _ or _
- 4. HS1 What was the most popular weapon among the Vikings? Why was it the most popular?
- 5. **HS1** Identify two other weapons that Vikings used.

3.8 Exercise 2: Apply your understanding

- 1. **HS3** What sort of evidence would the artist who created **SOURCE 2** have needed to accurately draw Viking warriors? Find examples of other sources from this topic that would help create a picture of what Viking warriors might have looked like.
- 2. HS3 Explain why the conical helmet, as depicted in SOURCE 1, was useful to its wearer in battle.
- 3. HS3 What does SOURCE 3 tell us about the variety of Viking weaponry in battle?
- **4. HS3** Describe the features that you can see on the weapons in **SOURCE 4**. From what metal do you think they were made?
- **5. HS3** Which weapons and armour are visible in **SOURCE 5**? What do the figures appear to be doing? How does a source like this help us understand what Vikings looked like going into battle?
- 6. HS3 Study SOURCES 2 and 5.
 - (a) To what extent do these two sources provide supporting evidence on what took place during Viking raids?
 - (b) Which source is the most useful for a historian studying Viking raids? Why is it the most useful?
- 7. **HS3** Using evidence from **SOURCES 2** and **3**, explain why it was challenging to defend oneself from a Viking attack.
- 8. HS4 Imagine you are a Viking who is about to take part in a raid. Describe how are you feeling? Were you a berserker?
- 9. HS4 Draw a mind map that explores how Vikings used armour and different types of weapons.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

3.9 Viking invasions and settlements 3.9.1 Viking attacks in Britain and Ireland

The exact reasons why the Vikings began their movement out from their homelands is unknown. However, it seems certain to have been a combination of the pressures of growing populations, a lack of arable lands, fighting among the different groups and an awareness of the availability of the wealth of foreign lands. Combined with their skill in shipbuilding, this allowed for an expansion into other lands.

The early raids late in the eighth century were focused on the short trip from Scandinavia across the North Sea and were concentrated in Northern England, Scotland and Ireland.

The first recorded Viking attacks on Britain started in the coastal regions at the monasteries in the north of England and Scotland in the latter part of the eighth century and picked up again by the middle of the ninth. Two of the most well-known raids were the monasteries of Lindisfarne in Northumbria in 793 CE and Iona off the coast of Scotland in 795. Here, the Vikings launched successful hit-and-run raids taking off with valuable church goods, such as works of art and valuable church icons, as well as slaves, leaving in their wake a trail of dead and dying monks who got in their way. Their longships were the perfect vehicles for attacking these coastal communities and getting away with their riches.

SOURCE 2 Illustration of a Viking attack from the twelfth century Miscellany on the Life of St. Edmund



SOURCE 1 A description of the Viking attack on Lindisfarne in *History of the Church of Durham* by the monk Simeon

On the seventh of the ides of June, they reached the church of Lindisfarne and there they miserably ravaged and pillaged everything; they trod the holy things under their polluted feet, they dug down the altars and plundered all the treasures of the church. Some of the brethren they slew, some they carried off with them in chains, the greater number they stripped naked, insulted and cast out of doors and some they drowned in the sea.

3.9.2 Viking settlements

As the Vikings began to voyage further and further away from their original homelands, they set up **longphorts** where they could winter away from home. They were drawn to Ireland as it had a number of monastic communities that had an array of riches which they could plunder. Viking Dublin began as a longphort, established in the ninth century, and developed into a thriving settlement from which they traded goods and slaves. It was one of the most established urban communities of its time, with craftsmen and merchants running flourishing trades. Archaeological excavations over the years have shown the remains of houses, streets and city walls. A Viking burial ground was found in Kilmainham in modern central Dublin and the dig revealed a large number of bodies of men, women and children, as well as many Viking artefacts buried with them, telling historians much about the society of the time.

SOURCE 3 An extract for the year 841 from the Annals of Ulster, a list of the year's events kept by monks and clergy

There was a naval camp at Linn Duachaill from which the peoples and churches of Tethba were plundered. There was a naval camp at Duiblinn from which the Laigin and the Uí Néill were plundered, both states and churches, as far as Sliab Bladma.

Dublin's Viking age was at its peak from the ninth to twelfth centuries. One of its major industries was shipbuilding. At some stage during 1070-1090 CE, five Viking ships were sunk at Skuldelev, Denmark to make a protective barrage. One of these sunk ships, a well-made 30 metre longship, was discovered to have been made in Dublin. Eventually the Vikings and their allies were challenged by the Irish King Brian Boru and they lost to him in the Battle of Clontarf in 1014, ending their hold on Ireland. The settlements that they had created and the people who lived in them, however, remained.

SOURCE 4 Artefacts from the excavation discoveries of Viking Dublin



3.9 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.9 Exercise 1: Check your understanding

- 1. HS1 Why did the early raids tend to concentrate around the northern parts of England and Scotland?
- 2. **HS2** In what years were the attacks on Lindisfarne and Iona?
- 3. **HS1** What did the Vikings take in their raids?
- 4. HS1 Why do you think the monasteries were such good targets?
- 5. HS1 Why did the Vikings establish longphorts?
- 6. HS1 What were two reasons that they settled in Ireland?
- 7. **HS3** What evidence is there that Dublin was a thriving community?
- 8. HS3 What does the longship found in Denmark show about the shipbuilding industry in Viking Dublin?

3.9 Exercise 2: Apply your understanding

- 1. HS3 Read SOURCE 1.
 - (a) List four actions that the Vikings took during the attack.
 - (b) What was the writer's view of the Viking attack? How do you know?
- 2. HS3 What does SOURCE 2 tell historians about the techniques of Viking sea attacks?
- 3. **HS3** Read **SOURCE** 3. What is the writer's main concern for this year?

- 4. HS3 Using SOURCES 1 and 3, explain what the monks' perspectives of the Vikings were.
- **5. HS3** Imagine that you are an Irish monk. Write a letter to one of your colleagues in Europe, describing the attacks by the Viking invaders.
- **6. HS3** Draw conclusions about what type of people were likely to have been buried in Viking Dublin from **SOURCE 4.** Explain your answer.
- 7. **HS3** From **SOURCE 4**, explain how a Viking burial ground or cemetery can provide information for historians and archaeologists.
- 8. **HS6** What do the discoveries of Viking settlements like Dublin tell us about the Vikings? Consider different ideas like the expansion of their influence, their interactions with native peoples and the type of settlement they created.
- 9. HS6 Do you think the Vikings should be remembered as raiders and pillagers, or do you have other views?

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3.10 Viking explorers, settlers and traders 3.10.1 Exploring and colonising

Vikings were ferocious warriors and raiders but they were also successful explorers whose seamanship enabled them to reach places unknown to other Europeans. They colonised new lands and became traders in commodities such as fur, timber, metal goods and slaves — the people who were captured during their raids.

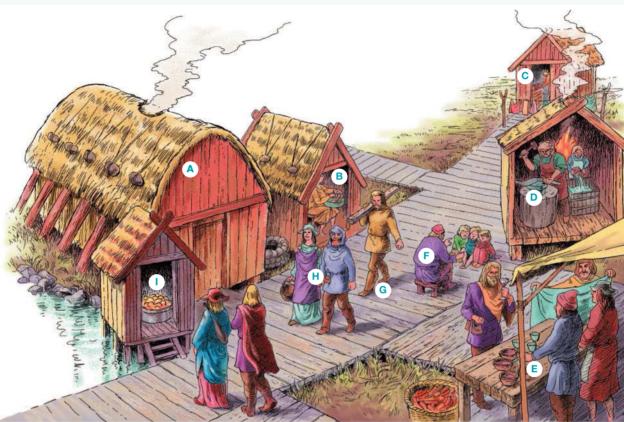


Source: Map drawn by Spatial Vision.

As their population grew, the Vikings colonised the lands they had raided and looted, and they looked for new lands in which to settle. Norwegian Vikings colonised the North Sea island of Iceland. This settlement later became the base from which Vikings colonised the coast of Greenland. One of the most famous of all Viking explorers was Leif Eriksson. According to Viking sagas, Eriksson sailed from Iceland to North America in about 1000 CE, five centuries before any other European. He briefly established a settlement at a place he called Vinland because wild grapes grew there. It was probably strong resistance from indigenous North Americans that caused the Vikings to soon abandon Vinland.

Trading settlements

Viking trading towns were built along the coasts of their Scandinavian homelands. At least one of these trading posts, Hedeby, in Denmark, was at the crossroads for trade between the East and the West. It was visited by traders from as far away as Baghdad, in Iraq. Goods exchanged included wine, bronze, iron and glassware. Viking traders also sold slaves. They were mostly Slavic peoples from Eastern Europe who were captured in Viking raids. They were traded for Arabic silver and gold. This trade was so extensive that in many European languages the modern word for 'slave' has stemmed from the word 'Slavs'.



SOURCE 2 A modern artist's reconstruction of a Danish trading centre

- A Longhouses had an earth floor and a thatch or turf roof. Animals and food stores were kept at one end in winter. Wealthy families may have had a table, storage chests, stools, oil lamps and wall tapestries.
- B Women spun wool from sheep and goats into cloth on wooden looms. Vegetable juices and minerals were used to dye the cloth.
- C Meat and fish were preserved by being smoked, or pickled in salt. Bread, made from ground grain, was baked in clay ovens.
- p Iron weapons and tools were made and repaired in the blacksmith's barn. Sometimes steel (made by adding carbon to molten iron) was welded onto weapons such as axes to make them stronger.
- E At the markets, merchants might trade silks from China and glassware from Italy for farm produce or artefacts. Artefacts might include combs (made from deer antlers), skates and musical instruments (made from animal bones), cups (made from cow horns), silver jewellery and tapestries.
- F When not working, many Vikings passed the time wrestling, swimming, skiing, playing a board game called hnefnatafl (a bit like chess), and listening to the sagas told by storytellers.
- G The Vikings were experts at building both warships and trading vessels.
- H Men wore a woollen undershirt and leggings under a belted tunic or coat. Like women, they wore woollen or fur hats, woollen socks and soft leather shoes or boots. Women wore a long linen shift under a woollen tunic, clipped at the shoulders by two brooches.
- To keep clean, Vikings visited the sauna every few days. They sat in a small, enclosed shelter and threw cold water on very hot stones. The steam opened the pores of the skin, helped by slaps from small birch or pine tree branches. Once hot and sweaty, people dived into a nearby source of ice-cold water.

Viking trading settlements were founded as far west as Ireland and as far east as Russia. Trading posts like Hedeby or Dublin were usually constructed entirely of timber with wooden planks lining the streets, outdoor marketplaces, and earthen ramparts and ditches surrounding the settlements to protect them from attack.

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• The Western and Islamic world >Viking homelands and settlements

3.10.2 Trading boats

Viking longships were designed for war and long travel, but the Vikings also built another type of ship called a **knarr**. These ships were designed for trade and each could hold around 30 cubic metres of goods. Historians know what they looked like because two knarrs have been found at the bottom of the sea. They were filled with rocks and sunk along with some longboats to block Roskildefjorde in Denmark. This was done to create an underwater barrier against enemy attacks.

3.10.3 The Danes in England

From the mid-ninth century, Danish Vikings overran much of England. But in 878 CE, after several battles, Alfred, the Saxon king of Wessex, forced the Danes to accept a treaty under which the Danish leader, Guthrum, agreed to withdraw to the eastern part of the country. This part of the land was known as the Danelaw. Alfred's son later conquered the Danelaw. However, in 1016, Danish forces conquered England. Under the Danish king Canute, England formed part of a Scandinavian empire until 1042.

SOURCE 3 A modern artist's reconstruction of a knarr, based on a wreck found in Roskildefjorde, Denmark



SOURCE 4 A silver coin from King Eric of Jorvik from the tenth century





DISCUSS

'The Vikings deserve to be remembered only as barbaric raiders'. Give your perspective and provide evidence to support your point of view.

[Critical and Creative Thinking Capability]

3.10 ACTIVITIES

- Find out about the Viking trading town of Konugardr (modern-day Kiev). Use a map and trace a journey that starts in Sweden and finishes in Constantinople (modern-day Istanbul), going through Konugardr. Identify the route and explore how the knarrs would have made the journey.
 Analysing cause and effect
- Using an atlas and SOURCE 1, find as many modern-day nations as possible through which Viking trade
 and raiding routes passed.
 Using historical sources as evidence

3. Using the internet and your library, research the Viking shipwreck site at Roskildefiorde in Denmark. Explain how the ships were recovered, what their relative sizes and functions were, how many have been recovered, and when, why and how they were sunk. Using historical sources as evidence

3.10 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.10 Exercise 1: Check your understanding

- 1. **HS1** Why did the Vikings begin to colonise other lands?
- 2. HS1 Who led the first known European settlement of North America and why is it likely that it failed?
- 3. **HS1** How did Vinland get its name?
- 4. HS1 Why was Hedeby's geographical position good for trade?
- 5. HS1 How was Hedeby defended?
- 6. HS1 Where has the term 'slave' come from?
- 7. **HS1** What was the purpose of the knarr?
- 8. **HS1** Why did the Vikings build the knarrs deeper and shorter than the longships?
- 9. **HS1** Why did the Danes sink ships in Roskilejorde?
- 10. **HS1** What was Danelaw?
- 11. HS1 Under which Viking leader was Danelaw brought in?

3.10 Exercise 2: Apply your understanding

- 1. **HS3** Using the information in the map in **SOURCE 1**, describe where the Vikings colonised and traded.
- 2. HS3 Examine SOURCE 2. Explain why there are very few remains of Vikings settlements.
- 3. HS3 Examine SOURCE 3. What were some of the disadvantages of transporting trade goods in this type
- 4. HS3 What does the design of King Eric's coinage in SOURCE 4 suggest about the type of image he was keen to promote?
- 5. HS3 Archaeologists have found only the foundation timbers of towns like the one shown in SOURCE 2. How might they have decided how the rest of the town would have looked, as shown in the illustration?
- 6. HS5 Examine the causes and effects of Viking trade and settlement. Construct a concept map to show your findings.
- 7. HS5 To sail from Iceland to North America in a Viking ship, as Leif Eriksson is said to have done, would be an amazing achievement. Why is it not celebrated as widely in the United States as the explorations of **Christopher Columbus?**

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

3.11 The spread of Christianity

3.11.1 The influence of Christianity

Gradually, the Vikings became more and more exposed to Christianity. Initially they were happy to accept the Christian god into their range of gods but eventually most Viking leaders adopted Christianity as their sole religion.

Early records written by Anglo-Saxon monks show that the Vikings savagely attacked monasteries, robbing them of valuable items, such as silver plates, golden crucifixes and goblets, as well as gifts of coins. The first recorded major attack was on the island of Lindisfarne in Northumbria in England in 793, where the Vikings attacked the religious community in a surprise raid, stealing many of their treasures, killing monks and taking others as slaves. These were followed by other raids on monasteries in England and Scotland; the age of the Viking raids had begun. These attacks on monasteries were not motivated by religion, but did bring the Vikings into contact with Christianity. The captured slaves must have brought their beliefs in god with them to their new lands.

SOURCE 1 An extract from Alcuin of York's letter to the Bishop of Lindisfarne consoling him on the terrible Viking raid

The intimacy of your love used to rejoice me greatly when I was with you; but conversely, the calamity of your tribulation saddens me greatly every day, though I am absent; when the pagans desecrated the sanctuaries of God, and poured out the blood of saints around the altar, laid waste the house of our hope, trampled on the bodies of saints in the temple of God, like dung in the street.

The coming of Christianity to Scandinavia

By the end of the Viking Age most of the Scandinavian countries had adopted Christianity as their main religion. Those in the west were influenced by Rome. Further east, where the descendants of Swedish Vikings had mixed with the Slav tribes on the rivers of Russia, the chief influence was Constantinople, which followed Eastern Orthodoxy. This was a result of Vikings serving as guards for the emperor of Constantinople.

Evidence suggests the conversion to Christianity was a gradual process. There was a long period of overlap where Christian and old pagan practices mingled. For the Christian missionaries who spread the faith throughout Scandinavia, this may have been seen as a practical tactic. By not completely overthrowing the old gods and the old pagan rituals, Christianity was able to get a foothold in Viking lands. There may also have been some degree of sentimental attachment to the old pagan religion. The sagas, products of a later Christian age, dwell at length on the myths and legends of the pagan past.

3.11.2 Christian leadership

Kings and chieftains taking up the new Christian faith also did much to hasten the path to conversion. With many of the powerful leaders of Europe already converted to Christianity, it made political sense for Scandinavian rulers to convert to the religion of their allies. King Olaf Tryggvason imposed Christianity on Norway in 995 CE. The sagas tell of him destroying pagan temples. Such aggression suggests there was resistance to the spread of Christianity. With some parts of the Scandinavian world remote from the rest of Europe, and therefore having little, if any, contact with the Christian faith, this seems a reasonable assumption, especially in far-flung regions like northern Norway, Iceland and Greenland. By the time Tryggvason's successor, St Olaf, had finished his work of converting Norway and Iceland to Christianity, the Christian faith had taken firm root in the Viking world.

SOURCE 2 A Viking gravestone from Yorkshire in England. It combines both Christian and pagan symbols.



SOURCE 3 St Olaf with his axe, depicted on a fifteenth century Bishop's crozier from Norway



3.11 ACTIVITY

Find out more about the town of Uppsala in Sweden by tracing its history from paganism to Christianity. What was its significance to the Vikings over this period? **Determining historical significance**

3.11 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.11 Exercise 1: Check your understanding

- 1. **HS1** When was the first recorded major Viking raid?
- 2. HS1 What did the Vikings gain from this raid?
- 3. HS5 Did the raids on monasteries have any influence on the Vikings in terms of religion?
- 4. HS4 Was the conversion to Christianity a slow process or a fast change? Support your answer with an explanation.
- 5. **HS1** Write out the sentences below adding the missing words.
 - (a) Changing from one religion to another is called _
 - (b) King _____ imposed Christianity in Norway.
 - (c) The parts of Scandinavia were probably most resistant to the new religion.
 - (d) King Olaf Trggyvason's successor was
- 6. HS1 Why was there more resistance to the conversion to Christianity in some places over others?

3.11 Exercise 2: Apply your understanding

- 1. HS3 Read SOURCE 1.
 - (a) Explain what Alcuin means when he says that the 'pagans desecrated the sanctuaries of God'.
 - (b) List three terrible things that Alcuin says the Vikings did in their raid of Lindisfarne.
 - (c) Find out whether Alcuin was present during the raid. Is this a reliable source?
- 2. HS3 What evidence is there in SOURCE 2 that the Vikings mixed Christian and pagan beliefs as they moved towards Christianity?
- 3. HS3 What can historians learn from sources like SOURCE 3?
- 4. HS3 Re-examine the three sources in this subtopic. What are the strengths and weaknesses of each one in terms of a source to gain historical information from? Which source do you believe is the most useful? Explain your answer in detail.
- 5. HS4 Identify the reasons you think the Vikings converted from paganism to Christianity.
- 6. HS4 Describe how Christianity spread throughout Scandinavia. What methods to spread the religion
- 7. HS4 Using what you know of the Viking pagan religion (subtopic 3.6) and what you know about Christianity from this subtopic, what impact do you think the change of religion would have had on the Viking people?

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3.12 Harald Bluetooth: Viking king of Denmark

3.12.1 Viking royal palace

In 2010, archaeologists announced they had unearthed a Viking 'palace' in Jelling, a village in Denmark on the Jutland Peninsula. The foundations of five longhouses, standing stones in the shape of a longship and some runestones have so far been uncovered. Whose palace complex has been discovered?

The palace is the ruins of a particularly large longhouse beneath the present-day church. The complex has been dated to the late tenth century, the same period as ring-fortresses such as Trelleborg. Therefore, it is likely this complex was built by the same people.

'The birth certificate of Denmark'

Close to the palace complex are two runestones called the Jelling stones. One is shown in **SOURCE 1**. This stone was erected by Harald Bluetooth, the king of Denmark. This stone has both pictures and runes carved into it. The stone:

- honours Harald Bluetooth's parents
- proclaims Harald united Norway and Denmark into a single Viking empire
- declares Harald brought Christianity to Denmark and Norway.

For these reasons, the Jelling stones have become known as 'the birth certificate of Denmark'. In other words, they record the beginning of Denmark as a nation.

It is believed the palace complex unearthed at Jelling was most likely Harald's seat of royal power. This is because of its size and its close proximity to the Jelling stones.

SOURCE 1 One of the Jelling stones in Jutland, Denmark. This side of the rune depicts the crucifixion. The runes on the other side of the stone read: 'Harald king had these stones made after Gorm his father and after Thyra his mother — that Harald who won all Denmark and Norway and made the Danes Christian'.



SOURCE 2 The Ericsson company's Bluetooth symbol.



DID YOU KNOW?

The software called Bluetooth is named after the Viking king of Denmark and the symbol for Bluetooth is made up of two runic letters, standing for H and B, the initials of the Danish king Harald Bluetooth. Just as Harald Bluetooth united Denmark and Norway, so does the software named after him unite communication technology.

3.12.2 The life of Harald Bluetooth

Harald may have been the first king of a united Denmark. However, he had to fight hard to keep his throne. Given there is so little written evidence from the Viking Age, not much is known for certain about Harald's life or his reign. For example, it is not certain exactly when he was born. However, it is generally thought that he was born about 911 CE and died about 987 CE. We also know that he engaged in many battles, both at home and abroad.

Harald's conversion

Although the inscriptions on the Jelling stones give the impression that Harald freely converted his people to Christianity, some evidence suggests Harald might have been forced to do so.

Harald's ring-fortresses were part of a defensive military system called the Danevirke, which was designed to protect his kingdom from the Germans in the south. At this time, the ruler of Germany was the Holy Roman Emperor Otto I. Some historians say that Otto I defeated Harald in battle, forced him to be baptised and commanded him to protect the churches in Denmark where many, including Harald himself, continued to worship the old pagan gods.

Other accounts, however, say that Harald Bluetooth was freely converted by a Christian cleric.

Battles

Harald appears to have been successful in foreign military expeditions. The inscription on the Jelling stone says he conquered and brought Christianity to Norway. The southern part of Sweden fell under Harald's rule, and he supported Richard the Fearless of Normandy to fight against the king of France. He succeeded in capturing King Louis IV of France as prisoner and forced the French king to accept his ally Richard's rule over Normandy.

Harald finally met his end fighting a rebellion by pagan Danes in which it is thought his own son, Svend, was involved. Harald was given a Christian burial. The Christian faith he had helped to spread throughout the Viking world would prevail. So would Denmark, which under his grandson Canute the Great would become a vast empire, encompassing Norway, Scotland and England.





3.12 ACTIVITIES

- There is some controversy around the theories of Harald Bluetooth's conversion. Using the internet, find
 primary sources that support both main theories. Finding out what you can about who produced each
 theory and what biases they had, evaluate whether you believe that Harald converted freely or whether he
 was coerced.
 Using historical sources as evidence
- Use the internet and your library to research the Danish king Canute the Great. Design a runic stone, like the
 Jelling stone in SOURCE 1, that describes his achievements.
 Using historical sources as evidence
- 3. Examine **SOURCE 2**. Using the internet or your library, research the runes that combine to make the Bluetooth symbol. Write these in your workbook along with their meaning.

Using historical sources as evidence

3.12 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.12 Exercise 1: Check your understanding

- 1. HS2 When was the Viking palace complex at Jelling built?
- 2. **HS1** Why are the Jelling stones called 'the birth certificate of Denmark'?
- 3. HS1 Against which enemy was the Danevirke meant to defend Denmark?
- 4. HS1 How was Harald Bluetooth able to secure the rule of Normandy for his ally Richard the Fearless?
- 5. **HS1** How did Harald Bluetooth die?

3.12 Exercise 2: Apply your understanding

- **1. HS3** Examine **SOURCE 1.** Why do you think the Jelling stones have led archaeologists to hypothesise that the palace complex at Jelling was the seat of Harald Bluetooth's royal power?
- 2. **HS3** The chalkstone church in **SOURCE 3** is almost a thousand years old and there is evidence of three other wooden churches having been in the same place dating back to Harald Bluetooth. Write a short speech, defending its inclusion in the UNESCO world heritage list.
- 3. **HS6** What makes Harald Bluetooth a significant figure in Viking history?
- 4. HS5 Explain the two different theories surrounding Harald Bluetooth's conversion to Christianity.
- 5. **HS5** What was the broader impact of Harald Bluetooth's conversion to Christianity?

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3.13 The Battle of Hastings and the end of the Viking Age

3.13.1 Build up to the Battle of Hastings

In the Bayeux Cathedral in France, there is an embroidered wall hanging. It shows detailed scenes from the Battle of Hastings in 1066, which led to the Norman invasion of England. It is called the Bayeux Tapestry and is one of the most famous primary sources in medieval history. Many historians believe it was created in the late eleventh century under the orders of a bishop called Odo. This man lived in Bayeux, was a leader in the Battle of Hastings and was the half-brother of William, the Norman duke who won the battle. The Bayeux Tapestry has a height of only 50 centimetres, but is 70 metres long! It outlines the events of the Battle of Hastings like a modern-day comic book.

When England's King Edward the Confessor died in 1066, he had no direct heir to the throne. A powerful earl, Harold Godwinson, saw the opportunity to take the crown himself. But he had competition. King Harald Hardrada of Norway, as a descendant of the Danish king Canute who had once ruled England, believed he had a right to the throne. Harold Godwinson's own brother, Tostig, joined forces with Harald Hardrada. Finally, Duke William of Normandy also tried to claim the throne because he said Harold had sworn an oath promising to support him in becoming king after Edward's death.

SOURCE 1 Contenders for the English throne jostle for power.



- A Harold Godwinson 'I should be king! Edward was my brother-in-law, and even though I rebelled against him in 1051 we've put aside our differences."
- William, Duke of Normandy 'Edward promised me the throne because I helped him crush Harold's rebellion in 1051. Harold even swore to me that he'd let me be king!'
- C Harald Hardrada 'We should not let Viking influence in England disappear. I'm a descendant of King Canute and that's why I should be king!'
- **Tostig Godwinson** 'My brother Harold is a power hungry, ambitious swine! I want the throne for myself, and I'll use King Harald Hardrada of Norway to my advantage to get it!'

The last Viking attack on England

Harald Hardrada and his Norwegian army landed in the north of England. They met Harold Godwinson's army on the battlefield at Stamford Bridge. They were defeated in a bloody battle and as little as 25 of their 300 longships returned to Norway. Hardrada and Tostig were both killed. Some historians consider this the last true Viking attack on England. However, William of Normandy, a descendant of Danish Vikings, was now sailing to England in a fleet of longships.





- A William
- B Harold places his right hand on a casket containing a holy relic and his left hand on a Bible. Possibly this is an oath to support William's claim to the throne of England.
- 'William' and 'Harold' in Latin. The words dux and duci mean 'leader'.
- Harold is escorted back to England in a Norman ship. Clearly it is a Viking longship in design.

3.13.2 The Battle of Hastings

Harold's weary troops marched southwards 700 kilometres to meet the Norman force. They finally met near Hastings at a place now appropriately called Battle. Harold's troops formed a shield wall near the top of a hill, defending their position with battle axes. Wave after wave of Norman cavalry charged the shield wall but with little effect. Medieval battles were often decided within an hour — but not Hastings! It raged for the better part of a day. According to historians, it was a risky strategy of William's that finally won him the battle. Twice, his cavalry pretended to flee from the English. When the English troops gave chase, they broke their shield wall. William's cavalry regrouped, charged and defeated the now scattered English infantry. Harold was killed.

SOURCE 3 A scene from the Bayeux Tapestry — the death of Harold



- An English huscarl the elite bodyguard of Harold's army
- B A mounted Norman knight. His armour is similar to the huscarl's. His kite-shaped shield is favoured over Viking round shields.
- C Stripping troops of their expensive armour
- D Harold is killed. He is either shot with an arrow or cut down by a Norman sword or perhaps both.

Aftermath

William was crowned king of England at Westminster Abbey on Christmas Day, 1066. He became known as William the Conqueror. Despite his coronation, he had to continue fighting the English for the next few years before he had full authority. His knights became the new nobility of England. William followed the Frankish custom of parcelling land and peasant workers out to his supporters. This was part of a new system of running a country, called feudalism. This system, along with Christendom, would define Europe for the rest of the Middle Ages.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

• Overview > Invasion of Britain

3.13 ACTIVITY

Use the internet or your library to conduct further research into the Bayeux Tapestry. Write a summary of the order of events shown in the Tapestry.

Using historical sources as evidence

3.13 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.13 Exercise 1: Check your understanding

- 1. HS1 Study SOURCE 2 and 3.
 - (a) Which famous event in medieval history is shown on the Bayeux Tapestry?
 - (b) Whose perspective does it show?
- 2. HS1 Why was there a battle for the throne after Edward the Confessor died?
- 3. **HS1** What happened at the Battle of Stamford?
- **4. HS1** How did Harold Godwinson's troops manage to hold off the Norman force despite being tired from their 700 kilometre journey?

- 5. **HS1** How did the French forces manage to overcome them in the end?
- 6. HS1 Who won the Battle of Hastings?
- 7. HS1 Where and when was William the Conqueror crowned the king of England?

3.13 Exercise 2: Apply your understanding

- 1. HS3 List the features of the ship shown in SOURCE 2 that show it is a Viking longship.
- 2. HS3 Study SOURCE 3.
 - (a) After reading the passage and examining SOURCE 3, explain why the Normans found it so hard to break through the shield wall formed by the English huscarls.
 - (b) What can you learn about warfare from this time from SOURCE 3?
- 3. HS3 Why do you think the Bayeux Tapestry is such a valuable source of information for historians studying the Battle of Hastings?
- 4. HS5 The Viking Age ended when the raids stopped because the people who had been the Vikings stayed where they had settled and became English, Swedish, Norwegian, and so on. Examine how events like the Norman conquest contributed to ending the Viking Age.
- 5. **HS5** Identify one intended cause and effect, and one unintended, of the Battle of Hastings.
- 6. HS3 After reading the notes in SOURCE 1, who do you believe had the strongest claim to the English throne? Explain why.
- 7. HS6 Evaluate whether you agree that the Battle of Hastings was a turning point in bringing down the Age of the Vikings.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

3.14 Heritage of the Vikings: governing Iceland in the Viking Age

3.14.1 A Viking republic?

The modern parliament in Iceland is called the Althing. It has the same name as the body established in 930 CE that governed Iceland during the Viking Age. Although the Althing is regarded as the oldest national government assembly in Europe, there have been many changes over the last 1000 years. The Althing of the Viking era had some of the features of a modern parliament, but was quite different in many ways.

Iceland was originally a colony of Norwegian settlers. Most of them had settled Iceland as a result of feuding with the king of Norway. They fled to Iceland where they hoped to live free of the Norwegian king's authority. Like Norway, Iceland was divided into a series of regional assemblies

SOURCE 1 One of the earliest written versions of the Icelandic legal code. It dates from 1260, two centuries after the end of the Viking Age. Because the Vikings did not keep records in the form of a book, the code was originally recited by heart (see **SOURCE 2**).



called things. Each thing was ruled by a local chieftain called a godar. As the population grew, these things combined to create a national governing assembly, the Althing. It was a unique form of government because it rejected the rule of a king. This was probably the result of the Icelandic settlers' dissatisfaction with the way they had been treated by the king of Norway.

SOURCE 2 A nineteenth-century depiction of Thingvellir in Iceland, where the Althing was held. The actual gathering took place outdoors at the foot of the lava cliffs. The Lawspeaker, who recited the law code, stood on the Law Rock. He faced the cliffs so that his voice could be heard more clearly by echoing off the cliff face.



Each year in summer, the Althing met on a plain called **Thingvellir**. The godars, 48 in all, came with their supporters and were billeted in small dwellings called **booths**. The assembly met in the open at a spot called the Law Rock. They listened as the law code was recited by a representative called the Lawspeaker. Then they discussed making new laws and amending old laws. One of the more radical amendments they made to their law code was the adoption of Christianity in 1000 CE.

Feuds were frequent between the regional chieftains, and the Althing's role was to try to resolve conflict. No doubt there was an endeavour to do this peacefully, but there is evidence that at times weapons were drawn at the Althing. One saga tells of one chieftain and his supporters using force of arms to barge through another group to get a hearing at the Althing.

But such incidents were probably rare. The Althing was unique as an assembly of free men trying to establish rule of law without the need of a king to enforce it. They even elected a president every three years. This is why some historians describe Viking Iceland as a republic. However, unlike the president of a modern **republic**, the president of the Althing was unable to enforce laws. This was the job of those directly involved in the law-making process.

DID YOU KNOW?

The word *booth*, which means an enclosed structure usually of wood or canvas, such as a stall at a fair, is originally an Old Norse word, which referred to the booths described in this subtopic.

Enforcing the law

There were various penalties for breaking the law. Theft was punished with beheading or hanging. A slave judged to be disobedient was punished with a whipping. Stoning and drowning were also punishments. Some offenders were sentenced to become outlaws. They were denied food and shelter and anyone had the right to kill them on sight. If you were an outlaw for life you also lost your property. Lesser offences carried a three-year sentence of outlawry. In the case of a dispute, it was the role of the injured party to enforce a punishment, not the Althing. Sometimes they accepted punishment payment from the offender or even agreed to reconciliation.

The Althing may have been very different to a modern parliament. However, in the centuries which followed its establishment, the rest of Europe would be ruled by kings and emperors. Compared to this, the Althing was more closely related to modern parliaments with representatives elected by free citizens.

3.14 ACTIVITIES

- 1. Hold a Thingvelllir with your class, or with two classes together to make the right number. Agree on the rules of your classroom, then elect a Law Speaker who will recite this to everyone. Find a Law Rock in your school and discuss an issue on which you decide. Using historical sources as evidence
- 2. Many people now believe that Iceland has not received enough recognition for being the first society to experiment with democracy, highly unusual in medieval times. Conduct a debate in class where you discuss the topic 'Iceland's Althing should be recognised as a proto-democratic movement'.

Determining historical significance

3.14 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

3.14 Exercise 1: Check your understanding

- 1. HS1 In what year was the Althing set up in Iceland? What was its purpose?
- 2. HS1 From what country did most Icelanders originate and why did they leave their original home?
- 3. HS1 What is a godar?
- 4. **HS1** Where and when did the Althing meet?
- 5. HS1 Under Icelandic law, what happened if you were declared an outlaw for life?

3.14 Exercise 2: Apply your understanding

- 1. HS3 Why was SOURCE 1, the written Icelandic legal code, dated 1260 CE when the Althing actually began in 930 CE? What did they do before this?
- 2. HS3 Why do you think the Icelanders chose the place shown in SOURCE 2 for the Althing? What makes it suitable for their purpose?
- 3. HS3 SOURCE 2 is a nineteenth century artist's interpretation of the Thingvellir. Using the information that you have been given here, draw your own diagram of this annual event and label it.
- 4. **HS4** Describe who held the power in the Icelandic Althing. How was this different where the people were originally from?
- 5. **HS4** Do you think that the penalties for breaking laws were tough? Too tough?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

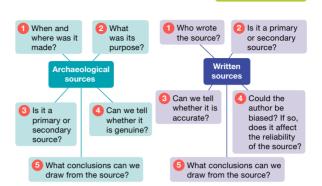
3.15 SkillBuilder: Interpreting sources on the Vikings

Why do historians need to interpret sources?

Sources can reveal a lot about the Vikings as long as historians ask questions about their origin, their purpose and if they are reliable and therefore useful.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.



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on line $\frac{1}{5}$

3.16 Thinking Big research project: Write a Viking saga

SCENARIO

You are part of a Norse mythology revival group. Drawing inspiration from traditional Icelandic sagas, you will write your own exciting saga and share it using a podcast.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources

projectsPLUS Thinking Big research project: Write a Viking saga (pro-0159)

3.17 Review

on line =

3.17.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

3.17.2 Reflection

Reflect on your learning using the activities and resources provided.



eWorkbook Reflection (doc-31324)

Crossword (doc-31325)

Interactivity The Vikings crossword (int-7585)

KEY TERMS

Althing Iceland's parliament; Icelandic governing national assembly formed during the Viking Age, which met

amber yellow fossil resin found in countries around the Baltic Sea and valued as precious stones in the manufacture of jewellery

arable land that can be ploughed for crops

barbarian uncultured and uncivilised: not Christian

berserker Viking warrior who fought naked or near-naked and rushed wildly into battle. The word 'berserk' is derived from this.

booth small, temporary shelter for participants at things and the Icelandic Althing

boss metal bulge used as reinforcement in the centre of a shield

bronze metal alloy mainly of copper and tin

duchy dukedom; a small state ruled by a duke, a nobleman whose rank is just below that of a prince fjord long, narrow inlet flanked by high cliffs and slopes

flax plant cultivated for its seeds and fibres, which can be used to produce many things such as textiles Gulf Stream great warm current of water flowing from the Caribbean Sea all the way to northern Europe heathen one who is neither Christian, nor Jewish nor Muslim, and is often seen as therefore being uncivilized hemp plant favoured for its tough fibre, useful in the making of rope

hilt the handle of a sword or dagger

keel lowest timber running along the length of a vessel, and upon which the framework of the whole boat is built knarr a Viking trading ship

lamellar made up of overlapping metal plates or scales

linen cloth made from flax

longhouse a Viking farmhouse with a curved shape like an upturned boat. Particularly large longhouses meant for 30-50 people are often called halls.

longphort a fortified base

mail armour comprising chain links

oath breaker someone who goes back on their word

pagan someone who is not a Christian, Jew or Muslim, but who worships many gods

peat vegetable matter, decomposed by water and partially turned to carbon, frequently forming a bog polytheistic the worship of numerous gods

pommel rounded knob at the end of a sword hilt

prow front part of a boat or ship

reconstruction rebuilding or re-making: in archaeology, rebuilding an artefact using archaeological remains as

republic a state in which the head of the government is not a ruler who inherits his position as might a king or emperor

rudder broad wooden or metal piece at the end of a boat used for steering; on a longship, it was a broad oar attached to the tiller

runes letters of the Scandinavian alphabet based on Roman or Greek letters but modified to be easily carved on wood or stone

saga a medieval Scandinavian tale about exploits and adventures in the life of a hero or his family self-sufficient able to provide for its own needs

tapestry carpet-like wall-hanging

thing regional meeting held to decide local issues in Norway and Iceland during the Viking Age Thingvellir meeting place of the Althing in Iceland during the Viking Age

3.15.1 Tell me

What are our main sources for the Vikings?

We have many sources that tell us about the Vikings. Most sources from the Viking Age are archaeological. This means that much of what is written about the Vikings is based on guesswork. Written documents from the Viking Age itself are, for the most part, very brief. Secondary sources, including film or attempts to recreate Viking life through replicas like armour or ships or buildings, are often based on guesswork.

Why do we need to interpret sources for the Vikings?

Sources can reveal a lot about the Vikings. Historians need to ask questions about both primary and secondary sources to identify their origin (where they came from), their purpose (why they were created) and whether or not they are reliable and therefore useful.

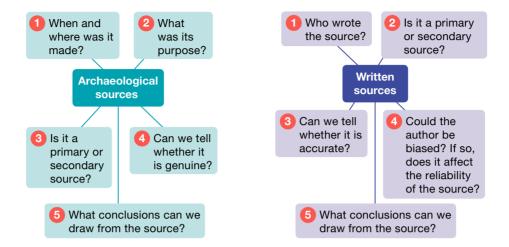
SOURCE 1 The Trelleborg Ring, a Viking fortress in Denmark, was built about 980 CE. Ring fortresses were surrounded by circular earthen mounds. Visible in this aerial view is the circular ridged earthen mound, which was the defensive wall. It is surrounded by a ditch.



3.15.2 Show me

How to interpret sources for the Vikings

We need to think carefully about the clues each source provides. We need to ask questions such as:



Step 1

The questions for archaeological sources have been applied to **SOURCE 1**.

- 1. When and where was it made? Scientific tests show it was built between 980 and 981 CE.
- 2. What was its purpose? It was a fortress, meant to shelter armed men and to control the surrounding country.
- 3. *Is it a primary or secondary source?* Having been built during the Viking Age, it is a primary source. Almost certainly it was built by Danish Vikings.
- 4. Can we tell whether it is genuine? It is a genuine Viking building complex. It was built during the Viking Age and is now mostly in ruins, with most of the timber structures having disappeared over time.
- 5. What conclusions can we draw from the source? The Vikings built ring fortresses that were surrounded by mounds and ditches.

Step 2

The questions for written sources have been applied to **SOURCE 2**.

SOURCE 2 An extract from an Icelandic saga called *Eyrbyggja*, written originally in Old Norse, or Icelandic, in the mid-thirteenth century

[The] onset [of the battle] was of the fiercest, and many were wounded on either side, but none slain. Snorri and his folk shot so thick and fast, that Raven with his men gave back from the wall [of the defensive work]. Then Thrand the Strider made a run at the wall, and leaped up so high that he got his axe hooked over the same, and therewith he drew himself up by the axe-shaft till he came up on to the work . . . [When] Raven saw that a man had got on to the work, he ran at Thrand, and thrust at him with a spear, but Thrand put the thrust from him, and smote Raven on the arm close by the shoulder, and struck off the arm. After that many men came on him, and he let himself fall down outside the wall . . .

- 1. Who wrote the source? The author is unknown. We know only that, like the Viking saga he has written, he has an Icelandic heritage.
- 2. *Is it a primary or secondary source?* The event is a Viking battle. As this source was written in the mid-thirteenth century and the author could not have witnessed the events he describes, it is a secondary source. However, if we were studying this source in the context of thirteenth-century medieval literature, it would be a primary source.

- 3. *Can we tell whether it is accurate?* It is not an eyewitness account. Even as a fictional account, the style of warfare may have changed after 200 years. At best, it is an imaginative account of a battle on a Viking fortress. We cannot be certain that it is an accurate description of an event from the Viking Age.
- 4. *Could the author be biased*? If so, does it reflect the reliability of the source? There does not appear to be any motive for bias. It is a straightforward account of a battle in the Viking Age.
- 5. What conclusions can we draw from the source? We cannot conclude anything about actual Viking battles, but we can conclude that the Vikings told stories about their battles.

3.15.3 Let me do it

Complete the following activities to practise this skill.

3.15 ACTIVITIES

- 1. Use the following questions to interpret **SOURCES 4** and **5**. The information given in **SOURCE 3** will help you judge which is more reliable.
 - (a) When and where was it made?
 - (b) What was its purpose?
 - (c) Is it a primary or secondary source?
 - (d) Can we tell whether it is genuine?
 - (e) What conclusions can we draw from the source?

SOURCE 3 From an article by Holger Schmidt entitled 'The Trelleborg House Reconsidered'

The reconstructed Viking-age house erected at Trelleborg in 1942 has, as a result of recent archaeological investigation, proved to be wrongly designed. The theory that it had an outside gallery [the verandah] is impossible to sustain, since on further examination the posts proved to be inclined towards the house and they must, therefore, be explained as buttresses . . . [The] whole structure of the house must be reconsidered . . . [The] Trelleborg house-type is that of the NW European medieval hall. It was built entirely of wood, the walls were of a stave-plank construction and it had a trussed-rafter roof. The convex shape of the structure was in accordance with contemporary taste or style . . . The walls . . . were perpendicular, but the roof and buttresses would have been the overriding feature of the exterior, giving it the curved outline of . . . hog-back grave-covers.

SOURCE 4 Reconstruction of a Viking longhouse from Trelleborg. It was built in 1942 and is supposed to be modelled on the longhouses which once occupied the Trelleborg Ring, as seen in **SOURCE 1**.



SOURCE 5 A more recent reconstruction of a Viking longhouse from a ring-fortress site at Fyrkat in Denmark



- 2. Based on your work interpreting sources on the Vikings, answer the following questions:
 - (a) Why are written documents from the Viking Age extremely rare?
 - (b) How have historians and archaeologists been able to find out about the Vikings?
 - (c) Describe how historians can check whether sources are reliable and/or useful.
 - (d) How useful are reconstructed sources like reconstructed Viking longhouses in providing information about the Viking Age?
 - (e) Explain whether the Viking sagas are primary or secondary sources.

3.16 Thinking Big research project: Write a Viking saga

Scenario

Icelandic sagas were written down by scribes mainly during the thirteenth and fourteenth centuries, taken from the stories passed down in the oral tradition from generation to generation. They told of Norse heroes and legends, of kings and gods, of Icelandic families and their deeds, as well as creatures such as trolls and giants. They give insight into the values and beliefs of the time, as well as details about the social structures, living conditions, food, clothing and many other things.



Task

Because sagas were passed down from generation to generation, they were constantly changed and adapted. You are part of a Norse mythology revival group and you are creating a podcast with retellings of exciting Norse sagas. You will write a saga, using the traditional stories and style as the basis for your version, and you will record it as a podcast so that others can enjoy listening to it.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group if you wish. You may work individually or in pairs, depending on your teacher's preference. Save your settings and the project will be launched.
- Navigate to your **Research forum** where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered. This is where the creation of your saga begins.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Spend some time reading (and listening to) a variety of sagas. There are numerous websites that give access to a variety of translations of Icelandic myths.
- When you have a good sense of the topics covered and the style used, decide on a character or event(s) that you would like to write about. Brainstorm some ideas, either taking a known account and giving a different perspective on it, or writing a new adventure using known characters.
- Write a draft of your saga. Keep in mind that it will eventually become a spoken text. Use the **Writing** a Viking saga document in the Media centre to help you.
- Hold a critique session where you and your classmates will provide helpful feedback to each other so that you can draft your writing.
- Practise telling your saga. Work on including techniques that will entertain your audience. Use the document, **Using your voice in a spoken text** to help you with this.
- When you are ready to record, use the document **How to make an audio recording**.
- Your teacher will upload your recordings in a central place so that you can all listen to each other's sagas.





3.17 Review

3.17.1 Key knowledge summary

3.2 Examining the evidence

- The Viking civilisation that we study existed over one thousand years ago.
- Although a written language called runes existed, these were mainly for stone or bone inscriptions. It
 was not until the Vikings became Christian later in the Viking Age that written language was used to
 record things.
- Historians discover information from this period through the examination of artefacts and other archaeological discoveries.
- There have been significant discoveries of burial sites such as the King's Mound in Gokstad in Norway and many archaeological sites where there were settlements.
- The Vikings had a great oral storytelling culture.
- Late in the Viking Age, the stories of heroes and gods were written down and are known as the sagas. There was also much written about the Vikings by monks and others like the Anglo-Saxons who were their enemies, such as the Old English story, *Beowulf*.

3.3 Scandinavia before the Viking Age

- The ancestors of the Vikings were mainly farmers, just as the Vikings were.
- There is archaeological evidence from the Bronze Age in Scandinavia, showing the people had developed boats and used bronze for tools and weapons.
- By the time the Scandinavians came into contact with the Romans, they had moved into the Iron Age, finding it a much harder metal and therefore more effective in battle.
- They had further developed their boats, giving them the ability to travel greater distances by sea, thus enabling trade from which they profited.
- The period immediately before what we call the Viking Age is known as the Vendel era, 400–800 CE.
- The boats and armour from the Vendel era are recognisably Viking.

3.4 The Viking homelands

- Much of the land in the Viking areas was rocky and mountainous and only a small percentage was suitable for farming. Because of this the Vikings lived mainly around the coastal areas of their lands where the climate was milder and land more fertile.
- Although the winters were very cold, the water around the Viking homelands was prevented from freezing by warm currents, like the Gulf Stream. This was important for a seafaring people.
- From around the eighth century the Vikings started to raid and later settle other areas.
- There are a number of theories about why the Vikings started to move away from home. For example, it is possible that they needed more farming land because the population was growing. Another theory is that the Vikings fought among themselves and some fled overseas. There is also the hypothesis that they took advantage of weaknesses among the rulers of European countries to conquer and settle. It is likely to be a combination of a number of these theories.

3.5 Viking society

- Although Vikings are known as pirates and raiders, for the most part they were farmers. Viking society
 was stratified, into kings or lords known as jarls, freemen called karls and slaves known as thralls. The
 slaves were usually people who had been brought back after raids and battles. They were needed for
 their labour on the farms.
- Viking farms were a series of buildings huddled around a longhouse and were often quite isolated, meaning the people relied only on themselves and the farms were often self-sufficient.
- Vikings kept livestock and crops of grains, such as barley and rye, as well as flax and hemp for linen sailcloths.
- Viking women ran the farms as the men tended to be away for long periods on raids.
- Children would most likely have helped out on the farm.

3.6 Early Viking religion

- Early Vikings followed a pagan religion.
- Viking myths are full of giants and of their gods who lived in a place called Asgard, which is high up in the sky.
- They worshipped many gods, the most significant of whom were Odin, Freya and Thor.
- Odin features in many of the sagas as the god who ruled from Valhöll, the Hall of the Slain, where the warriors who died in battle were welcomed by the Valkyries, or war-maidens.
- Vikings believed that death marked the beginning of a journey to another world and their burial
 practices reflected this. The dead were buried with the things the Vikings believed they would need in
 the next life or had enjoyed in this one, with archaeological finds of burial mounds providing evidence
 of this.

3.7 Viking longships

- In the eighth century CE developments in Viking boat design technology, such as innovations in the keel, the rudder and the sail, enabled them to make longer ocean voyages.
- The remains of several ships have been found and replicas have been built that demonstrate how quickly the ships were able to sail across the seas, which is also quite remarkable considering that they only had the sun and stars for navigation.
- Viking ships were large but quite narrow and shallow, which enabled them to be pulled up close to shore during raids.
- There is evidence that the ships were carried overland from one waterway to another.
- At times Viking ships were known as dragon ships because a carved head of the mythical monster was sometimes mounted on the prow of the ship.

3.8 Viking weaponry

- Viking weapons and armour were extremely well-constructed and effective.
- For protection the Vikings wore body armour usually made of leather and chain mail, as well as a conical iron helmet.
- They carried timber shields to protect their bodies.
- They used an array of weapons such as bows and arrows, spears, axes and swords.

3.9 Viking invasions and settlements

- Around the eighth century, the Vikings began their expansion into other lands.
- Monastery records from England, Scotland and Ireland show that the Viking raids started as
 hit-and-run raids where they attacked and took with them the monastery's precious artefacts and
 money, killing and maiming monks and others as they attacked.
- As time went on and the Vikings travelled further from their homelands, they set up winter camps in some of these places because it was too far to get home for the winter. Eventually some of these became permanent settlements, such as Dublin in Ireland.

3.10 Viking explorers, settlers and traders

- In their search for new lands, the Vikings colonised Iceland and Greenland.
- The explorer Leif Eriksson made it as far as North America in about 1000 CE. He established a settlement there called Vinland.
- As well as longships, Vikings had trading ships called knarrs.
- The Vikings also founded trading posts and settlements, including one called Hedeby that was on the crossroads of the East and West and settlements in Russia and Ireland. Many goods were exchanged including slaves, wine, bronze, iron and glassware.
- The Vikings settled much of England, dividing the country between them and the Anglo-Saxons. The northern part of the country, known as the Danelaw, was ruled by the Vikings until it was conquered by Alfred the Great.

3.11 The spread of Christianity

- Over time the Vikings became more and more exposed to Christianity through their travels and trade with countries, as well as from missionaries.
- Initially they were happy to accept the Christian god into their range of gods.
- Eventually, most Viking leaders adopted Christianity as their sole religion and imposed it on their subjects.

3.12 Harald Bluetooth: Viking king of Denmark

- Harald Bluetooth was celebrated as the first king of a united Denmark.
- He was a successful warrior who brought Christianity to the countries that he conquered, Denmark, Norway and parts of Sweden.
- He was eventually killed in a rebellion by pagan Danes but was given a Christian burial.
- The Christianity that Harald spread prevailed.
- An archaeological discovery was made of the ruins of a series of longhouses close to two large runestones known as the Jelling stones. They were erected by Harald Bluetooth and honour his parents as well as his achievements. They record the birth of a nation and have been called the 'birth certificate of Denmark'.

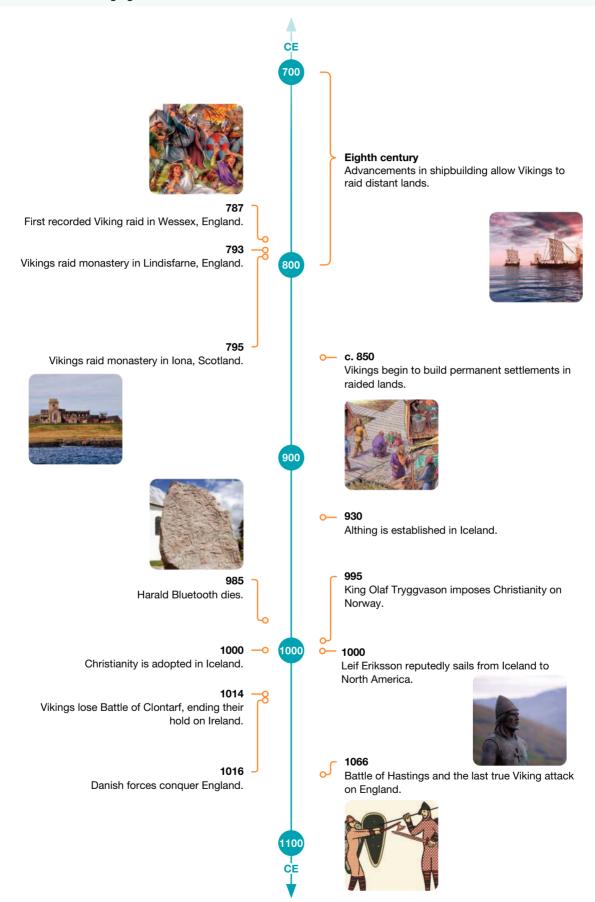
3.13 The Battle of Hastings and the end of the Viking Age

- The Battle of Hastings ended the Viking Age.
- When England's Edward the Confessor died in 1066 he left no direct heir to the throne.
- Three main contenders came forward to replace Edward the Confessor: a powerful earl, Harold Godwinson; the Norwegian king Harald Hardrada, a descendent of the Danish king Canute who once ruled England; and William of Normandy, who said that he had been promised the throne after Edward's death.
- Godwinson and Hardrada fought, with the Viking king eventually being killed. After this, Harold Godwinson had to face the Normans who had sailed from France.
- The Bayeux Tapestry shows detailed scenes from the battle between Godwinson and William of Normandy the Battle of Hastings.
- Eventually Harold was killed and William was crowned at Westminster Abbey, becoming known from then on as William the Conqueror.
- William's rule was to change England significantly, bringing in feudalism.

3.14 Heritage of the Vikings: governing Iceland in the Viking Age

- A Viking governing body was founded in Iceland in 930 CE called the Althing.
- Iceland was divided into a series of regional assemblies known as things ruled by local chieftains called godars which combined to create the Althing.
- The godars with their supporters met annually on a plain called the Thingvellir and listened to the law codes spoken by the Lawspeaker. They then discussed making new laws and resolving feuds.
- The Althing is recognised as an early republic, an assembly of free men.





3.17.2 Reflection

Complete the following to reflect on your learning.

3.17 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Raid, pillage and plunder. Were the Vikings more than just Middle Ages bullies?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.





eWorkbook Reflection (doc-31324)

Crossword (doc-31325)



Interactivity The Vikings crossword (int-7585)

KEY TERMS

Althing Iceland's parliament; Icelandic governing national assembly formed during the Viking Age, which met once a year

amber yellow fossil resin found in countries around the Baltic Sea and valued as precious stones in the manufacture of jewellery

arable land that can be ploughed for crops

barbarian uncultured and uncivilised; not Christian

berserker Viking warrior who fought naked or near-naked and rushed wildly into battle. The word 'berserk' is derived from this.

booth small, temporary shelter for participants at things and the Icelandic Althing

boss metal bulge used as reinforcement in the centre of a shield

bronze metal alloy mainly of copper and tin

duchy dukedom; a small state ruled by a duke, a nobleman whose rank is just below that of a prince fjord long, narrow inlet flanked by high cliffs and slopes

flax plant cultivated for its seeds and fibres, which can be used to produce many things such as textiles

Gulf Stream great warm current of water flowing from the Caribbean Sea all the way to northern Europe

heathen one who is neither Christian, nor Jewish nor Muslim, and is often seen as therefore being uncivilized hemp plant favoured for its tough fibre, useful in the making of rope

hilt the handle of a sword or dagger

keel lowest timber running along the length of a vessel, and upon which the framework of the whole boat is built knarr a Viking trading ship

lamellar made up of overlapping metal plates or scales

linen cloth made from flax

longhouse a Viking farmhouse with a curved shape like an upturned boat. Particularly large longhouses meant for 30-50 people are often called halls.

longphort a fortified base

mail armour comprising chain links

oath breaker someone who goes back on their word

pagan someone who is not a Christian, Jew or Muslim, but who worships many gods

peat vegetable matter, decomposed by water and partially turned to carbon, frequently forming a bog polytheistic the worship of numerous gods

pommel rounded knob at the end of a sword hilt

prow front part of a boat or ship

reconstruction rebuilding or re-making: in archaeology, rebuilding an artifact using archaeological remains as a guide

republic a state in which the head of the government is not a ruler who inherits his position as might a king or emperor

rudder broad wooden or metal piece at the end of a boat used for steering; on a longship, it was a broad oar attached to the tiller

runes letters of the Scandinavian alphabet based on Roman or Greek letters but modified to be easily carved on wood or stone

saga a medieval Scandinavian tale about exploits and adventures in the life of a hero or his family self-sufficient able to provide for its own needs

tapestry carpet-like wall-hanging

thing regional meeting held to decide local issues in Norway and Iceland during the Viking Age Thingvellir meeting place of the Althing in Iceland during the Viking Age

4 Medieval Europe (c. 590–1500)

4.1 Overview

From the Crusades and castles to the Black Death, was medieval Europe the worst place to live in history?

4.1.1 Links with our times

In this topic we will look at events that occurred in Europe during the Middle Ages. The timeline of medieval Europe may be filled with power struggles, war, and death, but there were also developments in trade, medicine, learning, and skills that contributed to our modern society.

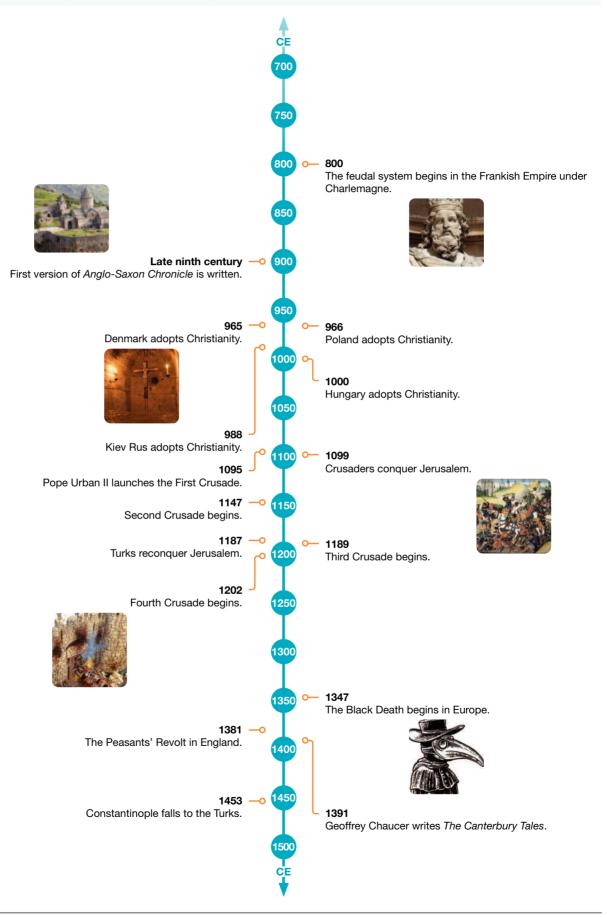


LEARNING SEQUENCE

- 4.1 Overview
- 4.2 Examining the evidence
- 4.3 The impact of the 'barbarian' invasions
- 4.4 Early medieval Christianity
- 4.5 The feudal system
- 4.6 Life on the manor for men, women and children
- 4.7 The knight
- 4.8 Medieval warfare
- 4.9 Castles
- 4.10 The power of the medieval Church
- 4.11 Monasteries and convents
- 4.12 The Crusades
- 4.13 The Age of Faith
- 4.14 Towns and trades
- 4.15 Living conditions and medical science in the fourteenth century
- 4.16 The Black Death
- 4.17 How did the Black Death change society?
- 4.18 The Peasants' Revolt
- 4.19 Joan of Arc
- 4.20 The heritage of medieval Europe
- 4.21 SkillBuilder: Interpreting medieval art as sources
- 4.22 Thinking Big research project: Festival of Lost Trades
- 4.23 Review



To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.



4.2 Examining the evidence

4.2.1 How do we know about medieval Europe?

There are many different types of evidence that provide historians with information. These include artwork, written sources and artefacts, monuments and buildings.

4.2.2 Artwork

Illuminations like the one in **SOURCE 1** help us imagine what life was like. In the foreground, peasants can be seen engaged in various activities on a farm. Many illuminations show scenes of village life, with peasants tending their crops and livestock. For the illustrator, such a scene would have been commonplace, because 90 per cent or more of the medieval population were peasants.

The Bayeux Tapestry (see **SOURCE 2**) is an embroidered cloth that depicts the battle of Hastings in 1066 and the events leading up to it. It is remarkably well preserved and hangs in Bayeux in France. Although the origins of the Bayeux Tapestry are unclear, wall hangings of this type were used for both decoration and insulation against the cold castle walls of the times. They were also highly portable and so moved around with their owners. These artworks give historians much information, about the scenes they depict as well as the technologies available to their creators.

Other artworks include paintings, mosaics and frescos.

SOURCE 1 Peasants working in the fields. From a French calendar illumination by the Limbourg Brothers, c. 1415.



SOURCE 2 A section of the Bayeux Tapestry that shows the nobles feasting while on campaign fighting for King William I of England



4.2.3 Written sources

Many stories and poems have survived over the centuries and give us more information. One of the most famous examples is a collection of stories and poems by Geoffrey Chaucer. It is called *The Canterbury* Tales, and was written in about 1391. This book examines medieval English society — even the titles of

the tales show the types of jobs the people of medieval England had. For example, some stories are 'The Miller's Tale', 'The Knight's Tale', 'The Reeve's Tale', 'The Monk's Tale', 'The Franklin's Tale' and 'The Squire's Tale'.

Official records also help to give us information about the Middle Ages. For example, William the Conqueror carried out a stocktake of all property in England in the late eleventh century. This record is called The Domesday Book (see **SOURCE 3**) and is a detailed record of the resources that were held throughout England at this time. It is an incredibly useful source for historians.

SOURCE 3 The Domesday Book is an amazing eleventh century public record of who owned what and how much they had. After conquering the English, the new king, William I, ordered a public survey of his new territory and the record was written up to become The Domesday Book.



4.2.4 Artefacts, monuments and buildings

Artefacts, monuments and buildings that have survived from the Middle Ages can be valuable sources of information. Artefacts include all types of items, such as coins, armour, weapons, utensils, tools and goblets. Artefacts made of durable metal like silver, gold and bronze are more common than garments and timber and iron materials, which tend to rust or rot away. To understand what such materials may have looked like, historians rely on written and pictorial records.

All sorts of buildings have survived from the Middle Ages: some cottages, churches, monasteries, tithe barns, castles and manor houses still exist. The cottage in **SOURCE 4** is made of **thatch** and stone. Although it would have been frequently renovated (for example, thatch needs to be replaced every 20 to 30 years), it is a good example of a peasant's cottage from the fourteenth century. Compare this to **SOURCE 5**, Dover Castle. Dover Castle is clearly intended for a class of people far wealthier and more powerful than peasants. The history of its site goes back to pre-Roman times. However, its present appearance began to take shape

SOURCE 4 These reconstructed cottages date back to the fourteenth century.



SOURCE 5 Dover castle in Kent, England. It was built in the eleventh and twelfth centuries.



under King Henry II in the late twelfth century. Castles like Dover help historians understand how such buildings were used both as military fortresses and homes for rich owners and their supporters. Comparing cottages and castles also gives us an idea about the class differences between the peasants and their rich and powerful rulers. Even buildings which are now ruins may give us clues about what life was like in the Middle Ages.

4.2 ACTIVITIES

- Make a list of types of sources under the headings of 'Artwork', 'Written sources' and 'Artefacts, monuments and buildings'. Include an explanation paragraph about what you can learn from each one as well as an example. Share these in your class and add to a class document that you can display in your history classroom.
 Using historical sources as evidence
- Find out more about the Bayeux Tapestry, such as who historians think may have commissioned it and which side of the Battle of Hastings it favours.
 Using historical sources as evidence

4.2 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.2 Exercise 1: Check your understanding

- 1. **HS1** What are the different types of artwork that historians have access to in order to draw conclusions about the medieval era?
- 2. HS1 Why were most illuminations concerned with scenes of village and farm life?
- 3. HS1 Consider SOURCE 2
 - (a) What was the Bayeux Tapestry created to celebrate?
 - (b) What was the purpose of this type of wall hanging during medieval times?
- **4. HS1** Explain the importance of written sources from this period to historians.
- 5. **HS1** What were the types of artefact that were mostly likely to survive from this period? Explain why this is so.

4.2 Exercise 2: Apply your understanding

- 1. HS3 Study SOURCE 2. What questions would you need to ask to work out what its biases are?
- **2. HS3** Is a photograph of a primary source, such the one of *The Domesday Book* in **SOURCE 3**, a primary or a secondary source? Discuss your answer in your class.
- 3. HS3 How do SOURCES 1, 4 and 5 help us learn about what life in medieval Europe was like?
- 4. HS3 What would a historian be likely to learn about the medieval period from The Canterbury Tales?
- **5. HS3** Suggest reasons to explain why William the Conqueror conducted a public survey of his new kingdom and created a written account of it (*The Domesday Book*).

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.3 The impact of the 'barbarian' invasions

4.3.1 The fall of Rome

The term 'Dark Ages' is sometimes used to describe the Early Middle Ages; that is, the period in Europe from the fall of the Roman Empire in 476 CE to about 1000 CE. It was a time when some believed the 'light' of Rome was extinguished, and Europe was plunged into 'darkness' and chaos, until it began to advance its knowledge and learning in a time known as the Renaissance. Many historians and archaeologists now avoid use of the term 'Dark Ages' as they believe it downplays the significance of the period and undervalues the achievements of the societies of the time.

DID YOU KNOW?

The term 'Dark Ages' was originally used by the Italian scholar Petrarch in the 1330s. He was describing what he considered to be the poor quality of literature coming from Europe in the period following the fall of Rome.

Romans called all those from beyond the borders of the empire 'barbarians', from a Greek word meaning foreigners. Barbarians were thought to be uncivilised because of their different culture and customs. For a number of reasons, these barbarians were still able to defeat and overthrow the Roman Empire.

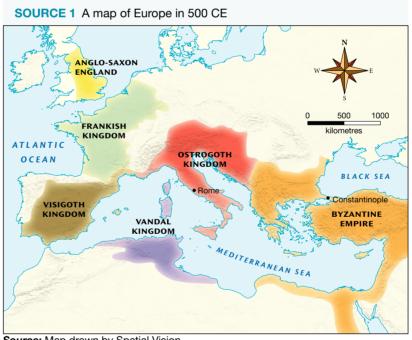
Historians have various hypotheses to explain the fall of Rome:

- 1. The empire was simply too big to survive.
- 2. The Roman population was declining.
- 3. The Roman legions increasingly enlisted 'barbarians', whose loyalty could no longer be taken for granted.
- 4. The adoption of Christianity as the official religion of the empire blunted their desire to conquer.
- 5. Infighting and civil war weakened the empire.

The collapse may have been due to a combination of these or other factors. Whatever the cause, the last Roman emperor, Romulus Augustulus, was deposed in 476 CE.

Not all of the Roman Empire was lost, though. In 395 CE the empire had split and the eastern part became known as the Byzantine Empire. Its capital was the city of Constantinople (modern-day Istanbul in Turkey). The Byzantine Empire lasted another thousand years until it was conquered by the Turks in 1453 CE.

Many kingdoms emerged to fill the vacuum left by the fall of the Western Roman Empire. At different times, Huns, Goths, Vandals and other groups that had challenged Rome established empires of their own. However, beset by internal divisions or invasions, most of these kingdoms did not last.



Source: Map drawn by Spatial Vision.

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Deepen and check your understanding of this topic with related case studies and auto-marked questions.

Overview > Transformation of the Roman World

4.3.2 The times that followed

Consequences

The Dark Ages were a time of great instability. The security provided by Roman control was gone. These were times of great violence. To educated people it seemed that ignorance and backwardness had triumphed over learning and order. Grand Roman buildings, roads and aqueducts were destroyed or abandoned. Migrations of peoples from various lands led to further conflict. Because few could speak or read Latin, the great Roman works of literature were no longer widely read, and many were lost.

Contributions

We now recognise, however, that important changes were taking place during this period, with new social systems and cultures emerging. Feudalism is an example of one such system. Many Roman customs and legal principles survived because the new rulers came to see the benefits such laws gave them and their people. Charlemagne was one ruler whose achievements were far greater than those of a mere warlord. As king of the **Franks**, he encouraged the arts and learning. Under his rule, large parts of western Europe became Christian and he promoted education, particularly through monasteries. The English king Alfred the Great is another great ruler from this time. Some Early Middle Age societies, such as the Vikings, had political systems that had no place for kings or dictators; some historians see in these systems the beginnings of modern democratic principles.

SOURCE 2 Alfred the Great, as depicted in a twentieth-century stained glass window



SOURCE 3 An image from the *Book of Kells* showing Mary with the baby Jesus



Contrary to the views of Petrarch, great works of literature containing magnificent artwork were created in these years. The Anglo-Saxon Chronicle, which documents the early history of England, was written in the time of King Alfred. The beautifully illuminated *Book of Kells*, featuring the four Christian gospels written in Latin, was created during the eighth century; it is on public display in Dublin today.

4.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.3 Exercise 1: Check your understanding

- 1. HS1 Who or what was a 'barbarian'?
- 2. **HS5** Explain the main reasons for the fall of Rome.
- 3. **HS1** Who was the last Roman emperor and in what year was he deposed?
- 4. HS1 What did the remaining piece of the Roman Empire become known as?
- 5. **HS5** What were some of the results of the loss of the security of the Roman Empire?
- 6. **HS1** Why were significant works of literature from that time lost?
- 7. **HS1** Name two great rulers from the so-called 'Dark Ages'.
- 8. HS1 What was one of the new social systems that developed during this time?
- 9. **HS1** List two great works of literature from this period.

4.3 Exercise 2: Apply your understanding

- 1. HS3 The map in SOURCE 1 shows the kingdoms and empires that rose after the fall of the Roman Empire.
 - (a) Which of these kingdoms or empires appears to be the largest?
 - (b) What modern continents does it cover?
- 2. HS3 Using SOURCE 1, explain the impact of the fall of the Roman Empire on Europe.
- 3. HS3 SOURCE 2 shows Alfred the Great holding two objects. What are these objects, and what might this depiction tell us about his accomplishments?
- 4. HS3 Artworks such as the one in SOURCE 3 were drawn by monks by hand and took a very long time to create. They devoted their lives to this work. What conclusions can we draw about these monks? What does it tell us about the importance of religion to these people?
- 5. HS3 Using information gathered from looking closely at SOURCES 2 and 3, argue whether or not you believe that the Early Middle Ages was a time lacking in art and learning.
- 6. **HS5** What is meant by the term 'Dark Ages'?
- 7. HS5 Identify three reasons why some consider the period from 500 CE to 1000 CE to be a 'dark age' and give three reasons why some believe this to be an inaccurate description.
- 8. HS6 Identify the contributions of the medieval period and rank them from most significant to least significant.

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4.4 Early medieval Christianity

4.4.1 The power of the Pope

Christianity stemmed from the Jewish religion in the first century CE. After becoming the official religion of the Roman Empire it spread throughout Europe. Following the fall of Rome, it became entrenched as the principal religion across Europe. For many reasons, cultures turned away from their traditional belief systems and adopted Christianity.

The Pope is the head of the Catholic Church. After the fall of the Western Roman Empire, the power and authority of the Pope increased; he became a unifying figure. Based in Rome, the Pope made a powerful ally in political disputes. Papal support gave a leader both political prestige and moral authority.

The Pope became far more powerful than any other Christian bishop for several reasons. He was able to claim authority based on St Peter's decision to lead the Christian Church from Rome. St Peter and St Paul, two early Christian leaders, were **martyred** in Rome, and this gave the city particular religious significance. Strategic political alliances with rulers such as Charlemagne also saw papal power and importance rise.

SOURCE 1 Charlemagne's coronation by Pope Leo III (800 CE)



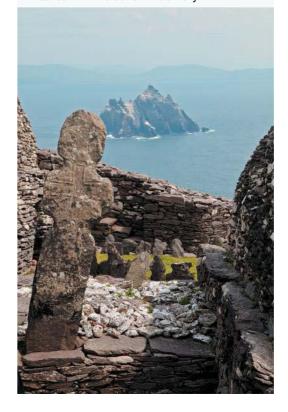
4.4.2 Monks and monasteries

An important feature of early Christianity was the role of monks and monasteries. A monk was a man who chose to withdraw from society in order to live according to strict Christian principles. Communities of monks were formed, with rules governing every aspect of their lives in order to ensure their obedience to God. These communities of monks lived in monasteries. Many monasteries were built in isolated places (see **SOURCE 2**), both for their protection and to free them from worldly distractions and influences.

Some monasteries, however, played important roles in the community. Many had schools attached to them. Some had markets where fairs were held. Justice and law were dispensed by the abbot in the towns that developed around the monasteries. People gave money to the monasteries in the belief that this would please God. Sometimes people were forced to pay taxes to the monastery for the use of their land or to sell produce in the markets. This made some monasteries very rich and powerful.

The spread of Christianity during the Early Middle Ages was in large part due to the work of missionaries. These were committed Christians, usually men, who took the message of Christianity to the **pagan** foreign tribes. They were usually most successful when they were able to convert the king, who would then ensure his followers converted. A notable example of this occurred when Clovis, king of the Franks, converted in 496 CE and began the task of converting the Frankish kingdom to Christianity.

SOURCE 2 A stone cross on Skellig Michael in Ireland. The monastery, on a small island off the west coast of Ireland, was built in the seventh century.



SOURCE 3 A ninth-century monastery in Tatev, Armenia



4.4.3 Education and health

The Church was one of the few sources of education during this period. Most schools were run by the Church; they represented the only educational opportunities for most people (see **SOURCE 4**). Similarly, most hospitals were attached to monasteries. The Church was often the only place the poor could turn to for help or welfare.

SOURCE 4 A thirteenth-century illustration showing a boy being brought by his parents to a monastic school



SOURCE 5 In this medieval illustration a sick man is cured through the power of prayer.



Despite its position of authority, there was still much ignorance in the Church and in society's perception of the Church. Medical knowledge was scant and often based on **superstition** rather than science. For example, the monks believed that a person could be saved from disease only through the intervention of God. Often they would pray to the saints or use **holy relics** to treat people rather than apply practical medicine.

DID YOU KNOW?

Pope Leo I personally met the barbarian invader Attila the Hun in 452 CE outside the walls of Rome. Attila, known as the 'Scourge of God', had ravaged Europe, invaded Italy and was set on sacking the city. No-one knows what was said during the meeting, but Attila withdrew his forces and Rome was saved.

4.4 ACTIVITIES

- Using software such as Google Earth, locate Skellig Michael in Ireland (see SOURCE 2). Evaluate why monks
 might have chosen to construct a monastery in this location.
 Using historical sources as evidence
- 2. Using the internet and the library and both primary and secondary sources, investigate the importance of Christian relics. Can you find examples of religious relics that still exist today?

Using historical sources as evidence

4.4 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

4.4 Exercise 1: Check your understanding

- 1. **HS1** What was the role of the Pope?
- 2. **HS1** Why was the Pope so powerful in the early Christian period?
- 3. **HS1** Explain why someone might become a monk.
- 4. **HS1** List one role that monasteries played in the community.
- 5. HS1 Explain what a missionary did.
- 6. **HS1** How could people gain an education in the early medieval period?
- 7. **HS1** Where would the poor turn if they were sick or needed help?
- 8. **HS1** Give an example of superstition or ignorance from this era.

4.4 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1. What evidence is there in this image that Pope Leo III was a powerful man?
- 2. HS3 Approximately how long after the fall of Rome was Leo III the Pope?
- 3. HS3 After closely examining SOURCES 2 and 3 explain why monasteries were built in isolated places.
- HS3 Using SOURCES 4 and 5, evaluate the significance of the Church in the lives of the poorer people.
- 5. **HS3** Look at **SOURCE 3**. Apart from being a place to live, does this monastery look as though it had other purposes? Explain why this might be needed.
- **6. HS3** Examine **SOURCES 4** and **5**. What conclusions can you draw about the Church and its importance to people of the time?
- 7. HS6 Evaluate the two important contributions of the Church to the lives of people in early medieval times.

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4.5 The feudal system

4.5.1 Charlemagne, King of the Franks

Charlemagne, or Charles the Great, was king of the Franks, modern-day France, who ruled from 768 to 814 CE. He was a powerful leader who conquered many lands around him. He was a strong Christian monarch who converted his subjects to Christianity, by force where required, thus expanding the religion widely across Europe. Under his reign, his Empire grew larger than the old Roman Empire and in 800 CE, he was crowned ruler of the Holy Roman Empire by the Pope. By implementing a strong feudal system, Charlemagne brought peace and productivity to his previously chaotic empire.

In 800 CE Charlemagne, king of the Franks, gave land to churchmen and wealthy families in return for their support in running the empire. This method of ordering society is called feudalism. Although Charlemagne's feudal system was based on practices that had existed for centuries, it is in this period that strong evidence first identifies a clear feudal system in Europe. It took hundreds of years for feudalism to spread. Some European countries never adopted the system, and some Asian societies, such as Japan, developed their own particular feudal system.

SOURCE 1 A statue of Charlemagne that stands in Paris. Charlemagne bears the traditional symbols of a medieval European king: orb, sceptre and crown.



4.5.2 The feudal kingdom

There were few cities or towns in early medieval Europe. Most communities were based around small villages. Most people who lived in the villages were peasants — poor farmers who worked the surrounding land. Most of the wealth therefore came from the produce generated by the peasants, who were by far the biggest social class and made up about 90 per cent of the population.

Under **feudalism**, the monarch was the owner of all land in a kingdom. The next most powerful class consisted of feudal lords, who were the big landowning nobles. In return for the right to land and control over peasants who worked it, these nobles (or tenants-in-chief) were required to give the king their loyalty, fight for him in wars and provide him with a proportion of taxes collected from the peasants. Below the nobles were the knights (or sub-tenants). In return for land, they gave loyalty to their lord, fought for him and provided him with taxes from their peasants.

The monarch also gave land to the **clergy**. In western European countries such as England, the clergy swore loyalty to the Pope in Rome over their king. However, they also supported the feudal system by accepting the monarch and the lord as God's earthly representatives. Well-educated clerical advisers were often assigned to the king's service and helped keep social order.

Maintaining the social order

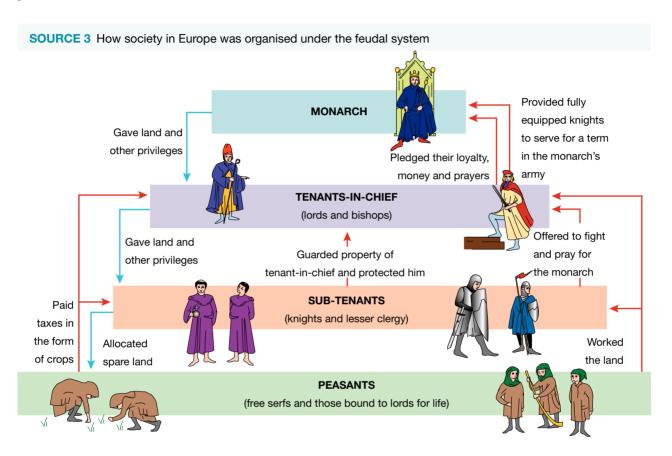
Feudalism was an effective way for the kings to control their nobles and lords. If they broke their oath with him, he could take the lands back and remove their source of power.

SOURCE 2 An oath taken in 1127 by knights and clergy to serve William, Count of Flanders, at Bruges, Belgium. The bond between them was sealed when William touched each man with a sceptre at the end of the ceremony.

I promise by my faith that from this time forward I will be faithful to Count William and will maintain towards him my homage entirely against every man, in good faith and without deception.

In return everyone had the same power of control over those who were below them, all the way to the peasants at the bottom of the social order.

Towards the end of the Middle Ages, towns and cities based on trade began to grow. The rich merchants who ran them could afford to defy or ignore the king and his lords. They could even afford to hire their own knights to protect their interests and the power of feudalism began to decline. *The Domesday Book*, ordered by William the Conqueror around 1085 to determine who owned what land and how much was owed to him in tax, allowed him to maintain control over what was his. It is an amazing achievement and gives us a clear picture of the medieval manors of the time.



SOURCE 4 This extract from *The Domesday Book* gives information about a reasonably large village called Hitchen in County Hertfordshire.

Source Taxable units: Taxable value 5 geld units.

Value: Value to lord in 1066 £4.

Value to lord in 1086 £6.

Value to lord c. 1070 £1.

Households: 45 villagers. 17 smallholders. 12 slaves. 29 cottagers.

Ploughland: 38 ploughlands (land for). 7 lord's plough teams. 1 lord's plough teams possible.

22 men's plough teams.

Other resources: 2.5 lord's lands. Meadow 4.25 ploughs. Woodland 600 pigs. 4 mills, value 2.66.

1 church.

Lords in 1066: Earl Harold; Hitchin, church of. Lords in 1086: Hitchin, church of; King William.

Tenant-in-chief in 1086: King William.

4.5 ACTIVITIES

1. Explore what happened in 1066 in England using the internet or other resources. Looking at **SOURCE 3**, do you think that this event had any impact on the peasants at the bottom of the feudal system?

Analysing cause and effect

2. Conduct further research into the medieval figure of Charles the Great. Why was he such a significant figure? **Determining historical significance**

4.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.5 Exercise 1: Check your understanding

- 1. HS1 When is it believed Charlemagne introduced the principles of the feudal system to his empire?
- 2. HS1 What were the features of his rule that led to him being one of the most significant figures in medieval Europe?
- 3. **HS1** Under feudalism, who was the ruler and owner of the land?
- 4. HS1 Under feudalism, who were the tenants-in-chief?
- 5. **HS1** Apart from the king, to whom did the clergy swear loyalty?
- 6. **HS1** How did the lords maintain control over the people below them?

4.5 Exercise 2: Apply your understanding

- 1. **HS3** Explain what **SOURCE 1** tells us about the power of Charlemagne.
- 2. HS3 The oath-taking ceremony described in SOURCE 2 seems very formal. Why would people have sworn an oath to their lord? Do similar oath-taking ceremonies occur in modern times? List some examples.
- 3. HS3 Using the diagram in SOURCE 3, explain in a paragraph how the monarch received support from his subjects and what these subjects were given in return.
- 4. **HS3** What power did *The Domesday Book* give William the Conqueror?
- 5. HS3 Using the information in SOURCES 1 and 4, explain what symbols of power are used to show the strength of the monarch, or tenant-in-chief and what they represent.
- 6. HS3 Read the extract from The Domesday Book (SOURCE 4) closely.
 - (a) Who was the tenant-in-chief of this village?
 - (b) How many families of villagers are indicated (each number represents a family, rather than a single person)?
 - (c) How much land does Hitchen have?
 - (d) What resources does this village have?
 - (e) What conclusions can you draw about whether or not this was a thriving village?
- 7. HS4 Describe three essential elements of a feudal society. These may be physical constructions, social classifications or ways of thinking. Write these as a short paragraph.

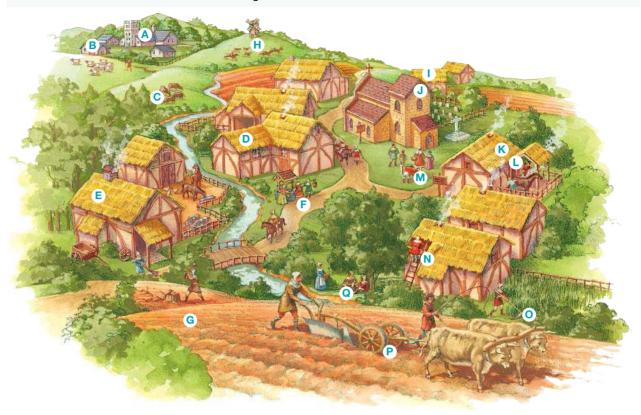
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4.6 Life on the manor for men, women and children

4.6.1 The people on the manor

Quality of life in the Middle Ages depended largely on what position a person had in the feudal system. For the nobility, who had the luxury of wealth and servants, life was certainly more comfortable than for the peasants. Knights and barons enjoyed privileges befitting their rank; they could own several manors and lived off the taxes extracted from their peasants. The clergy led simple lives, forsaking possessions in the service of God. As the educated elite, they enjoyed the pursuit of scholarly learning in their monasteries. Although the clergy often engaged in the same kind of farm work as the peasants, many monasteries operated like manors, owning villages.

SOURCE 1 Life on a manor in the Middle Ages



- A Lords often owned and operated grain mills. They kept a portion of all grain ground as tax. The lord lived in a castle or a manor house. The woods, and any game they contained, were the lord's property.
- B The house of the steward the lord's business manager was surrounded by stables, barns, a bakehouse and a kitchen.
- C Animals grazed on an open stretch of land called a common.
- The house of the bailiff, who collected taxes and ensured the steward's directions were carried out
- The house of the reeve, who supervised farm work carried out by serfs to ensure it was done properly
- F Women were the property of their menfolk, and were married by about 14. They cooked, spun and weaved, and tended to the animals and the children.
- G The three-field rotation system was introduced by the Anglo-Saxons. Crops were grown in two fields, with the third left to lie fallow (not used) so the soil could recover its nutrients. Fields being used were divided into strips, with different serfs working each strip. Crops were rotated to prevent the same nutrients in the soil always being used.
- (H) The miller operated the mill, where grain such as wheat was ground into flour.
- 1 Tithe barn, where peasants deposited one-tenth of all they produced for use by the church
- J The church (and its grounds) was a central feature. People went to church regularly. It was also the place where they paid their tithes and often held their simple markets. The tithe was a tax given to the Church equal to one-tenth of what someone received, grew or raised.
- K Serfs lived in simple wattle and daub huts with thatched roofs. A hole in the roof allowed smoke to escape from cooking fires. Windows had rough wooden shutters.
- As well as farming, some serfs also worked as blacksmiths and carpenters. They generally could not read or write.
- M A serf who had been punished by the reeve was placed in the pillory. This punishment instrument consisted of a wooden framework built on posts, with holes through which the victim's head and hands were placed and then locked.
- N Thatchers wove thick bunches of straw, reeds and sticks together to form roofs of village houses.
- Scythes, sickles and rakes were used to harvest crops.
- P A serf's most important tool was the heavywheeled plough.
- Q Lunch for a serf might be coarse bread and vegetable soup, washed down with ale.

Men

For the vast majority of peasant men, life was very hard. They endured a daily grind of farm work: clearing fields, harvesting, repairing buildings, sawing and chopping timber, and paying the tithe to the lord of the manor. Most men were uneducated and remained tied to the drudgery of peasant labour. Still, some boys managed to receive formal education in monasteries. This might provide them with the opportunity to become a parish priest or to work in the manor in a bookkeeping role such as a bailiff or a steward.

Women

Medieval women, regardless of class, had few rights. Women from the nobility married as early as the age of 12! Their marriage was arranged by the family. The aim was usually to gain political power or wealth for the girl's family. Her husband — and society in general — expected her to produce a male heir to continue the noble line of her husband. In an era of poor medical care, childbirth for women of any class was dangerous. It has been estimated that during the Middle Ages, one in five women died during childbirth. Although she looked after her husband's household and had some command over the servants, the noble woman could not own property, except as a widow.

Peasant women had even fewer rights. Peasant families generally were reluctant to allow their girls to marry as young as the noble girls. This was because children were an important source of labour. Peasant women did much the same farm labour as the men. On top of that, they had household duties such as preparing food and weaving clothes, and looking after the children and small livestock.

Children

Childhood as a time of play or schooling was almost non-existent. Children were regarded as sources of labour on the farm. At first it was helping the women with household chores, but fairly soon they could be expected to be sent out to the fields. Peasant children were educated in how to harvest a field, fix a thatched roof or milk a cow.

It appears that in medieval Europe, the period of growth now called adolescence was ignored. Children were treated as adults from the age of ten, because by then they could participate in the farm work. Boys generally married a little older than girls — when they were about 14. 'Teenagers' were isolated; as they did not go to school, they had few opportunities to mix with other people their own age.

4.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.6 Exercise 1: Check your understanding

- 1. HS1 What type of work did peasant men generally do?
- 2. HS1 How might peasant men manage to get an education?
- 3. HS1 Why were noble women's marriages arranged for them by their family?
- 4. HS1 What property rights did a noble woman have compared with her husband?
- 5. HS1 Why did peasant women generally not marry as young as noble women?
- 6. HS1 How were children regarded on a farm?
- 7. **HS1** Why might it be highly valued to have a large family?

4.6 Exercise 2: Apply your understanding

- 1. HS3 Make a list of the work you can see people doing in SOURCE 1.
- 2. HS3 Of the jobs listed, which ones would women and children have been able to do?
- 3. HS3 Is SOURCE 1 a primary or secondary source? Explain your answer. What is its value?
- 4. HS3 Who held the most wealth and power in the manor in SOURCE 1? Explain the basis of their wealth.
- 5. HS3 Examine SOURCE 1.
 - (a) Explain the roles of the reeve, steward and bailiff.
 - (b) Create a diagram that shows them in order of importance.
 - (c) Do you think women would have been allowed to do these jobs in medieval times? Explain your answer.

- **6. HS3** Using the information gained from **SOURCE 1**, as well as any other knowledge you have, write a paragraph about life on the manor, describing work, living conditions and farming practices.
- 7. **HS1** To which social class did most people in medieval Europe belong?
- 8. HS5 Compare the quality of life of those high up in the feudal system with those at the bottom. Be specific about wealth and work.

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4.7 The knight

involving knights on horseback.

4.7.1 The warrior on horseback

One of the most iconic images of the Middle Ages is that of the mounted warrior called the knight.

Although there are some earlier descriptions of warriors on horseback, the knight as we know him did not appear until the Middle Ages. Two important developments were needed to enable a soldier to move around on horseback during a battle: the **stirrup** and a heavier breed of horse capable of carrying a man in full armour. These developments emerged in the Early Middle Ages. The Battle of Hastings, fought in 1066 between Norman knights and English infantry, is one of the earliest recorded military engagements

SOURCE 1 A scene from the Bayeux Tapestry, dating from the late eleventh century. Norman knights on horseback are seen here attacking their English enemies at the Battle of Hastings in 1066.



The knights at Hastings fought for their lord, William, **Duke** of **Normandy**. This feudal service to the lord or the king was an important aspect of knighthood. Generally, knights were wealthy themselves, as it was expensive to breed warhorses and own good armour. They were also generally quite powerful landowners. Some knights, however, were monks who served the Church. Their role was usually to accompany pilgrims and protect them while they were on the Crusades. The Church could afford to pay for their horses and armour.

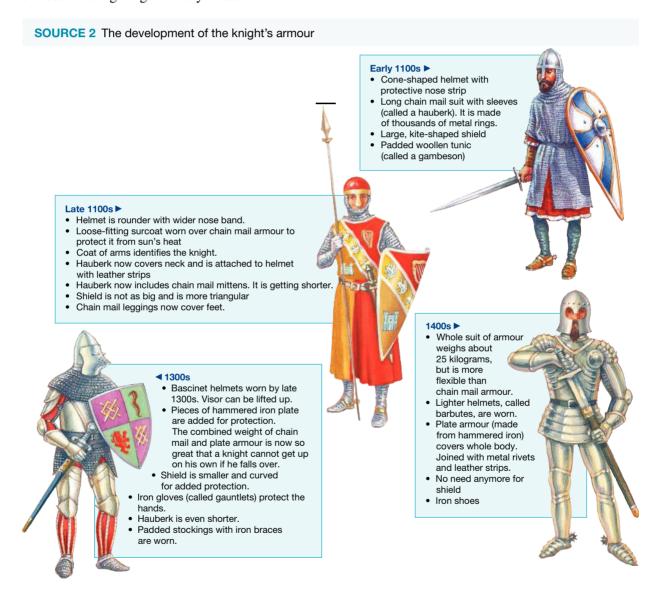
4.7.2 In battle

Weapons and armour

As **SOURCE 1** shows, a heavily armed warrior on horseback was meant to terrorise and destroy foot soldiers. The decapitated body at the bottom of the panel demonstrates the effectiveness of a charging knight.

The knight used an arsenal of heavy iron weapons. Swords, maces and battle axes were common. However, the lance appears to have been the favoured weapon: it helped to put distance between the knight and the infantry soldier he was fighting. As a last resort, the knight's wooden shield could be used as a weapon — swiping at someone with its rim could cause severe wounds.

The armour was both heavy and awkward. The coats of mail worn by the fighters in **SOURCE 2**, for example, could weigh over fifteen kilograms. It was no easy task wearing such a cumbersome outfit on horseback and fighting furiously in battle.



Jousting tournaments

In films and other popular media, knights are often seen charging at each other in sporting events called jousts. This type of sporting event actually did happen. It was no doubt a useful method of training. Unlike Roman gladiators, knights in jousts did not fight to the death. The lances were padded, but swords and other weapons were not, so it was still a violent sport with many accidental fatalities.

The fall of the knight

By the end of the Middle Ages, the knight's effectiveness as a warrior had diminished. By then, professional armies were forming. These were often made up of peasants who were properly trained to bring down a knight off his horse. Also, the development of firearms by the Late Middle Ages proved too much for the knight's armour. And so the days of the knight were over.

SOURCE 3 John Chalon of England and Lois De Beul of France jousting, 1448



SOURCE 4 The body armour of today: Canadian riot squad police. Modern riot squad police also often carry a perspex shield as protection from missiles such as rocks or homemade fire-bombs.



4.7 ACTIVITY

You are a medieval sports journalist. Write a three-paragraph report on a jousting tournament suitable for reading by your medieval audience. You should use the internet and your library to research the organisation and rules of jousting.

Using historical sources as evidence

4.7 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.7 Exercise 1: Check your understanding

- 1. HS1 The knight could not have existed without two important developments. What were they?
- 2. HS1 Which individuals or institutions did the knight serve?
- 3. **HS1** What was the purpose of the mounted warrior?
- 4. HS1 List four different weapons used by knights. Which one did they favour the most and why?
- **5. HS1** What was jousting?
- 6. HS4 Why did the knight's usefulness in battle decline at the end of the Middle Ages?

4.7 Exercise 2: Apply your understanding

- 1. **HS3** Describe in a paragraph what is happening in **SOURCE 1**. How would this source help the historian find out about the weapons and armour of the medieval knight of the eleventh century?
- 2. **HS3** Using **SOURCE 2**, write a paragraph describing how the knight's weapons and armour changed between the early 1100s and the 1400s. List at least four things that changed (this might include changes in function, appearance or shape).
- 3. HS3 Why do you think the shield disappeared as armour by the 1400s?
- 4. HS3 Why do you think weapons and armour changed over time? Think of things like protection and comfort.
- **5. HS3** Examine **SOURCE 4**. In what ways are the riot squad police of today like the medieval knights? Modern armies, for the most part, do not use armour like the riot squad police. Can you guess why?

- 6. HS3 Compare and contrast SOURCES 1 and 3. Draw up a table with two columns, using it to examine similarities and differences under headings such as armour, weapons, purpose of clash, and consequences of the event.
- 7. HS6 Why do you think that the knight is often seen as a symbol of the Middle Ages? What is it that has made them an iconic image of this time?

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4.8 Medieval warfare

4.8.1 Medieval weapons and battles

Many destructive wars were fought during the Middle Ages. However, nothing like today's firepower existed in medieval times. The destruction wreaked by two atomic bombs dropped on the Japanese cities of Hiroshima and Nagasaki show what modern technology is capable of. In medieval Europe, wars were fought literally through clash of arms — with swords and axes and maces. Arrows and rocks, rather than bullets, were the main missiles. Still, even in the Middle Ages, there were instances of large-scale massacres. The knights shown in **SOURCE 1** slaughtered thousands of Turks when they took the city of Antioch. Later in this chapter, you will read about the Tartars using trebuchets like the one shown in **SOURCE 2** to fling disease-rayaged bodies over the walls of the city of Caffa. This allowed them to kill many people with sickness.

The invention of gunpowder, originally from China, changed the way battles were fought. In Europe, guns and cannons were developed from the early fourteenth century. Medieval guns were at first ineffectual,

being very slow to load, inaccurate and liable to blow up. Archers with longbows and crossbows were more effective. But by the end of

the fifteenth century, gun technology had improved.

Medieval battles would have been terrifying experiences. Anyone observing a battle from a short distance would have heard yelling, screaming and the clash of steel on shields. This would have been noisy in the thick of battle, but from a distance it would not have been very loud. The ear-splitting noise of twentieth and twenty-first century warfare largely comes from modern artillery.

Fighting hand-to-hand, medieval armies tended to battle in tightly grouped formations. One side would push against the other. Infantry stabbed and slashed each other with swords, axes, pikes, maces and even farming tools. It was the job of mounted knights to charge such formations and try to break them up, as shown in **SOURCE 1** of subtopic 4.7. SOURCE 1 A medieval illumination showing the siege of Antioch in 1098. The knights in this illumination resemble the soldiers from two centuries after the event depicted. In some ways, this would be like depicting a soldier from colonial Australia as a modern Australian infantry soldier. Medieval artists were not historians, and they often painted historical scenes as if the event was happening in their own time.



The bloodshed was horrific. Limbs and heads were chopped off, and brains and guts were strewn across the battlefield. The tight formations meant that soldiers were likely to stumble over the dead and the dying. By the end of the battle, which did not usually last more than an hour, the battlefield was covered with gore and blood. The ground would be littered with the bodies of both men and horses.

For those who died, there were no war cemeteries and no pensions for their wives and children. Nor were there any entitlements for disabled veterans. A beggar's bowl was often the only means of survival for the medieval common soldier who was crippled fighting for his lord or king.

SOURCE 3 From a chronicle describing the Battle of Bannockburn in 1314, when the Scottish rebel leader Robert the Bruce defeated the English, who sought to control Scotland. Robert became King Robert I of Scotland.

The two hosts [English and Scottish armies] came together, and the great steeds of the [English] knights dashed into the Scottish pikes as into a thick wood; there arose a great and horrible crash from rending [splitting] lances and dying horses, and they stood locked together . . .

SOURCE 2 The trebuchet was a kind of giant slingshot designed for hurling rocks at enemy armies and fortresses. Sometimes other missiles were used, including dead animals and slain enemies, with the twin aims of demoralising the enemy and spreading disease among the besieged population.



SOURCE 4 From *The History of the Art of War in the Middle Ages* by C. Oman, published in 1924. The battle described here is between Swiss and German infantry.

The two bristling lines of pikes crossed, and the leading files were thrust upon each other's weapons by the irresistible pressure from behind. Often the whole front rank of each **phalanx** went down in the first onset, but their comrades stepped forward over their bodies to continue the fight.

4.8 ACTIVITY

Design a poster, web page or PowerPoint presentation that explains the most important weapons used in the Middle Ages.

Using historical sources as evidence

4.8 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

4.8 Exercise 1: Check your understanding

- 1. HS1 Why were guns not as popular as longbows and crossbows during the Middle Ages?
- 2. HS1 Where did gunpowder originate?
- 3. **HS1** List three weapons used by fighters in a medieval battle.
- 4. **HS4** Name one way a medieval battle differed from a modern-day battle.
- 5. HS1 What often happened to soldiers who were permanently injured during battle?

4.8 Exercise 2: Apply your understanding

- 1. HS3 Closely examine the trebuchet in SOURCE 2. List two ways that it could be used against the enemy.
- 2. HS3 Closely examine SOURCE 1. What were the weapons used in this battle?
- 3. **HS3** What was the name given to the soldiers on horseback in **SOURCE 1**?
- 4. HS3 Study SOURCES 2, 3 and 4. What can you tell from each of these sources about:
 - (a) the effectiveness of pikes in battles
 - (b) the risks to horses in battle
 - (c) the tight formations in which medieval battles were fought
 - (d) the reasons for high casualties in the front ranks?
- 5. HS4 Using what you have learned about knights in subtopic 4.7 and medieval warfare in this subtopic, write a short paragraph exploring why mounted soldiers (knights) became less and less useful in battles as warfare technologies changed. In preparing your answer, consider the types of weapons and how they changed, as well as the formations that were used.

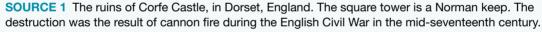
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4.9 Castles

4.9.1 Building a castle

During medieval times, castles were built to protect the monarch or lord's land. They had many features, such as high walls, that made it very difficult for enemies to invade. However, if conquered, castles could then be used by invaders to help control the land they had taken. Castle walls were so effective in the Middle Ages that they were even built around some towns and cities.

The first castles appeared in the eleventh century. They were usually made from timber and sat on a high mound called a motte, which was surrounded by a ditch. If the castle was near a river, the ditch could be filled with water to create a **moat**. The innermost tower was called the **keep**. **Palisades** and walls called baileys protected the keep. By the end of the eleventh century, timber was replaced with more durable material such as stone or brick.





The easiest place to build a castle was on flat ground. However, castles were often built on hills or cliffs. High positions enabled castle occupants to look out over and control the surrounding countryside. Such positions were also easier to defend because attackers had to advance uphill. There were also great advantages in building castles on islands in rivers or lakes. Castles were built along the Rhine River in Germany to force merchants transporting goods along the river to pay taxes. Such positions also ensured a supply of water to fill a castle's moat and for drinking during long sieges.

4.9.2 Attacking a castle

Attacking a castle was no easy task. As their design became more sophisticated, more features were added. For example, **concentric curtain walls** meant that attackers who broke through one wall were faced with



- A The gatehouse was heavily defended. If attackers got in, defenders could shower them with rocks, red-hot sand or boiling water through a hole in the ceiling (called a murderhole).
- B A battering ram made of a huge, often reinforced timber beam would be driven against a castle gate or lower wall to try to break through.
- Battlements lined the top of castle walls.
- D A castle was often surrounded by a ditch, sometimes filled with sharpened stakes (palisade) or water.
- © Sometimes castle walls sloped outwards at the base. This added strength to the walls and reduced the effectiveness of battering rams.
- F Missiles could be dropped on attackers through holes in the floor of the battlements known as machicolations.
- G The trebuchet, introduced to Europe from the Arab world, was a type of counterweighted catapult. It was used to hurl huge rocks weighing up to 90 kg against castle walls, and to toss rotting animal bodies over the walls.
- H The ballista was a giant crossbow that fired flaming bolts over castle walls.
- 1 A mangonel was a type of catapult used to hurl smaller objects (e.g. heads, smaller rocks or piles of dung) over castle walls.

another and were trapped in the space between them. Marienburg Castle in modern-day Poland had five curtain walls. Drawbridges could be lifted above the moat, blocking access to the main gate. All manner of missiles could be launched at attackers, including arrows and rocks. Even boiling oil could be tipped through 'murderholes' in the roof of the gatehouse surrounding the main entrance. In turn, attackers responded by using siege engines, including battering rams and hide-covered siege-towers on wheels. It was not unusual for a siege to last many months. Defenders kept an ample supply of food in the castle keep and sunk wells in the inner courtyard to ensure a protected water supply.

4.9.3 A lord's home is his castle

The castle may have been a fortress, but it was also a home. A castle was usually owned by a lord or the Church. It had all the requirements of a fortress, such as troop quarters, stables and an armoury. However, if owned by a lord, it also had facilities for the comfort of his family.

By the end of the Middle Ages, castles were no longer as effective or desirable. The feudal system, which until then had encouraged the lord to show his strength by having a castle, was fading. Also, developments in the cannon meant that castle walls could no longer protect against invading armies.

4.9 ACTIVITIES

- 1. Use the internet to research information about the construction of a British eleventh century castle and one from the fifteenth century, then compare and contrast the two. What differences were introduced and what remained the same? Using historical sources as evidence
- 2. Draw a diagram of a Corfe Castle in SOURCE 1, recreating it from its ruins, as the motte and bailey castle it was. Label the keep, the palisade, the motte and the bailey. Using historical sources as evidence

4.9 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.9 Exercise 1: Check your understanding

- 1. **HS1** Complete the following sentences by choosing the correct words from the alternatives in brackets.
 - (a) The first castles appeared in the (eleventh/tenth) century.
 - (b) The innermost tower was called a (motte/keep).
 - (c) The bailey was a (wall/moat).
- 2. HS1 What were early castles built of?
- 3. **HS1** Why were castles often built on a steep hill?
- 4. HS1 Why did some castles have a series of concentric curtain walls surrounding the keep?
- 5. **HS1** What was a 'murderhole' used for?
- 6. **HS1** Give two reasons why castles were built.
- 7. **HS1** How was the castle a symbol of the feudal system?

4.9 Exercise 2: Apply your understanding

- 1. HS3 Study SOURCE 2. Which features of the castle and its defenders would be most effective in holding back the attack? Which methods of attack appear to be most effective? Give reasons for your answers.
- 2. HS3 How likely do you think it is that the attackers in SOURCE 2 will succeed in breaking into the castle? Why?
- 3. HS3 How does SOURCE 1 support the idea that castles eventually went out of fashion as military fortresses?
- 4. HS3 List the features seen in SOURCE 1 that supports the accuracy of the castle illustrated by a modern artist in SOURCE 2.
- 5. HS3 Find out what it means to have a 'licence to crenellate'? What did it entitle the holder of the licence
- 6. **HS1** Describe the common methods used to attack and defend castles.
- 7. **HS5** Describe the best places to build a castle and explain why.

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4.10 The power of the medieval Church

4.10.1 The authority of the Church

The Roman Catholic Church was the one common institution found throughout western Europe. Its rituals were similar across the continent. It even used a common language, Latin, although no-one other than the clergy spoke this old Roman language any longer. Everyone was expected to live according to Church law and attend Mass. The sermons of the priest, often delivered in the vernacular language rather than Latin, reminded parishioners of their Christian responsibilities.

The head of the Roman Catholic Church was the Pope. As God's representative on Earth, he was very powerful. His **cardinals**, **archbishops** and **bishops** supported the Pope's **edicts**, advised lords and kings, and had key government positions. Below this upper class of clergy were the parish priests, nuns and monks, and friars. These lesser clergy took the Church's message to the people in the villages. They also collected the taxes on which the Church's wealth depended. At the village level, this tax was called a tithe. The tithe required that 10 per cent of a person's income, or of what they produced, such as grain, eggs and livestock, should be paid to the Church.



Anyone who was believed to be acting against the interests of the Church could be excommunicated. This meant they could no longer attend Mass and receive the Christian sacraments. Worse, they were told they would go straight to hell. The Church made sure that the fear of hell, with its fires and devils, was instilled in everyone.

4.10.2 The parish church and the cathedral

Almost every village had a parish church. Often it was both the largest building and the only one built of stone or brick. The parish church was built using peasant labour. Although unpaid for their efforts, the parishioners would have felt a sense of achievement and communal ownership. The church walls, and sometimes the stained-glass windows, depicted scenes from the Bible, especially the life of Jesus. This helped teach Bible stories to the mostly illiterate congregation. In an age before clocks, the bells in the church tower helped people keep track of the time of day.

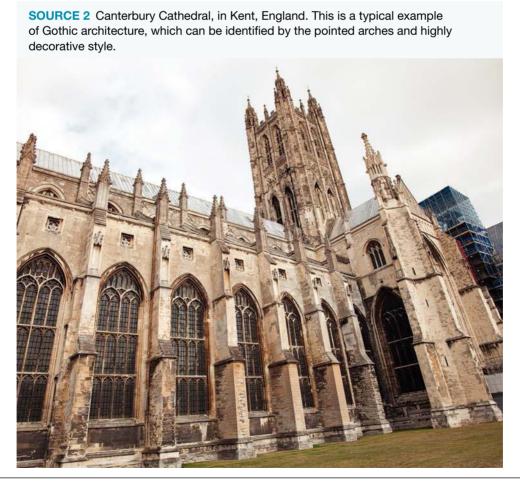
The church was not only a place of worship. It was also a community centre, a fairground and a school for those studying for the priesthood.

The bishop's church — the cathedral

Many European cities today have at least one cathedral. Some of the greatest cathedrals were built in the Middle Ages.

The word 'cathedral' comes from the Greek word kathedra, meaning seat. This refers to the bishop's seat or throne in the back of the church. It is from here that the bishop ran his diocese (which, in turn, was divided into parishes).

The bishop's church was very important. This was reflected in its size and magnificence. The cathedral towered over the other buildings in the town. Many cathedrals took more than a hundred years to build and were completed long after their architects had died.



4.10 ACTIVITY

Using the internet and other information sources, explore the significance of medieval church music, especially Gregorian chants. Explain what your findings tell us about the influence of the medieval church.

Determining historical significance

4.10 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.10 Exercise 1: Check your understanding

- 1. HS1 Which religious institution dominated western Europe during the Middle Ages?
- 2. HS1 What language was used in the medieval Mass?
- 3. **HS1** Who is the Head of the Roman Catholic Church and what power did he have?
- 4. HS1 Almost every village had a parish church.
 - (a) Who did most of the work in building the parish church?
 - (b) How did this make people feel part of the community?
- 5. **HS1** How did the Church teach the illiterate the Bible stories?
- 6. **HS1** What is the origin of the word 'cathedral' and what does it mean?
- 7. **HS1** Who is responsible for the cathedral and its diocese?
- 8. **HS1** Why were cathedrals so enormous?

4.10 Exercise 2: Apply your understanding

- 1. HS3 Write a detailed description outlining what is happening in SOURCE 1. What effect was a painting like this intended to have on the villagers?
- 2. HS3 Canterbury Cathedral in SOURCE 2 dominates the city's skyline even today. How do you think the cathedral would have impressed the ordinary people of Canterbury in the fifteenth century?
- 3. HS3 Compare and contrast SOURCES 1 and 2. Which one do you think was a more effective way of making an impression on the medieval population? Explain your answer in detail.
- HS5 Identify five ways the Roman Catholic church demonstrated its power over the people of medieval Europe.
- 5. HS5 What were some of the methods that the parish churches used to create a sense of community?

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4.11 Monasteries and convents

4.11.1 Closed communities

Parish priests, monks, nuns and friars played important roles in spreading the faith. They took the Christian message to the remotest villages. This was important, because until then Christianity was practised mostly in the towns, even though most people lived in the country.

Monks lived in small closed communities called monasteries. Only males could join. A monastery included a church, a chapter house (the monks' meeting place), dormitories or cells (where the monks slept), a hospice (where the sick and aged were cared for), a refectory (eating hall), a library and the **abbot's** quarters. The abbot had complete authority, and strict rules had to be observed. These rules covered daily activities such as religious services, social work, manual labour and copying manuscripts.

Nuns lived in similarly closed communities called **convents**. Girls and women could join a convent, where they too had to observe strict rules. The chief nun was called the **abbess**. Some monasteries and convents were called **abbeys**.

Monasteries and convents spread throughout Europe in the Middle Ages in part because they were efficient instruments for upholding feudal order. A lord granted land to a monastic order because monks and nuns helped him maintain social control over a population that was widely dispersed across the countryside. Some monasteries owned their own villages, whose serfs worked their fields.

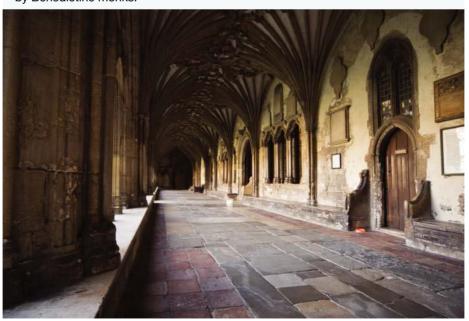
SOURCE 1 The Death of St Francis, a painting by the fifteenth-century Italian artist Giotto. St Francis was the founder of the Franciscan order of friars. This painting shows some of them mourning his death.



4.11.2 The monastic orders

The origins, rules and practices of monastic orders varies widely. The Benedictines were one of the earliest monastic orders. They established many of the rules and customs followed by nuns, monks and friars. SOURCES 2 and 3 are both Benedictine monasteries, with Cluny Abbey being the largest monastery in Europe during the Middle Ages. At its height in the twelfth century it had about 300 monks, whereas most monasteries had about 30.

SOURCE 2 The pointed, fanned arches of the Great Cloister at Canterbury Cathedral in Kent, England. Canterbury Cathedral had an attached monastery run by Benedictine monks.



There were, and still are, numerous monastic orders with varied purposes and practices. Monasteries of the Cistercians order relied solely on the labour of their own monks. This limited labour force drove the Cistercians to move into new agricultural areas, such as raising sheep on a large scale. Such efforts gained them considerable wealth. The monks themselves, however, in accordance with their order's rule, remained poor.

Some orders did not live in small communities. The Franciscans and Dominicans, for example, sent their members out into the larger community as friars. They moved among the people as missionaries. The Franciscans tried to live as Jesus had lived — as poor preachers serving the needy.

The Church was almost the sole source of literacy during the Middle Ages. Before the printing press was invented, every book had to be handwritten. Among the tasks performed by monks was the writing and copying (and often decorating) of books by hand. Some of the first universities in Europe began as monasteries. The architecture of such ancient schools of learning as Oxford University in England is based on the layout of a monastery. Even a comparatively recently established school such as Sydney University, with its Great Hall and cloisters, has architecture based on the monastic model.

SOURCE 3 Cluny Abbey in Burgundy, France. Its church was the largest in the world until the early seventeenth century, when St Peter's Basilica in Rome was rebuilt.



SOURCE 4 An illuminated letter from the Book of Kells



DID YOU KNOW?

There are still several Benedictine monasteries in Australia. New Norcia is a small town a couple of hours' drive northeast of Perth, Western Australia that was settled by Spanish Benedictine monks in 1847. It is still run as a Benedictine community that people can visit to learn about monastic life.

4.11 ACTIVITY

Using a range of sources of information, such as the internet and your school library, explore how illuminated manuscripts like SOURCE 4 were created. Using historical sources as evidence

4.11 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.11 Exercise 1: Check your understanding

- 1. **HS1** What are the communities called where monks live?
- 2. HS1 What are the communities called where nuns live?
- **3. HS1** How did monks and nuns help to support the feudal system?
- 4. HS1 Which monastic order did much to establish the rules followed by monks and nuns?
- 5. HS1 Upon whose labour did the Cistercian monks depend and what impact did this have on their order?
- 6. **HS4** Which modern educational institution has its origins in the medieval monastery?

4.11 Exercise 2: Apply your understanding

- 1. HS3 The friars in SOURCE 1 are dressed in coarse woollen garments called habits. Many still dress this way today. Why do you think they would have chosen such simple clothing?
- 2. HS3 Examine SOURCE 2. What sorts of activities do you think monks would do in the cloisters?
- 3. HS3 Is SOURCE 3 a primary or secondary source? Explain your answer. How useful is it to historians?
- 4. HS3 Closely examine SOURCES 2 and 3 and use the architectural features you can see to explain the impressions that would have had on peasant communities living in villages.
- 5. HS5 Write a brief outline identifying the ways that the monasteries and convents played a role in further spreading the messages of the Roman Catholic Church.
- 6. HS5 What were the ways that monks and nuns helped to maintain social control over the people of medieval Europe?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.12 The Crusades

4.12.1 The First Crusade

The Crusades were a series of wars fought throughout Europe and the Middle East between the eleventh and thirteenth centuries. In these wars, Christians fought against non-Christians and heretics. The Crusades generally centred on the Holy Land and the main enemy of the Crusaders were the Muslim Turks. The term Crusader comes from the Latin word Crux, which referred to the Christian cross, However, evidence suggests Crusaders only began calling themselves this as late as the thirteenth century.

Jerusalem is a very important city for Christians, Muslims and Jews. The Holy Sepulchre in Jerusalem is believed to be the site of Jesus' tomb. When the Muslim Turks took control of Jerusalem in 1071, they began to harass and even kill visiting Christian pilgrims.

In Constantinople, Emperor Alexius I appealed to Pope Urban II to help him fight his Muslim enemies. In 1095, the Pope called upon Christians to fight the Turks and reclaim Jerusalem.

SOURCE 1 Extract from call to arms by Pope Urban II at Clermont, France, in 1095

If you choose the right path, you will be forgiven for all your sins. This path is to make war upon the Turk . . . Let those who are going to fight for Christianity put the form of the Cross upon their garments . . . God will be gracious to those who undertake this expedition: those who die will go straight to heaven . . .



SOURCE 3 From an account of one of the Crusaders who took part in the capture of Jerusalem in 1099

With drawn swords our people ran through the city; nor did they spare anyone, not even those pleading for mercy. If you had been there, your feet would have stained up to the ankles in blood. What more shall I tell? Not one of them was allowed to live. They did not spare the women or children. The horses waded in blood up to their knees, nay up to the bridle. It was a just and wonderful judgment of God.

There were various reasons why Christians responded to the Pope's call. These included the chance to gain wealth, power, land and knighthood. They were also promised eternal life in heaven.

The First Crusade was two expeditions. One, known as the Peasants' Crusade, was led by Walter the Penniless. It was a violent rabble beginning with a murder of Jews in Germany. It left a trail of destruction all the way to Constantinople. Being poorly organised, it was wiped out by the Turks after it had set out from that city. The second expedition was led by knights. It successfully defeated the Turks, and took city after city throughout the **Holy Land**, including Nicaea, Antioch and, finally, Jerusalem.

The **Crusader** victory did not last. The Turks fought back and the Crusaders' alliance with the Byzantine emperor dissolved because each distrusted the other.

DID YOU KNOW?

Crusaders were often from monasteries. One monastic order was the Knights of St John the Hospitaller. Their cross-shaped symbol is now the logo of the St John Ambulance Society.

4.12.2 More crusades

The Crusades continued over the next two centuries. The Second Crusade (1147–49) began because the Turks had taken the town of Edessa. This crusade did not succeed: the Turks defeated the Crusaders at Damascus.

In 1187, the Kurdish leader of the Turks. Saladin, conquered Jerusalem. This inspired the Third Crusade (1189–92). A lack of unity among Crusader leaders prevented a victory for them, although they were successful in capturing the city of Acre. Despite their defeat, Saladin allowed Christians to visit the Holy Sepulchre in Jerusalem.

The Fourth Crusade (1202-04) started out against the Turks, but ended up as a pillage of Christian cities, including Constantinople. The driving issue was commercial rivalry rather than religion.

There were more Crusades in which control of land was lost and won. Jerusalem was recovered by the Christians for a brief time, and the Turks took Acre in 1291.

SOURCE 4 The siege of Nicaea in 1097, from a thirteenthcentury French manuscript, The History of Outremer. Outremer was the name by which the parts of the Holy Land captured by the Crusaders became known.



It is generally agreed that the Crusades came to an end when the Turks took Constantinople in 1453 as part of the Ottoman Empire.

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Deepen and check your understanding of this topic with related case studies and auto-marked questions.

The Western and Islamic world > The Crusades

4.12 ACTIVITY

Draw a mind map showing the effects of the Crusades. You may need to research this further.

Analysing cause and effect

4.12 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.12 Exercise 1: Check your understanding

- 1. HS1 Against whom were the Crusades organised?
- 2. HS1 What does the term Crusader mean?
- 3. HS5 Compare the two expeditions in the First Crusade. Can you explain the different outcomes?
- 4. **HS1** Who was the Kurdish leader of the Turks during the Third Crusade?
- 5. **HS1** Who controlled the city of Constantinople at the end of the Crusades?
- 6. **HS1** Decide whether each of the following statements is true or false.
 - (a) The Crusades continued over four centuries.
 - (b) The Second Crusade failed.

- (c) Despite the failure of the Third Crusade, Saladin allowed Christians access to the Holy Sepulchre.
- (d) The Fourth Crusade was a success.

4.12 Exercise 2: Apply your understanding

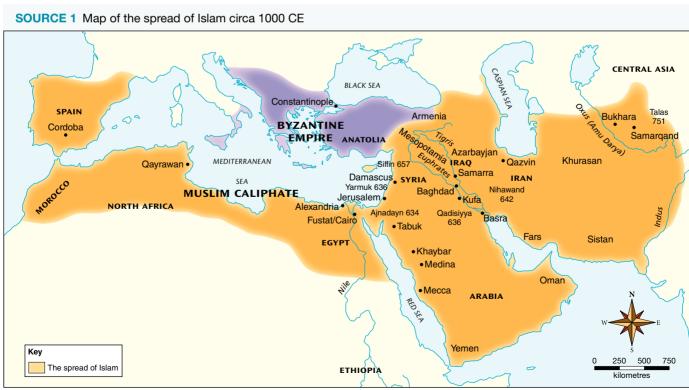
- 1. HS3 Read SOURCE 1. What do you believe is the aim of Pope Urban II's speech?
- 2. HS3 Using the map in SOURCE 2 as well as the text, describe which cities the First Crusade captured.
- 3. **HS3** The Crusaders in **SOURCE 4** are using a trebuchet to throw their enemies' heads over the walls of the besieged city. Why do you think they are doing this?
- 4. HS3 After reading SOURCE 3, write an account of the same day from 1099 from a Muslim Turk's perspective.
- **5. HS3** Which sources show evidence of the brutality of the Crusades? What sort of brutal acts were committed by the Crusaders?
- **6. HS3** Analyse whose perspective **SOURCE 3** is from. How reliable do you think it is in telling/showing us about the behaviour of the Crusaders?
- 7. **HS5** Explore the reasons that European Christians went on crusades. List them in order of importance (as you see it) and explain each one of them.
- 8. HS2 List the four main Crusades mentioned here in order of dates and briefly outline what happened in each one of them.
- 9. HS5 After reading this subtopic, can you see any positives in the relations between Muslims and Christians over this period?

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4.13 The Age of Faith

4.13.1 Christianity and Islam

Many people assume that the conflict between the Christian Crusaders and Islamic Turks was the first point of tension between Christians and Muslims. However, it started much earlier than that. Islam originated in Medina and Mecca in the Middle East early in the seventh century. By the eighth century it had spread to North Africa and was the religion of the invaders of southern Spain in 711 CE. Significant tension and conflict between the two monotheistic religions has existed since the Early Middle Ages.



Source: MAPgraphics Pty Ltd, Brisbane

Generally speaking, religion does not strongly influence governments today. Many countries around the world are secular, which means they are neutral in regards to religion. It was different in the Middle Ages. In western Europe, the Christian Church had great influence over rulers. The situation was similar in the Islamic world. Countries were ruled by Muslim leaders called caliphs. With religion dominating so much of private and public life, it is not surprising that some historians have called the Middle Ages 'the Age of Faith'.

The conflict between Christians and Muslims is most often assumed to have begun with the First Crusade at the end of the eleventh century. But Muslim Arabs had conquered much of Spain, via North Africa, as early as 711 CE. This was a major Muslim inroad into Christian Europe, and wherever the Christian West and the Muslim East met, there was conflict.

4.13.2 Religion in Spain

Spain is a good example of how relations developed between the Christian West and the Muslim East. Muslim Arabs ruled much of Spain for about 700 years. Throughout that period, there was a great exchange of culture between not only the Muslim occupiers and the Christians, but also the Jews, who were a sizable minority in Spain. Even after the Christians reconquered Spain, much of the rich Muslim culture remained. In fact, Muslim music, architecture and many other fields continued to flourish, even after Muslims were forcibly converted to Catholicism. For example, an instrument that would eventually develop into the Spanish guitar was invented by Muslim Arabs. The famous Spanish dance music, flamenco, is also thought to be Middle Eastern in origin.

But just as the Christians tried to subject conquered peoples to their faith, so did the Muslims subject countries they had conquered to Islam. In Muslim Spain, Christians and Jews were tolerated but they suffered discrimination and were made to pay special taxes because their religions were regarded as inferior. When Christians eventually reconquered Spain, they would be much less tolerant. They ruthlessly persecuted Muslims and Jews.

There may have been some appreciation of the refined culture of the Arabic Muslims in Spain. However, as conflict developed between the Christian north and the Muslim south in Spain, new waves of invaders arrived. The Arabic leaders brought in North African fighters (called Moors by the Christians). The Moors were a harsher, less tolerant group. An example of their intolerance was the destruction of a splendid palace in Cordoba called Medina Azahara.

SOURCE 2 Amad ibn Muammad al-Yammani, a Muslim traveller, commenting on music he had heard while recovering from an illness in the Moorish city of Malaga during the eleventh century

The people are absolutely dominated by their passion for music. One night I awoke ... to ... a breath of sound, tranquil and lovely. I felt that my soul understood this music, and would find repose [peace] in it . . . [It] began increasing slowly in volume. I was drawn to it and disposed to listen . . . I found myself forgetting my misery in the emotional enjoyment, which almost caused me to imagine that the walls and floor were floating around me.

SOURCE 3 The prayer hall of the Great Mosque in Cordoba, Spain. Begun around 786.



4.13.3 Shared learning

While much of the learning of ancient Greece and Rome had been lost in the West during the Early Middle Ages, it was kept alive by Muslim scholars. One of the greatest libraries in history was established in Muslim Baghdad in 832 CE. Called the House of Wisdom, it held copies of manuscripts and books on the arts, sciences and many other topics. It was a meeting place for academics and intellectuals for hundreds of years. Islamic societies also built hospitals for the sick, and their scholars led the world in studies of medicine, sciences and mathematics. The Crusades gave European Christians the opportunity to gain an insight into the learning of the Islamic East. As in Spain, Europeans became influenced by Islamic culture, including poetry and architecture. European scholars were no doubt impressed by Muslim schools as it was about this time that the great universities of Europe were established. The challenge posed by Islamic learning was at least partly responsible for this development.

And did the Islamic East have anything to learn from Europe? As it turns out, the Europeans, who appeared rough and barbaric to the Muslims, had little to offer at this point in history. Their contribution to government, learning and invention lay far in the future.

SOURCE 4 From Usamah ibn Mequidh, a twelfth-century Arab writer and soldier. Muslims referred to Crusaders as 'Franks' because many Crusaders came from the part of Europe that was once the Frankish Empire (near modern-day France and Germany).

When I come to tell stories about the Franks [Crusaders] I cannot help but glorify and praise Allah (exalted is He!), for I see them as animals possessing the virtues of courage and fighting, but nothing else; just as pack animals have only the virtues of strength and carrying loads.



SOURCE 5 Details of the Alhambra, a magnificent fortress and palace built by the Islamic rulers of Granada in the mid fourteenth century

DID YOU KNOW?

The Muslim world also adopted and further developed ancient technologies. An example is the astrolabe, an instrument invented by a Greek scholar about 150 BCE to locate and predict the positions of the Moon, the planets, the Sun and other stars. Medieval Muslim scholars made improvements to the astrolabe that enabled it to be used for navigation at sea and to find the direction of Mecca, the holy city in the Arab empire that Muslims were required to face during prayer.

4.13 ACTIVITY

Use the internet and/or your library to find out more about the great Mosque at Cordoba (SOURCE 3). Some questions you could answer are:

- When was it originally built and by whom?
- What are some of its impressive features?
- What is it being used for today?

Using historical sources as evidence

4.13 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.13 Exercise 1: Check your understanding

- 1. **HS1** What is the name for a Muslim ruler?
- 2. **HS1** Why have some historians called the Middle Ages the Age of Faith?
- 3. **HS1** Who conquered much of Spain in 711 CE?
- 4. **HS1** Name the three main religious groups in Spain during the Middle Ages.
- 5. **HS4** List two elements or products of Spanish culture today which are Middle Eastern in origin.
- 6. **HS1** Were other religions permitted in Muslim Spain?
- 7. **HS1** Which two groups were discriminated against with taxation?
- 8. HS1 How was much of the ancient Greek and Roman knowledge kept alive during the Early Middle Ages?
- 9. HS1 In what fields did Islamic scholars lead studies in the world during medieval times?
- 10. HS5 How much did the Muslims learn from European culture in the Middle Ages? Explain.

4.13 Exercise 2: Apply your understanding

- 1. HS3 Using the map in SOURCE 1, explain the spread of Islam into Spain by around 1000 CE.
- 2. HS3 Examine SOURCE 2. What impression does Amad ibn Muammad al-Yammani have of the Moorish music he hears?
- 3. HS3 Look closely at the repeated architecture in the Prayer Hall of the Great Mosque in SOURCE 3. What impressions would this give the worshippers and what techniques were used to obtain these impressions?
- 4. HS3 Examine SOURCE 4.
 - (a) What positive things does Usamah ibn Mequidh have to say about the Crusaders?
 - (b) What negative things does he have to say?
 - (c) Why do you think Usamah ibn Mequidh would make such negative remarks about the Crusaders?
- 5. HS3 What does SOURCE 5 tell historians about the Islamic rule in Granada in the mid-fourteenth century? Explain how it does this.
- 6. HS3 Using SOURCES 2 and 4, explain whether the medieval Muslim travellers and soldiers saw themselves as the brutal infidels that the Christian Crusaders saw them as. Use short quotations from the sources to back up your statements.
- 7. HS3 Examine SOURCES 3 and 5 closely. What features of these buildings justify their reputations as magnificent examples of medieval Islamic architecture?
- 8. HS6 What were the achievements of the Islamic East during medieval times? How does this contrast with Christian Europe of the same time?
- 9. HS6 Write a short paragraph evaluating whether you agree that there was greater tolerance in Muslim Spain during the Middle Ages than was expected for that time.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.14 Towns and trades

4.14.1 The growth of towns

By about the eleventh century, Europe was a relatively peaceful place. People felt free to risk living beyond the security of the manor. In time, a network of towns sprang up, particularly along trade routes. These towns became the focus for the rise of a new social group — a **middle class** of merchants.

Personal loyalty to a lord in exchange for a **fief** was a basic principle of feudalism. As barbarian raids stopped, as food stocks increased, and as money rather than personal services began to be given to lords in exchange for rights and privileges, the feudal system began to break down.

People began to drift away from the manors to start new lives in towns, many of which had developed near castles. Some people learned new skills such as spinning, weaving, baking, leather work, music, acting, ale brewing, armour construction, ropemaking, butchery, banking, cloth dying and stonemasonry.

As towns grew, large walls were built around them. Near these walls were the cramped homes of the poor — mostly wooden and many storeys high. Most houses were coated with a highly flammable paint made of pitch and linseed oil. Pitch was a black, tarry substance used to seal cracks in buildings and boats. The homes of the wealthy were in the town's centre.

The town's lanes were crooked and narrow. They were lit only by people's lanterns and candles, and had no footpaths. They became smelly, rat-infested rubbish dumps, splattered with food scraps, bones and sewage. Open drains stank from cloth dyes and the blood of slaughtered animals. Townspeople tramped through this muck to reach the town's central marketplace. It bustled with the activity of traders, musicians, actors, jugglers, pickpockets and beggars.

SOURCE 1 A young boy's experience on entering the marketplace in the English town of Shrewsbury in 1241. This extract is from *Falls the Shadow*, a novel by Sharon Penman, Penguin, 1989, p. 132.

Church bells pealed out the hour . . . Men wandered the streets shouting 'hot meat pies' and 'good ale' . . . itinerant [wandering] pedlars hawked [tried to sell] their goods, offering nails, ribbons, potions to restore health . . . People gathered in front of the cramped, unshuttered shops, arguing prices at the tops of their voices. Heavy carts creaked down the streets . . . Dogs darted underfoot, and pigs [shuffled] about in the debris dumped in the centre gutter.

4.14.2 Rise of the merchant class

Adventurous European merchants began looking for more distant markets. They travelled to Asia, northern Africa and the Middle East with goods such as iron, timber and copper. They returned with exotic silks, furs, spices, gold and precious stones. They visited trade fairs in Europe, where both goods and ideas were exchanged. It is thought, for example, that the windmill was first heard of from traders from Iran, and soap from traders from China.

Long-distance trading was risky. There were robbers and sea pirates. As well, merchants had to deal with clever money lenders. To protect themselves and their profits, merchants often formed partnerships and shared responsibilities. This led to the formation of companies, which in turn created new jobs.

By the latter part of the Middle Ages, this new merchant class had become a very powerful force in medieval society.

SOURCE 2 Medieval illustration of stonemasons, who were highly respected craftspeople



Growth of apprenticeships

The demand for skilled workers was growing. Apprenticeships began to be set up to train young people in particular trades. Most were seven-year agreements, and were strictly controlled by guilds.

Guilds

The standard of work in each skilled craft was also controlled by its guild. These associations were formed by artisans to protect their interests, settle disputes between employers and skilled workers, and to set wages and prices. In some ways they were like modern trade unions; however, unlike trade unions, guild members included employers.

Merchants also had guilds. The most powerful merchant association was the Hanseatic League, which controlled many trading ports around the Baltic Sea, and trading outposts as far away as Russia, Italy and England. The Hanseatic League was so powerful during the fourteenth and fifteenth centuries that it minted its own money and wrote its own laws. In the fourteenth century, it even waged war against the King of Demark.

SOURCE 3 As shown in this medieval painting, businesspeople usually sold their goods from the ground floor of their home. Family, servants and apprentices lived on the upper floors.



4.14 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.14 Exercise 1: Check your understanding

- 1. HS1 What was the basic principle of feudalism?
- 2. HS1 What was the initial change that meant that food stock increased and money could be exchanged?
- 3. **HS1** Why were the new towns quite frequently destroyed by fire?
- 4. HS1 Where did the poor usually live in the town? Why?
- 5. **HS1** Where did the wealthier people usually live? Why?
- 6. HS1 To where did the more adventurous European merchants travel?
- 7. HS1 What did they take with them to trade and with what did they return?
- 8. **HS1** What were the risks associated with long-distance trading?
- 9. **HS1** How long were the new apprenticeship agreements?
- 10. HS1 What is a guild?
- 11. **HS1** Describe the major role of guilds.
- 12. HS1 What was the Hanseatic League?

4.14 Exercise 2: Apply your understanding

- 1. HS3 Read SOURCE 1.
 - (a) Describe features of medieval towns that would have made them dirty, noisy and unhealthy.
 - (b) What would you need to know about this source in order to judge its reliability?
- 2. HS3 Describe the medieval trades that you can see in SOURCES 2 and 3.
- 3. HS3 Imagine that you were a peasant who left your manor to come to a town. Use the sources and information in this subtopic to write a paragraph describing what you see as you enter the town and make your way to the marketplace. Keep in mind that there are probably many things that you would find remarkable.
- **4. HS3** If you had been a young town dweller in the Middle Ages, to what trade would you like to have been apprenticed? Give reasons for your choice.
- 5. **HS4** Describe the factors that led to the decline of feudalism.
- 6. HS4 Explain what the growth of trade and skilled crafts had to do with the growth of towns.
- 7. **HS4** Explore the growth in power of the merchant class and guilds. Identify the impact that this would have on the lords and their knights.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.15 Living conditions and medical science in the fourteenth century

4.15.1 Living conditions in medieval cities

The High Middle Ages (c. 1100–1300 CE) in Europe was a period of rapid population growth and relative prosperity. It saw the expansion of towns and cities. Many of these were filthy and overcrowded, providing ideal conditions for the spread of disease. Medical science at the time was totally inadequate and unprepared for the plague that was to come.

Medieval cities such as London, Paris and Florence grew very rapidly during the thirteenth and fourteenth centuries, with little thought given to proper planning or healthy living conditions. Most houses were small, containing only one or two rooms. Privacy was not a particularly high priority, and even members of reasonably well-off families would all sleep in the same room. Among the poor, it was not unusual for as many as a dozen people to all sleep on the floor together. In country villages, they would often be joined by their livestock. If someone became ill, it was physically impossible to isolate them from other members of the family. So if one member of the family became sick, it was likely that all would catch the same illness.

Hygiene and sanitation

In a small village, the removal of rubbish and human waste was relatively simple, but in an overcrowded town it became a more difficult problem. The streets were narrow, usually with a drain running down the middle that was meant to carry waste away. However, these drains regularly filled up and so the waste remained. Often the drains fed into the same rivers and streams from which people drew their drinking water. While breathing in foul air or drinking contaminated water could not spread the Black Death, cases of gastric diseases such as **dysentery** and diarrhoea were common. If the body was weakened because of such diseases, the plague could take hold more easily, and death was likely to occur much sooner.



SOURCE 1 Medieval houses and towns were generally very unhealthy places to live.

- A The presence of domestic animals and straw on the floor allowed rats and other vermin to flourish.
- B Houses were close together, allowing for the easy spread of disease.
- Houses were very small, providing little opportunity to isolate sick family members.
- A drain down the middle of the street was the only way to remove waste and rubbish.
- Rivers and streams that were used for drinking water often became contaminated.

Life expectancy

Although the average life expectancy in Australia today is about 82 years, most people did not live this long in medieval times. Death from infectious disease was common and children were the most likely victims. Close to a quarter of all babies died within the first year of life. Less than half of all children would reach the age of ten. Those who passed the age of ten had a reasonable chance of reaching adulthood and perhaps living to around 40 years of age. Only a small minority lived to what we would regard as old age.

4.15.2 Medical science in the Middle Ages

Medical knowledge in the Middle Ages was based largely on ancient knowledge and had not advanced much for a thousand years. Doctors relied largely on the theories of ancient physicians such as Hippocrates and Galen. In the fourth century BCE, the Greek physician Hippocrates was one of the first to determine that illness was not a result of a curse from the gods. He promoted the idea that illness and disease were part of nature and could be influenced by factors such as diet and a person's living habits. Nevertheless, he was completely unaware of microscopic organisms as a cause of disease. The Greek physician and philosopher

Galen lived in Rome in the second century CE. Because human dissections were illegal under Roman law, Galen carried out anatomical dissections on various animals. He proposed theories on the operation of the brain and the nervous system, as well as on the circulation of the blood throughout the body. Although many of his theories were later proved to be incorrect, they were the definitive word on medical science in Europe. Medieval doctors refused to accept any idea that was not consistent with Galen's theories and so were not willing to accept any new evidence relating to the causes or spread of disease.

Treating the sick

The treatment of illness and disease in the Middle Ages was based more on superstition and ignorance than on any genuine medical knowledge. Medieval doctors believed that the body contained four 'humours' or aspects that influenced a person's state of health (see **SOURCE 2**). These humours were black bile, yellow bile, phlegm and blood. While they were in balance, the body would be healthy. Illness occurred when these humours were out of balance in the body. In these circumstances, one common cure was to drain blood from the body through a process of bloodletting (see **SOURCE 3**). Applying leeches to the body to suck the blood was an alternative method of restoring the body's balance (see **SOURCE 4**). Herbal medicines were also popular, but often contained poisons, and so were sometimes more dangerous than the disease. Surgery was usually carried out by barbers, and was rarely successful. Amputations of injured or diseased limbs were the most common form of surgery. Because of the strong religious beliefs of the time, most people believed that prayer was the most effective way of dealing with serious illness.

SOURCE 2 This sixteenth-century diagram illustrates the four humours that medieval doctors believed determined the health of the body.



SOURCE 3 Bloodletting, as shown in this fifteenth-century artwork, involved the draining of a measured amount of blood from a vein believed to be connected to the diseased organ in the body.



SOURCE 4 In this illustration from Boccaccio's Decameron, doctors apply leeches to a royal or aristocratic patient.

DID YOU KNOW?

Modern anaesthetics were unknown in medieval times, so the patient was wide awake during surgery. One mixture used to try and dull the pain was known as 'dwale' and it consisted of lettuce juice, gall from a castrated boar and assorted herbs such as bryony, henbane and hemlock. All these plants were poisonous and could have killed the patient. Cuts and wounds from surgery were treated by cautery. This was a process of applying hot irons to the wound to seal it and prevent further loss of blood.

4.15.3 Life suddenly gets harder

The growth in population throughout Europe in the twelfth and thirteenth centuries quickly led to most of the best farming land being overworked. By the beginning of the fourteenth century, the quantity and quality of crops were in decline. This raised the threat of famine. To make matters worse, there appears to have been a change in weather patterns early in the fourteenth century, with the winter of 1306–07 the coldest experienced in over 300 years. As the colder and wetter weather took hold, farming conditions became worse, with the years 1315–17 bringing crop failures and widespread famine. The 1320s and 1330s saw frequent famine conditions continue as the weather and overworked soils brought regular crop failures. By the 1340s the standard of health of much of the European population was very poor, with little resistance to serious disease. It was to this ravaged population that the Black Death was to bring unprecedented death and destruction.

SOURCE 5 An extract from a blog post written by a historian working on a book about the impact of the king, Edward II, in the mid-1310s.

The Sempringham annalist says 'there were great floods of water throughout England, and the wheat was destroyed, and the hay also, and there was great famine and great dearth of wheat throughout the land'. He gives the price of a quarter of wheat as twenty-four shillings and more, a quarter of barley as sixteen shillings and a quarter of oats as twenty shillings, many times the usual price. Such bread as was available could not satisfy hunger, as the grain was soaked from the endless rain and had to be dried in ovens before it was cooked, and contained minimal nutrients.

4.15 ACTIVITY

Each of the four humours depicted in **SOURCE 2** was associated with a number of other natural and human characteristics. Using the resources available to you from the internet and/or your library, find out the following:

- a. What were the names of each of the humours?
- b. What elements in nature was each humour associated with?
- c. How were the humours believed to have influenced a person's personality and mood?
- d. When did this belief lose popularity?

Using historical sources as evidence

4.15 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.15 Exercise 1: Check your understanding

- 1. **HS1** Living conditions varied greatly throughout the population.
 - (a) Describe the living conditions of the poorer people in medieval cities.
 - (b) How did these living conditions contribute to the increased likelihood of illness?
- 2. HS1 What caused an increased risk of diseases such as dysentery and diarrhoea in overcrowded towns?
- 3. HS1 Of all the babies born in medieval times, approximately what proportion could be expected to reach adulthood?
- **4. HS1** Why had there been no significant advances in medical knowledge in Europe for over a thousand years?
- 5. **HS1** What medical treatment was offered by barbers at this time?
- 6. **HS1** How did most people in the Middle Ages attempt to deal with illness?
- **7. HS5** What happened in the first half of the fourteenth century in Europe to make people more susceptible to disease?

4.15 Exercise 2: Apply your understanding

- 1. HS3 Using SOURCE 1, list three reasons why people living in medieval times were at greater risk of disease than we are today.
- 2. HS3 Explain the purpose of the medical treatments in SOURCES 3 and 4.
- 3. HS3 Study SOURCE 4.
 - (a) How do we know the patient in SOURCE 4 was an important person?
 - (b) From the reactions of the other people in **SOURCE 4**, what can you identify as one of the patient's symptoms?
- 4. HS3 SOURCE 5 is written by a historian. Read it carefully and answer the following questions.
 - (a) Is this a primary or secondary source? Explain your answer.
 - (b) What do you think an 'annalist' is?
 - (c) The historian quotes a medieval source. Is this a direct quotation? Explain your answer by offering
 - (d) Does it verify the information given in this section?
- 5. HS3 Examine SOURCES 2, 3 and 4 closely. Using what you can see, explain how the sick were treated in medieval times.
- 6. HS4 Describe the contributions made by Hippocrates and Galen to medieval medical knowledge.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

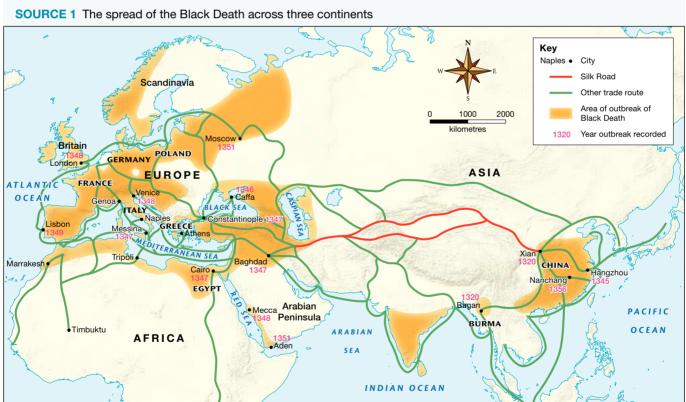
4.16 The Black Death

4.16.1 Origins of the Black Death

In 1347 something terrible happened across three continents — something that changed the course of history. This event is known as the Black Death or the **plague**. The Black Death was a disease that spread across the known world and wiped out whole towns and villages. In Europe alone, between 1347 and 1352, one-third of the population may have died as a result of this **pestilence**.

What was the nature of the Black Death? Where did it come from, and how did it spread? And how did it change the course of history?

It is believed that the Black Death originated in Mongolia in the early fourteenth century. It spread along trade routes and via military expeditions. In 1346 the Tartars, a people descended from the Mongols, were besieging the Black Sea port city of Caffa, a trading colony of the Italian city of Genoa. Then the Tartar troops started to fall sick and die. Weakened by disease, they used trebuchets to hurl infected dead bodies over the walls of Caffa in an attempt to inflict the same pestilence on the city's inhabitants. Some historians and medical scientists cite this event as possibly the first instance in history of **biological warfare**. Some people escaped from Caffa on ships for Italy. They may have escaped the Tartars, but not the Black Death, as it accompanied them on their ships. At least one such ship is recorded as having reached the Italian port of Messina, with dead or dying crew on board. This was probably not the only way the Black Death reached Europe, but it is the best documented. The Black Death spread right across Europe and North Africa.



Source: Map drawn by Spatial Vision.

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Deepen and check your understanding of this topic with related case studies and auto-marked questions.

Expanding contacts > Black Death

4.16.2 What was the Black Death?

The Black Death had three variations. Its most common form was bubonic plague, named for the buboes (stinking, pus-filled swellings) that appeared on the victim's body (see **SOURCES 2** and **3**). The second form was pneumonic plague, which affected the respiratory system, and the third was septicaemic plague, which affected the blood. Fever and vomiting were common symptoms. In its final stages, victims' skin turned purple-black and their nervous system was affected. This slurred their speech and they staggered about in convulsions. Observers called this phase the *danse macabre* — 'the dance of death'. The source of the disease was bacteria found on the fleas of black rats. Such rats were common on ships and in towns such as Messina. In the unhygienic conditions of medieval Europe, plague-ridden rats bred rapidly and the fleas were able to move to other animals and to people.

SOURCE 2 From *The Decameron*, a collection of stories by Giovanni Boccaccio, written between 1350 and 1352, when the plague was ravaging his country, Italy, along with the rest of Europe. Boccaccio's stories are told by characters who have fled the plague to isolate themselves in a villa in the countryside. In real life, those who took such action — and Boccaccio was one of them — did sometimes survive. But only the rich had this option.

... [The] deadly pestilence ... showed its first signs in men and women alike by means of swellings either in the groin [area between the belly and thigh] or under the armpits, some of which grew to the size of an ordinary apple and others to the size of an egg (more or less), and the people called them [buboes]. And from the two parts of the body already mentioned, in very little time, the ... deadly [buboes] began to spread indiscriminately over every part of the body; then, after this, the symptoms of the illness changed to black or livid [bluish] spots appearing on the arms and thighs, and on every part of the body — sometimes there were large ones and other times a number of little ones scattered all around ... [Almost] all died after the third day of the appearance of the previously described symptoms (some sooner, others later), and most of them died without fever or any other side effects.



SOURCE 3 Plague victims in Perugia, Italy - from a sixteenth-century manuscript

4.16.3 Medieval treatments for the Black Death

The details of the Black Death were not understood during the Middle Ages. Doctors knew nothing about the cause of the plague or how to treat it. All sorts of treatments were offered. They believed that stench was a cause of the disease, and offered patients sweet-smelling flowers and pot-pourri to smell. Some believe this is the source of the children's nursery rhyme 'Ring around a rosie, a pocketful of posies, a-tishoo, we all fall down'. Other doctors lanced buboes to draw out 'bad blood'. But this helped only to spread the disease.

As if doctors' remedies were not bad enough, panic and superstition made things even worse. Many believed that the plague was God's punishment for their sins, like the plagues described in the Bible that had ravaged Egypt in the time of Moses. One extreme response was made by a group called the Flagellants. They travelled from town to town publicly whipping themselves in the hope of receiving God's forgiveness for their sins and deliverance from the pestilence. However, with the blood from their whipped backs flowing freely, all this did was help spread the disease. Pope Clement VI ordered that these groups be disbanded. Clement, incidentally, may have come closest to an effective method of protection from **contagion**. His adviser, Guy

de Chauliac, sat the Pope between bonfires for many days so he could breathe the purified air. Given that fleas dislike such heat, this may have helped save the Pope's life.

Of all the remedies attempted during the period of the Black Death, cleanliness and hygiene were generally the treatments that were overlooked. This is because no-one connected the plague to the rats, which carried the pestilent fleas. Few bathed regularly or changed their clothes, and people continued to live in dirty, cramped cottages, often with their livestock. No-one thought of clearing the dung heaps in the middle of manor-house courtyards, and people continued to use the streets as dumps for their household waste. Such conditions attracted the flea-ridden rats. As

SOURCE 4 A doctor dressed up to treat the Black Death, as shown in a seventeenth-century manuscript



SOURCE 5 Minority groups, including the Jews, were blamed for the Black Death and were persecuted, as shown in this sixteenth-century illustration.



the rats bred and died in the squalor of medieval towns and villages, the fleas continued to infect the human population. And so, more than any other factor, it was the living conditions in medieval times that encouraged the spread of the deadly catastrophe that was the Black Death.

Inevitably, minority groups were blamed for spreading the plague. Some thought lepers were to blame, and many of them were hunted down and murdered. Jews were accused of deliberately poisoning wells. Despite the fact that the plague did not distinguish between Jews and Christians, thousands of Jews were murdered. Many were burned alive.

4.16.4 Effects of the Black Death

Within four years, at least a third of Europe's population had perished. Many villages were deserted and never repopulated. It would take another 200 years for the population of Europe to reach the size it had been in 1347. A **catastrophe** on such a scale must have had a major effect on society and the economy.

The feudal system itself was weakened as a result of the Black Death. With a shortage of workers, serfs began to demand wages and lower rents for their labour, and freemen, who were already paid, demanded higher wages. In some cases in England, workers' wages tripled during the time of the Black Death.

The power of the Church was weakened too. Partly, it lost respect in failing to protect the people through prayer. But also, the

SOURCE 6 As shown in this Italian fresco, increased wages led to a growth in markets and in the number of merchants offering goods for sale.



clergy lost many of its own members. Monasteries were closed communities and some lost almost all their educated monks. There were few priests left to perform Mass and conduct weddings and funerals. The Church desperately needed new clergy and was forced to accept novices with no education.

Farming changed. With fewer peasants to work the fields, grain production went into decline in England and other European countries. Farmers turned increasingly to livestock such as sheep that required fewer workers on the land.

DID YOU KNOW?

One of the most recent pandemics of bubonic plague occurred in about 1900. It originated in China, and spread to Australia, among other places. This time, however, medical and other authorities knew how to respond. Exterminators were sent into Sydney's Rocks area, which was a slum in those days, to wipe out rats. Suspected plague carriers were taken to the Quarantine Station at Manly. The disease was thus contained.

4.16 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.16 Exercise 1: Check your understanding

- 1. HS1 What is another name for the Black Death?
- 2. **HS1** Where did the Black Death probably originate?
- 3. HS1 How did the Black Death enter the Black Sea city of Caffa?
- 4. HS1 What are buboes?
- 5. **HS1** Describe the three variations of the Black Death?
- 6. HS1 What have we since discovered was the source of the disease and what carried it?
- 7. **HS1** Why did medieval doctors offer patients sweet-smelling flowers and pot-pourri to smell as a cure for the Black Death?
- 8. **HS1** Who were the Flagellants?
- 9. HS1 How did Pope Clement VI successfully avoid catching the Black Death?
- 10. **HS1** What was the main factor that encouraged the spread of the disease?
- 11. HS1 What percentage of the European population died from the Black Death?
- 12. HS5 List three effects that the Black Death had on medieval society.

4.16 Exercise 2: Apply your understanding

- 1. HS3 Using SOURCE 1, write a short paragraph explaining how the Black Death spread across Europe, Asia and Africa.
- 2. HS3 In which continent did the Black Death have the most impact? Why do you think this might be?
- 3. HS3 Read SOURCE 2 and examine SOURCE 3. On which variation of the Black Death did most descriptions and paintings focus? Why do you think this was so?
- 4. HS3 What is the person in the bottom right of SOURCE 3 holding and for what reason?
- 5. HS3 Imagine you are the doctor in SOURCE 4. Explain why you are dressed in such outlandish clothes.
- 6. HS3 How does the Black Death appear to have contributed to the development of markets, such as that shown in **SOURCE 6?** How would you describe the people at this market?
- 7. HS3 Analyse the map in SOURCE 1 carefully. Which places did not suffer from the Black Death? Using a modern atlas to find out any physical features or population information, create a hypothesis explaining why these features may have prevented the Black Death from reaching them.
- 8. HS3 How does SOURCE 2 support SOURCE 3 as evidence?
- 9. HS5 One historian has suggested that without trade the Black Death may never have happened. Explain whether or not you agree with this statement, giving evidence to support your opinion.
- 10. HS5 Examine the three main effects of the Black Death on medieval society discussed in this subtopic. Which one do you think was the most significant? Explain why.
- 11. HS5 Why do many historians believe the Black Death changed the course of history?
- 12. **HS6** Evaluate the responses of the different groups of people at the time to the Black Death and its effects on society. Pay particular attention to the Flagellants and the minority groups. How did they behave and what were their reasons for doing so?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.17 How did the Black Death change society?

4.17.1 Changes to medicine, sanitation and public health

Between 1347 and 1351, the Black Death had a brutal effect on life in Europe and the area surrounding the Mediterranean Sea. Despite all the devastation, there were also some positive changes in the following years, many of which occurred as a direct response to the horrors of the plague.

The failure of medieval medicine to successfully treat the victims of the plague led to changes in the practice of medicine in the years following the Black Death. Before this time, hospitals were places where sick people were sent to be isolated. When people entered a hospital, all their possessions were disposed of because no-one expected them to survive. During the period of the Black Death, doctors began to try to cure patients placed in hospital, and this practice continued after the plague had gone. Some hospitals began to develop relationships with universities and collect libraries of medical texts. An increased

SOURCE 1 As shown in this fifteenth-century illustration, the desire of doctors to find out more about the human body led to an increase in dissections, which improved knowledge of human anatomy.



emphasis on medical knowledge led to more dissections of human corpses, and so improvements in the knowledge of anatomy and surgical practices soon followed.

In a number of places, authorities became more aware of the need to take responsibility for the health of the population. In Italian cities such as Venice and Milan, public health boards were set up to deal with the plague, and these continued after the disease had moved on. These boards gradually gained extra powers and became a valuable means of preventing the spread of illness. In London, the city council brought in regulations to clean up the city. Laws to prevent littering, the employment of street sweepers and heavy fines for dumping waste in the river were all implemented in the years following the Black Death.

4.17.2 Changes to the power structures in society

Religion

The devastation of the Black Death weakened the influence of the previously all-powerful Catholic Church. The inability of religious leaders to deal with the plague through prayer and the fact that so many priests had died of the disease led to many people losing some respect for the Church. In the 1360s and 1370s, an English **theologian** John Wycliffe wrote a number of works critical of the papacy and of the role of monasteries in society. He gained a strong following among people whose recent experiences had led them to question the power and influence of the Catholic Church in society. Many of Wycliffe's followers were executed for **heresy**.

Political unrest

The huge decline in the numbers of peasants and agricultural workers meant there were fewer people left to perform these tasks. This meant that peasants were able to demand higher wages. However, these demands were often resisted by those in power. Peasants and workers in various parts of Europe rose up to demand their rights in the years following the Black Death. In France in 1358, a group of workers called the Jacquerie rose up in revolt to try and improve their working conditions. In 1378 a group of workers in the wool industry, who were known as the *ciompi*, led a revolt in Florence where they managed to force some democratic government reforms for a brief time. In England, causes of the Peasants' Revolt of 1381 (see subtopic 4.18) can be traced back to the changes in society that resulted from the Black Death.

workers to improve their conditions.

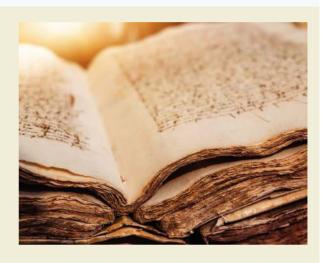
SOURCE 2 The Jacquerie uprising in 1358 was an attempt by French workers to improve their conditions.

Language

In England before the Black Death, most educated people spoke Latin or French, which were the languages of the ruling classes. The death of large numbers of educated monks and other scholars meant that schools had to resort to English as the language of instruction. By the 1380s, poets such as Geoffrey Chaucer were publishing their works in what is now referred to as Middle English (see **SOURCE 3**). Chaucer is considered by many to be the father of English literature. Once English became the commonly used language, all knowledge was open to the ordinary people as well.

SOURCE 3 The decline in the use of Latin and French in England led to increased use of a form of English, such as in this extract from the Wife of Bath's prologue by Chaucer.

And whom I sawgh he wolde never fyne To reden on this cursed book al night, Al sodeinly three leves have I plight Out of his book right as he redde, and eke I with my fist so took him on the cheeke That in oure fir he fil backward adown. And up he sterte as dooth a wood leon And with his fist he smoot me on the heed That in the floor I lay as I were deed. And whan he sawgh how stille that I lay, He was agast, and wolde have fled his way, Till atte laste out of my swough I braide: "O hastou slain me, false thief?" I saide, "And for my land thus hastou mordred me? "Er I be deed, yit wol I kisse thee."



4.17 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.17 Exercise 1: Check your understanding

- 1. HS5 How did the experience of the Black Death change the ways in which hospitals operated?
- 2. HS1 What did an increase in the dissection of human corpses lead to?
- 3. HS1 What does sanitation mean?
- 4. HS4 Describe an example of action taken to improve sanitation and public health after the plague had
- 5. HS1 Why did many people begin to lose respect for the Catholic Church after the Black Death?
- 6. HS1 Who was John Wycliffe and what was his perspective on the Catholic Church?
- 7. **HS1** What was the result of the decline in the number of peasant and agricultural workers?
- 8. HS1 How did the decline in the number of workers give them the strength to challenge those in power?
- 9. HS1 What were the languages used by scholars and educated monks in England before the Black Death?
- 10. HS1 Why did English take over from Latin and French after the plague?

4.17 Exercise 2: Apply your understanding

- 1. HS3 What aspects of the illustration in SOURCE 1 led to the conclusion that they still did not understand about infection control?
- 2. HS3 What appears to be happening in SOURCE 2 and why did this event take place?
- 3. HS3 In reference to SOURCE 2, where else did similar uprisings take place?
- 4. HS3 Read through SOURCE 3.
 - (a) Why is Chaucer considered by many to be the father of English literature?
 - (b) In what form of English is Chaucer's poetry written?
- 5. HS3 Although the extract in SOURCE 3 from Chaucer's The Canterbury Tales is written in a form of the language that is unfamiliar to us, it is still recognisable as English.

- (a) Identify the words in the poem that are the same as modern English words.
- (b) Identify the words that are similar to modern English words and give their equivalent.
- (c) List any words that seem completely unrecognisable. Suggest possible meanings for these words based on the context.
- (d) After analysing the language, summarise what you think this poem is about.
- 6. **HS4** Imagine that you are a literate Londoner who has lived through the events from 1347 to 1351. It is now 10 years later and you are looking back on the changes brought about to your society. Write these in a letter to your cousin who lives in the north of England.
- 7. **HS4** Create a chart where you have 'Before' on one side and 'After' on the other, and explore the changes brought about by the Black Death.
- **8. HS4** Categorise the changes that you have identified in question 7 as positive or negative for the common people in the Middle Ages.
- 9. HS5 At the end of the worst of the Black Death in 1351, what were the challenges that remained?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.18 The Peasants' Revolt

4.18.1 What caused the revolt?

It has already been mentioned in this topic that there was a serious revolt among the peasants in England in 1381. Along with the Black Death and the growth of the merchant class in the towns, this event did much to weaken the feudal system. What made the revolt so serious was its scale: there are no reliable figures on how many peasants were involved (50 000 is sometimes suggested), but the uprising caused such dread among the powerful that the king himself sought refuge for fear of his life.

The trigger for the revolt was the **Poll Tax** of 1380, the third such tax imposed in four years. The Poll Tax was intended to restore a treasury that had been drained by the costs of fighting the French in the Hundred Years' War. Price increases causing hunger and shortages led to despair and anger in the population.

The long-term causes of the revolt went back to the Black Death. We learned that one of the results of the Black Death was a labour shortage that allowed the peasants to demand higher pay. Traditionally, peasants had been tied to the manor. Now, with a vastly reduced population, they left their villages in search of better pay and conditions in other manors. In 1351 a law called the Statute of Labourers was passed. It aimed to put a stop to peasants' free movement around the countryside and to cap their wages at 1346 levels. Naturally, peasants greatly resented this law. Many risked punishment by ignoring it. Tensions grew, but the Poll Tax of 1380 turned the peasants' anger into open rebellion.

The outbreak

The Poll Tax returns of 1380 showed that very little of the tax had been collected, so the tax collectors were sent out again. They were instructed not only to collect the tax — in some cases for a second time — but to extract payment for those who didn't turn up. This caused outrage among the peasants. In May 1381, at the village of Fobbing in Essex, one collector and his men were beaten up and driven out. When the Chief Justice was sent to sort out the villagers, he too was driven out.

What happened next was made possible only by the free movement of peasants around the countryside. In early June, word about what had happened in Fobbing spread across Essex and Kent. Peasants from across both counties gathered together into one angry mob. Manor houses were burned down, tax and debt records were destroyed and some wealthy landowners were killed or humiliated by being forced to be the servants of their new masters, the peasant rebels. By June 10, the city of Canterbury was seized by the rebels. With the Archbishop of Canterbury absent in London, they appointed a poor monk as the new archbishop and attacked rich visitors.

The peasant revolt was not entirely a disorganised mob. Several of their number came forward as leaders — in particular, Wat Tyler, Jack Straw and a parish priest, John Ball. Tyler was able to exercise some control over what would otherwise have been a mob without direction. John Ball preached against the leaders of his own Church because he felt that they were helping the lords to **exploit** the poor.

SOURCE 1 Speech given by John Ball in 1377

Why are those whom we call lords, masters over us? How have they deserved it? By what right do they keep us enslaved? We are all descended from our first parents, Adam and Eve; how then can they say that they are better than us . . . At the beginning we were all created equal. If God willed that there should be serfs, he would have said so at the beginning of the world. We are formed in Christ's likeness, and they treat us like animals . . . They are dressed in velvet and furs, while we wear only cloth. They have wine, and spices and good bread, while we have rye bread and water. They have fine houses and manors, and we have to brave the wind and rain as we toil in the fields. It is by the sweat of our brows that they maintain their high state. We are called serfs, and we are beaten if we do not perform our task . . . Let us go to see King Richard. He is young, and we will show him our miserable slavery, we will tell him it must be changed, or else we will provide the remedy ourselves. When the King sees us, either he will listen to us, or we will help ourselves.

4.18.2 The events and consequences

The rebels then set out for London to appeal directly to the king, Richard II, at the time only a boy of 14. Evidently the King's Council were taken by surprise, because there were few guards to defend the city. With the rebels in the city by 13 June, along with many sympathisers among the Londoners themselves, fear spread among the ruling classes. Property was damaged, and some merchants were killed. Wat Tyler probably ensured that the rebels for the most part remained peaceful.

The king agreed to meet with the rebels the next day. The King's Council wanted to avoid meeting them inside the city, with its flammable timber buildings, narrow streets and lack of guards. So they met outside the city gates at a place called Mile End. The king declared that he agreed to their demands, pardoning the rebels, abolishing the Poll Tax and reducing land rents. A group of peasants, however, were not satisfied. They attacked the Tower of London, capturing and beheading three people — the Archbishop of Canterbury, the King's Treasurer and John Legge, who had created the Poll Tax. The rebels impaled their heads on stakes and paraded them around the city in triumph. Richard hid himself away, fearing a similar fate.



SOURCE 2 The death of Wat Tyler as Richard II addresses the crowd. Illumination from a medieval manuscript.

The following day, on 15 June, Richard met the rebels again outside the city, this time at Smithfield. In the course of the negotiations, a fight broke out involving Wat Tyler. He was struck with a sword by the Lord Mayor. Afterwards he was beheaded, and his head ended up on a stake. The king again agreed to the rebels' demands and, with their leader dead, they dispersed. The king's promises were soon revoked, however. Richard claimed they had been made under threat and so were not lawful. John Ball was hung, drawn and quartered. The four parts of his body were displayed in other towns as a warning against continuing the rebellion. Jack Straw was also beheaded. His head accompanied Wat Tyler's, displayed on London Bridge. And so the Peasants' Revolt came to a violent end.

SOURCE 3 From a chronicle written at the time of Wat Tyler's death

[one of the King's retinue] . . . said aloud [to Wat Tyler] that he knew him for the greatest thief and robber in all Kent . . . and for these words [Tyler] tried to strike him with his dagger . . . [The] Mayor of London, William Walworth, reasoned with . . . [Tyler] . . . and arrested him. And because he arrested him . . . [Wat] stabbed the Mayor with his dagger in the stomach in great wrath. But, as it pleased God, the Mayor was wearing armour and took no harm, but like a hardy and vigorous man drew his cutlass [a sword with a curved blade], and struck back at . . . [Tyler], and gave him a deep cut on the neck, and then gave a cut on the head. And during this scuffle one of the King's household drew his sword, and ran [Wat] two or three times through the body, mortally wounding him . . . [He] fell to the ground half-dead. And when the commons [peasant rebels] saw him fall, they began to bend their bows and shoot, wherefore the King himself spurred his horse, and rode out to them, commanding them that they should all come to him to Clerkenwell Fields . . . Wat Tyler] had been carried . . . to the hospital for poor folks . . . And the Mayor went thither and found him, and had him carried out to the middle of Smithfield . . . and there beheaded. And thus ended his [Wat Tyler's] wretched life. But the Mayor had his head set on a pole and borne before him to the King . . . [who] thanked the Mayor greatly for what he had done.

Results of the Peasants' Revolt

Despite being brutally crushed, the revolt had struck fear into the hearts of the privileged classes, particularly the lords and bishops. The rebels' demands were not met, yet the Poll Tax was not pursued again. Nor did the king's government try to continue controlling the wages landowners paid their peasants. Above all, this brief taste of freedom helped to weaken the feudal system, which was becoming increasingly outdated.

DID YOU KNOW?

In modern times, British prime minister Margaret Thatcher's government tried to introduce a Poll Tax in 1990. Like the Poll Tax of 1380, it also caused widespread anger and riots, and had to be dropped. Many believe it led to Thatcher's political downfall a year later.

4.18 ACTIVITIES

- 1. The feudal system developed in early medieval times as an effective system for organising society.
 - (a) List the features that were positive about the feudal system and the features that were negative.
 - (b) In a group of three, share your ideas and explain to the others why you made the decisions that you did. Then add any other ideas that you might have heard to your chart until you feel that you have covered all aspects.
 - (c) Using your notes from tasks (a) and (b) have a class discussion evaluating the effectiveness of the feudal system in medieval times. [Critical and Creative Thinking Capability]
- 2. Reflect on your participation in the above activity. How would you rate your ability to work by yourself? What were the strategies that you used that helped you and what were the things that made it difficult, and how did you overcome these? [Personal and Social Capability]

4.18 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.18 Exercise 1: Check your understanding

- 1. HS1 What was the Poll Tax and why was it imposed?
- 2. **HS5** Briefly outline two long-term causes of the Peasants' Revolt.
- **3. HS5** What was the trigger for the revolt?
- 4. HS1 How did the peasants show their dislike of the Poll Tax in the early part of the revolt?
- 5. **HS1** Consider the actions of the peasant rebels once they'd gathered into a mob.
 - (a) Which city did the rebels take over before setting out for London?
 - (b) Why did they appoint a new archbishop?
- 6. HS1 Who were the leaders of the Peasants' Revolt?
- 7. HS1 What indication is there that Wat Tyler was a charismatic and powerful man?
- 8. **HS1** How did the king act in the part he played in the rebellion?
- 9. **HS1** Who were the three public figures that the rebels captured and beheaded? What did they represent?
- 10. HS1 Examine the methods used to execute the leaders of the revolt. Why were they killed in these ways?
- 11. HS1 What was the ultimate achievement of the revolt for:
 - (a) the peasants
 - (b) the king?
- 12. HS5 Why is the revolt believed to have weakened the feudal system in the long run?

4.18 Exercise 2: Apply your understanding

- 1. HS3 Read SOURCE 1. What would the following groups have thought of what John Ball said in his speech?
 - (a) The peasants
 - (b) The nobles
 - (c) The king
- 2. HS3 In what ways does SOURCE 2 support SOURCE 3 as evidence for what occurred during the second meeting between the king and the rebels?
- 3. HS3 What view do you think SOURCE 3 takes of the rebel leader Wat Tyler? Whose side do you think the author of this chronicle takes? Explain your answer with evidence from the passage.
- 4. HS3 Read SOURCES 1 and 3. They are both intended to persuade people. Explain who they were trying to persuade, what they were trying to persuade them to believe and what techniques the authors used. Which one do you think was more successful?
- 5. HS3 Examine SOURCE 2 closely. What aspects do you think the painter made up? How do you know this?
- 6. HS2 Create a timeline starting with the Statute of Labourers and ending with the clash between the king and the rebels that explores the sequence of events.
- 7. HS5 Examine why the revolt failed. State which event you think was the turning point for the peasants.
- 8. HS6 Explore the reasons why historians sometimes see this as a significant event as Britain moved towards democracy.
- 9. **HS4** What developments stemmed from this event in British history?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.19 Joan of Arc

4.19.1 The life of Joan

In 1430 Joan of Arc was publicly burnt at the stake. Her crime? Listening to, and obeying, what she said were the voices of saints. Yet these same 'voices' helped this uneducated teenage girl bring about the coronation of a French king. Some 500 years later, in 1920, the Catholic Church declared her a saint.

Jehanne d'Arc (or Joan of Arc as we call her today) was born in 1412 in the small French village of Domrémy. Her simple life as the obedient daughter of a peasant farmer changed when she was 13. She began, she said, to see visions of saints and hear their voices. One day, they told her to drive the English armies from France and take France's dauphin, Charles VII, to the city of Rheims to be crowned as king.

It was three years before Joan decided to leave home and carry out the instructions she had been given. At first, her story was not believed. Eventually, she convinced the governor of the neighbouring town that she had to talk to Charles VII. Travelling there in men's clothing, she was taken to his castle by six men.

Supporters of Charles VII may have wanted to believe this strange young woman. The so-called **Hundred Years' War** had made them weary of fighting. But Charles VII wanted to be sure. He asked members of the Church Council to question her. They reported they '. . . had found nothing in her that was not of the Catholic faith and entirely consistent with reason'.

SOURCE 1 The only contemporary image of Joan of Arc, although it is probable that the artist, Clement de Fauquembergue, had not met Joan at this stage. The sketch was a personal note in the margin of the record he was making of the day when he heard of the victory in Orleans.



SOURCE 2 A miniature of Joan of Arc painted around 1450–1500 CE. She is holding her sword and her standard, on which is Jesus with an angel on each side.



Joan soon had the army she wanted. She rode to Orlean, dressed in white armour and on a white horse, where she drove the English back across the Loire River. It was here she earned her nickname, The Maid of Orlean. A series of amazing military successes followed, which turned her into a folk hero. On 17 July 1429, her dream came true: she stood beside Charles VII in the Rheims Cathedral when he was crowned King of France.

4.19.2 A fiery death

Once he was king, Charles VII lost interest in Joan. Nevertheless, she continued to lead her army. In May 1430, she was captured and was soon a prisoner of the English. She was held captive in Rouen for eight months, living on little more than bread and water. The English hated her, but they also wanted to damage the reputation of the new French king. They decided they could do this by proving Joan was a witch. When that failed, they tried to prove that she had gone against the Church by listening to 'voices', which, she said, told her to wear male clothing.

Joan's trial lasted over three months. No-one defended her. Yet this girl who had never been to school remained fearless and clear-headed in the face of constant questions. She finally gave in when threatened with being burned alive, and said she would stop wearing men's clothes. But she was tricked into putting them back on. That was all the authorities needed: she was declared a heretic.

DISCUSS

500 years after she was burned at the stake Joan was made a saint by the Catholic Church. As a class, discuss why so much time might have passed. [Critical and Creative Thinking Capability]

SOURCE 3 Extract from the court transcript, in which Joan is being questioned

Joan: I know well enough. I recognise them [the saints] by their voices, as they revealed themselves to me; I know nothing but by the revelation and order of God.

Q: What part of their heads do you see? Joan: The face.

Q: These saints who show themselves to you, have they any hair?

Joan: It is well to know they have.

Q: Is there anything between their crowns and their hair?

Joan: No.

Q: Is their hair long and hanging down?

Joan: I know nothing about it. I do not know if they have arms or other members. They speak very well and in very good language; I hear them very well.

Q: How do they speak if they have no members?

Joan: I refer me to God. The voice is beautiful. sweet and low; it speaks in the French tongue.

Q: Does not Saint Margaret speak English? Joan: Why should she speak English when she is not on the English side?

SOURCE 4 On 30 May 1431, Joan was tied on top of a pile of wood in the market square of Rouen, and burnt alive. She was 19 years old. Her last word was 'Jesus'.



4.19 ACTIVITY

Some people believe that Joan might have been suffering from some form of mental illness or epilepsy.

- a. What evidence do we have to suggest whether she really heard holy voices, or was just unwell or confused, or else a clever political activist? Individually, write your opinion in your work journal, including stating your evidence to back up your perspective.
- b. In pairs, discuss whether our judgement of Joan of Arc might be affected by the social and cultural context of the times in which we live. Consider which view the following groups might be most likely to have had of Joan:
 - i. the French of the time
 - ii. the English of the time
 - iii. a modern Australian who is reading about Joan of Arc.

In your discussion, make sure that you consider the biases that might be held towards Joan of Arc by particular groups, and the religious and scientific beliefs of the times, as well as anything else you think might be relevant.

c. Drawing together your ideas from your previous individual thinking and discussion have a class debate
where you evaluate the motivations and actions of the different people and/or groups involved in Joan of
Arc's life. Make sure that you include at least: Joan, Charles VII, the French army, the French Church and
the English.

[Ethical Capability]

4.19 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

4.19 Exercise 1: Check your understanding

- 1. HS1 What sort of family background did Joan have?
- 2. **HS1** According to Joan, what did the voices tell her to do about:
 - (a) the English armies that occupied parts of France
 - (b) the dauphin, Charles VII?
- 3. **HS1** Why did people not believe her at first?
- 4. HS1 What conclusions did the Church Council make when they questioned her?
- 5. **HS1** Why did Joan become a folk hero?
- 6. HS1 How did Charles treat Joan once he was made king?
- 7. HS1 Why did the English hate Joan?
- 8. **HS1** How did they treat her?
- 9. HS1 Why did the English burn Joan at the stake?

4.19 Exercise 2: Apply your understanding

- **1. HS3** Examine **SOURCE 1**. Although it is a contemporary sketch, the artist, Clement de Fauquembergue, had not met Joan. What do you see as historically accurate in his sketch and what is not?
- 2. HS3 SOURCE 2 was painted sometime soon after Joan's death. What is the artist trying to convey about Joan in his image?
- 3. HS3 Examine SOURCE 3. How can you tell that the questioner in the court was against Joan?
- **4. HS3** We know that Joan appealed to God. What evidence is there in **SOURCE 4** that her English executioners also appealed to God in other words, justified burning her at the stake in the name of God?
- **5. HS3** In real life, Joan did not have the benefit of anything like a defence lawyer. Using **SOURCE 3** as a guide, prepare a series of questions you would ask Joan at her trial as her defence lawyer.
- 6. HS3 Using SOURCES 1 and 2, explain what the key features were that symbolised Joan of Arc to people of the fifteenth century and what they represented.
- 7. **HS6** Evaluate what Joan of Arc's story tells you about the public role of women in medieval times? Consider her wearing of men's clothes.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.20 The heritage of medieval Europe

4.20.1 The Byzantine Empire

Most modern European nations did not exist before the Middle Ages. France and Germany, Poland and Hungary, Sweden and Denmark, Russia and Spain: all of these nations have their origins in the Middle Ages. Many of their languages too developed in this period. The English language first emerged after the Angles and Saxons invaded Britain in the fifth century CE, but it was only after the French-speaking Normans invaded England in 1066 that the English language, with many words of French origin added to it, began to take the form with which we are now familiar.

Some European nations had origins in the ancient Greek and Roman world. But the traditions they developed belong to the Middle Ages. For example, Greece has its roots, including its language, in ancient times. However, much of what is today traditional in Greece belongs to the culture of the Byzantine Empire. The Byzantine Empire was an important power in the Middle Ages. Although it inherited Roman culture, transplanting it to the eastern Mediterranean world, it replaced the old Roman language, Latin, with Greek and adopted the Orthodox Christian faith.

SOURCE 1 A twelfth-century Byzantine mosaic of Christ Pantocrator from the Hagia Sophia in Constantinople.



4.20.2 New nations emerge through Christianity

Many of the modern nations of Europe emerged at more or less the time they adopted the Christian faith. What is now Russia, Ukraine and Belarus, but was then a single state called Kiev Rus, adopted Orthodox Christianity in 988 CE. The centre of Orthodox Christianity was the Byzantine capital, Constantinople.

The Byzantine emperor was the head of the Orthodox Church. We have already seen that the centre of the Roman Catholic Church, which dominated western Europe, was Rome, and its head was the Pope. Most western and northern European countries adopted the Roman Catholic faith around the same period — at the end of the Early Middle Ages. Christianity came to Denmark in 965, to Poland in 966, to Hungary in 1000 and to Sweden in 1164 (although one Swedish monarch had been baptised as early as 1000). Christianity was adopted in England somewhat earlier. It first reached English shores in 597, and had spread across the whole country within a century.

SOURCE 2 St Mary's Cathedral in Sydney. The cathedral is Roman Catholic, which was the dominant religion in western Europe in the Late Middle Ages. Its style is Gothic, which is medieval in origin, yet it was built in nineteenth-century Australia!



Why rulers adopted Christianity

The Christian faith attracted many rulers in the later part of the Early Middle Ages. Firstly, its spiritual message had a universal appeal. Now that rulers were aware of cultures other than their own, the old local gods may have seemed limited compared with the Christian faith, which embraced the whole world. Secondly, the clergy were an educated elite. They were often the only people who could read and write, so could offer the ruler valuable support. Finally, the Church was a truly international institution with influence that stretched across many lands. In short, adopting Christianity added to a nation's influence in the Middle Ages. To be Christian was in the interests of any ruler.

4.20.3 Feudalism and the modern world

As a system of government, feudalism could not survive beyond the Middle Ages. Its existence depended on the inequality between a large class of peasants and a small class of wealthy, powerful families. The centre of government was a king who often enjoyed absolute authority. In Australia there is no class of peasant farmers and no nobility, so it would be impossible for feudalism to exist here. Even so, our Head of State is an English monarch. Although we have a **constitution** that allows us to vote for a new government headed by a prime minister, that same constitution still acknowledges the role of an English monarch whose office originated hundreds of years ago in the Middle Ages.





4.20 ACTIVITIES

- Create a timeline and place on it the approximate dates when the following nations adopted the Christian faith: Poland, Hungary, Denmark, Sweden, England and Russia. Using the internet or your library, try to find out why England was so different from the others.

 Sequencing chronology
- Refer to SOURCE 3. Find out which countries are member states and candidate states of the European
 Parliament. How many of these states first emerged in the Middle Ages? Try to also find out when they
 emerged as nations.

 Identifying continuity and change

4.20 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

4.20 Exercise 1: Check your understanding

- 1. HS1 What was the main language and religion of the Byzantine Empire?
- **2. HS1** What was the culture that the Byzantine Empire inherited?
- 3. **HS1** Where was the centre of the Roman Catholic Church and who was its head?
- 4. HS2 In what period did most of the western and northern European countries adopt Christianity?
- 5. HS1 List three reasons why the Christian faith was so attractive to many rulers of this period.
- 6. **HS1** On what was the existence of the feudal system based?
- 7. **HS4** What is the connection between modern Australia and medieval England?

4.20 Exercise 2: Apply your understanding

- 1. HS3 Mosaics and icons flourished in Byzantine art. Look at SOURCE 1 and answer the following questions.
 - (a) Who is the main figure? How would you know this if you did not have the caption?
 - (b) What is an icon and what were the common figures painted in them? You may need to research this answer
 - (c) How does this source reinforce what you have learned in the section? Does it raise any questions?
- 2. HS3 Examine SOURCE 2. Why do you think St Mary's Cathedral in Sydney was built in the Gothic style, which was an architectural style of the Late Middle Ages?
- 3. **HS5** Explain the potential inequity in a feudal system of government.
- 4. HS4 Describe the significant changes to Europe over the medieval period. Which ones do you think were most important? Explain why.
- 5. **HS4** How did the lives of the people change over this period?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

4.21 SkillBuilder: Interpreting medieval art as sources

Why is analysing artwork useful?

Artwork can tell us a great deal about a particular period or event. It may also tell us what ideas, beliefs or activities people felt were important enough to express in artwork.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- · a step-by-step process to develop the skill, with an example (Show me)
- · an activity to allow you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.



4.22 Thinking Big research project: **Festival of Lost Trades**

on line }

SCENARIO

Hold a Festival of Lost Trades to showcase and celebrate medieval trades that have been lost over time. Research and display your chosen trade at your festival stall.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources

projectsPLUS Thinking Big research project: Festival of Lost Trades (pro-0160)

4.23 Review



4.23.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

4.23.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



✓ eWorkbook Reflection (doc-31326)

Crossword (doc-31327)



Interactivity Medieval Europe crossword (int-7586)

KEY TERMS

abbess chief nun in a convent

abbey monastery or convent run by an abbot or abbess

abbot chief monk in a monastery

archbishop head bishop

artillery large mounted firearms such as the cannon

biological warfare method of warfare based on infecting the enemy with deadly disease

bishop clergyman who governs a diocese, a large church district

caliph in Islamic countries, the chief civil and religious ruler and a successor to the Prophet Mohammed

cardinal leading clergyman who is a member of the Pope's Council, or Sacred College, and who has the power

to elect the Pope from among his own group

catastrophe a disaster on a vast scale cathedral main church of a diocese; contains the bishop's throne

clergy officials of the Church

cloister a covered walkway surrounding a quadrangle

concentric having a common centre

constitution written rules outlining how a country will be governed

contagion the spreading of disease

convent community of nuns

Crusader during the Middle Ages, someone who took part in a Crusade, an armed expedition against those

believed to be enemies of the Church

curtain wall outer wall surrounding an inner wall in a castle

dauphin name given to the oldest son of the French king

deposed removed from a position of authority

Duke in England, a lord whose status placed him just below that of a prince; elsewhere in Europe, a ruler of a small state called a duchy or dukedom

dysentery a severe, infectious bowel disease

edict order issued by a monarch or other person in authority

exploit use dishonestly to one's own advantage

Faith religious belief and practice

feudalism social order in medieval Europe

fief a gift, usually land, given by a lord to a vassal (or tenant) in exchange for loyalty and service

franklin in the fourteenth century, one who was a landowner but not a member of the nobility

Franks people of a group of a Germanic nation who ruled in western Europe from the sixth century CE geld a form of land tax

guild an association of people engaged in a particular trade or craft for the mutual benefit of its members

heresy any religious opinion that differed from that of the Roman Catholic Church

heretic a Christian who holds views that conflict with official Church teachings

Holy Land land in the Middle East which has significant importance for Christians, Muslims and Jews

holy relic the physical remains of someone or something very significant to a religious tradition

homage pledging duties and loyalty to someone of superior rank in the feudal system

Hundred Years' War a series of campaigns and battles over territory between the English and the French, and between warring French princes

illumination hand-painted illustration in a medieval book

joust combat between two mounted knights using blunted lances

keep innermost tower of a castle

lance a long wooden shaft with steel point used as a weapon by mounted knights

leper person stricken with leprosy, a bacterial disease that causes ulceration of the skin, deformities and a loss of sensation

lord chief position in the feudal system below the monarch

mace iron-headed club

martyred killed or made to suffer because of religious beliefs

Mass roman Catholic church service

middle class a social class between the privileged nobility and the poor peasants. It typically comprised merchants and wealthier craftspeople.

moat water-filled defensive ditch surrounding a castle

Moor a member of a north-west African Muslim people of mixed Berber and Arab descent

motte a mound upon which a castle was built

Normandy now a French province, in the Middle Ages it was a dukedom in northern France

nun member of a closed community of women living under religious vows and rules

orb globe with a cross, symbolising a Christian monarch's rule

pagan someone who is not a Christian, Jew or Muslim, but who worships many gods

palisade tall fence made of pointed timber stakes driven into the ground

pestilence fatal epidemic disease

phalanx body of foot soldiers in close battle order

pike long spear-like weapon carried by foot soldiers

pilgrim one who travels to a sacred place to show devotion to his or her faith

pillage to steal or plunder using force, especially during war

plague fatal epidemic disease; usually used in reference to the bubonic plague

Poll Tax a tax levied on every person, regardless of age, sex or income

Reeve a magistrate administering law in a village

sacrament sacred Christian ceremony; in the Catholic Church, for example, baptism and marriage

sceptre rod symbolising royal authority of the monarch

sermon moral or religious lecture delivered by a priest

stirrup foot supports suspended from a saddle by straps

superstition a belief based on custom or fear rather than knowledge or reason

thatch straw used for making roofs

theologian a person who is considered to be an expert in religious matters

tithe barn a barn where peasants' produce is stored as a form of taxation

trebuchet heavy medieval siege machine that uses a sling to hurl large missiles

vernacular everyday language spoken by a particular group or class

4.21 SkillBuilder: Interpreting medieval art as sources

4.21.1 Tell me

What are works of art?

Works of art may be one type of primary source. Throughout this topic we have examined various primary sources: artworks, monuments, buildings and written sources. Artworks include paintings, sculptures, bas reliefs and mosaics. Art styles changed significantly throughout the Middle Ages, and differed from kingdom to kingdom.

Why is analysing artwork useful?

Artwork can tell us a great deal about a particular period or event. It may also tell us what ideas, beliefs or activities people felt were important enough to express in artwork. For example, an elaborately carved altarpiece in a church tells us that much attention was given to expressing the Christian faith during the Middle Ages.

4.21.2 Show me

How to analyse a work of art

A useful way to approach the task of analysing a work of art is remembering to use 'the three Cs' — content, context and comment.

Content

The content is what the artwork actually shows. Look at it very carefully and make sure you note all the details. For example, you might need to look for particular symbols or gestures. Think about how you would describe the image to someone who has not seen it; that way you can be sure you have looked at it thoroughly.

Context

Context refers to what was happening at the time the artwork was created — the historical background. Try to find out about the origin and purpose of the artwork: who created it, and why? Is it a primary or a secondary source? Knowing this can reveal as much as the artwork itself. The detail from the Mariacki altar in **SOURCE 1** was created by an artist called Wit Stwosz. The artist and his team were commissioned to create this altarpiece for the Church of Our Lady in Krakow, Poland. During the Middle Ages, artists were frequently employed to create artworks with religious themes. This altarpiece shows various saints, the ascension of the Virgin Mary into Heaven and scenes from the life of Jesus. At the time of its creation in the Late Middle Ages, it was the largest altarpiece in the world.

Comment

You should question the value of every source. Why is it useful? Does it give you raw information or does it show only a particular point of view? Are there any limitations to the source — that is, is there anything the illustration cannot tell you? Do you think it is a reliable source? Why or why not?

Remember, the origin and purpose of any historical source will always influence its value and limitations. If you ask these questions each time you analyse an artwork, you'll be on your way to becoming an effective historian. In the following example, the three Cs have been applied to **SOURCE 1**.

Content. One of the scenes on this altarpiece shows the arrest of Jesus. Except for the central figure of Jesus, the figures have the sort of attire that would have been familiar to the artist. In short, they are dressed like people from late fifteenth-century Europe, not like people from the time of Jesus in the Roman Empire almost 1500 years earlier. The soldier does not look like a Roman soldier of the first century CE. He is a knight of the Late Middle Ages. The buildings in the background are also from the late fifteenth century. Before modern times, and before the science of archaeology, little was known of how people in

past societies dressed, or how artefacts looked. So if an artist created a scene from a past era, he showed the clothes and objects as they were in his own time and place.

Context. The Church was a powerful and important institution in medieval Europe. Great expense went into embellishing churches with works of art such as this. Artists were commissioned to undertake such projects and employed people to help them in their task.

Comment. Can we trust this image? We can clearly trust that it represents how important religious artworks were to the Church in the Middle Ages. We cannot trust that it is an accurate image of how things looked at the time of Jesus. However, as students of the Middle Ages, we can trust that the artist used models from his own time to create these images. Thus we can say that, for the most part, it is an accurate image of how people looked in late medieval Europe. It shows knights' armour, head-dresses, coats, belts and other attire common to the time and place where the artist lived and worked.

SOURCE 1 A detail from the Mariacki altar in the Church of Our Lady in Krakow, Poland, showing the arrest of Jesus. It was carved by Wit Stwosz in the late fifteenth century.



4.21.3 Let me do it

Complete the following activities to practise this skill.

4.21 ACTIVITIES

1. Look at SOURCE 2 and first analyse it by completing the tasks below.

SOURCE 2 A French illustration depicting nuns looking after the sick



- (a) Describe what is happening in the artwork.
- (b) What impression is the artist trying to make about the subject of the artwork (the nuns)?
- (c) What are the figures doing? What are the various activities? Can you identify the different roles among the figures?
- (d) What sort of problems in dealing with historical sources do your answers to the above questions highlight?
- 2. You have learnt some of the history behind **SOURCE 1** and the sort of information it presents. This helped assess its usefulness as a source. You should now be able to think about the effectiveness of **SOURCE 2** as a historical source by answering the following questions.
 - (a) It is fairly certain that **SOURCE 2** was created under the direction of Church authorities. Perhaps members of the clergy created it. How might that influence the way the nuns are presented?
 - (b) If this was the only source available on the role of nuns in the medieval Church, what conclusions might you draw? Would all your findings be accurate?
 - (c) Why must historians be careful when looking at sources such as this? The types of questions you have asked about SOURCE 2 can be used for any medieval artwork — in fact, they can be used to analyse artwork from any era. Keep them in mind whenever you are looking at history through artwork.
- 3. Based on your work interpreting sources on medieval Europe, answer the following questions.
 - (a) What types of artworks are categorised under the term 'medieval artworks'?
 - (b) What does it mean to explore the content of an artwork?
 - (c) Explain what exploring the context of a medieval artwork requires historians to do.
 - (d) How can analysing medieval artwork be useful to historians?

4.22 Thinking Big research project: Festival of Lost Trades

Scenario

As the feudal system weakened, the population of medieval towns grew. People drifted away from the land and headed for the towns, which became more popular. People began to specialise in trades and would showcase their skills and sell their wares at weekly markets, held in the centre of town. Merchants began to travel long distances to trade. This created further wealth and a new middle class began to rise.



Task

As a class, hold a Festival of Lost Trades with a focus on medieval trades. Your fair should showcase and celebrate trades that have been lost over time. Some of these might include:

- Chandler
- Wheelwright
- Fletcher
- Scrivener
- Armourer

After you have held your fair, write an account of how a young man or young woman would become a member of this trade, the kind of work they would do and where they travelled to buy and sell.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the Start new project button to enter the
 project due date and set up your project group. Working in pairs will enable you to share responsibility
 for the project. Save your settings and the project will be launched.
- Navigate to your **Research forum** where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered. In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Choose a trade to showcase at the festival.
- Create your display. Include a written description of what the trade involves, as well as some primary visuals to show what your wares were like.
- Hold the Lost Trades fair in your classroom or another large space. Invite some visitors (another class or some parents or teachers) to come and view your displays. Make sure that they are prepared to ask you questions about your trade (and that you can answer them!).
- Conduct follow-up research on how people became qualified in different trades (apprentices and journeymen) and the formation of Guilds. Use the **Guide to writing a historical recount** document in the Media centre to help you.
- Draft your account and hold a critique session where you and your classmates will provide helpful feedback to each other so that you can draft your writing.
- When happy with your work, submit your final draft to your teacher.





ProjectsPLUS Festival of Lost Trades (pro-0160)

4.23 Review

4.23.1 Key knowledge summary

4.2 Examining the evidence

- Much of what we know about medieval Europe is from different types of evidence that provide us with information.
- Sources from medieval Europe include artwork, written sources and artefacts, monuments and buildings.

4.3 The impact of the 'barbarian' invasions

- After the fall of Rome in 476 CE, people believed that Europe fell into chaos and darkness. Now, however, it is recognised that, although it was a time of great instability with old empires being dismantled and much migration, there were also important developments taking place.
- Some of the changes that took place were: the system of feudalism, the rise of monasteries as centres for learning and the move towards modern English.

4.4 Early medieval Christianity

- After Christianity became the official religion of the Roman Empire, it spread widely and became the principal religion across Europe.
- By early medieval times, the Pope was the head of the Christian Church and communities of religious men had formed, called monasteries. These religious men devoted their lives to God and played important roles in the local communities, such as running schools and hospitals.
- The spread of Christianity was, in large part, due to the work of missionaries, who were committed Christians that travelled spreading the word of God to pagan tribes. They spread across Europe and many were later declared saints in recognition of their efforts.

4.5 The feudal system

- Feudalism, a method of ordering society, was expanded and developed over the period that Charlemagne ruled in Europe.
- The system was based on the king giving land to the wealthier nobles and lords in return for their loyalty and taxes.
- With the land, the nobles and lords gained power over the peasants who lived and worked there, which gave them an income.
- Below the nobles were the knights, who were their sub-tenants. In return for land, they gave loyalty to the lord, fought for him and paid tax they earned from their peasants.
- The feudal system was an effective way to maintain social order.
- Towards the end of the Middle Ages things began to change in relation to the feudal system, as the towns and cities grew.

4.6 Life on the manor for men, women and children

- Quality of life in the Middle Ages depended largely on what position a person held in the feudal system. The nobility, knights and barons all lived reasonably comfortable lives with privileges. The clergy generally led simple and scholarly lives. Peasants, though, had few rights and life was very hard.
- Men did all the farm work, which was mainly physical labour.
- Most peasants had no formal education.
- Women had few rights, even those of different classes. Their purpose was to provide children. Most
 peasant women also did farm labour work such as food preparation, looking after livestock
 and weaving.
- Children were also regarded as sources of labour as soon as they were old enough to help.

4.7 The knight

• Two important developments in the Middle Ages that allowed for the appearance of the mounted warrior, or the knight, in battle were the stirrup and a heavier breed of horse that could carry a man in full armour.

- The Battle of Hastings is one of the earliest recorded battles with knights, where William of Normandy's loyal lords fought alongside him.
- Knights tended to be wealthy, as it was expensive to breed warhorses and own good armour.
- Over the few hundred years that knighthood was at its peak, the armour developed from chain mail to whole suits of armour. Weapons were heavy iron swords, maces, battle axes and lances.
- By the end of the Middles Ages, weaponry and warfare had developed so that opponents could easily take a knight down during a battle, and so the days of knights were over.

4.8 Medieval warfare

- Medieval warfare was a clash of arms for power and wealth.
- Armies would fight hand-to-hand in tightly grouped formation, using weapons such as swords, pikes, axes and maces.
- Archers with crossbows and longbows would also be used and mounted knights would try to break up the enemy's formations.
- Missiles were used to try to break the walls of a town or castle, with trebuchets and early cannons hurling rocks and other materials at the enemy.

4.9 Castles

- In medieval times, castles were built to protect the monarch or lord's lands, as well as for them to live in.
- Early castles were motte and bailey design: a keep built on a high mound, surrounded by a ditch or moat. The high position gave them the advantage when they were being attacked.
- During the Middle Ages castle designs became more and more sophisticated, with heavy concentric walls, battlements and drawbridges.
- Within the castle there were troop quarters, stables, armouries, living quarters, kitchens and dining halls.
- By the end of the Middle Ages, feudalism was declining, castles were no longer effective as a show of strength and weaponry had developed so that they no longer stood up to an attacking army.

4.10 The power of the medieval Church

- The Roman Catholic Church was the one common institution found across western Europe and everyone was expected to live by Church law and keep its rituals and customs.
- As God's representative on Earth, the Pope was a very powerful figure and ruled with the upper class of clergy, his cardinals, archbishops and bishops.
- The lower clergy took the Pope's messages to the people in the villages through their sermons.
- Every village had a parish church built with peasant labour, which was the centre of their community. The more powerful churches, the seats of the bishops, were called cathedrals.

4.11 Monasteries and convents

- Parish priests, monks, nuns and friars played an important role in spreading Christianity to even the most remote village.
- Monks lived in small closed communities called monasteries and nuns lived in similar communities called convents.
- The daily practices of the Orders within which the monks and nuns lived varied greatly.
- The Benedictines were one of the earliest orders and established the rules and customs followed by many later nuns and monks.

4.12 The Crusades

- The Crusades were a series of wars fought between the eleventh and thirteenth centuries throughout Europe and the Middle East between Christians and non-Christians. They generally centred on the Holy Land and the control over Jerusalem.
- The first Crusade started after the Pope called upon Christians to fight the Turks and reclaim Jerusalem in 1095.
- In the twelfth and thirteenth centuries, there were a number of Crusades and control of the Holy lands went back and forth between the Christians and the Muslims.

• Eventually the Crusades came to an end when the Turks took Constantinople in 1453 as part of the Ottoman Empire.

4.13 The Age of Faith

- The tensions between Islam and Christianity began in medieval times and developed in intensity during the Crusades.
- Muslim Arabs ruled much of Spain for about 700 years and much of the current Spanish culture comes from that time, such as flamenco guitar and architecture.
- The Muslim Arabs were quite tolerant of other religions, something that was not reciprocated when the Catholics eventually reconquered Spain.
- Much of the knowledge gained from Ancient Greece and Rome was kept in Muslim libraries during the medieval period.
- Islamic scholars led the world in many fields including medicine, sciences and mathematics and the West was influenced in many areas such as architecture and poetry.

4.14 Towns and trades

- As trade routes became more established and Europe became more settled and peaceful, a network of towns sprang up giving rise to a new social group, the merchants.
- Merchants travelled to distant markets in Asia, the Middle East and Africa, and returned with goods and ideas to be exchanged.
- The new merchant class became quite powerful.
- As the demand for skilled workers grew, young people were trained in particular trades in apprenticeships.
- The standard of work by tradesmen was overseen by a guild, which was an association formed to
 protect the trade's own interests. The merchant guilds become quite powerful, controlling trading ports
 and routes for themselves.

4.15 Living conditions and medical science in the fourteenth century

- The rapid expansion of towns and cities meant that they grew without consideration for sanitation and healthy living conditions. As a consequence, the towns were overcrowded and filthy, with waste in the streets and contaminated drinking water.
- Dysentery was very common.
- General life expectancy was quite low, with a high level of infant mortality from infectious diseases.
- Medieval science was rudimentary and treatment of the sick was based on suspicion and ignorance.
- In the twelfth and thirteenth centuries the population grew quite quickly.
- At the beginning of the fourteenth century, there were some very cold years that led to the failure of crops and widespread famine. By the 1340s the ravaged population had very little resistance to disease.

4.16 The Black Death

- It is believed that the plague that hit Europe in 1347 began in Mongolia and spread along the trade routes and via military expeditions to other continents.
- The plague was known as the Black Death and was a highly contagious deadly disease that struck its victims quickly, eventually wiping out around one-third of the population of Europe between the years of 1347 and 1352.
- The most common form was the bubonic plague.
- Fuelled by panic and superstition, medieval treatments were at best ineffectual and at worst dangerous. Generally, cleanliness and hygiene were the treatments that were overlooked.
- Sadly, it was a time when people, in their ignorance, looked for someone to blame for what happened. Some minority groups were blamed, such as Jews and lepers.

4.17 How did the Black Death change society?

• The Black Death had a brutal effect on medieval life between the years of 1347 and 1352. Although more than one-third of Europe's population was killed, there were also a number of positive changes.

- Doctors started looking for more ways to cure patients when they were sick and the authorities began to be more aware of the need for better sanitation and town hygiene.
- Due to the death of so many educated people who used to communicate in French and Latin, English became more widely used in literature and scholarship.
- The feudal system, which was already in decline, was put under extreme pressure as the loss of so many workers meant that peasants had more power to negotiate their conditions and wages.
- There were a number of workers' revolts demanding government reform.
- The power of the Church was greatly diminished. Because the Church had not been able to stop the plague, people started to believe that perhaps it was not the all-powerful institution that it was once believed to be.

4.18 The Peasants' Revolt

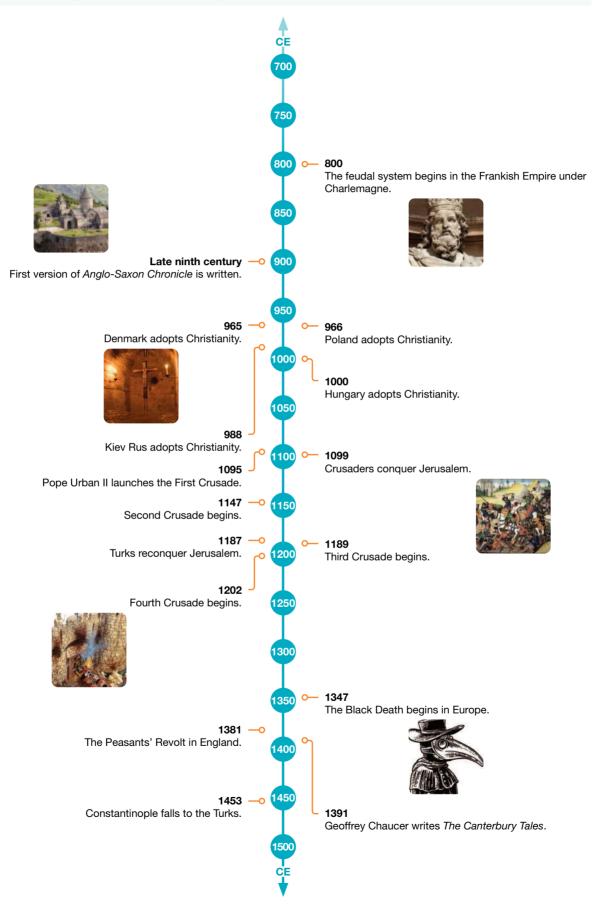
- The Peasants' Revolt was an uprising by the English peasants in response to the Poll Tax of 1380. This was a tax on the people by the monarchy to restore the treasury after the cost of fighting the French.
- There had been food shortages and hunger so the enforced collection of the Poll Tax caused outrage and spurred a group of peasants to rise against the government and storm to London, destroying tax and debt records as they went.
- Several leaders emerged, such as Wat Tyler, Jack Straw and the parish priest John Ball.
- The rebels marched on London hoping to speak with the king.
- The rebels met the king outside London at Mile End and the king agreed to several of the demands. However, some were not satisfied and they attacked the Tower of London, killing several of the king's officials connected with the Poll Tax.
- Ultimately, the rebellion was quashed by the king's troops and punished with death. Despite this outcome, the Peasants' Revolt did much to weaken the feudal system and raise the leaders' awareness of the needs of the people.

4.19 Joan of Arc

- Joan of Arc was born in 1412 in a small French village and was the daughter of a simple peasant farmer.
- At the age of 13, Joan began to have visions of saints who told her to drive the English from France and help the dauphin, Charles VII, to take his throne.
- Although she was not believed at first, eventually, disguised in men's clothing, she was taken to meet Charles VII.
- Many people were weary of the war and wanted to believe that they could stop the fighting.
- Joan soon led an army and had a series of military successes against the English, and in 1429 she stood beside Charles when he was crowned King of France.
- Once he was king, Charles lost interest in Joan and she was captured by the English, tried as a witch and burned at the stake in 1431.
- She has since been recognised by the Catholic Church as a saint.

4.20 The heritage of medieval Europe

- The medieval period in Europe established many nations that did not exist before and laid the groundwork for the modern world.
- The Byzantine Empire took over the eastern part of Europe and adopted the Orthodox Christian faith with its centre in Constantinople, while the Roman Catholic Church, with its centre in Rome, dominated western and northern Europe.
- Christianity was attractive to the European rulers who adopted it and it unified many diverse groups of people of the time.
- Feudalism and its absolute power of the monarch and nobility was widespread in the early medieval
 period but as the world changed, it weakened and by the end of this period, the early seeds of
 constitutional democracy were sown.



4.23.2 Reflection

Complete the following to reflect on your learning.

4.23 ACTIVITIES

Revisit the inquiry question posed in the Overview:

From the Crusades and castles to the Black Death, was medieval Europe the worst place to live in history?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



Resources



eWorkbook Reflection (doc-31326)

Crossword (doc-31327)



Interactivity Medieval Europe crossword (int-7586)

KEY TERMS

abbess chief nun in a convent

abbey monastery or convent run by an abbot or abbess

abbot chief monk in a monastery

archbishop head bishop

artillery large mounted firearms such as the cannon

biological warfare method of warfare based on infecting the enemy with deadly disease

bishop clergyman who governs a diocese, a large church district

caliph in Islamic countries, the chief civil and religious ruler and a successor to the Prophet Mohammed

cardinal leading clergyman who is a member of the Pope's Council, or Sacred College, and who has the power

to elect the Pope from among his own group

catastrophe a disaster on a vast scale

cathedral main church of a diocese; contains the bishop's throne

clergy officials of the Church

cloister a covered walkway surrounding a quadrangle

concentric having a common centre

constitution written rules outlining how a country will be governed

contagion the spreading of disease

convent community of nuns

Crusader during the Middle Ages, someone who took part in a Crusade, an armed expedition against those

believed to be enemies of the Church

curtain wall outer wall surrounding an inner wall in a castle

dauphin name given to the oldest son of the French king

deposed removed from a position of authority

Duke in England, a lord whose status placed him just below that of a prince; elsewhere in Europe, a ruler of a small state called a duchy or dukedom

dysentery a severe, infectious bowel disease

edict order issued by a monarch or other person in authority

exploit use dishonestly to one's own advantage

Faith religious belief and practice

feudalism social order in medieval Europe

fief a gift, usually land, given by a lord to a vassal (or tenant) in exchange for loyalty and service

franklin in the fourteenth century, one who was a landowner but not a member of the nobility

Franks people of a group of a Germanic nation who ruled in western Europe from the sixth century CE

geld a form of land tax

guild an association of people engaged in a particular trade or craft for the mutual benefit of its members

heresy any religious opinion that differed from that of the Roman Catholic Church

heretic a Christian who holds views that conflict with official Church teachings

Holy Land land in the Middle East which has significant importance for Christians, Muslims and Jews

holy relic the physical remains of someone or something very significant to a religious tradition

homage pledging duties and loyalty to someone of superior rank in the feudal system

Hundred Years' War a series of campaigns and battles over territory between the English and the French, and between warring French princes

illumination hand-painted illustration in a medieval book

joust combat between two mounted knights using blunted lances

keep innermost tower of a castle

lance a long wooden shaft with steel point used as a weapon by mounted knights

leper person stricken with leprosy, a bacterial disease that causes ulceration of the skin, deformities and a loss of sensation

lord chief position in the feudal system below the monarch

mace iron-headed club

martyred killed or made to suffer because of religious beliefs

Mass roman Catholic church service

middle class a social class between the privileged nobility and the poor peasants. It typically comprised merchants and wealthier craftspeople.

moat water-filled defensive ditch surrounding a castle

Moor a member of a north-west African Muslim people of mixed Berber and Arab descent

motte a mound upon which a castle was built

Normandy now a French province, in the Middle Ages it was a dukedom in northern France

nun member of a closed community of women living under religious vows and rules

orb globe with a cross, symbolising a Christian monarch's rule

pagan someone who is not a Christian, Jew or Muslim, but who worships many gods

palisade tall fence made of pointed timber stakes driven into the ground

pestilence fatal epidemic disease

phalanx body of foot soldiers in close battle order

pike long spear-like weapon carried by foot soldiers

pilgrim one who travels to a sacred place to show devotion to his or her faith

pillage to steal or plunder using force, especially during war

plague fatal epidemic disease; usually used in reference to the bubonic plague

Poll Tax a tax levied on every person, regardless of age, sex or income

Reeve a magistrate administering law in a village

sacrament sacred Christian ceremony; in the Catholic Church, for example, baptism and marriage

sceptre rod symbolising royal authority of the monarch

sermon moral or religious lecture delivered by a priest

stirrup foot supports suspended from a saddle by straps

superstition a belief based on custom or fear rather than knowledge or reason

thatch straw used for making roofs

theologian a person who is considered to be an expert in religious matters

tithe barn a barn where peasants' produce is stored as a form of taxation

trebuchet heavy medieval siege machine that uses a sling to hurl large missiles

vernacular everyday language spoken by a particular group or class

5 The Ottoman Empire (c.1299-1683)

5.1 Overview

Trade, military strength and a love of learning. What influenced the rise and fall of the Ottoman Empire?

5.1.1 Links with our times

Every year, thousands of Australians travel to Gallipoli to commemorate the landing of the Anzac troops in 1915 during World War I. While visiting Gallipoli, many travel around Turkey. When they do this, they are travelling through the lands of what was one of the world's great empires — the Ottoman Empire. This empire began in the thirteenth century, and it was against the Ottoman Empire that Australian troops fought at Gallipoli.

The Ottoman Empire lasted for over 600 years and had a huge impact on the modern world. In this topic you will learn about the Ottoman Empire and its dominant religion, Islam. This empire



LEARNING SEQUENCE

- 5.1 Overview
- 5.2 Examining the evidence
- **5.3** Origins of the Empire
- 5.4 The golden age of Islam
- 5.5 The beginnings of the Ottoman Empire
- 5.6 The Black Death and the Ottoman Empire
- 5.7 The fall of Constantinople
- 5.8 Suleiman the Magnificent
- 5.9 Life in the Ottoman Empire
- 5.10 Ottoman art, architecture and literature
- 5.11 SkillBuilder: Evaluating Ottoman Empire sources
- 5.12 Thinking Big research project: Ottoman Empire documentary

played an important role in shaping history and left a significant legacy.

5.13 Review

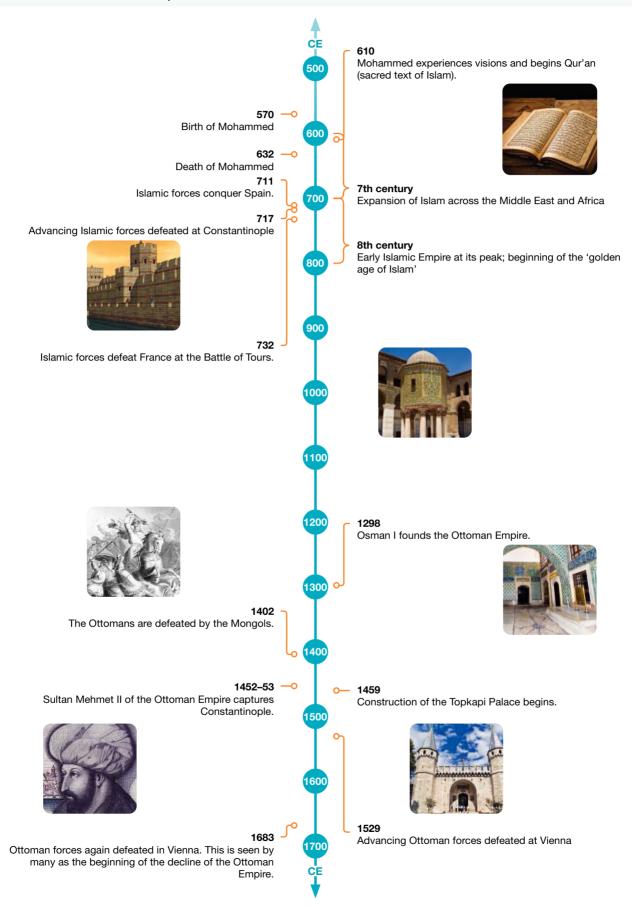
To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

online ?

on line

on line

A timeline of the Ottoman Empire



5.2 Examining the evidence

5.2.1 How do we know about the Ottoman Empire?

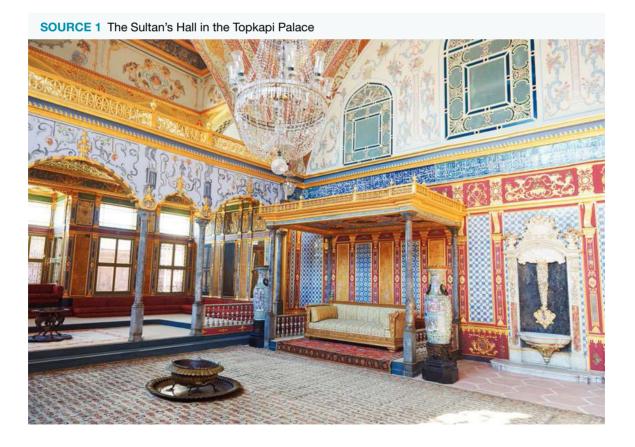
The Ottoman Empire existed until the twentieth century and so there are many surviving sources that tell us about the origins and lives of the Ottomans. These include written sources, artwork, oral traditions and archaeological discoveries. In this subtopic, we will concentrate on one particular aspect — Ottoman architecture. By examining the buildings made by the Ottomans, we can learn a lot about their lifestyle, culture and technology. In particular, this subtopic will focus on the Topkapi Palace. This palace was built by Sultan Mehmet II in the fifteenth century to celebrate his conquest of Constantinople.

Construction of the palace began in 1459. Various sultans added to the layout, and many renovations have seen the palace change over the years. The palace had two main roles: it acted as the centre of government, and was the residence of the sultan and his family.

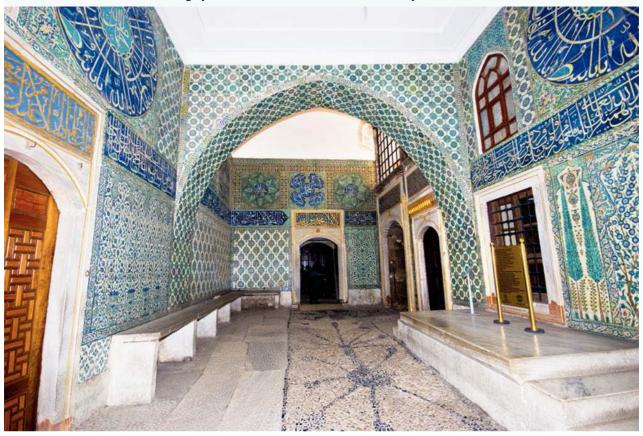
By looking at some of the features of the palace, we can learn a lot about the Ottomans.

- The Sultan's Hall, as shown in **SOURCE 1**, where the sultan sat on his throne is evidence of the power of the sultan.
- The sultan provided generously for his family. He had a special courtyard and buildings of over 400 rooms constructed for his **harem**, as shown in **SOURCE 2**. As well as his wives, the sultan's mother, concubines, children and servants lived here. Entry without special permission was forbidden.
- The Tower of Justice, as shown in **SOURCE 3**, is the tallest structure in the palace and symbolises the sultan's fight against injustice. It was designed to be seen by all the residents of Constantinople.
- The gate into the second courtyard of the palace, known as the Middle Gate or Gate of Salutation, as shown in **SOURCE 4**, bears the inscription, 'There is no God but Allah and Mohammed is his prophet'. This is one of the most important concepts in the Islamic religion.

So much can be learned from examining and studying buildings. This topic will look at other buildings, as well as a great variety of other sources, to help inform us about the Ottomans.



SOURCE 2 Inside one of the highly decorated rooms in the harem's courtyard



SOURCE 3 The Tower of Justice



SOURCE 4 The Gate of Salutation



DID YOU KNOW?

Even the sultan's **eunuchs** had their own courtyard. But beside these rooms is a less pleasant room where boys and young men were castrated to become eunuchs.

5.2 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

5.2 Exercise 1: Check your understanding

- 1. HS2 For how long did the Ottoman Empire exist?
- 2. **HS1** What were the two main roles of the Topkapi Palace?
- 3. **HS1** What does the Tower of Justice in Constantinople symbolise?
- 4. HS1 What is inscribed on the Sultan's Hall in the Topkapi Palace?
- **5. HS1** Define the following terms:
 - (a) Sultan
- (b) Concubine
- (c) Eunuch
- (d) Harem

5.2 Exercise 2: Apply your understanding

- 1. HS3 SOURCE 1 shows the sultan's throne room. Identify the features of the room that might demonstrate the power of the sultan.
- 2. HS3 Examine SOURCE 2. The tiling and architecture is very ornate and would have been expensive to construct. What conclusions can be drawn about the wealth of the sultans and the status of the harem?
- 3. HS3 Examine SOURCE 3. Why do you think the sultan may have chosen a tower to be a symbol of justice, instead of another traditional symbol such as scales or a sword?
- 4. HS3 SOURCE 4 bears an inscription that clearly demonstrates a link to Islam. If the sultan ordered this inscription to be placed in such a prominent place, what does this say about the importance of Islam in the Ottoman Empire?
- 5. HS3 How can historians use art and architecture to learn about the interactions one civilisation may have had with its neighbours?
- 6. HS6 What significance do buildings and artefacts from the Ottoman Empire have for historians?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

5.3 Origins of the Empire

5.3.1 Mohammed, the prophet

Before we can learn about the achievements and influence of the Ottoman Empire, we first need to understand how this incredible civilisation came to be. In many ways, the rise of the Ottoman Empire can be linked directly to the increase in popularity of its main religion, Islam. In turn, the beginning of Islam can be traced to one man — Mohammed. He founded the religion and is believed by Muslims to be the prophet who communicates the will of God to all people.

Mohammed was born about 570 CE in the town of Mecca. As a young man, Mohammed worked for a widow named Khadija. Mohammed was placed in charge of a camel caravan carrying goods from Mecca to Damascus. Khadija was so impressed by Mohammed that, despite being 15 years older than him, she proposed to him when he was 25.

DID YOU KNOW?

The name Mohammed, when taking into account the 14 varieties of its spelling, is believed to be the most common name in the world.

During this time, trade in Arabia the Arabian Peninsula was changing. Rather than trading in just basic necessities, merchants traded in luxury goods such as incense, spices and silks. A few people became very rich through this trade. However, they tended to neglect traditional family responsibilities.

Through their involvement in trade, the Arabians came into frequent contact with Christians and Jews. Mohammed saw the contrast between the practices of these religions, particularly their belief in one god (monotheism), and the practices in Mecca, where people worshipped many gods (polytheism) and made sacrifices to idols.

SOURCE 1 A map of the world of Islam in 750 CE



Source: Map drawn by Spatial Vision.

As husband to a wealthy wife, and having completed extensive travel, Mohammed had much time for meditation and for 15 years he contemplated what he saw. It was during this time that Muslims believe Mohammed received **revelations** from God. Once collected in written form, these revelations become known as the Qur'an (or Koran), the Islamic sacred text.

Mohammed began to preach to the people of Mecca. Instead of worshipping many idols, he asked them to worship the 'one true God', known in Arabic as Allah. *Islam* means 'submission' to the will of Allah. Although the message was originally conveyed to the Arabic people, it was a universal message and Mohammed became a prophet of all mankind.

5.3.2 Mohammed in exile

Many people in Mecca came to accept Mohammed's teachings, and a community of Muslims (sometimes also called Mohammedans) developed. However, other groups felt threatened by these teachings. Rich merchants were worried about the impact of this new religion on their power and influence. Followers of other religions were also concerned about the future of their faiths.

For some time, Mohammed was able to resist the opposition of these critics, but after the death of his uncle and then his wife, Khadija, Mohammed decided to move north to Medina in 622 BCE. This migration, or *Hijrah*, marks the beginning of

SOURCE 2 A sixteenth-century illustration of the Prophet Mohammed splitting the moon; the crescent moon is a symbol of Islam. It is claimed he performed this miracle to prove he was the true Prophet of God. Note that Mohammed's face is covered, as Islamic teachings prevent any images of his face being shown.



the Muslim calendar. Mohammed eventually returned to Mecca in 630 and set about turning the city into the religious centre of Islam. However, only two years later, Mohammed died.

SOURCE 3 A Muslim man reads the Qur'an in the al-Aqsa Mosque, Jerusalem.





5.3.3 The spread of Islam

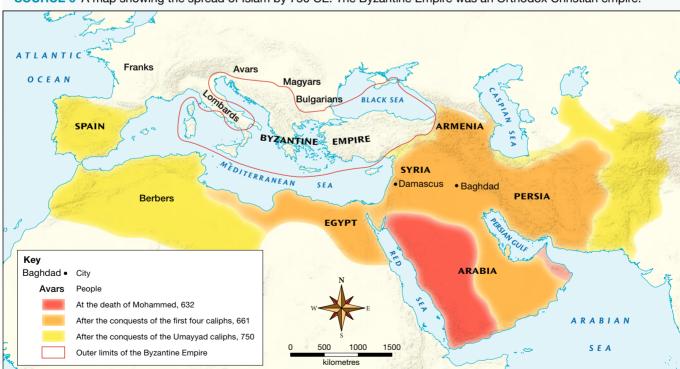
A large range of religious, military, economic, political and social factors contributed to the expansion of Islam.

- Islam was warmly welcomed across Africa as the Arabs were seen to be more like the Africans than previous rulers.
- The two powers most able to resist the spread of Islam, the Byzantine and Persian empires, had both been weakened by centuries of warfare.
- Muslim missionaries were very persuasive and successful in converting people and rulers.
 The newly conquered peoples were impressed by the zeal of the Muslims, who believed they were inspired by the will of Allah.
- Muslim traders established strong relationships with their neighbours, spreading the word of Allah.

SOURCE 5 Some important events in the spread of Islam

| Year (CE) | Event | |
|-----------|---|--|
| 632 | Arabia conquered | |
| 635 | Syria and Palestine conquered | |
| 637 | Persia (Iran) and western India conquered | |
| 638 | Jerusalem conquered | |
| 639 | Egypt conquered | |
| 680 | North Africa conquered | |
| 711 | Spain conquered | |
| 717 | Defeat at Constantinople | |
| 732 | Defeat in France | |

- The leader of the Muslim world, the **caliph**, was both a spiritual and political leader. This increased his prestige and authority and made him very difficult to challenge. Many of the early caliphs were very capable rulers.
- Using camels as cavalry meant that Muslim forces could travel long distances through difficult terrain, often allowing them to attack with little or no warning.



SOURCE 6 A map showing the spread of Islam by 750 CE. The Byzantine Empire was an Orthodox Christian empire.

Source: Map drawn by Spatial Vision.

- The word *Islam* means to 'submit'. By submitting to Allah, the Arabic people became a more disciplined and inspired group of people. This showed in their lives and military victories.
- Conquered people were allowed to keep their religion and were usually only required to pay extra tax. This kept local populations content and so resources were not needed to control societies and maintain law and order.

Divisions emerge

Divisions between followers of Islam began to emerge as the popularity of the religion grew. One key division, which still exists today, was between the Sunnis and the Shi'ites. The first four caliphs were direct relatives of Mohammed. However, after the assassination of Caliph Ali in 661 CE, different ways of thinking began to emerge. The Sunnis believed that the caliph could be chosen and any heirs of the first four caliphs could rightly be called the caliph. However, the other major denomination, the Shi'ites, believed only blood relatives and descendants of Mohammed could be called the caliph. Despite these differences, both groups still closely followed the Qur'an.

SOURCE 7 The Great Mosque in Damascus, built by Caliph al-Walid in 706 CE



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Deepen and check your understanding of this topic with related case studies and auto-marked questions.

Overview > Spread of Islam

5.3 ACTIVITY

The division between Sunni and Shi'ite still remains today. Research and identify the modern countries that follow each branch of the religion. Identifying continuity and change

5.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

5.3 Exercise 1: Check your understanding

- 1. HS1 Where was Mohammed born?
- 2. **HS1** Explain how Mohammed first came into contact with Jews and Christians.
- 3. **HS1** What event in Mohammed's life formed the basis of the Qur'an?
- 4. **HS1** Explain the difference between monotheism and polytheism.
- 5. **HS1** Explain why the rise of Islam threatened other groups in the area.
- 6. **HS1** What event marks the beginning of the Muslim calendar?
- 7. HS5 Summarise the factors that led to the swift expansion of Islam. Once you have done this, classify each factor as either a religious, military, economic, political or social factor. (Note: Some factors could be seen as fitting multiple categories.)
- 8. HS1 Outline the main difference between the beliefs of the Sunni and Shi'ite Muslims in regards to the
- 9. **HS1** Explain the role of a missionary.

5.3 Exercise 2: Apply your understanding

- 1. HS3 Study the map in SOURCE 1. Identify the major powers in the Mediterranean region in c. 750 CE.
- 2. **HS3** What evidence in **SOURCE 1** suggests that Muslims were in a good position to trade with Asia and to bring together ideas from the East and the West?
- 3. HS3 Examine SOURCE 4. Describe the layout of the mosque as shown in the photograph. What do you think the open area in the centre of the mosque is used for?
- **4. HS3** Using information from **SOURCES 1** and **6**, describe the speed and extent of the spread of Islam during the seventh and eighth centuries. Include a description of how you believe Islam moved from one country to another as it spread through the Middle East, Africa and Europe.
- 5. **HS3** Use the scale on the map in **SOURCE** 6 to calculate the extent of Islam by 750 BCE. Provide the eastern, western and northern boundaries.
- 6. **HS3** Compare the representations of people in the sources in this subtopic.
 - (a) Describe any similarities.
 - (b) Describe any differences.
 - (c) Are these sources reliable representations of this period of history? Explain your response.
- 7. HS3 Make a list of the sources in this topic. Create a table that indicates whether these are primary or secondary sources.
- 8. **HS4** Identify and explain the divisions between Sunni and Shi'ite Muslims.
- 9. HS5 How did Mohammed's life as a merchant trader influence his understanding of religion?
- 10. **HS6** Evaluate the importance of trade in the rise of the Islamic Empire.

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5.4 The golden age of Islam

5.4.1 The quest for knowledge

From its beginning, the Islamic Empire turned its mind and creative energies toward the study of the world in which we live. Developments in the arts, philosophy, science, medicine and mathematics led many to refer to this time as the golden age of Islam. Islam drew on the knowledge of the Greeks and Romans in the west and from India and China in the east to make important contributions to human knowledge.

Education

One of the main reasons for the achievements of the Islamic people was their love of learning and their focus on education.

The Islamic world built many universities where law, languages, mathematics, science and medicine were studied. Great works of literature were written, such as the *One Thousand and One Nights* (see **SOURCE 2**), which includes the famous stories of Ali Baba and Sinbad the Sailor.

Perhaps the highest point of Islamic learning came in 832 CE when the House of Wisdom (*Bayt al-Hikma* in Arabic) was established in Baghdad as a collection of world knowledge. It was one of the great libraries of history but was destroyed by Mongol invaders in 1256.

SOURCE 1 Some sayings of the Prophet Mohammed that encouraged learning

He who pursues the road of knowledge Allah will direct to the road of Paradise . . . The brightness of a learned man compared to that of a mere worshiper is like that of a full moon compared to all the stars . . . Obtain knowledge; its possessor can distinguish right from wrong; it shows the way to Heaven; it befriends us in the desert and in solitude, and when we are friendless; it is our guide to happiness; it gives us strength in misery; it is an ornament to friends, protection against enemies . . . The scholar's ink is holier than the martyr's blood . . . Seeking knowledge is required of every Muslim . . .

SOURCE 2 'Open sesame' was the password used by the forty thieves to store their plunder in One Thousand and One Nights.



SOURCE 3 A thirteenth-century illustration showing a teacher instructing students in the House of Wisdom. Note the stacks of books in the background.



Medicine

Islamic scholars studied the works of the Greeks and Romans as the basis for their medical knowledge. Some of the main medical texts that were used until recently were written by Muslims during this time. Al-Rhazi was one of the great Islamic doctors. He lived from 865 to 925. He studied medicine at Baghdad University and was later put in charge of the hospital in Baghdad. Al-Rhazi wrote over 100 books on medicine including the medical encyclopaedia, al-Hawi. In it, he recorded the opinions of Greek, Syrian, Hindu and Persian writers on how to treat various conditions. He then added his opinions. This shows that he and other Islamic doctors had open minds about medicine something that was not reflected by some other cultures of the time.

SOURCE 4 Al-Khwarizmi, depicted in this nineteenth-century woodcut, was a famous Islamic mathematician and astronomer.



Astronomy and geography

Inspired by earlier works, Arabic scientists were fascinated by the stars and the planets. In 771 the caliph of Baghdad built an observatory to study the stars. By learning more about the stars, Islamic scientists could develop charts that helped their sailors navigate and enabled their traders to travel more quickly by sea.

Mathematics

The development of the Arabic numeral system (see **SOURCE 5**) enabled Islamic mathematicians to make more complex mathematical discoveries.

Great advances were made in the use of algebra and trigonometry. One of the most famous was Mohammed ibn Musa al-Khwarizmi (c. 780–850 CE). He wrote a famous text on algebra and geometry; as well as advancing mathematics, these writings were important to developments in navigation and sea travel.

SOURCE 5 A table of various number systems

| Roman | Arabic | Western |
|-------|--------|---------|
| | | 0 |
| I | 1 | 1 |
| II | ۲ | 2 |
| III | ٣ | 3 |
| IV | ٤ | 4 |
| V | ٥ | 5 |
| VI | ٦ | 6 |
| VII | ٧ | 7 |
| VIII | ٨ | 8 |
| IX | ٩ | 9 |
| X | 1. | 10 |
| XI | 11 | 11 |
| XII | 17 | 12 |
| XV | 10 | 15 |
| XX | ۲٠ | 20 |
| L | ۰۰ | 50 |
| С | 1 | 100 |

DID YOU KNOW?

The mathematical term algebra comes from the Arabic word al-jabr (try saying it out loud), meaning 'restoration'. Algebra was widely used by Muslim mathematicians.

5.4 ACTIVITY

Based on the information in this subtopic, create a timeline showing the development of the golden age of Islam. Include the events from the lives of some of the famous Islamic scholars.

Sequencing chronology

5.4 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

5.4 Exercise 1: Check your understanding

- 1. HS1 Why was the term 'the golden age of Islam' used for this period?
- 2. HS2 In which years was the House of Wisdom established and destroyed?
- 3. HS1 Islamic scholars studied the works of which two societies as the basis for their medical knowledge?
- 4. **HS1** What was built in 771 by the caliph of Baghdad?
- 5. **HS6** What was significant about the development of the Arabic numerical system?

5.4 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1. Which of these sayings do you believe gives the best reason for why you should study and learn?
- 2. HS3 Explain the scene depicted in SOURCE 3.
 - (a) Identify the people in this painting
 - (b) What does the evidence suggest is occurring in this scene?

- 3. HS3 Examine SOURCE 4. From the evidence presented, what conclusions can be drawn about Islamic interest in astronomy?
- 4. **HS4** Outline two advances in medical knowledge made by Islamic doctors during this time.
- 5. HS5 List four civilisations that influenced Islamic science.
- 6. HS6 Evaluate the following statement: 'The House of Wisdom was the most significant academic legacy of the Ottoman Empire.'

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

5.5 The beginnings of the Ottoman Empire

5.5.1 The battle for power in the Middle East

About 1200 CE, the Middle East was made up of a series of states competing for dominance. The major powers of Persia and Byzantium were being affected by a variety of new forces. To understand the success of the Ottomans in dominating this area, it is important to look at both of these older powers, as well as some of the forces that helped to destabilise the region.

In the fourth century, the Roman Empire was divided in half and Constantinople became the capital of the Eastern Empire. This empire was known as the Byzantine Empire (from Byzantium, the old name for Constantinople). Based in modern-day Iran, the Persian Empire had existed in various forms for over a thousand years. A series of wars between these two empires significantly weakened both of their armies and left them vulnerable to outside forces.



SOURCE 1 A map of major trade routes in the Middle East about 1200 CE

Source: Map drawn by Spatial Vision.

The situation in the region was changing, driven by a number of factors. The spread of Islam and its impact on the Middle East has already been examined. Other factors included the:

- *Venetians*. Venice is an island city in the north-east of Italy. A flourishing trade was developing between China and India in the east and western Europe. Due to the city's importance in this route, Venice found itself under constant threat of foreign invasion.
- *Crusaders*. The Crusades were a series of wars by European Christians who wanted to reclaim holy lands taken by the Islamic Empire. Pope Urban II called for support by citing violent acts committed by some Muslim groups. Soldiers in France and Germany responded to Pope Urban's call and left to help defend Constantinople and reclaim other territories. As well as fighting to take the Holy Land from the Muslims, the Crusaders took the opportunity to attack Jews and Orthodox Christians.

DISCUSS

As a class, discuss the impact of the Crusades on the Ottoman Empire. You may need to undertake some additional research to help with the discussion. [Critical and Creative Thinking Capability]

5.5.2 Establishment of the empire

The Ottoman Empire was founded by the Seljuk Turk Osman I, who ruled from 1298 to 1326. The word *Ottoman* was based on a European form of his name. Osman captured Bursa from Byzantine rule in 1326 and made it his capital. The following three factors help to explain how the Ottoman Empire spread its influence.

Involvement in trade

The Ottomans were in a position to take part in the major trading routes: between Europe and China by the Silk Road; from India by land and sea; and from Africa along the pilgrimage routes to Mecca, as shown in **SOURCE 1**. Profits from trade brought the money to wage wars, but trade also brought ideas and technology, such as the use of the cannon.

Adoption of Sunni Islam

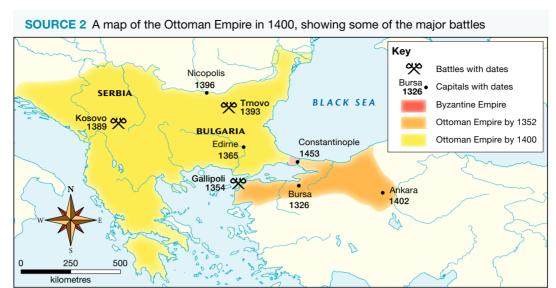
The Ottomans, like their neighbours to the east and the south, followed Islam. The Ottomans were Sunni, a branch of the religion that was generally more tolerant to Christians and Jews than other Islamic denominations.

A military tradition

The Ottomans already had a strong military tradition that they had developed as soldiers for Persia. They set up their own state and were initially able to defend themselves against the Mongols from the east.

Under Osman's successor Orhan (1326–1362), the Ottomans began taking possession of all the Christian states on the eastern side of the Black Sea. They could not move further into Europe while the Dardanelles were in Christian hands, as this controlled access to the Black Sea. Orhan's son, Suleyman Pasha (not to be confused with Suleiman the Magnificent), laid siege to Gallipoli. When an earthquake on the night of 1–2 March 1354 destroyed the walls of the Gallipoli fortress, Suleiman immediately occupied the fort and conquered the region.

The Ottomans captured the Byzantine city of Edirne, which became their new capital, in 1365. From here the Ottomans advanced into Europe by conquering the Balkan empires of Serbia and Kosovo.



Source: Spatial Vision

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• The Western and Islamic world > Ottoman Empire

5.5 ACTIVITY

Research one of the battles mentioned in this subtopic and answer the following questions.

- a. Who was the battle between?
- **b.** Why was the battle fought?
- c. What tactics were used in the battle?
- d. Why was the victorious side able to win?
- e. What was the significance of this battle?

Determining historical significance

5.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

5.5 Exercise 1: Check your understanding

- 1. **HS1** Which were the two major powers in the Middle East during the Early Middle Ages?
- 2. HS1 What was the capital of the Byzantine (Eastern Roman) Empire?
- 3. **HS1** Who was the founder of the Ottoman Empire?
- 4. HS5 What three factors helped the early Ottoman Empire spread its influence over the region?
- 5. HS1 There are three Ottoman rulers mentioned in this subtopic. List these rulers and describe at least one of their respective accomplishments.

5.5 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1.
 - (a) Which city connects Europe and Asia?
 - (b) Which cities would you have to pass through on a journey from Buda to China or India?
 - (c) Explain the part that trade played in Bursa, Edirne and Constantinople becoming major cities.
- 2. HS3 Using SOURCE 2, name the two earliest Ottoman capitals and the date each city became the capital.

- 3. HS2 Place the following dates on a timeline and match them with an event examined in this subtopic: 1298, 1326, 1354, 1389, 1393.
- **4. HS3** Examine the maps shown in **SOURCES 1** and **2**. Describe the connection between trade routes and the major battles discussed in this topic.
- **5. HS3** A key historical source from the Ottoman Empire is the architecture of the time. What other historical sources could be used to measure the influence of Ottoman culture on the surrounding area?
- **6. HS5** As the influence of the Ottoman Empire continued to grow, what happened to the other major powers in this region?
- 7. HS5 Which other empires came to an end as the result of the expansion of Ottoman rule?
- **8. HS5** Several factors that assisted the spread of the Ottoman Empire are listed in this subtopic. Identify these factors and rank in terms of significance. Remember to justify and explain your rankings.
- 9. **HS6** Ankara was made the capital of the Ottoman Empire in 1402. Why do you believe this location was chosen as a suitable capital?

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5.6 The Black Death and the Ottoman Empire

5.6.1 The growth of trade

As the Ottoman Empire grew, interactions between the people of Europe, North Africa and Asia became more regular. However, traders along the Silk Road did not know they were carrying more than their exotic cargos. Wherever people traded, black rats and their disease-carrying fleas followed. This disease, the Black Death, had previously been confined to an area in Central Asia. Soon it would spread to populations that had no immunity to its ravages. Soon it would inflict pain and devastation upon most of the known world. While the Black Death indeed affected the Ottoman Empire, not all of the impacts were necessarily negative.

As we have learned, the early medieval era was a period in which many nomadic groups moved through Europe and Asia, invading new land. Through the Middle Ages, most of these nomadic groups gradually settled in the lands they had conquered, establishing permanent villages and towns as the centres of agricultural activity. Warriors such as the Franks, Magyars and Goths became farmers, while seafaring raiders such as the Vikings and Danes came to use their ships for peaceful trade. By the fourteenth century, most of Europe, southern and eastern Asia and much of northern Africa was subject to permanent human settlement. Only in the northern and central regions of Asia and in sub-Saharan Africa was the nomadic lifestyle still prevalent.

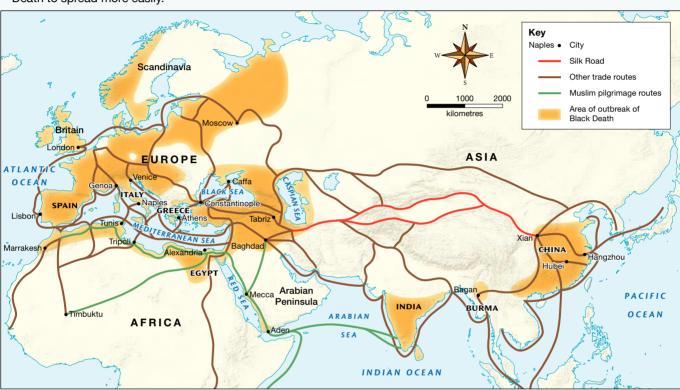
Settled civilisations in Europe, and Asian empires such as those in India and China, were quick to realise the benefits of peaceful trade. The Ottomans were also interested in controlling the passageway between Europe and Asia. Networks of overland trade roads developed throughout Europe and Asia, connecting the rapidly growing towns and leading to the growth of some towns as major trading centres. These towns would regularly hold fairs to allow merchants to display and sell their wares. Major commercial city-states such as Genoa and Venice sent ships throughout the Mediterranean and to western and northern European ports. Trade between Europe and Asia expanded rapidly along the Silk Road, with China and many other centres through central Asia coming into regular contact with European merchants. The geographic location of Constantinople also made the city a target for the savvy Ottoman rulers, who wanted to not only trade with the city, but to control it entirely.

DID YOU KNOW?

Some historians believe that fleas carrying the Black Death came to Caffa on the skins of marmots. These small Central Asian mammals had no resistance to the disease, and large numbers became infected and died in the mid-1340s. Fur traders came across the dead animals, removed their hides (including the deadly fleas) and sent them along the Silk Road to cities such as Caffa.

Outbreak in Asia

Written reports indicate that outbreaks of the Black Death may have occurred in China in the 1320s and 1330s. The province of Hubei in central China is considered by many to be the location of the first major outbreak in 1334. It was here that the Black Death first appeared in its most deadly form. In the fourteenth century, China was largely ruled by the Mongols, who had strong links to Central Asia, so they may have brought the disease with them to China. At the same time trade between China and a number of European states was increasing from access along the Silk Road. The potential was always there for the Black Death to be carried to Europe, either by European traders returning from the east or by the Central Asian Tartar warriors (Mongols) who were continuing their attacks in eastern Europe.



SOURCE 1 Permanent human settlement led to the growth of towns and expansion of trade, which allowed the Black Death to spread more easily.

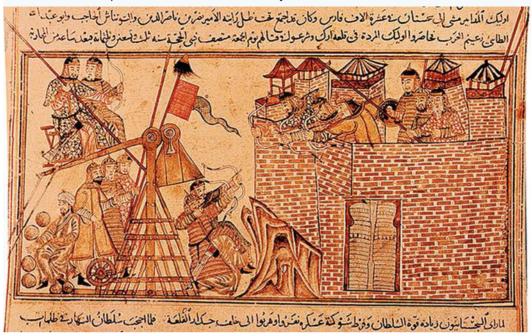
Source: Spatial Vision

5.6.2 The Black Death enters Europe

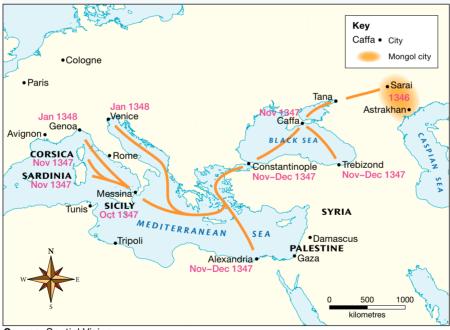
In the thirteenth century, the Italian trading city-state of Genoa had taken control of Caffa, on the Crimean Peninsula, in modern-day Ukraine. Caffa was a major shipping port for trade throughout the Black Sea. In 1347, the Tartars attacked the city (see **SOURCE 2**). They were supported by Genoa's bitter rivals, the Venetians, who had previously controlled Caffa. As they laid siege to the city, the Tartars began to fall sick from a serious disease and large numbers died in a very short time. Unable to maintain the siege, the Tartars began to withdraw; but before they did, they began catapulting the diseased bodies of their dead over the walls and into the city. The Genoans who escaped from Caffa soon found they were carrying the deadly disease. Venetian traders who had been present during the siege were also infected and both groups carried the Black Death deep into the heart of Europe (see **SOURCE 3**).

Trade links between Asia and Europe were developing so strongly during the fourteenth century that Caffa was probably not the only source of the Black Death coming to Europe, as Messina first recorded the plague shortly before the siege of Caffa. Nevertheless, the rapid spread to places that engaged in trade with Caffa suggests that it was very important in hastening the infection into Europe, the Middle East and North Africa. During the last few months of 1347, the disease was carried to Constantinople, the southern shores

SOURCE 2 When the Tartars attacked Caffa, they used trebuchets like the one shown in this illustration to catapult infected bodies over the city walls.



SOURCE 3 Merchants and soldiers returning from Caffa in late 1347 soon spread the Black Death to the Middle East, North Africa and Italy.

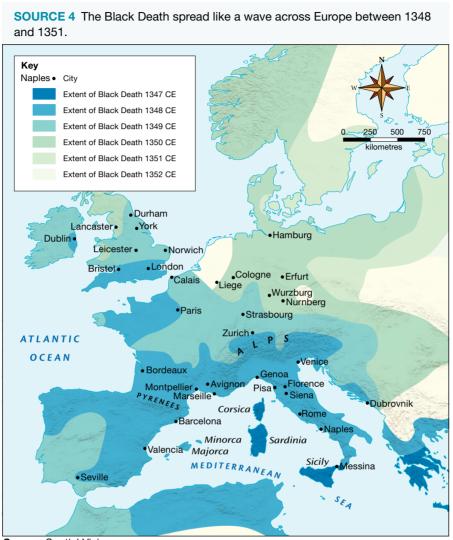


Source: Spatial Vision

of the Black Sea, Alexandria in Egypt and the islands of Sicily, Corsica and Sardinia in the Mediterranean. For the Ottomans, the arrival of the Black Death in Constantinople was particularly significant. The disease ravaged the city, making both it and its people susceptible to raids and attacks.

By January 1348, cases of the plague were reported in both Genoa and Venice in northern Italy. From there it quickly spread to the rest of Italy, and to southern France and Spain by the middle of that year.

Within a year all of western Europe was affected and, by 1350, the Black Death had turned east again and had reached Russia. source 4 shows how quickly the Black Death spread throughout Europe between the end of 1347 and 1351.



Source: Spatial Vision

DID YOU KNOW?

The spread of the plague to Scandinavia is believed to have occurred through a trading ship carrying wool from England. The ship was seen floating off the Norwegian coast and the locals rowed out to examine it. They found the crew to be dead and decided to take the cargo of bales of wool. Little did they know the bales were full of the deadly plague-carrying fleas.

5.6.3 Infestation through the Middle East

The plague appears to have come to the Middle East through several different routes. During 1347, warriors returning to Baghdad from battle at Tabriz in northern Persia (now Iran) found that they had brought the disease with them. These soldiers would have carried supplies of grain with them for food. Not only did black rats infest the grain supplies but the fleas carrying the disease would also have been able to survive on grain debris. The area that includes modern-day Iraq, as well as Syria and southern Turkey, was soon ravaged by the Black Death. It is also believed that Muslim pilgrims coming to Mecca from northern India

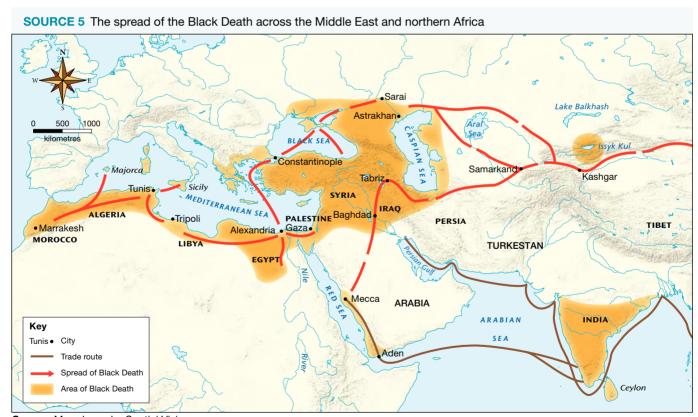
via the Persian Gulf and the Red Sea may have been transporting rats from Central Asia to the Arabian Peninsula, bringing the plague with them. This would also explain how infections entered the Ottoman world. While the official impact of the plague on Ottoman society is unknown, some historians believe that up to a quarter of the Ottoman population died from the Black Death.

The Egyptian city of Alexandria was a major trading port on the southern shores of the Mediterranean. It had strong links with Constantinople, as well as with Arab cities to the east and all along the north African coast. Alexandria became infected in 1347, soon after the siege of Caffa. The Black Death then spread eastwards to Palestine and Syria in 1348, and into the Arabian Peninsula, reaching Mecca.

North Africa

From Alexandria, the plague began to spread along the north African coast, and had reached Tripoli in modern Libya by 1348. At the about the same time, the city of Tunis appears to have been infected through its trade with Sicily, with an outbreak reported in April 1348. From Tunis, the plague spread eastwards into Libya, with that country now attacked by the plague from both east and west. In 1348, the ruler of Morocco attempted to conquer Tunis, but failed, and his retreating army carried the disease back to Morocco, infecting Algeria along the way. The plague reached Marrakesh in central Morocco in 1349. It is possible that Morocco was also infected by traders from Spain, bringing the disease via the island of Majorca.

From Alexandria, the plague also spread south along the Nile valley, although it does not appear to have spread into other parts of Africa. It appears that settled areas with towns and agriculture provided the most suitable environment for black rats to thrive. The area to the south of Egypt and the Sahara was inhabited largely by nomadic tribes. Their lifestyle did not provide an environment suitable for the rats, so the plague did not spread into these parts of Africa.



Source: Map drawn by Spatial Vision.

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• Expanding contacts > Black Death

5.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

5.6 Exercise 1: Check your understanding

- 1. HS1 Outline the areas of Europe, Asia and the Middle East that had become permanent human settlements by the fourteenth century.
- 2. HS1 Where did the Black Death first appear in the deadly form that eventually devastated Europe, the Middle East and North Africa?
- 3. **HS1** Why were the Ottomans so interested in gaining control of Constantinople?
- 4. HS1 Why was the city of Caffa important in the spread of the Black Death?
- 5. HS1 Who were Genoa's main rivals? How was this group involved in spreading the Black Death?
- 6. HS6 Explain why the Black Death arriving in Constantinople was such a significant event for the Ottoman Empire.
- 7. **HS1** Identify and explain the ways in which the plaque entered the Middle East.
- 8. **HS1** How was the Ottoman Empire negatively affected by the Black Death?
- 9. HS5 Explain the impact the Black Death had on the political situation in Morocco.

5.6 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 3. Why were the cities of Constantinople, Alexandria, Venice and Genoa among the first to be infected?
- 2. HS3 Examine SOURCE 1. How well do trade and pilgrimage routes correspond to areas of outbreak of the Black Death?
- 3. HS3 Describe the image shown in SOURCE 2. How does this source increase our knowledge about this period of history?
- 4. HS3 Using SOURCE 4, identify when each of the following cities was infected by the Black Death: London, Paris, Hamburg, Dublin, Marseilles.
- 5. HS3 Convert the map shown in SOURCE 5 into a flowchart to show the progression of the Black Death from Asia into Europe.
- 6. **HS3** Examine the maps shown in this subtopic.
 - (a) Write a statement that conclusively describes the origins of the Black Death in Europe.
 - (b) Determine whether there are any regions that remained unaffected by the Black Death. If so, suggest reasons these locations avoided infection.
 - (c) What are the strengths and weaknesses of using maps as historical sources?
- 7. HS4 How did the Black Death change political systems in Europe, Northern Africa and Asia. Use specific examples in your response.
- 8. **HS5** What changes in human settlement affected the spread of the plague?
- 9. HS5 'The Black Death did not contribute to the eventual fall of Constantinople to the Ottomans.' Evaluate this statement using evidence to support your arguments.
- 10. HS6 'As devastating as the Black Death was, it was essential for the growth of the Ottoman Empire.' Do you agree or disagree with this statement? Explain your response and include evidence.

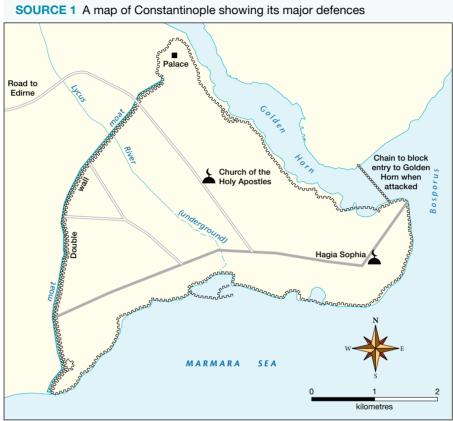
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5.7 The fall of Constantinople

5.7.1 Defences at Constantinople

After a brief period of instability at the beginning of the fifteenth century, the influence and power of the Ottoman Empire continued to spread. By the time Sultan Mehmet II gained control, the Ottomans occupied much of eastern Europe, including the land around the Byzantine capital of Constantinople. The jewel of the Byzantine Empire, Constantinople had been controlled by the Byzantines for nearly thirteen centuries. The city held strategic importance in the region and was also a symbol of Christianity in eastern Europe. For these reasons, it was a city that Mehmet II simply had to capture.

For over a thousand years the rulers of Constantinople had built and maintained strong defences. The famed walls of Constantinople were first constructed by Emperor Constantine the Great (see **SOURCE 2**). Rebuilding the city's initial fortifications, Constantine added more complex structures to the city's defences. These included towers at regular intervals and heavily protected gates and passages. Constantine the Great also increased the number, thickness and height of the original walls. On the seaward sides, steep cliffs and sea walls made access difficult. The Golden Horn (the strip of water north of Constantinople) could be closed off in times of attack by a heavy chain running from shore to shore. Subsequent emperors such as Theodosius II made further improvements to the fortifications of Constantinople including a system of double walls.



Source: Map drawn by Spatial Vision.

SOURCE 2 An artist's impression of the western walls of Constantinople

While the walls of Constantinople had provided protection for a very long time, their effectiveness was diminished by the Ottoman army's use of cannons.

Gunpowder and use of the cannon had originated in China and were probably brought to the area by the Mongols. The Ottomans were quick to adopt them in warfare. They used one cannon in November 1452 to sink a Venetian ship sailing along the Bosporus. But for the attack on Constantinople a larger one was needed and built. It was 8.4 metres long with a wall 20 centimetres thick. It could fire a cannonball of 600 kilograms a distance of 1.6 kilometres.

SOURCE 3 The Dardanelles Gun. This cannon, built in 1464, was cast in bronze and weighed 18.4 tonnes. It was built in two parts that could be screwed together using a large lever as a spanner.



DID YOU KNOW?

The Dardanelles Gun was still in use in 1807 when it fired at British ships, killing 28 British sailors.

5.7.2 The siege

At the time of the Ottoman conquest, Constantinople was far from the once-great city it had been. Years of tension and hostility between Rome and the Byzantine capital had taken its toll on the city and its people. Constantinople had also never truly recovered from the social and economic impact of the Black Death. These factors left Constantinople vulnerable and the Ottomans planned on taking full advantage of the city's weakened state. Before the siege began, Mehmet II tried to tempt Constantine XI into surrendering. Mehmet offered freedom of religion as well as territory in Greece to the Byzantine Emperor. Yet a proud Constantine refused, plunging his city into war with the Ottomans.

SOURCE 4 Sultan Mehmet II gives his reasons for attacking Constantinople.

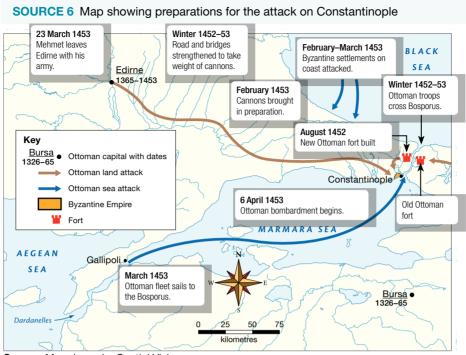
The ghaza [holy war] is our basic duty as it was in the case of our fathers. Constantinople, situated in the middle of our domains, protects our enemies and incites them against us. The conquest of the city is, therefore, essential to the future and the safety of the Ottoman state.

SOURCE 5 Candarli Halil, adviser to the sultan, warns Constantinople that Sultan Mehmet is more of a danger to them than the previous sultan.

You stupid Greeks . . . I have known your cunning ways long enough. The late Sultan [Murad] was a tolerant and conscientious friend of yours. The present Sultan Mehmet is not of the same mind. If Constantinople eludes his bold and impetuous grasp it will only be because God continues to overlook your wicked and devious schemes.

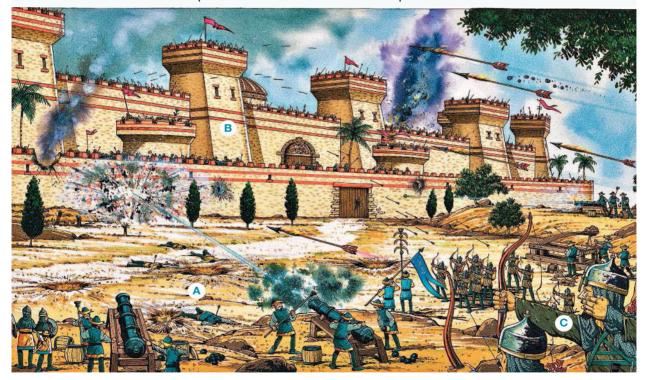
During the siege, Mehmet's base was the Ottoman fortress of Rumeli Hisar on the western bank of the Bosporus Strait. Though hastily constructed, this military centre enabled Mehmet to command his forces from a tactically strong position.

Over the winter of 1452/53, Constantinople prepared for a siege by reinforcing its walls and bringing in extra supplies of food, while Mehmet strengthened the roads between his capital of Edirne and Constantinople so that he could bring in his cannons to attack the walls of Constantinople. Mehmet positioned his naval fleet in both the Black and Marmara seas to isolate the Byzantines within their own city. On the ground, Mehmet used his Janissaries — elite and often brutal soldiers — to attack the walls of Constantinople.



Source: Map drawn by Spatial Vision.

SOURCE 7 A modern artist's impression of the attack on Constantinople



- Cannons could be fired only about eight times a day because they took so long to prepare.
- B The attack on Constantinople lasted many weeks.
- Ottoman armour was made from interlocking rings of metal.

Ottoman attacks continued through April and early May but the defenders of Constantinople held out, despite being outnumbered by ten to one. Towards the end of May, the Ottomans heard rumours that a European relief army was approaching the city and Mehmet decided to launch a final attack. Cannons were brought closer to the walls and, on the night of 28–9 May, Ottoman ships were brought as close as possible to the sea walls. By early morning on 29 May, the walls had been breached and defences collapsed.

5.7.3 After the fall of Constantinople

The fall of Constantinople was a significant event in medieval history. Not only does it mark the official end of the Eastern Roman Empire, but some historians see it as the end of the entire medieval period. Losing Constantinople was also a great blow for Christianity in Europe. The greatest symbol of this loss was the conversion of the great Hagia Sophia church into a mosque. However, there were also several positive outcomes from the fall of Constantinople.

- The Age of Exploration.
 The Ottomans now controlled the major trade link between Europe and Asia. This forced European powers, including Spain and Portugal, to consider different methods of reaching the Far East. It is thought that the journeys of the great European explorers may have occurred because of this need.
- *The Renaissance*. The Islamic focus on academic pursuits (especially maths and science) is well

SOURCE 8 Vasco de Gama's first voyage to India Kev PORTUGAL Vasco de Gama's Canary Island INDIA ARABIA Goa AFRICA Cape Calicut Verde Elmina Mogadish Malindi INDIAN Kilwa OCEAN ozambique Cape 1000 2000 Good Hope kilometres

Source: Based on http://media.web.britannica.com/eb-media/21/144621-050-B67E1FE0.gif

documented. After the fall of Constantinople, Ottoman traders and scholars began to interact with their European counterparts more frequently. These interactions are thought to have directly influenced the development of the Renaissance in Europe.

sources 8 and **9** show two different trade routes between Europe and the East. **sources 8** shows the journey of famed explorer Vasco de Gama, while **sources 9** shows the Silk Road, which stretched from Istanbul to China.



TOPIC 5 The Ottoman Empire (c.1299–1683)

5.7 ACTIVITIES

- Who were the Janissaries? Conduct your own internet research to find more information about this group of people.
 Determining historical significance
- 2. Conduct research to discover what became of the church at Hagia Sophia. What evidence is there of these changes?
 Identifying continuity and change

5.7 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

5.7 Exercise 1: Check your understanding

- 1. HS1 Identity and explain the reasons why Constantinople was so important to the Byzantines.
- 2. **HS1** Which two Roman emperors were significantly involved in constructing the fortified walls of Constantinople? Briefly describe the contributions of these two rulers to the construction of the walls.
- 3. **HS1** Consider the attack on Constantinople.
 - (a) What was the Ottoman army's main weapon against the walls of Constantinople?
 - (b) How did this technology make its way into Ottoman hands?
- 4. HS5 Identify and explain two reasons for the weakening of Constantinople's power before the Ottoman siege.
- 5. **HS1** How did Sultan Mehmet II attempt to avoid conflict?
- 6. HS1 What evidence of religious tolerance is there in Sultan Mehmet's approaches?
- 7. **HS6** Some historians have described the fall of Constantinople as a major turning point in history. What do you think makes this event so significant?
- 8. HS6 Explain how Islamic scholars could have influenced the development of the Renaissance.

5.7 Exercise 2: Apply your understanding

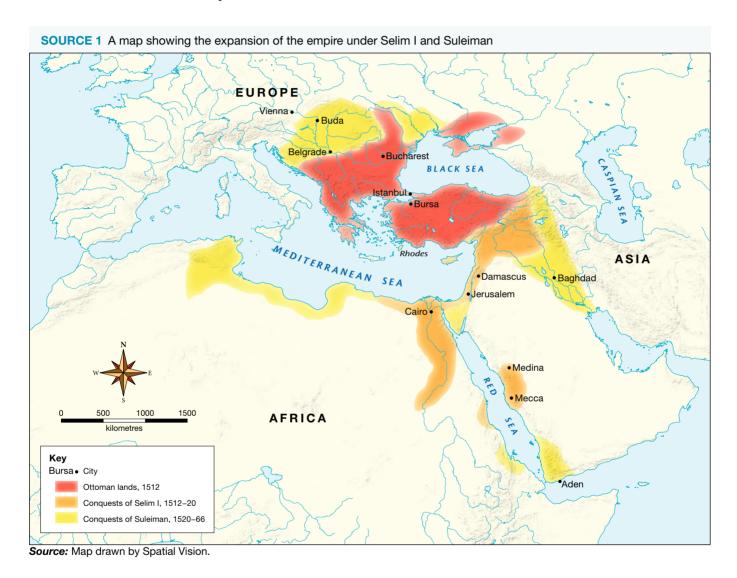
- 1. HS3 Carefully read SOURCES 4 and 5.
 - (a) What reasons did Sultan Mehmet give for attacking Constantinople?
 - (b) Candarli Halil warned the people of Constantinople that Sultan Mehmet had quite a different attitude from that of his father, Murad. What was this different attitude?
- 2. HS3 Examine the map shown in SOURCE 1. Can you identify any potential weaknesses in the fortifications of Constantinople? If so, explain your observations.
- 3. HS3 Examine SOURCE 6.
 - (a) Prepare a timeline covering the period from August 1452 to May 1453 that shows the major stages in the Ottoman attack on Constantinople.
 - (b) Explain the strategies Sultan Mehmet II used to isolate Constantinople from the rest of Europe.
- 4. **HS3** Examine **SOURCE 7** and list all the methods used to attack the city.
- 5. HS3 Compare the maps in SOURCES 8 and 9.
 - (a) How would traders have travelled from Europe to Asia before the fall of Constantinople?
 - (b) Why were Europeans forced to find alternative trade routes after the fall of Constantinople?
- 6. HS3 Using the sources provided in this subtopic, identify and explain the defences of Constantinople.
- 7. HS3 Examine SOURCE 6. Why do you think Constantinople was such an important city to control?
- 8. **HS4** The Byzantines held Constantinople for over a thousand years. How did the tactics used by Mehmet II differ to those used by other armies in the past?
- 9. HS4 What did Mehmet II's victory at Constantinople mean for the Byzantine Empire?
- **10. HS5** What effect did the Janissaries have on the siege of Constantinople? Do you believe they were a deciding factor in the outcome of the battle?
- 11. HS5 Identify and explain the external factors that weakened the Byzantines in the years before Mehmet II's attack.
- **12. HS6** 'The fall of Constantinople was the most significant event to occur during the reign of the Ottoman Empire.' Evaluate the accuracy of this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

5.8 Suleiman the Magnificent

5.8.1 Extending the empire

The Ottoman Empire continued to expand following the conquest of Constantinople in 1453. Under Selim I (1512–20) the empire had almost doubled in size; it included the territories of Syria and Egypt, parts of Persia and the Islamic holy places of Medina and Mecca, as shown in **SOURCE 1**. Selim I claimed the title of caliph of the Islamic world. But it was Selim's son, Suleiman, who was to become one of the most famous rulers of the Ottoman Empire.



Suleiman became sultan in 1520 at the age of 29. Under his rule, the Ottoman Empire became the largest empire of the time and he was looked up to by the European kings. A gifted poet and craftsman, Suleiman's rule saw great developments in art, literature and science. Yet it was for his military accomplishments that Suleiman is more well-known (see **SOURCE 1**). To the west, Suleiman pushed the Ottomans' territory further into Europe, toward the Christian strongholds of Belgrade and Vienna. To the east, he conquered Persia and to the south, the important port city of Aden. Suleiman's forces also captured significant territory in North Africa.

A significant campaign in the early years of Suleiman's rule was his attack on the Island of Rhodes in 1522. The knights of the Order of St John, successors to the early Crusaders, had seized the island from the Byzantines in 1309. The knights had been a constant thorn in the side of the Ottomans, attacking ships and thwarting Suleiman's advances across the Mediterranean. After an exhausting five-month siege, Suleiman signed a truce with the knights that gave him control of the island. This victory was strategically crucial for Suleiman and his empire as the Ottomans could now use Rhodes as a base for further campaigns across the Mediterranean and North Africa.

Suleiman's next target was eastern Europe. A series of successful campaigns gave him control of Serbia and Hungary. This brought Suleiman face to face with his long-time rivals, the Hapsburg Empire. The Hapsburg dynasty was based in Austria but through wars and marriage alliances they controlled a large part of western Europe, including Spain, Portugal, Poland and Hungary, as well as sections of the Netherlands and Italy. Suleiman laid siege to Vienna, Austria, in 1529. After 19 days, sections of the walls had been pierced and some of the outer suburbs burned. However, a long and costly siege followed and, ultimately, Suleiman withdrew his forces. Three years later, Suleiman launched another failed attempt at taking Vienna. This failure marked the end of the sultan's period of empirical expansion and Suleiman instead focused on administering the territory he had already gained.

DID YOU KNOW?

The defenders of the island of Rhodes made a giant stethoscope of leather. It was used to detect the sound of attackers digging mines under the walls.

5.8.2 Life and law under Suleiman

In Turkey, Suleiman is known as Sultan Suleiman el-Kununi — the Lawgiver — because he organised a large-scale rewriting of the legal code. This was necessary because the empire contained many new regions and different ways of life.

SOURCE 2 An inscription in which Suleiman describes his power, from M. Guboglu, *Palaeografia si diplomatica Turco-Osmana, Bucarest*, 1958, p. 167, facsimile no. 7, quoted in H. Inalcik, *The Ottoman Empire*, Phoenix Press, p. 41

I am God's slave and sultan of this world. By the grace of God I am head of Mohammed's community. God's might and Mohammed's miracles are my companions. I am Suleyman, in whose name the hutbe [religious sermon] is read in Mecca and Medina. In Baghdad I am the shah, in Byzantine realms the Caesar, and in Egypt the sultan; who sends his fleets to the seas of Europe, the Maghrib and India. I am the sultan who took the crown and throne of Hungary and granted them to a humble slave. The voivoda [governor] Petru raised his head in revolt, but my horse's hoofs ground him into the dust, and I conquered the land of Moldavia.

SOURCE 3 Portrait of Suleiman, attributed to the Venetian Renaissance painter Titian. There is no evidence that Titian ever met or saw Suleiman.



The challenges

The legal system had to take into account the complex structure of the Ottoman Empire.

- Almost all of the empire, except parts of Africa, was mountainous. Communities were isolated from each other and had developed their own laws.
- There were many different lifestyles in the empire. Some Ottomans lived in great cities while others were nomads or merchants who travelled long distances.
- The empire was made up of people with many different faiths, including Christianity and Judaism. In some parts of the empire Muslims were in the minority.

The solutions

When a new territory was added, Ottoman officials tried to preserve as many of the local laws as possible, as long as these did not contradict the religious law or general legal principles of the empire. This practice reduced opposition to Ottoman rule, ensured laws suited local conditions and made collecting taxes easier.

Christians and Jews

In Islamic belief, Jews and Christians were grouped with Muslims as 'people of the book'; that is, people who shared the background of the Jewish bible with its narratives of Abraham, Moses and the Prophets. As the territory controlled by the sultans expanded, increasing numbers of Christians and Jews were living under Muslim rule. Although executions and forced conversions may have taken place occasionally, most people were generally left to practise their own religion.

SOURCE 4 An Islamic painting from c. 1588 showing the army of Suleiman the Magnificent in front of Vienna



SOURCE 5 A sixteenth-century illustration showing an Ottoman Jew from Constantinople and an Arab merchant



Jewish and Christian religious communities were allowed to govern themselves, as long as they provided taxes to the government and kept the peace in their own communities. Each community had its own Millet — the Turkish word for 'nation'. This could include its own courts although in any dispute involving a Muslim, or criminal acts such as robbery and murder, the Islamic court took over.

DISCUSS

Suleiman the Magnificent is remembered for his diplomacy and creative policy reforms, especially when dealing with the beliefs and customs of conquered peoples. Through the Millet system, Jews and Christians were allowed to keep practising their religions if they paid a tax to Suleiman.

In small groups discuss the following:

- the purpose of the Millet system, including its advantages and disadvantages. Also suggest and debate any alternative to the system.
- whether the Millet system could work in a modern context. Identify and explore any possible positive and negative implications of such a system in modern society.
- whether it is necessary for all the citizens of a country to follow the same religion.

[Ethical Capability]

5.8 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

5.8 Exercise 1: Check your understanding

- 1. **HS1** Why would the addition of Mecca and Medina to the Ottoman Empire greatly increase the prestige of the Ottomans in Muslim eyes?
- 2. HS1 Identify the group that ruled over the island of Rhodes. Why did Suleiman want these people removed?
- 3. HS1 Why did Suleiman see the need to control Rhodes?
- 4. HS1 Who were the Ottoman's main rivals in Europe? What territories did they control?
- 5. **HS1** When Suleiman came to revise the legal code, what three special features of the empire's structure did he have to take into account?
- 6. HS1 Why did the Ottomans let local people keep their own laws wherever possible?
- 7. HS1 What was a Millet?
- 8. **HS1** What evidence is there that Jews were welcome in the empire?
- 9. HS6 Why do you think people have chosen to describe Suleiman as 'the Magnificent' or as 'the Lawgiver'?

5.8 Exercise 2: Apply your understanding

- 1. **HS3** Study **SOURCE 1**. Identify at least three modern-day countries whose territory was once part of the Ottoman Empire.
- 2. **HS3** In **SOURCE 2**, what links does Suleiman make with earlier empires? What is he claiming for himself by doing this?
- 3. HS3 Examine SOURCE 3.
 - (a) What impression of Suleiman is presented in the painting?
 - (b) Can this picture be trusted to give an accurate depiction of Suleiman? Why or why not?
 - (c) If Titian did not actually see Suleiman, where might he have gathered his references from which to paint him?
- 4. **HS3 SOURCE 4** is a representation of the Siege of Venice.
 - (a) Is **SOURCE 4** a primary or secondary source? Justify your response.
 - (b) Describe the military tactics used by both sides.
 - (c) Why do you think Suleiman's attack on Venice was unsuccessful?
 - (d) How useful is **SOURCE 4** in providing evidence of the siege?
- 5. **HS4** Describe how Suleiman the Magnificent expanded the Ottoman Empire. Use specific locations in your description.
- 6. HS4 Identify and explain the ways in which the Ottoman Empire changed under Suleiman's command.
- 7. **HS4** Describe how followers of other religions were allowed to continue demonstrating their beliefs under Suleiman's rule.
- 8. HS5 What did Suleiman hope to achieve by granting religious freedom to the territories he conquered?
- 9. **HS6** 'Suleiman the Magnificent is one of the most significant rulers of all time.' Do you agree with this statement? Use evidence in your response and justify your opinion.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

5.9 Life in the Ottoman Empire

5.9.1 Daily life

Life within the Ottoman Empire varied greatly, usually depending on a person's social and economic status. The empire included many Christian and Jewish communities as well as Muslim communities. Most of the population lived as peasants in small villages, and in the north-east there was a large nomadic population. As long as each community paid its taxes to the sultan, the communities were generally free to continue their own lifestyles.

Housing

Most homes in the towns were made of timber, although richer people might have had their bottom floor built with stone walls. Wooden houses meant fewer injuries during earthquakes, but also increased the danger of fire, especially as houses were built very close together and streets were very narrow.

Houses of the upper class usually had separate rooms for men and women. A space at the front, called the selamlik, was for men, and a space at the back, called the haremlik, was where women gathered. There were no chairs in the rooms. Boxes around the wall served as seats when covered with cushions. For meals, food was placed on large trays on a low platform in the centre of the living room and people squatted around this. At night, some rooms could be converted to bedrooms.

Peasants' houses usually had only three rooms — one for sleeping, one for cooking and one as a sitting/dining room. The material they were built from depended on the material available locally, so they could be of timber, stone or mud brick.

SOURCE 1 A traditional-style Ottoman house in Antalya, Turkey

Women and children in society Clothing

Clothing, and particularly headwear and belts, was a sign of status in the community. Muslim women originally saw the veil not as a sign of modesty but as something worn by the elite as a sign of prestige. For example, the wives of the Prophet Mohammed wore veils as a sign of their prestigious position. At first, the only women who wore veils were those whose husbands were rich enough to keep them in seclusion. But, over time, women in all levels of society adopted the veil.

Marriage

Most marriages were arranged, but the wife retained control of any property she had. The husband's family provided a **dowry**. Half of this went to the wife to set up her home while the other half was retained to be given to her in the case of her husband divorcing her.

Divorce was easier for the male — all he had to do was to repeat three times, 'You are divorced'. If a woman wanted a divorce, she had to go to court, accompanied by two witnesses who would testify to her mistreatment or abandonment. In a few cases, Jewish and Christian women took their case for divorce to a Muslim court, which indicates they felt that Muslim women had more rights in this area.

Occupations

Women in the cities could be involved in trade by appointing a male agent to act on their behalf. In the villages, women would work on a farm or be employed in the textile industry. Children could also be involved in spinning and weaving. The earliest textiles were linen, but this was followed first by silk and then by cotton.

As in other cultures in the Middle Ages, most children were employed as early as possible. This could be on a farm, in textile production or as an apprentice to a craft or trade (see **SOURCE 2**).

SOURCE 2 This court case concerns a father who, in 1656, complained that his son had been employed against his will by the barber Yusuf. The father brought his case to a judge, called the qadi.

Master barber Yusuf, questioned on this matter, said that the boy joined his employ of his own free will and wishes to stay with his master and learn the trade. The boy was therefore summoned and questioned, and he too replied that he wishes to stay with his master in order to learn the barber's profession.

In view of these declarations the qadi informed the plaintiff [the father] that he is not to get custody of his son unless the son himself so wishes, since the boy is now a mature companion. He warned the plaintiff against trying to harm the defendant [the barber] or harass him.

Slavery

Like other civilisations at the time, slaves existed in the Ottoman Empire but they had more opportunities and greater legal protection than many other slaves in the Middle Ages. While the Qur'an recognised slavery, it did recommend kindness to slaves and eventual liberation. Christians who had been captured and brought to work in the sultan's palace could eventually obtain high positions in the empire. The case of the Russian slave Roxana, who eventually became the legal wife of Suleiman the Magnificent, shows the possibilities available to some.

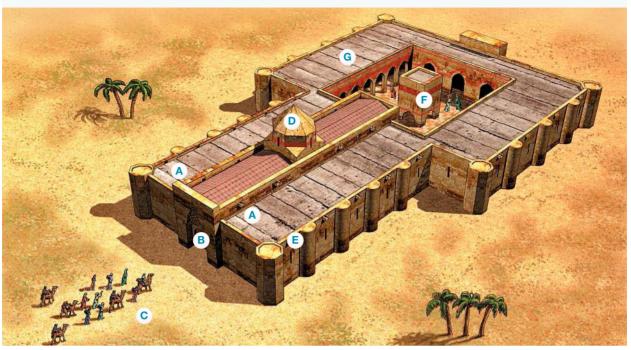
However, most slaves were women who worked as domestics. Their situation depended very much on the attitudes of the master and mistress of the house. If a domestic slave had a child by her master, the child was a free person. Slaves could also acquire their freedom when their masters died.

5.9.2 Trade and the marketplace

Trade

Trade was a large part of Islamic culture. Large caravans of camels carried goods long distances, often across difficult terrain such as deserts and mountains. Sultans organised the building of depots about 30 kilometres apart along these routes where the cameleers could rest from the long journey and be protected from thieves. These depots were called caravanserai. They were surrounded by strong walls and towers with a relatively small entrance. Each contained rooms for travellers to rest and, in the centre, there was a small mosque for the daily prayers.

SOURCE 3 An artist's reconstruction of a caravanseral



- A Winter quarters provided protection from cold weather.
- B The narrow entrance gate protected against thieves.
- Camel caravans move in to rest for the night.
- Domes allowed light into the rooms. This idea was further developed in the domes for mosques.
- Gutters redirected water away from the building.
- F Raised mosques were important for prayers, usually made five times a day.
- G This accommodation was suitable for summer.

Bazaars

Once goods reached the major cities they were sold in bazaars or markets. The Kapali Carsi or Covered Bazaar in Istanbul is typical of these. Although it has undergone many changes due to earthquakes and fires, it has still preserved the same basic layout. It is located just one kilometre from the shore and at the start of the major road running east through the city.

As well as a centre for trade, the bazaar also played an important role in bringing the local community together and became a place for meeting and socialising; a modern example is shown in **SOURCE 4**.

SOURCE 4 The Kapali Carsi in Istanbul



DID YOU KNOW?

The Kapali Carsi, which still operates today, contains over 4000 shops. The largest shopping centre in Australia, Chadstone Shopping Centre in Melbourne, contains about 530 shops.

At the heart of a bazaar was the bedestan. This was a stone building with a domed roof. The bedestan had doors that could be locked at night; this ensured the safe storage of luxury goods such as precious metals, gems and silk.

SOURCE 5 An account of a bedestan in Bursa, written by Turkish traveller Evliya Efendi (1611–1682) (From Joseph von Hammer's translation of *Narrative of travels on Europe, Asia and Africa in the Seventeenth Century* by Evliya Efendi, London, 1855, p. 12)

The Bedestan is a large building with four iron gates secured with iron chains; its cupola is supported by strong columns. It contains three hundred shops in each of which merchants reside, who are as rich as the kings of Egypt. The market of the goldsmiths is outside the Bedestan, and separate from it; the shops are all of stone. There are also the markets of the tailors, cotton-beaters, cap makers, thread merchants, drapers, linen merchants, cable merchants, and that called the market of the bride, where essence of roses, musk, ambergris, etc are sold.

Coffee houses

The first coffee came from the seeds of a tree in Ethiopia. Sufis — Islamic mystics — used a brew from the seeds in their devotional practice. In a ceremony called 'Remembrance of God', Sufis would go through long night sessions, reciting or chanting their love of God. Coffee was used as a stimulant to keep them awake.

Coffee was introduced to Istanbul in the early seventeenth century and men gathered in coffee houses to drink coffee, smoke tobacco and be entertained (see **SOURCES 6** and **7**).

Coffee houses were also centres of political discussion and, frequently, sultans would have them closed down or even burned down if their spies reported that mutinous talk was going on. Examples of this occurred during the reign of Murad IV (1623–1640).

The drinking of coffee and the café society spread from the Ottoman Empire to Vienna, Paris and London — and is very popular in Australia today.



SOURCE 6 A nineteenth-century illustration of a coffee house in Constantinople

SOURCE 7 Turkish traveller Evliya Efendi (1611–1682) writes about coffee houses. He is describing a coffee house in Bursa, former capital of the Ottoman Empire.

There are seventy-five coffee-houses each capable of holding a thousand persons, which are frequented by the most elegant and learned of the inhabitants; and three times a day singers and dancers execute a musical concert in them . . .

... All coffee-houses, and particularly those near the great mosque, abound with men skilled in a thousand arts. Dancing and pleasure continue the whole night, and in the morning everybody goes to the mosque. These coffee-houses became famous only since those of Constantinople were closed by the express command of Sultan Murad IV. There are also no less than ninety-seven Buza-houses, which are not to be equalled in the world; they are panelled with faience [coloured tiles], painted, each capable of accommodating one thousand men.

5.9 ACTIVITIES

- 1. Use the internet to find images of modern housing in Turkey. Compare these images to the description of housing during the Ottoman Empire. Do you believe housing styles have changed over the years? If so. Identifying continuity and change describe any key changes.
- 2. Read SOURCE 7.
 - (a) Think of a café that you've visited. It could be in your home city or anywhere in Australia.
 - (b) Compare the **SOURCE** 7 description of Ottoman coffee houses with your chosen café. Describe any similarities and differences.
 - (c) Do you think a place like the one described in **SOURCE 7** would be popular in Australia today? Justify your response. Using historical sources as evidence

5.9 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

5.9 Exercise 1: Check your understanding

- 1. **HS1** What were the selamlik and haremlik in a wealthy Ottoman house?
- 2. HS1 Identify and explain the original purpose of the veil worn by wealthy Muslim women.
- 3. **HS1** Were the rules around divorce the same for men and women in the Ottoman Empire?
- 4. HS1 Summarise what the Qur'an says about slavery.
- 5. **HS1** What role did children play in Ottoman society?
- 6. HS1 What was the reason for caravanseral being 30 kilometres apart?
- 7. **HS1** Why were the bedestans built to be secure?
- 8. **HS1** Explain how coffee was used as part of religious practice.
- 9. HS1 What reasons might Sultans have had for closing down coffee shops?

5.9 Exercise 2: Apply your understanding

- 1. HS3 is a house such as the one shown in SOURCE 1 more likely to have belonged to a rich family or a poor family? Explain.
- 2. HS3 What evidence does SOURCE 2 provide about:
 - (a) the rights of children in the Ottoman Empire
 - (b) the legal system in the Ottoman Empire?
- 3. HS3 Study SOURCE 3.
 - (a) What evidence is there in **SOURCE 3** that the caravanseral was built to accommodate prayer?
 - (b) What other feature common to mosques was often seen in caravanserai?
- 4. HS3 Compare the accounts provided in SOURCE 5 and 7. Which do you believe is more accurate and why?
- 5. **HS3 SOURCE 3** is an artist's impression of a caravanserai.
 - (a) Explain the purpose of caravanserai.
 - (b) What could be considered a modern equivalent of caravanserai?
 - (c) Is this image an example of a primary or secondary source? Explain your answer.
 - (d) Is this image a reliable historical source? Justify your answer.
- 6. HS3 Describe the scene depicted in SOURCE 6. Which groups of people can you identify and what do you believe is occurring in this source?
- 7. HS5 What effects did the Ottoman marketplace have on the Empire's ability to acquire new territories?
- 8. **HS6** Explain how a mere coffee shop could have a key role in Ottoman politics.
- 9. HS6 'The bazaar was the most important place in Ottoman society.' Evaluate the accuracy of this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

5.10 Ottoman art, architecture and literature

5.10.1 Art and architecture

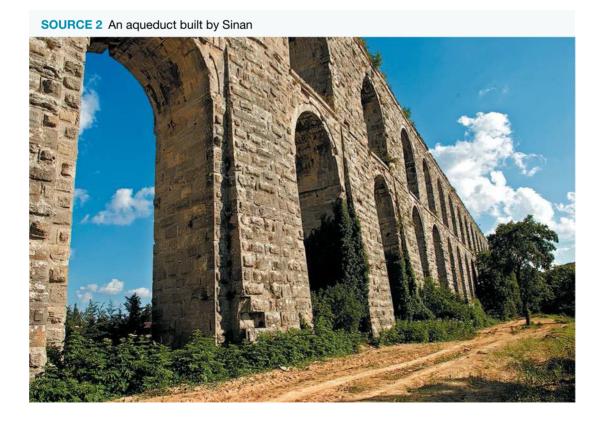
The modern world owes much to the Ottoman Empire. We have already discussed the achievements that occurred during the 'golden age of Islam'. Yet while most of Europe was in chaos for much of the Middle Ages, the Ottoman Empire continued to be a centre of learning and advancement. Without the achievements of the Ottoman Empire during the first millennium, much of the learning from ancient Greece, Rome and Egypt would have been lost forever. Many of the later advances in European philosophy and science either occurred because the Ottomans collected and translated the works of the ancients or were based on advances made by the Islamic people.

Ottoman architects continued traditions started by the Seljuk Turks. Common to Seljuk mosques, schools and caravanserai were tall doorways and pointed arches. Blue, white and black designs with floral or geometric patterns were often used to decorate walls.

SOURCE 1 A tile from an Istanbul mosque

Often a complex of buildings, called a *kulliye* surrounded a mosque. As well as the mosque, a kulliye in the former capital of Edirne contained separate buildings including a hospital, mental asylum and a bakery! A windowed dome over the mosque allowed the use of light to become a feature of Ottoman architecture.

It was under Suleiman and his architect Sinan (1489–1588) that Ottoman architecture reached its peak. One of Sinan's greatest achievements is the Suleiman Mosque, built in Istanbul from 1550. Its design mirrored that of the Christian church Hagia Sophia. In the structural features of the mosque, Sinan improved on the original. Sinan had discovered ways to incorporate supports within the structure so that fewer columns were needed; the Hagia Sophia had eight columns on each side but the Suleiman Mosque



had only two. Sinan also made extensive use of windows, giving a light-filled weightlessness to the building. Sinan's contributions also included great public works such as aqueducts bringing water into the city for fountains and Turkish baths.

Another common feature of Ottoman architecture, geometric design, can also be found in art from the same period. Islamic art rarely featured images of real life. Instead, circles, squares and pentagons are repeated in carefully arranged sequences. Examples of Islamic geometric design can be seen in **SOURCE 3**. With clear links to mathematics, these designs were meticulously painted onto mosques, libraries and other important buildings. Another popular form of art was calligraphy. The Qur'an was written in Arabic, so letters themselves were seen to have a sacred quality, and lettering became an art form.

SOURCE 3 The interior of the Shahzade Mosque in Istanbul. The construction of this mosque was ordered by Suleiman the Magnificent in 1543.



SOURCE 4 A painting by Bihzad showing the construction of a fort



5.10.2 Literature

Although most regions that converted to Islam adopted Arabic as their language, the Ottomans were different. They kept their Turkish language for day-to-day use but used Arabic script for writing. Their literature was, therefore, influenced by their traditional Turkish language, the Arabic language of Islam and the Persian language of neighbouring regions. Some Ottoman poets such as Fuzuli (c. 1483–1556) could write fluently in all three languages, while others who wrote mainly in Turkish would borrow words from Persian and Arabic.

The epics

One favourite form of literature was the epic. They were written down in the thirteenth century but were based on an oral tradition going back over hundreds of years to when the Turks were nomads in Central Asia. One of these epics was called *The Book of Dede Korkut*. It includes the story of a young prince, Uruz, who was captured by Georgians when his father was out hunting near the Georgian border (see **SOURCE 5**).

These works were usually in Turkish and were meant to be sung. Poetry dealt with basic human emotions; some common themes were the value of country life, the search for love and homesickness. However, some of the songs were religious. One of the most renowned composers was Yunus Emre (c. 1238–1320) (see **SOURCE 6**). He still influences Turkish poetry today.

SOURCE 5 An extract from *The Book of Dede Korkut*. Kazan returns from a hunting expedition without his son, and his wife questions him.

My prince, my warrior, Kazan! You rose up from your place and stood, With your son you leaped on to your black-maned

You sent out [to] hunt over the great mountains with their lovely folds,

You caught and laid low the long-necked deer, You loaded them on to your horses and turned homeward.

Two you went and one you came; where is my child?

Kazilik horse,

Where is my child whom I got in the dark night? My one prince is not to be seen, and my heart is on fire.

Kazan, have you let the boy fall from the overhanging rocks?

Have you let the mountain-lion eat him?

Or have you let him meet the infidel of dark religion?

SOURCE 6 A devotional poem by Yunus Emre

Knowledge is to understand To understand who you are. If you know not who you are What's the use of learning?

The aim in learning is
To understand God's Truth.
Because without knowledge
It is wasted hard labour.

Do not say: I know it all, I am obedient to my God. If you know not who God is That is sheer idle talk.

Twenty-eight syllables You read from end to end. You name the first 'alpha' What can it possibly mean?

Yunus Emre says also Let me receive what I need. The best possible thing Is to find perfect peace.

Translated by Taner Baybars

5.10.3 Modern influence

Modern-day Turkey is the country most heavily influenced by the Ottoman Empire. The influence of the Ottomans can be seen in its architecture, culture and political system. Although the Ottoman Empire was based on Islam, it showed tolerance of other religions; this is also reflected in Turkey's modern-day beliefs in secularism and tolerance. The vast extent of the Ottoman Empire has allowed its influence to spread to many other countries in the Middle East, and the Ottoman practice of allowing the common people a degree of self-government has influenced some modern governments. While it was far from perfect, the Ottoman Empire ranks alongside the Roman and Byzantine empires as one of the most powerful and long-lasting empires in world history. For many centuries, it was a major point of connection and interaction between the East and the West.

Islam is one of the world's great religions. It has over one and a half billion followers, making it the second largest religion. As can be seen in **SOURCE 8.** most followers of Islam live in the Middle East and Africa. But the religion is practised right around the world, including in Australia. An understanding of Islam is essential if we are to be active participants in our community. Islam has a great influence on Australian society and on international relations. Now you have an understanding of how Islam began and some of its important beliefs. You can now also appreciate some of the great advances made by Islam and the Ottoman Empire.

SOURCE 7 The Auburn Gallipoli Mosque in Sydney. The Ottoman-style mosque has been listed by the National Trust as an architecturally and culturally significant building.



NORTH AMERIC OCEAN AFRIC4 INDIAN OCEAN SOUTH 50-74

SOURCE 8 A map showing Islam in the modern world

Source: Map drawn by Spatial Vision.

5.10 ACTIVITIES

- 1. In groups of three to four people, investigate the legacies of the Ottoman Empire.
 - Step 1: Each group member identifies and describes (in paragraph form) what they believe to be the most significant contribution or aspect of the Ottoman Empire. Consider its legacy and the way it influenced the Ottoman culture and the wider world. Each group member justifies their opinion with evidence from this topic or from additional sources.
 - Step 2: Each group member then reads their response to the group. The other group members take their own notes and observations to be provided as feedback. This process is repeated until all group members have presented their opinions.
 - Step 3: Using the feedback from group members, each student rewrites their paragraphs and submits them to their teacher.

Determining historical significance

2. Using internet sources, find the current Muslim population in Australia and in the entire world.

Identifying continuity and change

5.10 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

5.10 Exercise 1: Check your understanding

- 1. **HS1** Describe the architectural features that were shared by Seljuk and Ottoman architecture.
- **2. HS1** What is a kulliye?
- 3. **HS1** Name one famous Ottoman architect and one building he constructed.
- 4. HS1 What way of life did the epics describe?
- 5. **HS1** Identify the two main forms that poetry and song took in Ottoman literature.
- 6. **HS1** Identify the main languages used by Ottoman poets and writers.
- 7. HS1 Identify the modern-day country that has been most heavily influenced by the Ottoman Empire and list the evidence of this historical influence.
- 8. **HS5** Discuss the origins of Turkey's secularism and religious tolerance.

5.10 Exercise 2: Apply your understanding

- 1. HS3 What does an aqueduct do? Why might it have been important to build an aqueduct like the one shown in SOURCE 2?
- 2. HS3 Examine SOURCE 3. What shapes can you see repeated in these images? What evidence is there in these images that suggests art and mathematics were closely linked?
- 3. HS3 Describe some of the activities being conducted in SOURCE 4. What does this tell us about the Ottomans?
- 4. HS3 Study SOURCE 5.
 - (a) What had actually happened to the boy?
 - (b) What three animals are mentioned?
 - (c) What did the mother fear had happened to him?
- 5. HS3 Carefully read SOURCE 6.
 - (a) In the first stanza, what does the poet say is the main reason for learning?
 - (b) How is the second stanza connected with religion?
 - (c) What does the poet include in the first line of the last stanza? (This was a common practice in Ottoman poetry of this period.) Why might this have been done?
- 6. HS3 Using SOURCE 8 and the information in the text, which parts of the world do most of the followers of Islam live in today?
- 7. **HS3** Compare **SOURCE 8** with some of the maps from earlier in the topic that show where Islam originated. (a) Is Islam still prevalent in the areas where it started?
 - (b) Where has Islam spread to since 750 CE?
- 8. HS6 What aspects might make the mosque shown in SOURCE 7 an 'architecturally and culturally' significant building?
- 9. HS3 Choose two of the historical sources used in this subtopic and evaluate their usefulness and reliability. When completing your evaluation, remember to describe the strengths and weaknesses of each source.
- 10. HS3 sources 5 and 6 are both examples of Ottoman literature, yet the stories they relate are quite different. Compare and contrast these sources by discussing their meaning, intended audience and purpose. You may wish to use a table to assist you in answering this question.
- **11. HS4** Identify and explain three ways in which the Ottoman Empire has influenced modern society. Include a ranking of these influences in your answer.
- 12. **HS6** What do you believe was the most significant contribution of the Ottoman Empire to the medieval world?
- **13. HS6** What do you believe was the most significant contribution of the Ottoman Empire to the modern world?
- **14. HS6** 'The Ottoman Empire does not deserve to be remembered in the same way as the empires of Rome and Greece.' Do you agree or disagree with this statement? Justify your response.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

5.11 SkillBuilder: Evaluating Ottoman Empire sources



Why should we test the accuracy, usefulness and reliability of Ottoman Empire sources?

We need to be very careful when using sources as they may be biased, or those who produced them may have been forced to tell only one side of the story.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.



5.12 Thinking Big research project: Ottoman Empire documentary

on line $\frac{1}{5}$

SCENARIO

You are a filmmaker and your next exciting project is to make a documentary about the historical legacies of the Ottoman Empire. Research the style and features of other documentaries to help create your film.

Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources

projectsPLUS Thinking Big research project: Ottoman Empire documentary (pro-0161)

5.13 Review



5.13.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

5.13.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31328)

Crossword (doc-31329)



Interactivity The Ottoman Empire crossword (int-7587)

KEY TERMS

caliph in Islamic countries, the chief civil and religious ruler and a successor to the Prophet Mohammed concubine a secondary wife, but usually of a lower social status and so not legally able to be married to a man in

dowry a payment of money or goods as part of a marriage agreement

eunuch a castrated man, especially one formerly employed by Oriental rulers as a harem guard or palace official harem the women in a Muslim household, including the mother, sisters, wives, concubines, daughters, entertainers and servants

revelation a communication or message from God

Sultan the king or sovereign of an Islamic country

5.11 SkillBuilder: Evaluating Ottoman Empire sources

5.11.1 Tell me

Sources of information on the Ottomans

As we have seen throughout this topic, there is a great variety of sources available to inform us about the Ottomans. Buildings, poems, artwork and other evidence survive from Ottoman times.

However, we cannot simply look at a source and draw a conclusion. Remember the picture of Suleiman the Magnificent created by someone who had never seen him or the description of the coffee houses where the author used the word 'thousand' a lot? These examples show we need to be very careful when using such sources as they may describe events in very different ways. This is because the creators of the sources may have been biased or they may have been forced to tell only one side of the story. They could be exaggerating to make their point, or words might have different meanings in different cultures or contexts. Historians often have to deal with gaps in evidence and this too can contribute to different interpretations of events.

Historians need to study a document or image closely in order to determine its suitability as a historical source. This involves an analysis of a source's strengths and weaknesses. Only after we test the accuracy, usefulness and reliability of a source can we truly know its value to a historical investigation.

5.11.2 Show me

How to interpret sources on the Ottomans

To be good historians, we need to be armed with the skills to interpret sources. We need to look critically at the source and ask ourselves several crucial questions:

- 1. Who made the source?
- 2. When was it made?
- 3. What do we know about the person who made it?
- 4. Is it a primary or a secondary source?
- 5. Can we tell if the source is accurate? Are there clues in the source that may suggest it is something other than a factual description?
- 6. What conclusions can we draw from the source?
- 7. Is the source useful? How does it assist our investigation?
- 8. Is the source reliable?

Interpreting written and visual sources

Read **SOURCE 1**. This is a description by the Greek historian Critobulus (c. 1410–1470) of the construction of the Topkapi Palace. He lived through the Ottoman destruction of the Byzantine Empire and later wrote an account of the rise of the Ottomans, their conquests and the early years of the rule of Sultan Mehmet II. His work is dedicated to the sultan. He lived on the island of Imbros and helped negotiate the peaceful handover of several islands to the control of the Ottomans.

SOURCE 1 From Critobulus of Imbros, quoted in *Architecture, Ceremonial, and Power: The Topkapi Palace in the Fifteenth and Sixteenth Centuries* by G. Necipoglu, Cambridge, Massachusetts: The MIT Press, 1991, p. 8

[The sultan] took care to summon the very best workmen from everywhere — masons and stonecutters and carpenters . . . For he was constructing great edifices which were to be worth seeing and should in every respect vie with the greatest and best of the past. For this reason he needed to give them the most careful oversight as to workmen and materials of many kinds and the best quality, and he also was concerned with the very many and great expenses and outlays.

Let's apply our questions to interpret this source.

- 1. Who made the source? Critobulus of Imbros
- 2. When was it made? The fifteenth century
- 3. What do we know about the person who made it? He was a Byzantine citizen who witnessed the Ottoman takeover.
- 4. *Is it a primary or a secondary source?* This is a primary source as it comes from the period being studied.
- 5. Can we tell if the source is accurate? Are there clues in the source that may suggest it is something other than a factual description? This source may be accurate as it comes from a person who was there at the time. However, the author seems to have approved of the Ottoman takeover, even to the extent of dedicating his work to the sultan. This may mean his account is biased.
- 6. What conclusions can we draw from the source? The palace was expensive to build, only the best craftsmen were used and the sultan took a great interest in the project.
- 7. *Is the source useful? How does it assist our investigation?* Being a primary source, albeit one that may be biased, this source is useful to our investigation.
- 8. *Is the source reliable?* Critobulus lived through the Ottoman conquest of the Byzantine Empire and, as such, he would have witnessed events firsthand. Although his account may be biased, it is still extremely valuable.

What if the source was an image, such as a work of art? The same questions can be just as usefully applied to a work of art. Study **SOURCE 2**.

SOURCE 2 An 1876 painting by French artist Jean-Joseph Benjamin-Constant, depicting the entry of Mehmet II into Constantinople after its capture in 1453. The artist had grown to appreciate the Islamic and Eastern cultures after a journey to Morocco in 1872.



- 1. Who made the source? Jean-Joseph Benjamin-Constant
- 2. When was it made? 1876
- 3. What do we know about the person who made it? He was a French artist.
- 4. *Is it a primary or a secondary source?* This source was created many years after the event being depicted, so it is a secondary source.
- 5. Can we tell if the source is accurate? Are there clues in the source that may suggest it is something other than a factual description? This source was created well after the event by a person who was not there. It is known the artist had an affinity with the culture he was portraying; therefore, the work may be biased.
- 6. What conclusions can we draw from the source? The capture of Constantinople was viewed as a significant event, both at the time it happened and hundreds of years later.
- 7. Is the source useful? How does it assist our investigation? Although historians usually prefer to use primary sources, secondary sources such as **SOURCE 2** still have their usefulness. Paintings and artistic depictions of historical events allow us to visualise what might have taken place. In this way, **SOURCE 2** is indeed useful to our investigation.
- 8. *Is the source reliable?* The painting in **SOURCE 2** is an artistic depiction of a historical event and as such is not strictly speaking reliable for our historical investigation of the Ottoman Empire.

5.11.3 Let me do it

Complete the following activities to practise this skill.

5.11 ACTIVITIES

- 1. Use the following questions to interpret **SOURCES 3** and **4**.
 - (a) Who made the source?
 - (b) When was it made?
 - (c) What do we know about the person who made it?
 - (d) Is it a primary or a secondary source?
 - (e) Can we tell if the source is accurate? Are there clues in the source that may suggest it is something other than a factual description?
 - (f) What conclusions can we draw from the source?
 - (g) Is the source useful? How does it assist our investigation?
 - (h) Is the source reliable?

SOURCE 3 An account from the French ambassador Philippe du Fresne-Canaye who led an embassy in 1573 to the Ottoman Empire (quoted in *Architecture, Ceremonial, and Power: The Topkapi Palace in the Fifteenth and Sixteenth Centuries* by G. Necipoglu, Cambridge, Massachusetts: The MIT Press, 1991, pp. 64–6)

At the right hand was seated the Agha of Janissaries, very near the gate, and next to him some of the highest grandees of the court. The Ambassador saluted them with his head and they got up from their seats and bowed to him. And at a given moment all the Janissaries and other soldiers who had been standing upright and without weapons along the wall of that court did the same, in such a way that seeing so many turbans incline together was like observing a fast field of ripe corn moving gently under the light puff of Zephyr... We looked with great pleasure and even greater admiration at this frightful number of Janissaries and other soldiers standing all along the walls of this court, with hands joined in front in the manner of monks, in such silence that it seemed we were not looking at men but statues. And they remained immobile in that way more than seven hours, without talking or moving. Certainly it is most impossible to comprehend this discipline and this obedience when one has not seen it . . .

SOURCE 4 A seventeenth-century German watercolour depicting a Turkish bath and steam room in Constantinople. Such baths were important in Ottoman culture during the seventeenth century.

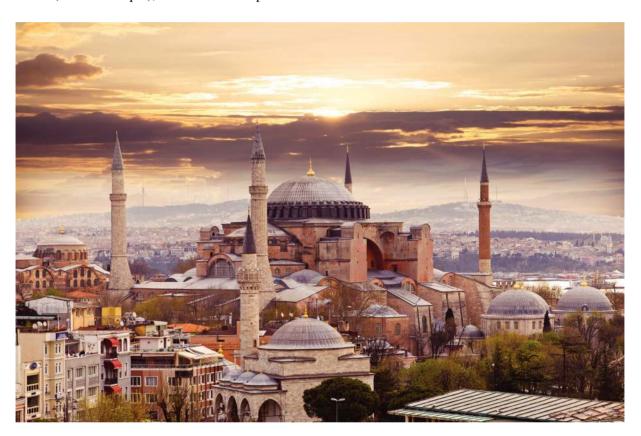


- 2. Based on your analysis of the sources in this SkillBuilder, answer the following questions:
 - (a) Identify the primary and secondary sources in this SkillBuilder.
 - (b) Which sources do you believe are the most useful and why?
 - (c) Which sources do you believe are the most reliable and why?
 - (d) Do any of the sources contain bias? If so, which source has the strongest bias?
 - (e) In your opinion, what kind of historical source provides the best insight into an event?

5.12 Thinking Big research project: Ottoman Empire documentary

Scenario

Some legacies of past civilisations have passed the test of time and still stand proudly for us to see. Other legacies are more subtle but can be found in modern customs, language and even in the subjects that we learn at school. The legacies of the Ottoman Empire are some of the most diverse and important gifts that have been left to the modern world. From the origin of mathematics to the breathtaking buildings of Istanbul (Constantinople), the Ottoman Empire left an indelible mark on the world.



Task

There have probably been thousands of historical documentaries made before. When you think back to the ones that you have watched yourself, what stands out to you? What kind of techniques did the film maker use to engage the viewer? What made you keep watching the film? Maybe the documentary used historical re-enactment footage, or perhaps the voiceover was particularly well written and delivered. Your task is to consider these features as you make your own documentary about the historical legacies of the Ottoman Empire. The specific format of your documentary is up to you – it can be a series of images with a voice-over or you can dress up with some friends to record 'historical re-enactments' or mock interviews.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in small groups will enable you to share responsibility for the project. Save your settings and the project will be launched.
- The first step in making your documentary is research! Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered. In the **Media centre** you will find an assessment rubric to guide your work.
- Use the internet and/or your school's library resources to research the legacies of the Ottoman Empire. Start your research with a broad view and then narrow in on some specific areas.
- Once you have found reliable and useful information, document your findings in the form of notes. These can be shared in the Research forum. You will need these notes later, so make sure they are accurate and that they contain references to both primary and secondary sources. You should also have a range of visual sources to be used in your documentary. You will need to submit your notes to your teacher at the end of the project.
- Now it's time to plan the documentary itself. What kind of format do you think would work the best? Perhaps you could simply play visual images and record a voice-over to accompany the images. Try using a storyboard to order your information.
- Write a script for your documentary. Avoid making up your voice-over on the spot. Instead, carefully
 plan what you want to say. Even if you are doing something creative like dressing up and pretending to
 interview a historical figure, everything that you say in your video should be written down in your
 script.
- Before you start filming, make sure that you have all the materials that you need for your documentary.
- When filming, chose a quiet location and use microphones (if they are available) to improve the sound quality of your video.
- Submit your documentary to your teacher for assessment and feedback. Perhaps hold a film festival in class to showcase every documentary.





ProjectsPLUS Ottoman Empire documentary (pro-0161)

5.13 Review

5.13.1 Key knowledge summary

5.2 Examining the evidence

- To discover information about the Ottoman Empire, archaeologists and historians can study written sources, artwork, oral traditions and archaeological discoveries.
- Ottoman architecture, such as the Topkapi Palace, is a rich source of information about the Ottoman lifestyle, culture and technology.

5.3 Origins of the Empire

- The rise of the Ottoman Empire can be linked to the growth of Islam and influence of Mohammed, who was the founder of the religion.
- Initial uncertainty about and, in some cases, fear of the influence of Mohammed halted the spread of Islam for a time.
- In a way, Mohammed's exile and subsequent return was a turning point in the development of the Islamic religion.

5.4 The golden age of Islam

- While academic and cultural developments stagnated in much of Europe during the medieval period, the Islamic (and later the Ottoman) Empire became a centre for knowledge and learning.
- Translated copies of Greek and Roman scholars fuelled developments in science, mathematics, astronomy, literature, art and architecture.

5.5 The beginnings of the Ottoman Empire

- A series of wars in nearby states left those states vulnerable to outside forces, exposing new lands and territories to Islam and Ottoman culture.
- The Ottoman's role in trade and a highly organised Ottoman army and well-planned military strategies assisted the expansion of the empire.
- As the Ottoman Empire expanded, strategies and policies were developed to help control conquered peoples, including religious tolerance and the invention of taxation systems.
- By allowing conquered people and nations to retain their religious beliefs and customs, Ottoman rulers gained respect and reduced the possibility of revolt and disobedience.

5.6 The Black Death and the Ottoman Empire

- The rapid expansion of the early Ottoman Empire was negatively affected by the Crusades. Launched partially in response to the capture of Jerusalem and other holy cities, the Crusades were aimed at restoring Christian rule to the area.
- For over two hundred years, control of the Middle East slipped from one group to the other, all the while affecting the Ottomans' plans for imperial expansion.
- The Ottoman Empire was also affected by several waves of the Black Death. Although the disease did not have the same impact on the Ottomans as it did on much of Europe, a significant number of Ottoman citizens were killed by the Black Death.

5.7 The fall of Constantinople

- A significant moment in the rise of the Ottoman Empire, the Battle of Constantinople was seen as one of the most significant events in Ottoman history.
- Complex military strategies were used to overcome the once-mighty Byzantine forces that occupied the city.
- The eventual fall of Constantinople is also used to mark the final chapter of the Roman Empire.

5.8 Suleiman the Magnificent

• Several Ottoman rulers' incredible accomplishments contributed to the expansion of the Empire. Yet out of these rulers, the impact of Suleiman the Magnificent remains the most significant.

Ruling from 1520 until his death in 1566, Suleiman (also known as 'the Lawgiver') conquered much
of eastern Europe, oversaw incredible academic and cultural achievements, and implemented
revolutionary social and legal changes that united followers of Islam.

5.9 Life in the Ottoman Empire

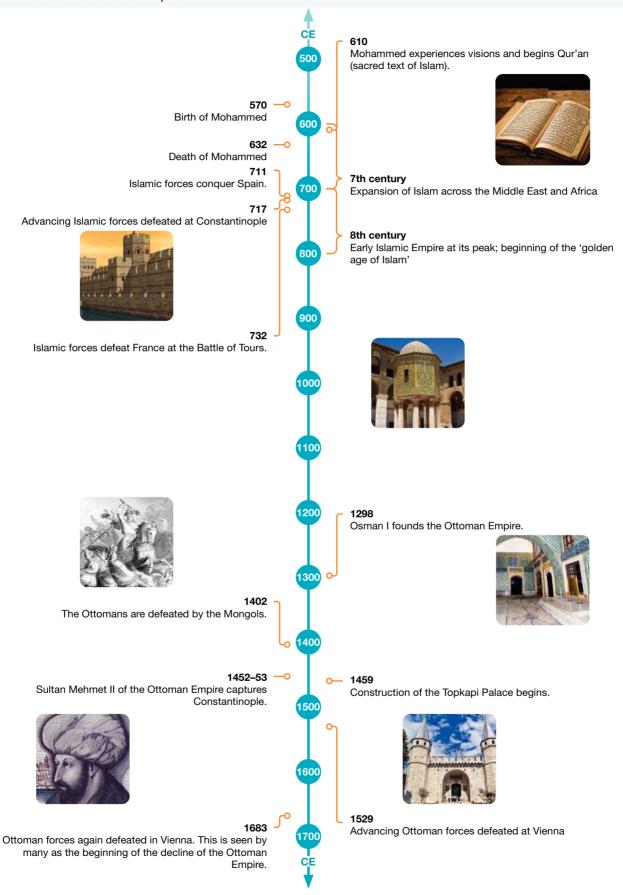
- Ottoman social, cultural, economic, environmental and political features were largely formed on the basis of their nomadic background.
- Due to a history of nomadic wandering and trade, Ottoman villages and cities grew to reflect the traditional caravanserai that dotted the area.
- Bazaars and coffee shops quickly became important focal points of Ottoman life. Control over these and other social features also became a crucial element of a sultan's rule.

5.10 Ottoman art, architecture and literature

- The achievements of the Ottomans were so important that many historians believe that the origins of the Renaissance stem from the scholars of this incredible empire.
- The building programs of Suleiman the Magnificent and his advisor and architect, Sinan, have left lasting legacies around the Middle East.
- The artistic and architectural styles developed during this time quickly spread around the Islamic and Western worlds.



A timeline of the Ottoman Empire



5.13.2 Reflection

Complete the following to reflect on your learning.

5.13 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Trade, military strength and a love of learning. What influenced the rise and fall of the Ottoman Empire?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



eWorkbook Reflection (doc-31328)

Crossword (doc-31329)



Interactivity The Ottoman Empire crossword (int-7587)

KEY TERMS

caliph in Islamic countries, the chief civil and religious ruler and a successor to the Prophet Mohammed **concubine** a secondary wife, but usually of a lower social status and so not legally able to be married to a man in a position of power

dowry a payment of money or goods as part of a marriage agreement

eunuch a castrated man, especially one formerly employed by Oriental rulers as a harem guard or palace official **harem** the women in a Muslim household, including the mother, sisters, wives, concubines, daughters, entertainers and servants

revelation a communication or message from God

Sultan the king or sovereign of an Islamic country

6 Angkor and the Khmer Empire (c. 802–1431)

6.1 Overview

Kings, wars and a city of temples. How did the Khmer Empire rise so high, and what caused its downfall?

6.1.1 Links with our times

Until the 1970s, many Australians viewed South-East Asia with suspicion and some imagined that Australia might be invaded. Few Australians understood the history and culture of these countries. Today, we have close ties with several countries in South-East Asia and some are popular destinations for Australian travellers, including Cambodia. However, you may not know that Cambodia was once the centre of a great empire that controlled most of mainland South-East Asia, an empire that built amazing temple complexes that are now visited by millions of people.

To understand any country or region, you need to know its history. In this topic, you will learn about mainland South-East Asia, particularly Cambodia, between the ninth and fourteenth centuries. As you will discover, this region's history is as rich and exciting as that of any place on Earth.



LEARNING SEQUENCE

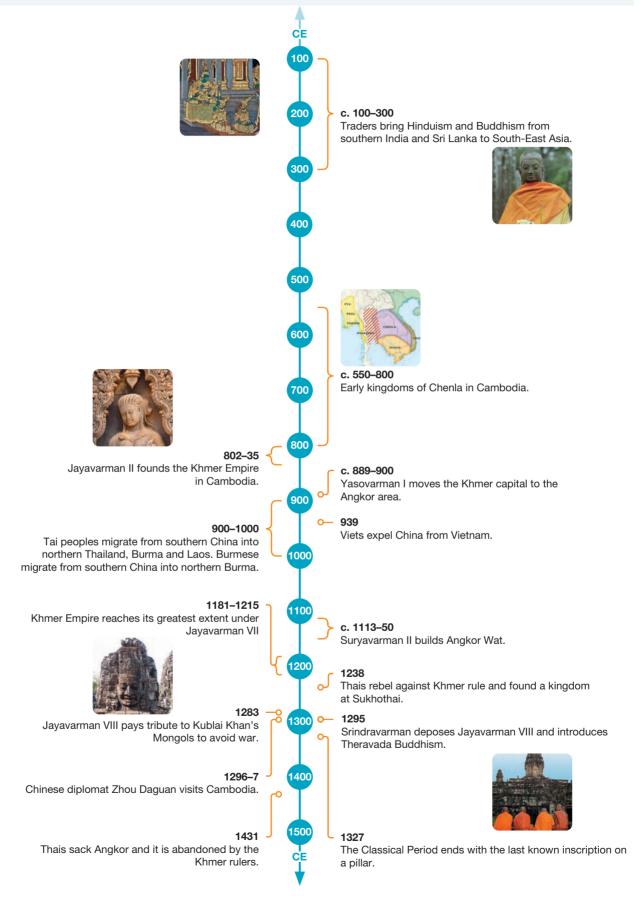
- **6.1** Overview
- 6.2 Examining the evidence
- **6.3** Environment and peoples
- 6.4 The historical setting
- 6.5 The rise of Angkor and the Khmer Empire
- 6.6 Religious beliefs and values
- 6.7 Khmer society
- **6.8** Angkor's buildings
- 6.9 Decline and fall: the historical debate
- 6.10 Legacies of the Khmer Empire
- 6.11 SkillBuilder: Making your own notes to analyse relevant sources
- 6.12 Thinking Big research project: Khmer Empire costume and set design

6.13 Review



To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.

A timeline of the Khmer Empire



6.2 Examining the evidence

6.2.1 How do we know about Angkor and the Khmer Empire?

In this topic, we will be studying South-East Asia during the time of the Middle Ages in Europe. Many historians call this the Classical Period of South-East Asia because it was a time when powerful states emerged, along with great achievements in art and architecture. You will notice some remarkable similarities between China, India and some ancient civilisations of the Mediterranean region; however, you will also notice great differences.

The main focus of this topic will be on the Khmer Empire, which was based in Cambodia from about 802 to 1431. To understand how Khmer society developed, we need to examine the bigger picture and study how this civilisation fits in the history of South-East Asia as a region. Khmer society both influenced and was influenced by neighbouring civilisations. This is because at its height the Khmer Empire controlled much of modern Thailand, Laos and Vietnam.

Legendary history

Many details of the history of South-East Asian societies are still a mystery. Like the ancient Greeks, Romans, Chinese and others, these societies had legends about their origins. However, these legends are sometimes contradicted by other sources. For example, there are legends that place **Tai** peoples in northern Thailand long before archaeological evidence does.

Inscriptions and other written sources

The only written primary sources from most South-East Asian societies during this period are inscriptions on materials such as stone pillars and gold foil. Sources from other societies can provide more information. For example, Chinese records discuss contact with parts of South-East Asia. The most useful of these is an account written by Zhou Daguan, a Chinese diplomat who stayed at the **Khmer** royal court at Angkor in 1296–97. Also, from the sixteenth century, we have records from European contacts.

SOURCE 1 A relief sculpture at the Bayon Temple in Angkor Thom, Cambodia. It was carved between the end of the twelfth century and the beginning of the thirteenth century. It depicts the Khmer army going to war against Champa, a Hindu kingdom that controlled much of central and southern Vietnam until the late fifteenth century.



Archaeological evidence

The most striking evidence comes from archaeological sites, especially temples. The most impressive of all the temple complexes is at Angkor, the capital of the Khmer Empire at the height of its power. Angkor's temples were originally **Hindu** temples, but they later became **Buddhist** temples and had images of the **Buddha** added to them. Inscriptions in the Angkor temples tell us about religion and rulers. Relief sculptures, such as the one in **SOURCE 1**, show scenes that include peasants ploughing fields, women in childbirth, market scenes, palace life and soldiers going to war. Evidence from Angkor also helps us to gain an understanding of neighbouring societies such as the emerging kingdoms in Thailand that were influenced by Angkor.

SOURCE 2 Enormous sculpted faces tower over the Bayon Temple at Angkor.



SOURCE 3 A relief sculpture at Angkor



6.2 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

6.2 Exercise 1: Check your understanding

- 1. HS1 When was the Khmer Empire dominant in Cambodia?
- 2. **HS1** Who were the Tai?
- 3. HS1 What written primary sources are there from this period?
- 4. HS1 List some important sources of information about South-East Asian societies.
- 5. HS1 What evidence of South-East Asia can be found at the archaeological site at Angkor?

6.2 Exercise 2: Apply your understanding

- 1. HS3 Study SOURCE 1.
 - (a) Describe the details of this relief sculpture.
 - (b) How are the Khmer soldiers dressed and armed?

- (c) Who do you think the figure on the elephant would most likely be? Why?
- (d) What role do you think elephants might have played in such wars?
- (e) What attitude to war is conveyed by this sculpture?
- 2. HS3 What kinds of crafts or skills would have been needed to create SOURCES 1, 2 and 3?
- 3. HS3 How would a society have to be organised to enable it to create such works?
- **4. HS3** Write three questions you would use to focus your research if you were using **SOURCES 2** and **3** as evidence for an investigation of the history of Angkor.
- **5. HS3** Of what kind of products would Khmer society have needed a surplus to enable vast numbers of people to be employed creating the types of structures shown in the sources in this subtopic?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

6.3 Environment and peoples

6.3.1 Geographical features

South-East Asia consists of the countries north of Australia, south of China and east of India. Although Vietnam was strongly influenced by Chinese culture, Indian influences dominated in Burma (now Myanmar), Thailand, Laos and Cambodia. The geography of this region played a key role in shaping its history.

Almost all of South-East Asia lies in the tropics and most of the region has a hot and humid monsoon climate. This means it has wet and dry seasons; a cool season generally occurs only in upland areas.

It is a region of geographical contrasts. There are heavily cropped river valleys such as the Mekong delta in Vietnam. There are dense rainforests such as those in western Malaysia, and there is a dry zone in Burma and north-eastern Thailand. Traditionally, populations have been most concentrated in lowlands and along rivers, lakes and coasts. Such places provided fresh water, fertile soils for growing crops and access to the sea for trading.

Maritime South-East Asia

Geographers divide South-East Asia into two broad areas: maritime and mainland. Maritime South-East Asia is made up of Indonesia, Malaysia, Brunei, Singapore, the Philippines and Timor-Leste (East Timor). Hinduism was the first major religion in maritime South-East Asia with Hindu states in Java and Sumatra (now parts of Indonesia). However, Muslim traders brought Islam to Indonesia and Malaysia in the thirteenth and fourteenth centuries and it quickly became the dominant religion. The Philippines and Timor-Leste have mostly Roman Catholic populations because they were colonised by the Portuguese and the Spanish.

Mainland South-East Asia

This is made up of Burma, Thailand, Laos, Cambodia and Vietnam. In these countries the dominant religion is **Theravada Buddhism**, which will be explored later in this topic.

DID YOU KNOW?

The earliest South-East Asian civilisation was the Hindu state of Srivijaya, based on the Indonesian island of Sumatra. Between the sixth and thirteenth centuries, Srivijaya was a trading empire that controlled the Strait of Malacca. Its sailors travelled between India and China exchanging goods from as far as Persia for Chinese silks and porcelains.

Hangzhou Huangshi. Ningbo CHINA Key Hanoi • Capital city BHUTAN Thimphu INDIA Medan • Citv Hengyang Guiyang Fuzhou LAOS Country Yungui Plateau Taipei Guiline Quanzhou \$ Kunming Liuzhou Guangzho Wetlands Taichung Foshan Shenzhen BANGLADESH Tropic of Cancer TAIWAN an Plateau Hanoi Zhanjiang MYANMAR Haiphong Babuyan Navovidaw -Thanh Hoa Islands Vientiane, Paracel Luzon Islands Tarlac • Cabanatuan VIETNAM THAILAND Manila Quezon City SOUTH Bangkok Andaman CHINA CAMBODIA PHILIPPINES Islands Phnom Penh Ho Chi Minh City SEA Palawan Gulf of CanTho Spratly Islands Nicobar Phuke Mindanac Islands Island Great Nicobai Sulu Bandar Seri Begawan Archipelago MALAYSIA BRUNE §Talaud Islands Kuala Lumpur Sangihe Simeulue SINGAPORE Nias Halmahera Batu Islands Equator Padang Bangka South Pagai Maoke Uiuna d Enggano Aru Islands FLORES SEA • Dili Islands Flores TIMOR-LESTE Gulf of 1000 **AUSTRALIA** kilometres

SOURCE 1 A map of modern-day South-East Asia showing landforms, rivers and cities with a population of over 1 million people

Source: Spatial Vision.

6.3.2 Peoples in South-East Asia

Many different peoples and cultures have shaped the history of South-East Asia.

- Austro-Melanesian peoples arrived about 70 000 years ago. They are now only a tiny minority in South-East Asia.
- Malays probably migrated from southern China from about 2500 BCE, settling in the Philippines, Malaysia and Indonesia.
- Vietnamese migrated from China to northern Vietnam before the second century BCE.
- The Chams probably migrated from Borneo to southern Vietnam before the second century BCE (see SOURCE 2).
- Mon peoples and related Khmers spread across South-East Asia from southern Burma into Thailand, Cambodia and southern Vietnam in the early centuries CE.
- Tai peoples migrated from southern China mainly into Thailand, Laos, northern Burma and north-western Vietnam in the tenth century CE (see **SOURCE 3**).

SOURCE 2 The Ponagar Towers in Nha Trang, Vietnam, were built by the Chams between the seventh and twelfth centuries CE. They are the best-preserved relics of the Champa civilisation, which was often at war with the Khmer Empire.



SOURCE 3 This Buddhist chedhi (tower) in northern Thailand is believed to have been built around 1100 CE.



People and environment of Angkor

The Khmer homeland, Cambodia, receives an enormous amount of rain during its six-month-long wet season but almost none during its dry season. This meant that settlement was possible only along the rivers. From the ninth century, vast reservoirs were built at Angkor. Over the following centuries, a complicated system of moats and canals was built. The Khmer were able to produce three rice crops each year. This made it possible to feed a large population and to provide the surplus needed to build and maintain Angkor's great temples.

6.3 ACTIVITY

Create a mind map to demonstrate your understanding of where and when the Khmers, Chams, Vietnamese and Tais settled in mainland South-East Asia and the geographical features that enabled their civilisations to develop where they did. Identifying continuity and change

6.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

6.3 Exercise 1: Check your understanding

- 1. **HS1** Geographers divide South-East Asia into which two broad areas?
- 2. HS1 Which countries make up mainland South-East Asia?
- 3. HS1 Why have South-East Asian populations been concentrated mainly in lowlands along rivers, lakes and coasts?
- 4. HS1 Where did the Khmer peoples originate?
- 5. **HS1** Where did the Vietnamese, Chams and Tais come from?
- 6. HS1 Why were Khmer settlements in Cambodia only possible along the rivers?

6.3 Exercise 2: Apply your understanding

- 1. HS3 Use SOURCE 1 to locate the position of the capitals and other major cities in mainland South-East Asia. What geographic features would explain why they grew there?
- 2. HS3 Angkor, the centre of the Khmer Empire, is located near Siem Reap in Cambodia. Using SOURCE 1, locate Siem Reap and suggest what geographical feature could have helped Angkor to develop there.
- 3. HS3 Using SOURCES 2 and 3 as your evidence, what can you tell about the cultures of the Chams and Tais, whose civilisations developed around the time of the Khmer Empire?
- 4. HS6 Explain the historical significance of migrations between the third century BCE and the tenth century CE in shaping the cultural diversity that exists in South-East Asia today.
- 5. HS5 The Ponagar Towers in SOURCE 2 are some of the very few remaining traces of the Champa civilisation. What could be a possible cause for few other traces remaining?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

6.4 The historical setting

6.4.1 Meet the neighbours

In the ninth century, the Khmer king Jayavarman II founded the Khmer Empire in Cambodia. It became the most powerful state in South-East Asia. By the twelfth century it included much of Thailand, Laos and Southern Vietnam. To understand how Angkor was able to hold such power, we need to look at the states around it. There were many kingdoms in mainland South-East Asia during the period of the Khmer Empire.

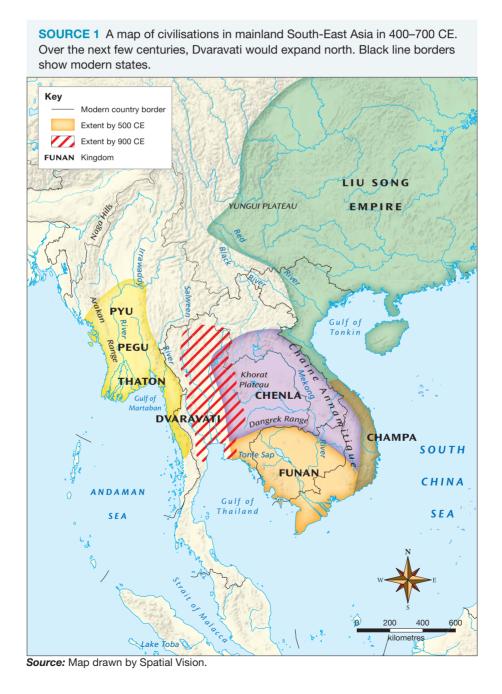
Burma

 People called the Pyu had kingdoms in upper Burma between the first and eleventh centuries CE. They practised Theravada Buddhism.

- The Mon people in Burma adopted Theravada Buddhism and are believed to have founded the kingdoms of Thaton and Pegu in lower Burma in the ninth century.
- The Bamar (Burman) people founded the city of Bagan in upper Burma in the eleventh century. Its remains include a massive Buddhist temple complex. From 1057 CE, Bagan controlled a vast Burmese empire until it was crushed by invading Mongols in 1287.

Thailand and Laos

- In the sixth century, the Mon founded a network of Theravada Buddhist city-states called the kingdom of Dvaravati along Thailand's Chao Phraya valley. They founded Haripunchai in northern Thailand in the ninth century. When the Khmer invaded, the Mon perished or were assimilated.
- In the thirteenth century, the Tai kingdom of Lan Na came to power in northern Thailand. In central Thailand, Sukhothai was the most powerful of the Tai states from 1238 to 1350. The main threat to these states came from Burma. Tai peoples also occupied the lowlands of Laos.



Cambodia

- From the third century to the seventh century, the civilisation of Funan covered much of Cambodia. The people of Funan were Khmers and Mons. Funan adopted Hinduism from India.
- From about 630 to 802, a collection of Hindu states called Chenla existed north of Funan in northern Cambodia, southern Laos and eastern Thailand.

Vietnam

- In 207 BCE the state of Nam-Viet was proclaimed in what is now northern Vietnam. A century later, China made it part of its empire. It remained under Chinese control until 939 CE when Vietnam broke away and formed the state of Dai Viet. This state had to resist several Chinese attempts to regain control.
- What is now the coastal part of southern Vietnam was then the Hindu state of Champa. From the eleventh century, Vietnam gradually spread south, taking territory from Champa. Yet in the twelfth century, Champa was powerful enough to attack the Khmer Empire.



Source: Map drawn by Spatial Vision.

Between the ninth century and the twelfth century, most states bordering the Khmer Empire were small and were struggling to establish themselves. The Tai peoples' main enemies were the Burmese, and the Viets were concerned with the Chinese and Champa. This situation helped the Khmer Empire to expand. However, once strong and united states emerged in Thailand and Vietnam, the Khmer Empire would be under threat.

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• The Asia-Pacific world > Khmer Empire

6.4 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

6.4 Exercise 1: Check your understanding

- 1. **HS1** Who founded the Khmer Empire in the ninth century?
- 2. HS1 Which kingdoms were founded by the Mon in Burma and Thailand by the ninth century?
- 3. HS1 Where was Bagan and which people founded it?
- 4. HS1 Name the kingdom founded by Tai people in central Thailand in the thirteenth century.
- 5. HS1 In 207 BCE which state was proclaimed in what is now northern Vietnam?

6.4 Exercise 2: Apply your understanding

- 1. **HS3** Study **SOURCES 1** and **2** and compare them with the map of modern-day South-East Asia in subtopic 6.3.
 - (a) Which two civilisations occupied Cambodia in the period 400-700 CE?
 - (b) In what modern country are Haripunchai and Sukhothai?
 - (c) Approximately what proportion of modern Vietnam was in Champa?
 - (d) What modern countries were included in the Khmer (Cambodian) Empire by c. 1200?
 - (e) Which civilisation appeared to dominate mainland South-East Asia in 1200?
- 2. **HS4** Using the sources and information in this subtopic, describe the changes that occurred in Cambodia between the third century and the twelfth century.
- **3. HS5** Explain how the situation in the Khmer Empire's neighbouring states enabled it to expand until the thirteenth century.
- **4. HS4** Comparing **SOURCES 1** and **2**, calculate the approximate percentage growth in size of the territory controlled by Khmers over the period between these two maps.
- 5. HS4 In what geographical area did most of this expansion occur?

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6.5 The rise of Angkor and the Khmer Empire

6.5.1 The Khmer Empire to the twelfth century

Until 802 CE, Cambodia (then called Kambuja or Kambujadesa) appears to have been a group of weak states ruled by princes and dominated by the Hindu kingdom of Java (in modern-day Indonesia). At the end of the eighth century, a Khmer prince returned to Cambodia from the Javanese royal court. The Khmer kingdom began in 802 when the prince declared Cambodia's independence and proclaimed himself to be the God-King Jayavarman II.

Jayavarman II established four capitals for his kingdom. The most important of these would be Hariharalaya (now called Roluos) on the northern shore of **Tonle Sap** (near the modern city of Siem Reap). He used wars, alliances and marriages to expand the area under his control. He built several Hindu

temples. These and the temples built by his successors served as the **mausoleums** of the Khmer kings when they died.

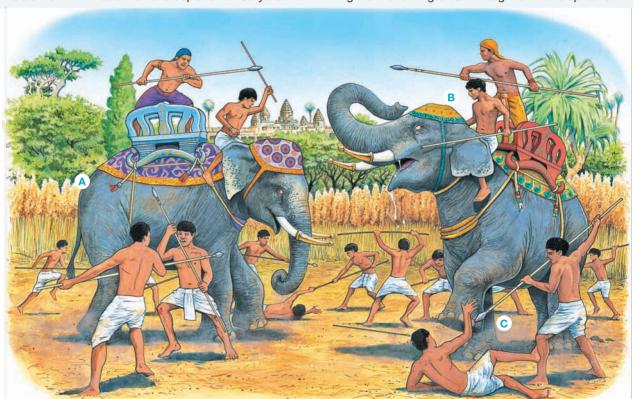
Jayavarman II's successors went on building temples and expanding the empire. Yasovarman I (who ruled from 889 to 900) constructed a new capital called Yasodharapura and a gigantic reservoir measuring 7.5 kilometres by 1.8 kilometres in the Angkor area. In 953, Rajendravarman II (944–968) built a series of temples at Angkor, and during his reign the Khmers had their first war with Champa. Under his son, Jayavarman V (968–1001), the Khmer court became a centre for scholars and artists.

Suryavarman II

The decades after Jayavarman V's death were years of fierce power struggles among the Khmer ruling class in which kings were overthrown by their rivals. According to a Khmer inscription, Suryavarman II (1113–1150) came to power after killing a rival prince in a battle fought on war elephants. He extended the Khmer Empire by conquering Haripunchai and south-western Thailand up to the border with Bagan. In the east and north he took several provinces of Champa and expanded north to the present southern border of Laos. Such expansion did not necessarily mean direct Khmer rule. In many places it was simply a matter of local rulers acknowledging the Khmer king as their overlord.

DID YOU KNOW?

Khmer armies used war elephants, cavalry and infantry armed with spears, bows and swords. Elephants were probably first used in war in ancient India. Their use continued in later times because they were effective in breaking up and crushing enemy infantry.



SOURCE 1 A modern artist's depiction of Suryavarman II killing his rival during a battle fought on war elephants

- A Evidence suggests the Khmer armies used elephants in battle.
- B A person called a mahout sat on the elephant's neck and used a stick to control the elephant.
- Spears were one of the types of weapons used by the Khmer.

Suryavarman II also commenced the construction of the greatest of all the Khmer temples, Angkor Wat. It was built in just 37 years and dedicated to the Hindu god Vishnu. After Suryavarman II's death, the Cham invaded the Khmer Empire in 1177, rowing up the Mekong River and across Tonle Sap in war canoes. They sacked the Khmer capital and killed King Tribhuvanadityavarman.

6.5.2 Jayavarman VII, greatest of the Khmer rulers?

The next Khmer king was Jayavarman VII (1181–c. 1218), who is regarded as the greatest of all Khmer rulers. His history is known mainly through inscriptions and works of art. His name means 'victorious warrior'. In 1178, after the Cham invaders sacked Yasodharapura, the Khmer capital, and killed King Tribhuvanadityavarman, Jayavarman led a Khmer army that fought to drive the Cham out. His battles on land and water are depicted on the walls of the Bayon Temple in Angkor Thom (see **SOURCES 3** and **4**). He put an end to the claims of his rivals for the kingship and was

SOURCE 2 Part of the amazing Angkor Wat, commenced under Suryavarman II

crowned in 1181. He waged war against Champa for 22 years, conquering its land and extending the Khmer Empire to the southern shores of Vietnam (see **SOURCE 5**). During his long rule, the Khmer Empire reached the greatest extent of its territory and the height of its power.



SOURCE 3 A relief sculpture on the Bayon Temple depicting Cham soldiers in

SOURCE 4 A war scene in a relief sculpture on the Bayon Temple

SOURCE 5 Khmer expansion under Jayavarman VII, from the National Museum of Cambodia

During his reign, the Cambodian kingdom spanned a huge area; extending beyond the Menam Basin to the west (the Bayon inscription mentions the existence of two statues of divinities [gods] guarding the cities of Ratchaburi and Phetburi in Thailand), as far as the seacoast of Champa to the east, as far as the city of Sukhothai . . . in the north, all the way down to the southern sea. At the time the Khmers were trading with China, India and other countries of Asia Minor.

Religious changes

Varieties of Buddhism had long been practiced alongside Hinduism but Jayavarman VII was a follower of Mahayana Buddhism and, in a truly revolutionary step, he made this the new state religion of the Khmer Empire. His great building program may have been partly aimed at introducing his mainly Hindu population to the symbols of Buddhism, which were provided in sculptures that adorned his temples.

A great building program

According to an inscription discovered in Laos, Jayavarman VII wanted to turn his kingdom into an earthly paradise. He conducted a massive program of public works, building 102 hospitals, many reservoirs, roads with 121 rest houses along them and several temples. The temples included Ta Prohm, in honour of his mother, and Neak Khan, to honour his father. His greatest construction was the capital city, Angkor Thom (meaning 'great city'). Angkor Thom included the Bayon Temple (see subtopic 6.8). The construction of Angkor Thom was probably partly a reaction to the sacking of the Khmer capital. Angkor Thom was built with massive walls surrounded by a moat to deter any future invaders. Like other Khmer temples, Angkor Thom also provided for agriculture by having ponds and barrays (water reservoirs used for irrigation).

6.5 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

6.5 Exercise 1: Check your understanding

- 1. HS1 Where and when was the Khmer kingdom founded?
- 2. **HS1** How was the Khmer kingdom founded?
- 3. HS1 What was Hariharalaya and where was it built?
- 4. HS1 What did Yasovarman I and Rajendravarman II have constructed in the Angkor area?
- 5. **HS1** Under which ruler was Angkor Wat commenced?
- 6. **HS1** How did Jayavarman VII become the Khmer king?
- 7. HS1 What changes did Jayavarman VII bring to the Khmer Empire in:
 - (a) territory
 - (b) building?
- 8. HS1 What religion did Jayavarman VII make the state religion of the Khmer Empire?

6.5 Exercise 2: Apply your understanding

- 1. **HS2** Create a timeline of key events in the rise of the Khmer Empire up to 1177 and identify developments that helped it to grow.
- 2. HS3 Compose an inscription that could have been written to honour Suryavarman II's victory as depicted in SOURCE 1.
- 3. HS3 Look at Angkor Wat in SOURCE 2. What features do you think justify its reputation as the most spectacular of the Khmer temples?
- 4. HS3 Look closely at SOURCES 3 and 4.
 - (a) Describe what is happening in each of these sources.
 - (b) Why do you think Jayavarman VII had these relief sculptures carved on the Bayon Temple walls in Angkor Thom?
- 5. HS3 What can you tell from SOURCE 5 about Khmer expansion under Jayavarman VII?
- 6. HS6 Using evidence from all sources and other information in this subtopic, give your opinion on whether Jayavarman VII should be considered to be the greatest of the Khmer rulers. You could consider the following points:
 - Who benefited from his construction projects?
 - How far did he extend the Khmer Empire?
 - Why do many historians regard his achievements as greater than those of earlier Khmer rulers, including Suryavarman II?
- **7. HS4** How big was the religious change introduced by Jayavarman VII, and how might his subjects have felt about such a change?

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6.6 Religious beliefs and values

6.6.1 Animism and Hinduism

Religious ideas inspired the Khmer rulers to build great temples. During Angkor's period of power, there were shifts from Hinduism to two different forms of Buddhism. Ideas from these major world religions had co-existed in South-East Asia for centuries and influenced the development of the Khmer Empire.

Animism

From the earliest times, ordinary people worshipped spirits. South-East Asian people were animists before Hinduism and Buddhism arrived in their lands. Animism is the belief that natural phenomena like winds and rain have souls, and that people, animals and objects such as trees are inhabited by spirits. People also believed in life after death and worshipped the spirits of their ancestors. Generally, when ordinary people adopted one of the major religions they blended it with earlier local beliefs and customs.

Hinduism

The first major religion to come into South-East Asia was Hinduism. The ancient Hindu religion has many gods and originated in India. Hindu gods include Vishnu, the supreme god and preserver of the universe, and Shiva, god of destruction and regeneration. Over the centuries, worshippers began to choose to follow only one of the many Hindu gods.

Reincarnation is a key Hindu belief. Hindus believe that a soul exists in each living thing and that performing religious duties and living a moral life leads to being born into a higher class in the next life. Hindus see their goal as the achievement of spiritual joy by eventually being united with Brahma, the universal spirit.

Hinduism in South-East Asia

Hinduism in India divided society into classes called castes. These are Brahman (priests); warriors and landowners; farmers and craftsmen; and untouchables or outcasts. By the ninth century CE, many rulers of South-East Asian states followed Hinduism, but the caste system was never adopted in South-East Asia.

SOURCE 1 A figure from Banteay Srei, a tenth century Hindu temple on the outskirts of Angkor



6.6.2 Buddhism

Buddhism was founded by the Hindu prince Siddhartha Gautama in the sixth century BCE. He decided to leave his riches and seek truth after observing the suffering in his kingdom. It is said he lived as a hermit for seven years, and then set out to teach people what he called the Four Noble Truths. At this time people began calling him the Buddha, which

means 'the Enlightened One'.

The Four Noble Truths are:

- All people, regardless of wealth, suffer pain.
- People remain on an endless cycle of reincarnation — they keep being born and reborn, and pain continues.
- Pain is caused by the desire, or craving, for things.
- To overcome desire, a person must follow the Eightfold Path.

The Eightfold Path includes knowing the truth, freeing the mind from evil, serving one's neighbours and meditating to be rid of desire. So long as a person followed this path, the Buddha taught, he could achieve nirvana.

SOURCE 2 Giant faces of the Bodhisattva Avalokiteshvara at the approach to the Bayon Temple at Angkor Thom



Buddhism in South-East Asia

After the Buddha died, Buddhism split into two forms. One is Mahayana Buddhism, which says that the Buddha should be worshipped. The other is Theravada Buddhism, which says that it is the Buddha's teachings that should be followed. Mahayana Buddhism was the first form to influence South-East Asian rulers. Theravada Buddhism came to South-East Asia from Sri Lanka. Theravada Buddhist monks were meant to live in a way that supported others on the Eightfold Path. Ordinary people 'made merit' by supporting the monks. Buddhist temples called wats became the heart of communities and many became important places of pilgrimage.

DID YOU KNOW?

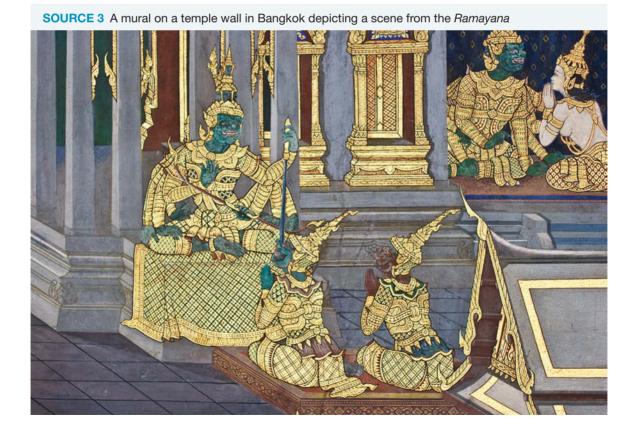
Theravada Buddhism was the main form of religious worship in mainland South-East Asia by the fourteenth century and it remains so today. It is the state religion of both Cambodia and Thailand.

Bodhisattvas

In Buddhist belief, a bodhisattva is a being who is working towards enlightenment. In Mahayana Buddhism, Avalokiteshvara is one of the most revered bodhisattvas, one who has vowed to help others to achieve nirvana.

6.6.3 Religious art, architecture and literature

When Indian and Sri Lankan traders and priests brought Hinduism and Buddhism to South-East Asia, they also brought ideas about the arts and architecture. However, like much that came from India, styles of arts, including sculpture and dance, and architecture changed when the Khmer and other South-East Asians adopted them. By about 500 CE, India had given Cambodia its Hindu gods, Buddhist ideas, a writing system (Sanskrit) and ideas about how societies should be governed. Angkor would not have been built without Indian influence.



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But Angkor had its own Cambodian character that was different from any Indian city. In turn, Angkor's civilisation influenced other mainland South-East Asian societies. Throughout the Buddhist kingdoms. rulers sponsored the building of temples and monasteries and decorated them with religious artworks. In doing so, they believed that they 'made merit' and would be seen as pious men who were fulfilling part of their role as **legitimate** rulers.

Influence of the Ramayana

Indian Hindu literature came to South-East Asia along with Indian religious ideas. The Ramayana is one of two great Hindu epic stories. The other is the Mahabharata. The Ramayana's 24 000 verses were composed in the eighth century BCE. Its hero, Rama, is an incarnation of the Hindu god Vishnu. The purpose of the story was to demonstrate the *dharma* (right path that people should take in life). From the eighth century CE, the Ramayana had an enormous influence in South-East Asia, and it has been depicted in temple art, architecture, theatre and dance.

SOURCE 4 One of the many statues of guardian giants at Wat Phra Kaew in Bangkok. These mythical creatures are from the Ramayana.

6.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

6.6 Exercise 1: Check your understanding

- 1. **HS1** Which religions influenced South-East Asia?
- 2. HS1 What do animists believe?
- 3. **HS1** What do Hindus believe about reincarnation?
- 4. HS1 What was the Hindu caste system and in what significant way did South-East Asian Hinduism differ from practices in India?

- **5. HS1** According to Buddhist belief:
 - (a) What are the Four Noble Truths?
 - (b) What happens when a soul reaches nirvana?
- 6. HS1 What two forms of Buddhism have influenced South-East Asia?
- 7. **HS1** Who brought ideas about the arts, architecture and religion to the Khmer Empire and other South-East Asian societies?

6.6 Exercise 2: Apply your understanding

- **1. HS3** Banteay Srei, the Hindu temple shown in **SOURCE 1**, means 'Citadel of the women'. Its fine carvings are said to be the work of a woman. Do you think this could be true? Why or why not?
- 2. **HS3** The faces of the Bodhisattva in **SOURCE 2** are believed to be modelled on Jayavarman VII, who made Mahayana Buddhism the state religion of the Khmer Empire. Why would that particular ruler have wanted his subjects to see him as a representation of the Bodhisattva Avalokiteshvara?
- 3. HS3 How do SOURCES 3 and 4 provide evidence of the influence of ideas and art forms that came into South-East Asia from India?
- 4. **HS5** Using the sources and information in his subtopic:
 - (a) Explain how the Khmer Empire adopted religious, artistic and cultural traditions that came from the Indian subcontinent.
 - (b) Describe the role the Khmer Empire played in spreading these influences in South-East Asia.
- 5. **HS5** What benefits did rulers gain by paying for religious art and architecture?

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6.7 Khmer society

6.7.1 Kings, nobles and officials

During the Middle Ages, European kings claimed to be chosen by God. Chinese emperors meant something similar when they claimed to have the 'mandate of heaven'. In the Khmer Empire and in South-East Asian Buddhist societies, kingdoms were held together by individual rulers who claimed to be semi-divine. This meant that not only were they chosen by the gods but they were partly gods and they had magical powers. That was how their people saw them. This created an enormous gap between the **ruling class** and those they ruled.

All Khmer Empire rulers claimed to be semi-divine and they identified themselves with Hindu gods such as Shiva or Vishnu. When Jayavarman II declared Cambodia's independence, he established the **cult** of the devaraja or 'god-king'. This cult centred on the worship of a **linga**. It connected the king with Shiva and represented the king's power to bring fertility to the land.

Despite such claims, Khmer rulers gained power by practical methods. Throughout Angkor's history there were periods of violent power struggles within the ruling families. In such struggles, several Khmer kings came to the throne by overthrowing their rivals.

SOURCE 1 A relief sculpture on the Bayon Temple depicting the Khmer army going to war against the Chams



DID YOU KNOW?

In Vietnam and China, officials were chosen through examinations, and there were very detailed written laws describing the powers of officials at each level. There was no such system in the Khmer Empire or the Buddhist kingdoms in Thailand and Burma.

Kings depended on officials to administer their kingdoms. The larger the Khmer Empire grew, the more power such officials held. It was only at the centre of the kingdom that the ruler had complete power. There, the officials were usually friends or relations of the ruler. They were drawn from the land-owning nobles and many of them inherited their positions. However, in the distant provinces, governors had almost complete power as long as they did not threaten the ruler's authority.

6.7.2 Women in Khmer society

The family was the basic unit of society but it is not known how men, women and children lived within their families. Evidence from neighbouring societies suggests that women had a more important position than in India or China. However, society probably became more male-dominated as Hindu and Buddhist ideas about the roles of men and women gained influence over traditional beliefs.

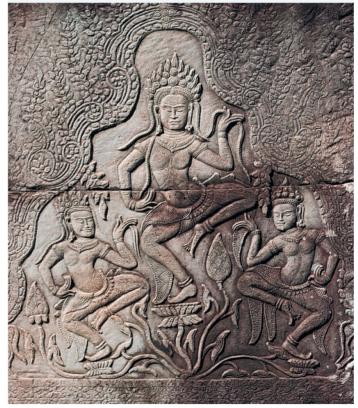
According to the Chinese diplomat Zhou Daguan, who stayed at Angkor from August 1296 to July 1297, both men and women wore only a cloth wrapped around their waists. He also wrote that women sold products displayed on mats in the market and that all trades were carried out by women.

Many women became dancers. Dance was a religious ritual in Cambodia during the Angkor period. Inscriptions tell of thousands of dancers performing in the temples. These temple dancers were regarded as apsaras, which in Hindu and Buddhist mythology is a female spirit of the clouds.

SOURCE 2 A modern Cambodian performing a Khmer classical dance



SOURCE 3 Bas-relief of apsaras at the Bayon Temple



6.7.3 The ordinary people

The survival of the Khmer Empire depended on ordinary people. Despite this, there is very little evidence that describes their lives. We know that they provided the surplus of food that supported the ruling classes. The people also provided labour for the rulers' building projects and were soldiers for wars. They included peasants, skilled artisans, fishermen, traders and slaves.



SOURCE 4 A relief sculpture at the Bayon Temple depicting Khmers at work, probably on the temple

Peasants

Peasants were by far the biggest group among the ordinary people. They did not own land in the modern sense but they had the right to land because they farmed it. Peasants farmed rice fields in the fertile valleys and vegetable gardens on the surrounding slopes. The lives of peasant men and women were controlled by the cycle of work such as ploughing and harvesting that followed the seasons. They made sense of their world through a mixture of Hindu ideas, Buddhism and beliefs about spirits.

Peasants lived in villages among their fields. According to Zhou Daguan, peasants' houses had thatched roofs. They had no tables or chairs. They cooked their food in earthen pots and ate from small bowls made of woven leaves.

The headman of any village was usually one of the more prosperous peasants. He was responsible for seeing that the ruler's policies were carried out at the village level. His duties included organising unpaid labour from the village for the ruler's building projects and for maintenance work on the irrigation system. He also had to ensure that taxes were collected and that men went off to fight in the ruler's wars.

Artisans, fishermen and traders

An artisan was a worker who was skilled in a particular craft, for example, sculpture, building, pottery, jewellery or metalwork. Artisans were a small proportion of the population but they were essential for their

role in building projects and supplying luxury goods for the ruling class and weapons for war. According to Zhou Daguan, artisans included Thai immigrants who worked in silk production and as tailors.

Fishermen harvested the coasts and rivers and their lives were mostly as unchanging as those of the peasants. Traders sold goods at markets that moved about between villages. There was also long-distance trade. Zhou Daguan described a range of Chinese goods that were sold at Angkor including paper, combs and needles. Many traders knew something of the world beyond the village because they took caravans across South-East Asia. They were a small group that would grow in importance as trade expanded from the eighteenth century.

SOURCE 5 From Milton Osborne, Southeast Asia: an Introductory History, Allen & Unwin, Sydney, 2004, pp. 59-60

The courts and kings were separate from the cultivators, fishermen and petty traders over whom they ruled. But all these groups inhabited a single, unified world. Just as the serf and the feudal lord of medieval Europe both, in very different ways, sensed themselves to be part of Christendom, so the cultivators or fishermen sensed themselves as being within the same world as their ruler . . .

Slaves and outsiders

It is impossible to know just how many people were slaves. Most slaves were prisoners of war or the descendants of such people. They were the property of their owners. They included temple slaves who were the property of the temples. There were also debt bondsmen. These people had temporarily given up their freedom to repay debts. Similar to slaves, there were hereditary household servants of rulers and high officials.

Outside the mainstream society were smaller ethnic groups who lived in the hills. Lowlanders regarded them as barbarians. Mostly they were left alone to govern themselves as long as they did not threaten the interests of rulers. These tribes had different beliefs from the lowlanders and most lived by nomadic slash and burn agriculture. They traded products of the forest for things that the lowlanders produced. At times they were captured and made slaves. At other times they were recruited as guides, soldiers and suppliers of slaves.

The lives and work of children

We have almost no direct evidence about how children lived and worked in the Khmer Empire. The little evidence that we have suggests that only the sons of the most privileged classes and of scholars received any kind of formal education. Among other sections of Khmer society — peasants, artisans, fishermen and traders — children would have worked alongside their parents, learning their skills, as soon as they were old enough to be useful.

6.7 ACTIVITY

Look at SOURCES 2 and 3. Use the internet to discover how classical Cambodian dance was influenced by images of apsaras, what stories were told through the dances and how they were passed down through the Angkor era. Using historical sources as evidence

6.7 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

6.7 Exercise 1: Check your understanding

- 1. HS1 How did Khmer kings want to be seen by their people? Why would they want to be seen that way?
- 2. HS1 Explain why a Khmer ruler usually had complete control at the centre of his kingdom only.
- 3. HS5 How might the influence of religions have changed women's roles?

- 4. HS1 According to Zhou Daguan, how did men and women dress and what jobs were done by women?
- 5. **HS1** Describe the kind of work you might do if you were an artisan.
- 6. **HS1** Describe where peasants lived.
- 7. HS1 What services did peasants provide for the ruling classes?
- 8. HS1 Were children educated in the Khmer Empire?
- 9. HS1 Which groups were not considered to be part of the mainstream society?

6.7 Exercise 2: Apply your understanding

- **1. HS3** In **SOURCE 1**, which soldiers would probably be rulers or nobles and which would come from the ranks of the ordinary people? How can you tell?
- 2. **HS3** Describe the scene in **SOURCE 4**. How could you use it as evidence for the lives of ordinary people in the Khmer Empire?
- 3. HS3 What do you think the writer of SOURCE 5 means by stating that 'the cultivators or fishermen sensed themselves as being within the same world as their ruler . . . '? (*Hint*: What religious beliefs and values would they have shared?)
- **4. HS5** We have almost no evidence of what ordinary people thought about their position in society. Do you think the religious beliefs of the people would have encouraged them to rebel or to accept things as they were? Give reasons for your answer.
- **5. HS4** Explain why it is most probable that throughout the period of the Khmer Empire there would have been very little change in the daily lives of the ordinary Khmer people.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

6.8 Angkor's buildings

6.8.1 The city of Angkor

In Khmer, *angkor* means 'city' and *wat* means 'temple' so Angkor Wat means 'temple city'. Angkor Wat, found near the Cambodian city of Siem Reap, is the world's largest religious structure and is one of over a thousand temples that make up the huge Angkor temple complex.

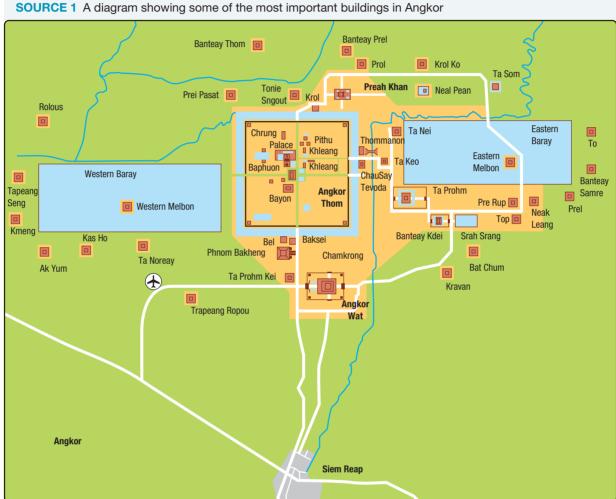
In the twelfth and thirteenth centuries, the city of Angkor covered over 1800 square kilometres, making it the largest city in the world before the industrial age. When London had a population of about 40 000, Angkor had over a million people grouped around it. When Angkor was the capital of the Khmer Empire it would also have had many villages and thousands of houses. Today only the temples survive because, unlike houses, they were built of stone and brick. As well as its buildings, Angkor had a system of water reservoirs, called barays, and moats that were probably constructed to irrigate rice crops and to represent seas of the mythical Hindu universe.

Angkor Wat

The building of Angkor Wat was commenced under Suryavarman II (1113–1150 CE). It was a shrine to the Hindu god Vishnu with whom Angkor's kings identified themselves. Its central tower represents Mt Meru, a mountain from Hindu mythology. Angkor Wat is the best preserved of the Angkor temples because, unlike the others, it was never completely abandoned. The temple's rectangular outer walls are surrounded by a huge rectangular moat. The walls measure 1025 metres by 800 metres. Relief sculptures line almost a kilometre of the outer walls. These sculptures include scenes from Hindu mythology including the *Mahabharata* and *Ramayana*, scenes of the king and the Khmer army at war, the Hindu heavens and hells, and over 3000 apsaras. Khmer inscriptions state that 300 000 workers and 6000 elephants were employed during the construction of Angkor Wat.

Angkor Thom

Thom is a Khmer word meaning 'large' so Angkor Thom means 'large city'. Much bigger than Angkor Wat, its area is around ten square kilometres. It was built under Jayavarman VII (1181–c. 1218 CE) and has huge 20-metre-high gates. Above the gates tower giant faces of the Buddhist Bodhisattva Avalokiteshvara. Within the city walls are its most important monuments and buildings, including the Bayon Temple, which stands at the centre of the city. Bayon has over 11 000 carved figures that cover about 1.2 kilometres of walls. They include scenes of battles against the Chams and scenes from everyday life including circus performers and a market.



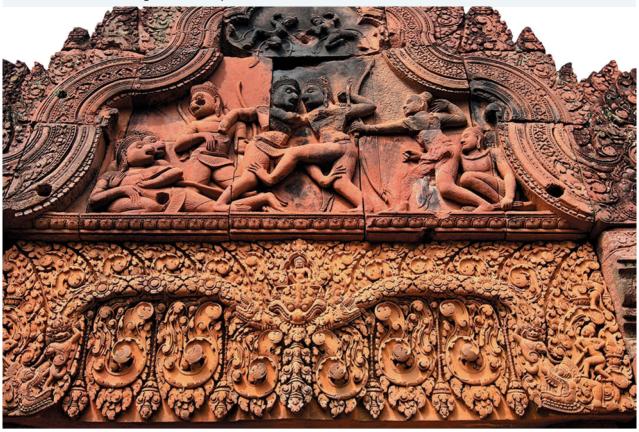
DID YOU KNOW?

Angkor has become a popular location for movie makers. Several major feature films such as Lara Croft: Tomb Raider, Two Brothers by Jean-Jacques Annaud and Transformers 3: Dark of the Moon were shot at locations such as Angkor Thom, The Bayon Temple, Ta Prohm and Angkor Wat.

DISCUSS

In small groups, discuss whether the cost of building such great temples could have contributed to Angkor's decline. In your discussion, consider the number of people and materials needed, as well as the resources required to support such a workforce. [Critical and Creative Thinking Capability]

SOURCE 2 Rows of Angkor relief sculptures



6.8 ACTIVITY

Use the internet to locate more images of Angkor temples. Use these images and **SOURCE 1** to design a guided tour for visitors to Angkor. **Using historical sources as evidence**

6.8 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

6.8 Exercise 1: Check your understanding

- 1. **HS2** Which is older Angkor Wat or Angkor Thom?
- 2. HS1 Who began building Angkor Wat and why?
- 3. HS1 What do the words angkor, baray, wat and thom mean?
- 4. **HS1** Approximately how many temples are there at Angkor?
- 5. **HS1** How many times greater than the population of London was the population of Angkor in the twelfth and thirteenth centuries?
- 6. HS5 Why is Angkor Wat better preserved than the other Angkor temples?

6.8 Exercise 2: Apply your understanding

- 1. **HS3** Several feature films have been made in and around Angkor. What are the impacts this could have had on the area? Suggest possible guidelines for minimising the impact.
- 2. HS3 Study SOURCE 1.
 - (a) How many times could Angkor Wat fit in Angkor Thom?
 - (b) If 300 000 workers and 6000 elephants were needed to construct Angkor Wat, how many might have been needed to build Angkor Thom?
- 3. HS3 Why would specialised artisans have been needed to create sculptures like those shown in SOURCE 2?

- 4. HS5 Referring to SOURCE 1, explain why the cost of building and maintaining such great numbers of temples could have contributed to Angkor's decline.
- 5. HS3 Describe what you think is depicted in the relief sculpture in SOURCE 2 and what it might represent.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

6.9 Decline and fall: the historical debate

6.9.1 A weakening empire

After Jayavarman VII's death, no more temples were built. The Khmer lost much of the territory they had conquered in Champa to their east. In the west, several Tai nobles rebelled against Khmer authority, establishing the first Tai kingdom at Sukhothai in 1238. These territorial losses and other developments seriously weakened the Khmer Empire.

Religious conflict and external threats

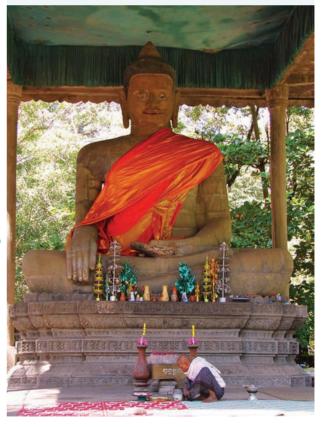
There was also religious conflict within the Khmer ruling family. Jayavarman VIII (1243–1295) wanted a return to Hinduism. He converted Buddhist temples to Hindu temples and destroyed many thousands of Buddha images. During his reign, the Khmer Empire was threatened by a much more powerful empire to its north. This was the mighty Mongol Empire, which conquered China in 1260. In 1283, Jayavarman VIII paid tribute to the Mongols to avoid war. For a time this made the Khmer Empire a vassal state of the Mongols but four years later it proved to be a wise decision when the Mongols defeated and captured Bagan (in modern Myanmar).

Jayavarman VIII was overthrown by his son-in-law, Srindravarman (1295–1309). In place of Hinduism, he introduced Theravada Buddhism to the Khmer Empire. It was already the dominant religion of South-East Asia and it was adopted quickly by the Khmer. The end of the reign of his successor, Indrajayavarman, in 1327 is regarded as the end of the Khmer Classical Age. There were no more inscriptions telling of the accession of kings and no more temples, possibly because Theravada Buddhism (see **SOURCE 1**) did not demand such building. It has also been suggested that religious changes, including the change to Theravada Buddhism, might have weakened the power of Khmer kings.

6.9.2 Why was Angkor abandoned?

From 1352, the Khmer suffered attacks by the Tai kingdom of Ayutthaya. For a while, the Khmer Empire remained powerful but in the 1440s the Khmer rulers abandoned Angkor. The most widely accepted explanation is the one put by Milton Osborne. He stated that the Tais 'threatened and eventually damaged the agricultural system upon which Angkor's very existence depended'. But this may not have been the only reason for Angkor's collapse. Several other hypotheses have been advanced to explain why Angkor was abandoned.

SOURCE 1 A modern Khmer worshipping at a huge Theravada Buddhist statue at Angkor



Environmental damage

One theory suggests that environmental damage may have played a role as forests were cut down to clear land for more rice fields. This resulted in topsoil being carried by floods into the barays and canals, causing them to silt up and flood. Once this happened there would have been flooding in the wet season and water shortages in the dry season. The population might have been afflicted with malaria. In any case, Angkor would no longer have been able to support its large population.

SOURCE 2 The base of the Hindu temple called the Eastern Mebon is guarded by carved figures of elephants. The temple is on an island in the Eastern Baray, one of two giant water reservoirs that were created to provide year-round water for farming. The barays were created by building huge dykes to hold floodwaters.



The Black Death

It has been suggested that the Black Death (bubonic plague) could have been a factor in Angkor's decline. The plague, which killed many millions in Asia, Europe, the Middle East and Africa, appears to have originated in Mongolia and central China in the early 1300s and it is known to have spread west along trade routes, including the Silk Road. Although the plague appears in reports from several parts of Asia from the 1330s and it could possibly have reached Cambodia from China, there is no hard evidence of it visiting the Khmer Empire.

Climate change

Another theory suggests that climate change could have caused a shortage of water during the 'Little Ice Age'. This was a period of lower global temperatures.

SOURCE 3 Climate as a contributing factor in the demise of Angkor, Cambodia, Proceedings of the National Academy of Sciences, 2010

[Angkor] experienced decades-long drought interspersed with intense monsoons in the fourteenth and fifteenth centuries that, in combination with other factors, contributed to its eventual demise. The climatic evidence comes from . . . tropical southern Vietnamese tree rings . . .

Royal family conflicts and retreat from the Tais

Without doubt, other reasons were ongoing conflicts within the Khmer ruling family and attacks by the Tais. These attacks stripped the city of its wealth and people. After the Tais besieged Angkor for seven months in 1431, a new Cambodian capital was founded in the southeast near the modern capital Phnom Penh. The move was significant as trade became more important to the Khmer economy. The new capital was located on a river much nearer to the sea and was therefore a more suitable site for Cambodia's growing trade with China.

SOURCE 4 Written by the Chinese diplomat Zhou Daguan, who stayed at Angkor in 1296–97

As a result of repeated wars with the Siamese [Tais] the land has been completely laid to waste.

6.9 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

6.9 Exercise 1: Check your understanding

- 1. HS1 Where did the Khmer Empire lose territory after the death of Jayavarman VII?
- 2. **HS1** Who overthrew Jayavarman VIII?
- 3. HS1 How was Khmer religion changed under Jayavarman VIII and Srindravarman?
- 4. **HS1** How did Jayavarman VII avoid war with the Mongols?
- 5. **HS1** When did the Khmers abandon Angkor?
- 6. HS5 Name one of the main reasons for Angkor's collapse.
- 7. **HS5** Make a list of factors that could have contributed to Angkor's abandonment.

6.9 Exercise 2: Apply your understanding

- 1. HS3 Look closely at SOURCE 1. The overwhelming majority of Khmers have continuously followed Theravada Buddhism since its introduction by Srindravarman.
 - (a) How do you think the Khmer people would have regarded the sequence of religious changes between the twelfth and fourteenth centuries?
 - (b) Imagine you are an ordinary Khmer living through some of these changes. Discuss whether the changes might have undermined faith in rulers and weakened the kingdom.
- 2. HS3 Look at SOURCE 2. What would have been the impact on agriculture and on the Khmer population if these giant water reservoirs failed due to environmental damage?
- 3. HS3 Read SOURCE 3 and briefly outline the theory that climate change could have played a role in the abandonment of Angkor.
- 4. HS3 Which theory about Angkor's abandonment is supported by the evidence of Zhou Daguan in SOURCE 4?
- **5. HS2** Create a timeline of key events in the decline of the Khmer Empire.
- 6. HS5 Referring to the evidence provided in the sources in this subtopic, debate the reasons for Angkor's abandonment.
- 7. HS5 Give your view on which hypothesis or combination of hypotheses best explains Angkor's decline and fall.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

6.10 Legacies of the Khmer Empire

6.10.1 Legacies for other South-East Asian societies

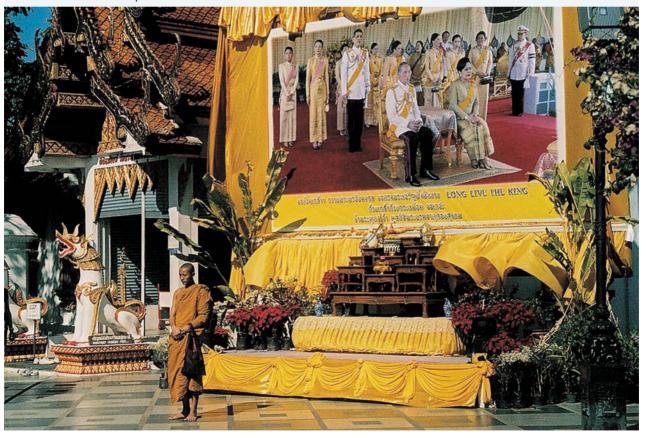
Angkor is the Khmer Empire's greatest legacy. This city was its capital and its central area of settlement. Angkor provides evidence of Cambodia's past wealth, strength, culture and religious beliefs. Many thousands of people visit Thailand, Laos and Cambodia each year to marvel at amazing historical sites. This is called cultural tourism. Of all these historical sites, Angkor is arguably the most spectacular; however, it is not the Khmer Empire's only legacy.

The Khmer Empire had cultural and trade relations with other mainland South-East Asian kingdoms and with the maritime South-East Asian states of Java and Srivijaya. Through trade and cultural exchange, and through its rise and fall, the Khmer Empire influenced much of the region.

Khmer influence in Thailand

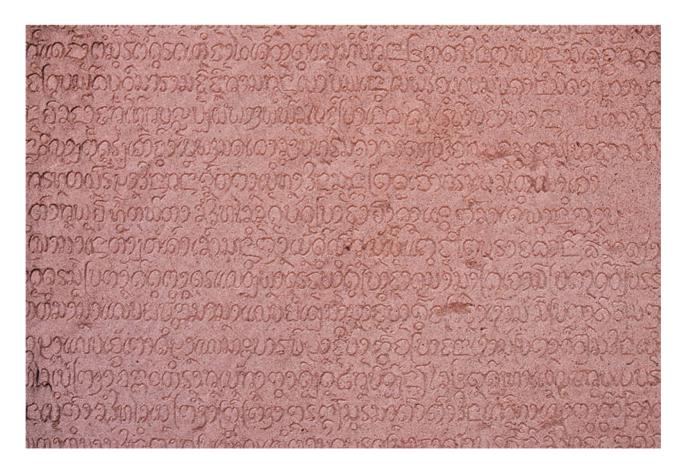
Angkor's civilisation influenced Thai systems of ruling, the way Thai society was organised, Thai architecture and arts, and the development of the Thai written language. From the sixteenth century, Europeans knew Ayutthaya's Thai empire as Siam. By 1700, Ayutthaya was a vast city with around a million people that traded with the Dutch, French, Chinese and Japanese. But in the eighteenth century, its power declined and in 1776 the Burmese destroyed the city.

SOURCE 1 A Theravada Buddhist monk stands before a portrait of Thailand's royal family at fourteenth-century Wat Prathat Doi Suthep in northern Thailand.



SOURCE 2 The Khmer written language (top) influenced the development of the Thai written language (bottom).





Khmer influence in Laos

In Laos in 1353, a prince from Angkor named Fa Ngum founded the Theravada Buddhist kingdom of Lan Xang (meaning 'a million elephants'). As Angkor lost its power, Lan Xang came to dominate modern-day Laos, much of north-eastern Thailand and even parts of southern China and north-western Vietnam. In the seventeenth century, Lan Xang reached the height of its power. European visitors were impressed by its prosperity and its great temples. But when its king died in 1694 without an heir to the throne, Lan Xang broke up into rival kingdoms that came under the influence of its more powerful neighbours — Vietnam, Thailand and Burma.

Vietnam after the fall of Angkor

During the early fifteenth century, China regained control of Vietnam until the Vietnamese secured their independence in a rebellion in 1428. Vietnam played no role in the decline of Angkor but it benefited by expanding into territory that had been part of the Khmer Empire. This is because much of Vietnam is mountainous and it needed more farming land. It also took territory from Champa.

6.10.2 Cambodia from the sixteenth century

In the sixteenth century, Europeans came to South-East Asia seeking wealth from the spice trade. However, they had little impact before the mid-eighteenth century. After a devastating attack by Ayutthaya in 1593, the Khmer rulers sought help from the Spanish who had colonised the Philippines. For a few years, the Spanish influenced Cambodia's rulers. However, the Spanish who were in Cambodia were massacred in 1599. In the seventeenth and early eighteenth centuries, Cambodia's rulers turned first to the Thais for support. When that help was not forthcoming, they sought Vietnamese help against the Thais. The result was that both Thailand and Vietnam grew stronger at Cambodia's expense. Thailand extended its territory into Cambodia but lost these areas as European colonisers moved in during the nineteenth century.



The colonial era and the present

Colonisation by European powers brought many changes to South-East Asia. Only Thailand remained independent. Portugal's capture of Malacca (in modernday Malaysia) in 1511 and Spain's colonisation of the Philippines were followed by Dutch, British and French empire-building in the region. The Dutch came to control most of modern Indonesia, the British took Burma and Malaya, and the French took Vietnam, Laos and Cambodia in the nineteenth century. The French met strong resistance in Vietnam, but when France declared a protectorate over Cambodia in 1862 it had the approval of the Cambodian king who feared losing more territory to Thailand and Vietnam.

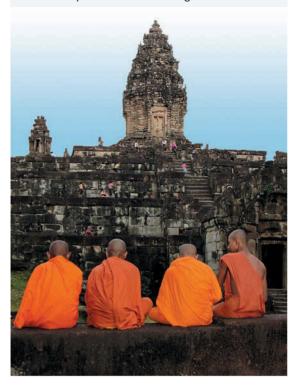
The Khmer prince Norodom Sihanouk declared Cambodia's independence in 1953 but Cambodia was to suffer terribly when it was caught up in the Vietnam War in the 1960s and 1970s. It then suffered even more under the secretive Khmer Rouge regime from 1975 to 1979. The Khmer Rouge called the first year of their rule Year Zero. Through forced evacuation of the cities, forced labour and mass murder, they tried to wipe out all traces of the past.

Today, Cambodia is a very poor country. In some ways its distant past continues to shape its present. After years of civil war, Cambodia has returned to its traditional monarchy and once again Theravada Buddhism is its state religion.

Angkor rediscovered

Angkor Wat continued to be visited by Buddhist pilgrims after the city was abandoned in the fifteenth century, but the rest of the city was overtaken by the jungle. Gigantic tree roots spread over the temples, which became hidden as they were cloaked by the encroaching forest. However, in the nineteenth century, French archaeologists began the process of rediscovering Angkor, clearing the jungle from temples and restoring the site by repairing foundations and making drains to prevent further damage from water. Since the 1990s, conservation work has been coordinated by UNESCO and government bodies from France, Japan and Cambodia. Over a million overseas visitors come to Angkor each year. They provide additional funds towards the cost of conserving the site, but as they walk and climb over Ankor's sandstone structures they create additional conservation problems.

SOURCE 4 Buddhist monks look on as visitors explore the ruins of Angkor.



SOURCE 5 An Angkor temple overgrown with tree roots



SOURCE 6 Tourists visiting Angkor



DISCUSS

Should historical places such as Angkor Wat be closed off to the public to avoid further damage being done? Suggest reasons why millions of tourists are allowed to visit. Do you think these are acceptable reasons? Discuss as a class.

[Ethical Capability]

6.10 ACTIVITIES

1. Historians use arguments to interpret and explain the past, including how events caused changes. But we have to be careful to ensure that our reasoning is sound.

An **argument** is a group of sentences arranged so that the sentence called the conclusion follows from the other sentences, which are called the **premises**.

A logical argument is one in which the conclusion does follow from the premises.

A **fallacy** is an argument in which the conclusion does not follow from the premises; it is a misleading argument, an argument based on reasoning errors.

One of the most common reasoning errors is to assume that, because one event came before another event or change or was occurring around the same time, the first event must be a cause of the second event. We call this a **cause and effect fallacy**.

An example could be the following argument.

Premise 1: Angkor was under attack by the Tais from at least 1296, when Zhou Daguan described the effects of their attacks.

Premise 2: The Khmers abandoned Angkor after it was besieged by the Tais in 1431.

Conclusion: Therefore, it was attacks by the Tais that caused Angkor to be abandoned and the Khmer Empire to collapse.

This argument might seem reasonable until you consider what you get if you use the same kind of reasoning for a different argument. For example:

Premise 1: From its beginnings until the death of Jayavarman VII in 1218 the Khmer Empire built many fine temples at Anakor.

Premise 2: The Khmers abandoned Angkor in 1431.

Conclusion: Therefore, temple-building caused Angkor to be abandoned and the Khmer Empire to collapse.

The reasoning error with both arguments is assuming that the first event is the cause of the second event without demonstrating any causal link between the two events. In the first example, all other possible causes are ignored. In the second, no direct link is shown between the events.

Your task:

- (a) Work in small groups to discuss and develop two arguments to explain the fall of the Khmer Empire. As you learned in subtopic 6.9, several possible causes for the decline of the Khmer Empire are: attacks by the Tais, environmental damage, the Black Death, climate change and conflicts within the royal family. In your first argument, use the same reasoning errors as in the given examples. For your second argument, your task is to present a logical argument.
- (b) After the discussion, list the erroneous arguments and the logical arguments decided upon by [Critical and Creative Thinking Capability] your group.
- 2. Working in small groups, create some guidelines that could be given to visitors (such as those in SOURCES 4 and 6) to reduce their impact on Angkor Analysing cause and effect

6.10 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

6.10 Exercise 1: Check your understanding

- 1. HS5 The Khmer written language influenced the development of which other written language?
- 2. HS1 How did Angkor influence Laos?
- 3. **HS1** How did Vietnam benefit from Angkor's decline?
- 4. HS1 In the years following an attack by Ayutthaya in 1593, who did Khmer rulers turn to for support?
- 5. HS1 Which European powers acquired colonies in South-East Asia between the sixteenth century and the nineteenth century?
- 6. HS5 What do you think it could have been about the historical experience of Angkor that led Cambodia's rulers to seek help from the Spanish in the sixteenth century and the French in the nineteenth century?
- 7. HS1 After the colonisation by European powers, which was the only country in South-East Asia to remain independent?

6.10 Exercise 2: Apply your understanding

- 1. HS3 How do SOURCES 1 and 2 provide evidence of Khmer influence and continuity in regards to monarchies, written language and religion in South-East Asia?
- 2. HS3 SOURCES 4 and 6 show tourists visiting Angkor. How might such tourism benefit Cambodia?
- 3. HS3 Although there is ongoing work to conserve and restore several of Angkor's temples, some sites, such as those shown in SOURCES 3 and 5, have been left alone to show the power of nature. Do you think this is a good idea? Why or why not?
- 4. HS4 Using the sources in this subtopic, what conclusions can you draw about continuity and change in Cambodia from the Khmer Empire to modern times?
- 5. HS3 Identify ways in which the visitors shown in SOURCES 4 and 6 might be damaging Angkor.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

6.11 SkillBuilder: Making your own notes to analyse relevant sources



Why is note-making useful?

Note-making from sources will help make information easier to understand and recall. Note-making can also help you analyse the causes and effects of significant events.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.



6.12 Thinking Big research project: Khmer Empire costume and set design



SCENARIO

A famous film director is making a dramatised documentary film about the Khmer Empire. To apply for the exciting position of set and costume designer, submit a design brief for three key scenes in the film.

Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources



projectsPLUS Thinking Big research project: Khmer Empire costume and set design (pro-0162)

6.13 Review



6.13.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

6.13.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources -



eWorkbook Reflection (doc-31330)

Crossword (doc-31331)



Interactivity Angkor and the Khmer Empire crossword (int-7588)

KEY TERMS

Buddha Siddhartha Gautama who founded Buddhism in the sixth century BCE

Buddhist to do with Buddhism; a follower of Buddhism

cult a system of religious worship

epic a long story in verse narrating the deeds of its hero

Hindu the most ancient of all the main world religions; originated in India

incarnation the representation of a spirit or quality in a living human

Khmer the Cambodian people

legitimate lawful or proper

linga a phallic symbol that would have originally been a feature of most Hindu temples

Mahayana Buddhism one of the two main forms of Buddhism that influenced mainland South-East Asia

mausoleum a huge tomb

nirvana in Buddhism, the perfect state; free of suffering and desire

nobles the aristocracy; hereditary privileged class

pious devout, very religious

protectorate when stronger states protect and control weaker states

reincarnation being continuously born and reborn in other lives

ruling class kings, nobles and high officials

Sanskrit ancient and sacred language of India

slash and burn agriculture a nomadic form of farming in which people clear part of a forest, grow crops, harvest them and then move on to repeat this in another place

Tai ethnic groups that migrated from southern China into northern mainland South-East Asia from the tenth century

Theravada Buddhism one of the two main forms of Buddhism that influenced mainland South-East Asia

Tonle Sap the largest freshwater lake in South-East Asia

vassal state a state whose ruler acknowledges a foreign ruler as his overlord

6.11 SkillBuilder: Making your own notes to analyse relevant sources

6.11.1 Tell me

What is note-making?

Do you ever feel overwhelmed when you see a lot of information on a page? Do you sometimes wonder how you will be able to remember it all? Don't worry, you don't need to know all of it — you just need to understand the important parts. Note-making cuts the information down into smaller pieces that are easier to remember

Why is note-making useful?

Note-making and learning to summarise will make information easier to understand and recall. You simply write out the key information in point form. Then it won't seem so hard. Note-making also helps you analyse and therefore understand what you are reading. Here you will be learning to make notes on sources that are relevant to change and decline in the Khmer Empire.

6.11.2 Show me

How to make notes

The most important thing to remember when making notes is that you are aiming to *reduce* the number of words used by keeping only the important points — and not just copying out a lot of text.

Step 1

Read the extract that you need to summarise. Don't try to make notes the first time you read it. Just try to understand the main points the author is making. Try reading **SOURCE 1**. It is about the weakening of Angkor (Cambodia) and the growing power of the Thais.

SOURCE 1 The fall of Cambodia and the rise of Thailand, from Milton Osborne, *An Introductory History: Southeast Asia*, Allen & Unwin, Sydney, 2004, pp. 59–60

Cambodian power had extended from its base in Angkor to incorporate large sections of modern Thailand, Laos and Vietnam. The really important unifying feature for the Angkorian empire was . . . the acceptance by many lesser rulers and governors that the king at Angkor was their supreme lord . . . When some of these lesser rulers no longer accepted this situation and chose to fight for their independence from the Angkorian ruler, they shattered the political relationship. In addition they threatened and eventually damaged the agricultural system upon which Angkor's very existence depended. The decision of the Cambodian King . . . to leave Angkor some time in the fifteenth century was an event of deepest importance for mainland Southeast Asia . . . A great empire had come to its end and with its end other states began their rise to greatness. The Thais were the people who brought Angkor down and their history from that time onwards was marked by slow but sure progress towards the achievement of control over the territories that comprise modern Thailand.

Step 2

Now re-read the text. Ask yourself:

• What are the main points the author is trying to make?

Highlight these (shown in light blue in **SOURCE 2**).

Step 3

Highlight any supporting ideas in the text (shown in green in **SOURCE 2**).

Step 4

Highlight any keywords that are new to you or that seem to relate specifically to the topic (shown in purple in **SOURCE 2**).

SOURCE 2 Identifying important information

Cambodian power had extended from its base in Angkor to incorporate large sections of modern Thailand, Laos and Vietnam. The really important unifying feature for the Angkorian empire was . . . the acceptance by many lesser rulers and governors that the king at Angkor was their supreme lord . . . When some of these lesser rulers no longer accepted this situation and chose to fight for their independence from the Angkorian ruler, they shattered the political relationship. In addition they threatened and eventually damaged the agricultural system upon which Angkor's very existence depended. The decision of the Cambodian King . . . to leave Angkor some time in the fifteenth century was an event of deepest importance for mainland Southeast Asia . . . A great empire had come to its end and with its end other states began their rise to greatness. The Thais were the people who brought Angkor down and their history from that time onwards was marked by slow but sure progress towards the achievement of control over the territories that comprise modern Thailand.

Step 5

Now you need to start writing. Write down the heading and then use dot points for each of your notes. Look for key words, dates, ideas, facts and evidence.

Remember, the aim is to analyse and summarise, not just to copy. Look for ways of shortening the text. Instead of listing lots of examples, use just one or two. Include definitions of words that are important to the topic. Your notes should be designed to help *you*, not other people, so use your own words. If you already know a lot about a topic, you may not need as many notes as other people; but if the topic is new to you, you may need more notes.

Now look at **SOURCE 3** and you will see how much we have reduced the text (from 170 words to about 50 words).

SOURCE 3 Summary

Cambodia had a great empire [1st main point].

Anakor:

- controlled much of modern Thailand, Laos and Vietnam [supporting point]
- depended on lesser rulers accepting Angkor's authority [supporting point].

Angkor was brought down in the fifteenth century by the Thais [2nd main point].

- Thai rulers rebelled and fought for independence [supporting point].
- Thais damaged Angkor's agriculture and gained territory [supporting point].

6.11.3 Let me do it

Complete the following activities to practise this skill.

6.11 ACTIVITIES

- Using what has been done with SOURCE 1 to create SOURCES 2 and 3 as an example, make notes to analyse SOURCE 4.
 - (a) Outline the main point in **SOURCE 4**. (*Note:* The author's main point about the power and wealth of the Khmer king is not directly stated. But you will see what it is.)
 - (b) Briefly outline each of the supporting points.

SOURCE 4 Description of a royal procession written by Zhou Daguan, a Chinese diplomat who visited Angkor in 1296–1297

When the king goes out, troops are at the head of the escort; then come flags, banners, and music. Palace women, numbering from three to five hundred, wearing flowered cloth, with flowers in their hair, hold candles in their hands . . . Then come other palace women, bearing royal paraphernalia made of gold and silver . . . Then come the palace women carrying lances and shields, [and] the king's private guards . . . Carts drawn by goats and horses, all in gold, come next. Ministers and princes are mounted on elephants, and in front of them one can see, from afar, their innumerable red umbrellas. And after them come the wives and concubines of the king, in . . . carriages, on horseback and on elephants . . . Behind them comes the sovereign [king], standing on an elephant, holding his sacred sword in his hand. The elephant's tusks are encased in gold.

- 2. Apply your skills to complete the following.
 - (a) Discuss in small groups how the extravagance described in **SOURCE 4** might have contributed to the decline described in **SOURCE 1**.
 - (b) How would you describe the perspective of the writer of **SOURCE 4**?
 - (c) Explain how your analysis of **SOURCE 4** made it easier to understand.

6.12 Thinking Big research project: Khmer Empire costume and set design

Scenario

Claudia Tortellini, a critically-acclaimed new Italian movie director, is planning to make a dramatised documentary film about the history of the Khmer Empire. She has advertised for actors, camera operators, cinematographers and other positions for the project. One of those positions has caught your eye. They require someone who knows enough about the Khmer Empire to design sets and costumes for scenes that will be re-enacted. Someone like you!



Task

To accompany your letter of application for this job, Claudia Tortellini requires you to write brief guidelines for set design and costume design for three scenes in the film. These scenes are:

- Jayavarman's defeat of the Cham invaders in 1178
- construction work on the Bayon Temple
- the daily life of ordinary Khmer people.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in pairs will enable you to compare ideas and share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research. You should also revisit the relevant subtopics in the Angkor and the Khmer Empire topic.
- Write up your research findings for each of the three scenes in the Research forum.
- You can use images from the Media centre, other images you locate and/or your own sketches to make your guidelines more colourful and exciting.
- You can view, share and comment on your project partner's research findings and design ideas. Be sure to enter the source for any information you find online.
- Describe what each of the three scenes should look like. We cannot know exactly what these scenes would have looked like. However, your guidelines must be historically accurate insofar as they must be based on what we do know from archaeological evidence and from the very limited written primary sources that exist as evidence for the Khmer Empire.
- Email your guidelines for set design and costume design for three scenes in the film to your teacher for assessment and feedback.





ProjectsPLUS Khmer Empire costume and set design (pro-0162)

6.13 Review

6.13.1 Key knowledge summary

6.2 Examining the evidence

- Legends of the rise of South-East Asian states are unreliable.
- Inscriptions provide our only written primary sources from the Khmers.
- Written primary sources from other societies that had contact with the Khmers provide more information.
- Khmer archaeological sources provide much evidence.

6.3 Environment and peoples

- The geographical features of South-East Asia provided conditions necessary for the rise of civilisations along rivers, including Angkor and the Khmer Empire.
- There were many different peoples and cultures in the region.

6.4 The historical setting

- Several states arose in mainland South-East Asia between the first century and the twelfth century.
- There were contacts and conflicts between the South-East Asian states.
- The expansion of the Khmer Empire was aided by conflicts between rival states.

6.5 The rise of Angkor and the Khmer Empire

- Jayavarman II founded the Khmer kingdom in 802 and built Hindu temples.
- Under his successors, reservoirs were built in the Angkor area and the Khmers began to have conflicts with Champa.
- Angkor Wat was built under Suryavarman II.
- Jayavarman VII defeated the Chams, introduced Mahayana Buddhism, built Angkor Thom and expanded the Khmer Empire to its largest extent. He is regarded as the greatest of the Khmer kings.

6.6 Religious values and beliefs

- Animism, Hinduism and Buddhism all played a part in shaping the beliefs and values of the Khmers.
- Khmer culture was strongly influenced by the art, architecture and literature of Hinduism and Buddhism from India and Sri Lanka but the styles were changed when the Khmers adopted them.

6.7 Khmer society

- Khmer society was very unequal, with kings and nobles having great power.
- Khmer women carried out a huge range of trades and many became dancers.
- The ordinary people provided the food surplus that supported the ruling classes. They also provided soldiers for wars and labour for building reservoirs and temples.

6.8 Angkor's buildings

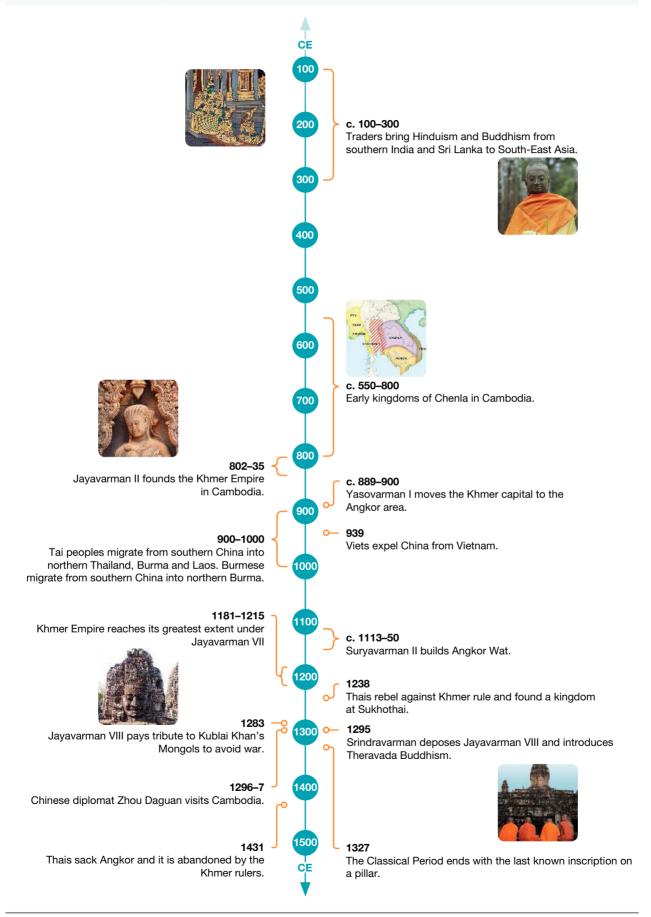
- The city of Angkor had a million people grouped around it in the twelfth and thirteenth centuries.
- Angkor Wat is the world's largest religious structure.
- Angkor Thom's Bayon Temple has over 11 000 carved figures with scenes of war and everyday life.

6.9 Decline and fall: the historical debate

- After the death of Jayavarman VII, temple-building ceased and the Khmers lost territory.
- There are several factors that could have contributed to Angkor's decline and fall. They include environmental damage, climate change, religious changes and attacks by the Tais.

6.10 Legacies of the Khmer Empire

- The Khmer Empire left significant legacies for Cambodia, including Angkor with its temples and other historical sites.
- The Khmer Empire's legacies also include its influences on the cultures of other South-East Asian states, especially Thailand and Laos.



6.13.2 Reflection

Complete the following to reflect on your learning.

6.13 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Kings, wars and a city of temples. How did the Khmer Empire rise so high, and what caused its downfall?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



eWorkbook Reflection (doc-31330)

Crossword (doc-31331)



Interactivity Angkor and the Khmer Empire crossword (int-7588)

KEY TERMS

Buddha Siddhartha Gautama who founded Buddhism in the sixth century BCE

Buddhist to do with Buddhism; a follower of Buddhism

cult a system of religious worship

epic a long story in verse narrating the deeds of its hero

Hindu the most ancient of all the main world religions; originated in India

incarnation the representation of a spirit or quality in a living human

Khmer the Cambodian people

legitimate lawful or proper

linga a phallic symbol that would have originally been a feature of most Hindu temples

Mahayana Buddhism one of the two main forms of Buddhism that influenced mainland South-East Asia mausoleum a huge tomb

nirvana in Buddhism, the perfect state; free of suffering and desire

nobles the aristocracy; hereditary privileged class

pious devout, very religious

protectorate when stronger states protect and control weaker states

reincarnation being continuously born and reborn in other lives

ruling class kings, nobles and high officials

Sanskrit ancient and sacred language of India

slash and burn agriculture a nomadic form of farming in which people clear part of a forest, grow crops, harvest them and then move on to repeat this in another place

Tai ethnic groups that migrated from southern China into northern mainland South-East Asia from the tenth century

Theravada Buddhism one of the two main forms of Buddhism that influenced mainland South-East Asia

Tonle Sap the largest freshwater lake in South-East Asia

vassal state a state whose ruler acknowledges a foreign ruler as his overlord

7 Mongol expansion (c.1206–1368)

7.1 Overview

Khans, clans, courts and culture. How did a band of rural warriors conquer half the world?

7.1.1 Links with our times

Wrestling is Mongolia's national sport. The popularity of wrestling today is one of many ways in which modern-day Mongolia continues to reflect the Mongolian Empire of the Middle Ages, a nation that rose to prominence because of its military prowess. Under the leadership of Genghis Khan, one of history's most fearsome fighters, the Mongol army conquered over a quarter of the known world, creating the largest land empire in history.

Mongol power contributed to the revival of learning in Europe, reunited China and expanded frontiers. Trade, knowledge and ideas flowed along the Silk Road under Mongol protection. It is no wonder, then, that the world of the thirteenth and fourteenth centuries is often called the age of the Mongols.



LEARNING SEQUENCE

- 7.1 Overview
- 7.2 Examining the evidence
- 7.3 Life in imperial China before the Mongol conquest
- 7.4 The Mongol people and their land
- 7.5 The rise of Temujin
- 7.6 The Mongol army
- 7.7 Mongol rule the Yuan dynasty
- 7.8 Culture and beliefs at the khan's court
- 7.9 The travels of Marco Polo
- 7.10 Defeat of the Mongol Empire
- 7.11 The Mongol legacy
- 7.12 SkillBuilder: Analysing different perspectives
- 7.13 Thinking Big research project: The Mongol expansion show
- 7.14 Review

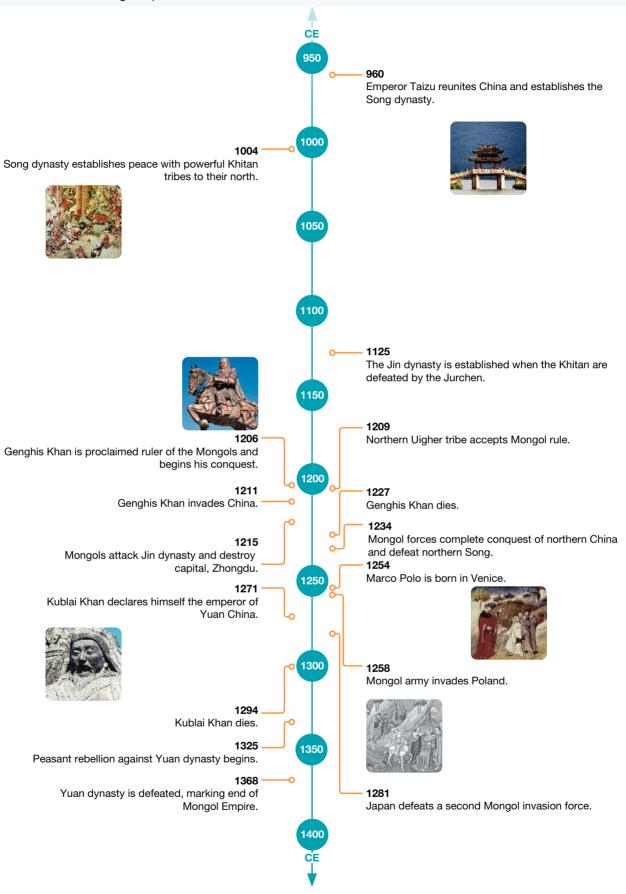
To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.

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A timeline of the Mongol expansion



7.2 Examining the evidence

7.2.1 How do we know about the Mongol expansion?

In this topic, we will explore the age of the Mongols, from about 1206 to 1368 CE. For many people, this was a time of war and destruction at the hands of the Mongol army. For others, it was a time of relative peace when ideas and religions could be expressed freely and cultural barriers were lowered between Europe and Asia.

7.2.2 Official records

To ensure they are remembered by the generations to come, governments often commission official histories to be created. Just a few decades after his death, the Mongol leadership commissioned an anonymous writer to document the life of Genghis Khan, leader of the Mongol army, as well as that of his son, in *The Secret History of the Mongols*. Intended to be read by only the Mongolian ruling class, the book was based upon the oral stories passed down within the empire and celebrated Khan's heroic deeds. Written in a flowing style, it included lessons for keeping the empire strong (see **SOURCE 1**).

SOURCE 1 The Secret History of the Mongols is a mixture of prose and verse, and contains many lessons.

She gave unto each [of her five sons] a single arrow shaft, saying 'Break [it]!' The single [arrow shaft] — how could they have hindered [it from breaking]? — each brake and cast away. Again, she bound five arrow shafts together in a bundle and gave [them to her sons], saying, 'Break [them]!' All five, holding, every person, the five arrow shafts bound in a bundle, were in turn not able to break [them].

7.2.3 The writings of explorers

China was known as the 'middle kingdom' in Europe during the Middle Ages, and legends of its wealth and mystery filled the popular imagination. Following the publication of *The Travels of Marco Polo*, interest in the region increased. Sources such as **SOURCE 2** give information about both the Mongols and what other societies thought of the Mongols.

SOURCE 2 Marco Polo's descriptions of the khan's prowess on and off the battlefield helped to make the Great Khan a celebrity in Europe.

When Nayan and his men saw their camp thus encircled by the khan and his host, they were seized with amaze; yet they ran to arms, formed themselves in order of battle, and were soon prepared to strike. Then began the beating on many instruments, and singing with loud voices; for it is the custom of the Tartars [Mongols], that until the horn termed naccar is winded the troops do not engage. But when that grand trumpet of the great khan was sounded, all the other performers began playing, and raising their voices very loud, making a noise that was truly most wonderful. Then the two armies rushed against each other with sword, spear, and lance, while the footmen were prepared with bow and quiver. The battle was fierce and cruel; the arrows filled the air like rain; horses and horsemen were seen falling to the ground; and the tumult was such, that if Jove had thundered, he could not have been heard. Nayan was a baptized Christian, and therefore had the cross upon his standard. Never, in our day, was there so hard and terrible a combat, nor so many assembled on one field, especially of horsemen; and the number who fell on both sides was fearful to behold. The battle continued from nine in the morning till midday; but the great khan at last remained master of the field.

7.2.4 Everyday objects

To better understand the lives of the Mongol people, it is important to look at the everyday objects they left behind (see SOURCE 3). Much can be learned by looking at seemingly simple things such as the tools they used, the jewellery they treasured, the houses they lived in and the food they ate.

7.2.5 An artistic view

Artwork gives great insight not only into the feelings of the artist but also into the audience for which the artwork was created. During the reign of the Mongols, Chinese artists worked for their Mongol rulers, producing calligraphy and paintings that depicted everyday life, landscapes and famous battles (see **SOURCE 4**). There were also many artworks created centuries after the fall of the Mongol Empire. Some of these, such as the painting shown in **SOURCE 5**, depict the power of the Mongol army.

SOURCE 4 This thirteenth-century artwork depicts Kublai Khan, grandson of Genghis Khan, in a hunting party. This source was created using ink and colour on silk during the Mongol expansion.



SOURCE 3 This paiza, or Mongol passport, was used by those travelling through the Mongol Empire on official business. It was worn around the neck so that it would be visible to customs officers who would let the wearer pass. The inscription reads, 'By the strength of Eternal Heaven, an edict of the Emperor [Khan], he who has no respect shall be guilty.'



SOURCE 5 A sixteenth-century illustration of the Mongol army engaged in battle with Chinese Song dynasty forces. This is a secondary source as it was created many years after the event it depicts.



7.2 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

7.2 Exercise 1: Check your understanding

- 1. HS2 When was the age of the Mongols?
- 2. HS1 Why would governments commission official historical records to be created?
- 3. HS1 The ruling group usually commissioned sources such as paintings. Would these sources be biased in any way? Explain your answer.
- 4. HS1 Why was China known as the middle kingdom in the Middle Ages?
- **5. HS1** Objects such as weapons provide us with information about the Mongol people. List three everyday objects that provide us with information about the lives of the Mongol people from the Middle Ages.
- 6. HS1 What type of artwork was produced during the reign of the Mongols?

7.2 Exercise 2: Apply your understanding

- 1. HS3 What lesson do you believe was meant to be learned by the boys in SOURCE 1?
- 2. **HS3** In **SOURCE 2**, the explorer Marco Polo describes a large battle.
 - (a) What adjectives or phrases does he use to describe the khan and his forces?
 - (b) What adjectives or phrases does he use to describe the khan's enemies?
 - (c) Whose side was Marco Polo on (if any), and how can you tell?
- 3. **HS3 SOURCE 3** is an example of an everyday object used by government officials. What does it tell you about the society in which they lived?
- 4. HS3 What is depicted in SOURCE 4? Why would an artist create this scene?
- 5. **HS3** Is **SOURCE** 5 a primary or secondary source? Explain your answer.
- 6. HS3 List the similarities and differences between the portrayals of battle in SOURCES 2 and 5.
- 7. **HS3** Examine **SOURCES 1, 2, 4** and **5**. Which one would you trust to depict Mongol culture most accurately? Why?
- **8. HS3** Using the sources in this subtopic and what you have already read about the Mongol expansion, suggest why the Mongol Empire expanded so quickly during the thirteenth and fourteenth centuries.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

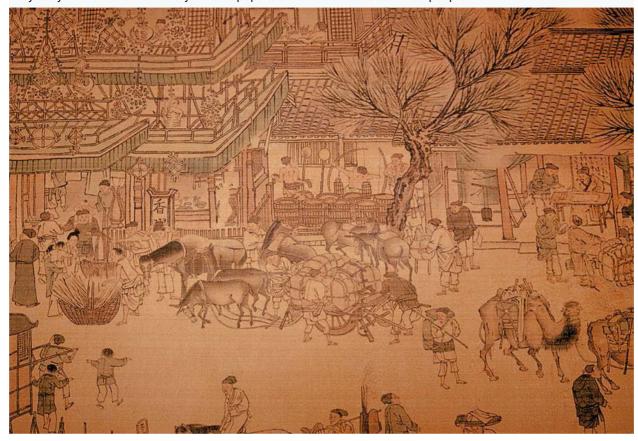
7.3 Life in imperial China before the Mongol conquest 7.3.1 The Song dynasty

In the twelfth century, over 100 million people lived under the rule of the Song. The Song Empire covered 4 million square kilometres of rich agricultural land and bustling cities. In 960 CE, the first Song emperor, Taizu, established his control of central China when he led the army in a rebellion against the government. Once in power, Taizu turned away from using military force to rule the people.

The emperors of the Song dynasty built their authority through a strong civilian government:

- civil servants were selected by a series of examinations and interviews
- an imperial academy and university trained government officials
- governors and magistrates were appointed to run government at a local level
- senior government officials were made responsible for drawing the emperor's attention to public opinion and problems
- taxation of trade and industry raised the revenue to finance important government works such as irrigation programs
- prices were regulated through government control of big industries such as salt, tea and wine.

SOURCE 1 An illustration created in the twelfth century of the beautiful city of Kaifeng, the capital of the Song dynasty. In the eleventh century it had a population of more than one million people.



Life in the Song cities

Peace in Song-dynasty China led to a massive growth in population because farming techniques improved, irrigation systems were rebuilt and trade grew. As a result, Song city streets were bustling places, crowded with the congestion of horses, mules, carts, rickshaw boys and porters carrying goods dangling from poles balanced across their shoulders. People stopped to shop at the booths and stalls marked by tall posts and banners advertising their wares. In the Song cities of Kaifeng and Hangzhou, the wealthy could shop for exotic items such as rhinoceros horn from Bengal and ivory from Africa. Street stalls and shops stayed open until 2 am. At the tradesmen's stalls, there was knife sharpening, pot mending, coffin making and tailoring on offer. Crowds also gathered to listen to fortune tellers, watch magicians and consult healers.

DID YOU KNOW?

Anyone who wanted to appear before the emperor had to sink on their knees and knock their head nine times on the floor to show their obedience.

SOURCE 2 A group of wealthy Song women dressed in their fine silk robes enjoying a New Year feast.



Song cities were built in the shape of a square and had thick defensive walls. People entered the city through guarded gates and walked down straight streets that criss-crossed from north to south and east to west. Houses were grouped into **wards**, enclosed by another protective wall that was locked every night. In cities teeming with people, the government was responsible for community health and hygiene. Garbage was regularly removed from the streets and transported on barges to dumps in the countryside. Every day the 'pouring men' came to cart away the city's human waste, which was dried and used as fertiliser for the local vegetable gardens.

7.3.2 Home and the Chinese family

Traditional life in China was in stark contrast to life for the nomadic Mongol warriors. The Chinese way of life centred on agriculture. Every member of the Chinese peasant family was needed to work on farming tasks such as draining and ploughing fields, fertilising crops and irrigating. Most people living in traditional Chinese communities were bound to the land for their survival. Traditional Chinese culture emphasised a person's duty to their family, including dead ancestors who were continually honoured through religious rituals. Loyalty to the family was more important than loyalty to the government. The father was the head of the family and made all the decisions. Wives and children were expected to obey.

During the Song dynasty, China had many small villages where between 200 and 400 people lived in family cottages made from mud bricks. Chinese families also lived on boats, called sampans, along the busy waterways of the large river systems. Within the harbours of the port cities, thousands of boat people lived in floating villages. The strong Chinese family network provided security in a land where natural disasters like insect plagues, floods and droughts frequently destroyed harvests and homes.



SOURCE 3 The ideal traditional Chinese family (from the southern Song dynasty, tenth century)

7.3.3 Song inventions and ideas

Many inventions and ideas began in ancient China. From the fourth century CE, the Western world was greatly influenced by Chinese developments such as:

- the loom for weaving silk
- the compass for establishing directions and distances
- the breast strap harness and the foot stirrup for horse riding
- the stern post rudder for steering ships
- the wheelbarrow
- the blast furnace for obtaining metals
- the mechanical clock to keep time and track the movements of the sun, moon and stars.

The Chinese discovered that a combination of coal, saltpetre and sulfur would make gunpowder 300 years before the Western world discovered it. The Song dynasty leaders recognised the military usefulness of gunpowder and used it to set off fires and create frightening clouds of smoke. Song China defended itself against the Mongol army by hurling gunpowder grenades from catapults and shooting flaming arrows from thick bamboo tubes.

SOURCE 4 A water-powered Song clock in Kaifeng that moved through its cycle by the tipping of water from one bucket into another. The clock wheel rotated every 14 minutes and 24 seconds.



SOURCE 5 A Song dynasty description of one of the uses of gunpowder

At the end-of-year festival . . . there were many firecrackers . . . there were fuses so arranged that when you lit one it set off hundreds of others . . . [Some] fireworks . . . were like wheels and revolving things, others like comets, and others again shooting along the surface of the water, or flying like kites . . .

Spreading the word

Printing began in China 700 years before it appeared in Europe. In 750 CE, sheets of paper were stamped with inked blocks of wood into which Chinese characters had been carved. It was a quick and easy process known as 'block printing'. By the ninth century, the blocks had become much larger and each could print a whole page. Over the centuries, labour-saving methods of printing were developed. The Song dynasty printer Bi Sheng made characters out of clay and set them in a frame. These clay characters could then be removed and new characters arranged for printing the next page.

7.3.4 The dynasty crumbles

Behind the splendour of the Song dynasty was weakness. North of the empire was the land of two powerful tribes called the Khitan and the Jurchen. In 1004 CE, the Song dynasty made the first of many peace agreements with the Khitan, agreeing to give an annual **tribute** of silver and silk to their northern neighbours. The peaceful policies of the Song eventually strengthened the position of the Khitan who continued to launch raids into Song territory.

In 1120 the Jurchen were at war with the Khitan. The Song supported the Jurchen in the belief that defeat of the Khitan would free them from the annual tribute payment. However, the decision was disastrous for the Song. Jurchen forces defeated the Khitan and then turned south to invade the Song Empire. The Jurchen took control of Kaifeng in 1126, humiliated and murdered the members of the imperial family and then drove the Song from northern China. The Jurchen established the Jin dynasty in the north, with a capital in Beijing.

The southern Song

The surviving members of the Song dynasty fled south and established a new capital at the town of Linán, now known as the city of Hangzhou. This southern Song settlement was protected by the dense forests of the lower Yangtze River valleys. Linán was located in the wealthiest agricultural land in China. The southern Song secured themselves in this prosperous region by building a navy to defend the coast and developing more sophisticated military technology. The southern ports flourished as Song sailors and their fleets of ships made long voyages in search of trade. They held their power in this southern empire for another 150 years, until they faced a more powerful foe than the Khitan — the Mongols.





7.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

7.3 Exercise 1: Check your understanding

- 1. **HS1** How did the Song emperors build their authority?
- 2. HS1 What were the key features of the civilian government?
- 3. HS1 Why did the population grow so rapidly in Song-dynasty China?
- 4. **HS1** What were some of the things that could be bought at the markets?
- 5. **HS1** How were the cities designed? Explain how this helped protect the citizens.
- 6. **HS1** What work did the traditional Chinese peasant do?
- 7. **HS1** What was more important than loyalty to the government?
- 8. **HS1** How did the strong Chinese family network provide security?
- 9. **HS1** Identify at least five ancient Chinese inventions and their purposes or uses.
- 10. HS1 What combination of elements made gunpowder and what did the Chinese use it for?
- 11. **HS1** Describe early Chinese printing.
- 12. **HS1** What was the weakness behind the Song dynasty?

- 13. HS5 Consider the weakness behind the Song dynasty.
 - (a) What saved the city of Kaifeng from being attacked by the Khitan?
 - (b) What was the consequence of this for the Song imperial family?
- 14. HS1 How did the Song survive their foes?

7.3 Exercise 2: Apply your understanding

- 1. HS3 What features of life in the Song cities are shown in SOURCES 1 and 2?
- 2. HS3 Examine SOURCE 3 closely. What work are the people in the fields doing?
- 3. HS3 What does the scene within the house in SOURCE 3 tell us about the hierarchy within the family unit?
- 4. HS3 What are the inventions in SOURCES 4 and 5?
- 5. HS3 What are the weapons being used in SOURCE 6?
- 6. HS3 Who won the battle shown in SOURCE 6?
- 7. **HS3 SOURCES 1–3** provide valuable information about the art and architecture of Song China. Using the sources as your evidence, write a brief description of the particular features of the gardens and buildings, and the way the artist has chosen to paint the scenes.
- **8. HS4** Explore the reasons that the Song dynasty created such a flourishing culture that allowed for so much growth and creativity.
- 9. HS2 Design a timeline and record the major events in the downfall of the Song.
- 10. **HS4** Debate why the Northern Song dynasty only lasted for just over 150 years, despite being so prosperous. After your debate, list the top five reasons for the defeat of the Song. Justify your answers.
- 11. **HS6** Evaluate the statement that China was way ahead of Europe in technology and culture during the Middle Ages.
- 12. HS6 What elements of the Songs' way of ruling a city can be found in Australian society today?
- 13. HS3 Imagine you are one of the people in any of the sources. Write a short description of where you are and what is happening, emphasising the relevant achievements of the Song dynasty that are clear to you from the source.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

7.4 The Mongol people and their land

7.4.1 The Mongol homeland

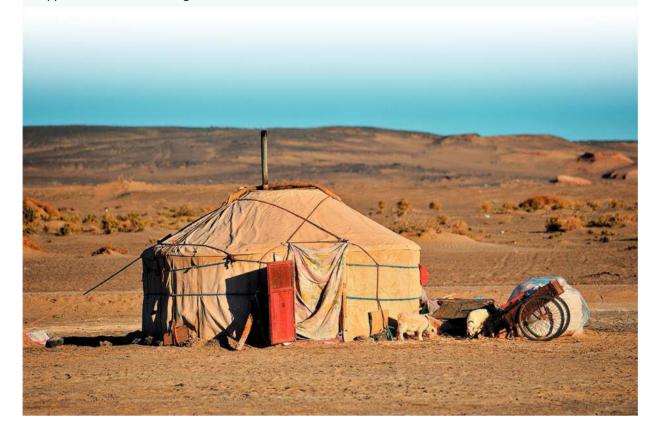
The Mongols were nomadic tribal people from Mongolia, the cold and barren land to the north and west of China. The Mongol homeland was bordered by the high Altai mountain range to the west, the Gobi Desert to the south and Lake Baikal to the north.

The people raised animals on the vast treeless grasslands of Mongolia because the region was too cold and dry for growing crops. The Mongols lived off their herds of cattle, goats, yaks and sheep. Fleece was used to make clothing and line the walls of homes, known as *yurt*. They collected the sheep manure for fuel and made cheese and butter from milk. **Mutton** was also a major part of the Mongol diet. The Mongols used camels to cross the harsh deserts, oxen to move heavy loads and horses for transport, hunting and warfare.

Life in Mongolia was shaped by the land and the seasons. Every year the Mongols migrated south from summer pasture lands on the open plains to their winter pastures in the sheltered mountain valleys. Survival in the unforgiving climate was a struggle and so Mongol territory remained sparsely populated. 'Luxuries' such as grain, metals, textiles and tea were obtained through raiding or trading with the settled agricultural people living to the south of China's Great Wall.

From 400 BCE, the Chinese constructed walls to defend themselves against raids from the tribes living along their northern border. China's huge population was concentrated in the river valleys where the people cultivated crops, constructed roads and built great cities. The Great Wall marked the boundary between two very different ways of life: the wealth and sophistication of **Imperial** China, and the poverty and simplicity of nomadic Mongolia. The Chinese regarded the Mongols as 'barbarians'.

SOURCE 1 A traditional Mongolian yurt was easily collapsed and transported. The conical shape allowed rain to run off and provided resistance against strong Mongolian winds. Sections of the wooden frame were secured with strips of rope to form a cylinder shape over which felt was stretched for insulation. Roof poles supported the outer covering.



SOURCE 2 Yaks are perfectly suited to the Mongolian landscape. They can survive extreme temperatures, live on rocky slopes and flat plains, and can forage through snow for fodder, which is essential in a country where snow covers the ground for almost half the year. Hangai yak provided Mongols with meat, milk and transport.



SOURCE 3 Mongolia lay to the north of China. The stark northern landscape was the home of people the Chinese regarded as barbarians. This Song dynasty illustration shows the Chinese view of the Mongol homeland as barren and harsh.



7.4.2 Mongol society

The Mongols lived in small clans. Groups of clans were bound together by marriage and blood relationships to form a Mongol tribe. A chieftain, or khan, governed the tribe. The khan was not born to rule, but kept the position of power through constantly proving personal strength and protecting the tribe. Within clan groups, the people belonged to a particular social class which determined everything, from what they were given to eat at a banquet to how they were armed and dressed when they went into battle.

The role of women

Mongol women had power, influence and considerable freedom because they managed daily life in the camp. Their tasks included:

- herding and milking all the livestock
- making cheese, yoghurt and butter
- packing the yurt
- making felt by soaking and beating sheep fleece for winter insulation of the yurt
- · rearing the children
- cooking and sewing animal skins into warm winter clothing.

Marriage ties were very important to Mongol tribal organisation. Marriages were arranged through discussion with clan leaders and were regarded as an important step into adulthood. Men were permitted to have many wives. Once married, a woman was responsible for her own yurt. The location of the yurt, in relation to the man's yurt, indicated seniority among the women. The first married wife placed her yurt to the east of her husband's and subsequent wives placed their yurts to the west. If the husband died, it was expected that the youngest son or brother would take care of the widow. Married women had particular status in Mongol society and were identified by elaborate headdresses.

SOURCE 4 An extract from a first-hand report written by European Giovanni da Pian del Carpini, who visited the Mongols between 1245 and 1247 at Pope Innocent IV's command

Girls and women ride and gallop as skillfully as men. We even saw them carrying quivers and bows, and the women can ride horses for as long as the men; they have shorter stirrups, handle horses very well, and mind all the property. The Tartar (commonly used term for Mongols) women make everything: skin clothes, shoes, leggings, and everything made of leather. They drive carts and repair them, they load camels, and are quick and vigorous in all their tasks. They all wear trousers, and some of them shoot just like men.

Hunters and horses

Horses were the Mongol's most treasured asset. The herders and hunters of Mongolia spent their lives in a saddle. From childhood they were taught to hunt from horseback. This outdoor life gave the Mongols independence and mobility. Traditional hunting expeditions, called the *nerge*, also provided military training. By riding in a vast circular formation, the Mongol horsemen gradually forced wild game such as deer and boars into a *corral*, or enclosure. The hunt required great teamwork, skill and endurance. Mongol warriors were known to ride for days without rest, surviving on dried milk curd and the blood drawn from an incision into the veins on their horse's neck. The life that the Mongol nomads knew from birth created powerful warriors.

7.4 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

7.4 Exercise 1: Check your understanding

- 1. HS1 What animals did the Mongols use and why?
- 2. HS1 How was Mongol life shaped by the land and seasons?
- 3. **HS1** Why was the Great Wall of China built and what did it signify?
- 4. HS1 Why was clan and family so important to the survival of Mongol society?
- 5. **HS1** Who was the ruler of the clan? How did they maintain their power?
- 6. **HS1** What were some of the tasks that the women managed in daily life?
- 7. **HS1** What were the traditions associated with marriage?
- 8. HS1 What were the biggest differences for men and women in Mongol society?
- 9. **HS1** Why were horses the Mongols' greatest asset and treasure?

7.4 Exercise 2: Apply your understanding

- 1. **HS3** Using **SOURCE 1**, explain how the Mongolian yurt was perfectly created to work within the conditions in which the Mongolians lived.
- 2. HS3 Look closely at the landscape in SOURCE 2. What makes yaks so suited to their landscape?
- 3. HS3 Describe the elements in SOURCE 3 that show the Song illustrator thought the Mongol landscape was harsh and barren.
- **4. HS3** After reading **SOURCE 4**, are there any other tasks performed by women that you would add to your list from exercise 1, question 6?
- 5. HS3 What was Giovanni da Pian del Carpini's view of Mongol women? Explain your evidence for saving this.
- **6. HS3 SOURCES 1, 3** and **4** give information about Mongolian life. Using these sources, suggest why the Chinese regarded their northern neighbours as 'barbarians'.
- 7. **HS3** Pretend you are a Mongol tribe member who has made the journey to trade with the settled agricultural people to the south of the Great Wall. Using the sources in this subtopic as a basis, tell the farmers about your home and why you continue to live there despite the harsh conditions.
- 8. HS5 Identify how the landscape the Mongol people lived in shaped their living conditions.
- 9. HS5 Referring to all the sources in this subtopic, describe the Mongol people's relationship with:
 - the land
 - · their animals
 - the weather
 - the Imperial Chinese
 - · each other.

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7.5 The rise of Temujin

7.5.1 Early life

The details of Temujin's early life are unclear, but it is believed that he was born around 1162 and was the son of a warrior and minor chieftain named Yusegei. Mongol legend claims that Temujin was born clasping a clot of blood in his right hand, a sign that he was destined to become a hero.

Temujin was a member of a Mongol tribe known as the *Oirat*. When Temujin was still a young child his father was poisoned by another band of nomads and his family was abandoned by their clan. It was left to his mother, Yulun, to instruct him in the skills of the warrior: riding horses and shooting the Mongol bow and arrow.

At that time, the Mongols were divided into many tribes that constantly went to war with each other in their efforts to gain the best hunting grounds and pastures. Warriors also went on raiding parties, kidnapping women from other tribes to be brought back as additional wives. A shaman named Teb-tengri described life on the **steppe** when Temujin was a boy by saying, 'There was no respite, only battle. There was no affection, only mutual slaughter.'

As a young man, Temujin was noted for his height, his broad forehead and his piercing green eyes. He learned to survive by developing military superiority and the skills of diplomacy and negotiation.

SOURCE 1 A sculpture of Temujin, who became known to the world as Genahis Khan



7.5.2 The creation of a khan

By the time he was in his twenties, Temujin had built alliances with a number of other Mongol clans. He gained a reputation as a furious warrior and a man of great influence, leading to his being given the position of tribal chief in 1189. In 1206 — the year of the leopard — his greatness was recognised when he was elected as the khan over all his fellow tribal chieftains. Temujin took on the new title of *Genghis Khan*, meaning 'the universal ruler'.

To strengthen the bond between the Mongolian tribes, Genghis Khan relied upon three ties that were familiar to the nomadic tribes:

- quda tie of marriage. A skilled politician, Genghis Khan used marriage as a tie to bind together old enemies, even marrying one of his daughters to a rival tribe after they submitted to him without a fight.
- anda tie of sworn brotherhood. As a child, Temujin had made this tie with a friend named Jamuka by exchanging knuckle bones and a bow and arrow. As a man, Genghis Khan exchanged valuable items such as sable coats with other warriors to create ties that were considered stronger than the tie between real brothers.
- nökör tie of friendship. This was a bond similar to that of a European lord and liegeman, in which the follower promised to obey and defend his leader, leaving his family behind to travel with his leader.

The Great Khan commanded loyalty from his companions and obedience from his soldiers, but accepted criticism from his advisers, including his mother, Yulun. He was also noted for his tolerance of other religions, a position that he adopted because it made it easier to work with and manipulate others. Under the brilliant leadership of Genghis Khan, the warring Mongol tribes were finally united.

Genghis Khan's first military victory as the universal ruler was against the Tanguts of Xi Xia, south of the Gobi Desert. Rather than battle the forces of Genghis Khan, the Tanguts chose to pay a tribute to him. The Great Khan now controlled a major section of the Silk Road, giving his army direct access to China.

SOURCE 2 When a new camp was established, the khan's tent was the first to be erected. In this image, created in the fourteenth century, the khan is surrounded by his court officials. In the trees outside, the yak tails hang as a symbol of the presence of the khan.



SOURCE 3 Genghis Khan met with a Taoist holy sage, or holy man, in 1221. The record of his conversation with Ch'ang-Ch'un presents a different image of the Great Khan.

I hate luxury and exercise in moderation [the Khan wrote]. I have only one coat and one food. I eat the same food and am dressed in the same tatters as my humble herdsmen . . . In the space of seven years I have succeeded in accomplishing a great work, uniting the whole world in one empire. I have not myself distinguished qualities . . . But as my calling is high, the obligations incumbent on me are also heavy and I fear that in my rule there may be something wanting. To cross a river we need boats and rudders. Likewise we invite sages and choose assistants to keep the empire in good order . . . I implore thee to move thy sainted steps. Do not think of the extent of the sandy desert. Commiserate with the people in the present situation or have pity upon me and tell me the means to preserve life.

SOURCE 4 Genghis Khan's ferocious reputation was created through statements that Yuan-dynasty writers attributed to him.

The greatest joy a man can know is to conquer his enemies and drive them before him; to ride their horses and take away their possessions; to see the faces of those who were dear to them wet with tears . . .

7.5 ACTIVITY

Using the internet or your library, research the importance of the Silk Road.

- a. Who built the Silk Road and why?
- b. Where was it? What were travelling conditions like on the road in the thirteenth century?
- c. Explain the road's strategic importance to Genghis Khan.
- d. Name some of the products and ideas that were transported via the Silk Road in the days of the Great Khan.

Determining historical significance

7.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

7.5 Exercise 1: Check your understanding

- 1. HS1 Of what tribe was Temujin a member?
- 2. **HS1** What happened to Temujin's family when he was young?
- 3. **HS1** What was life like for the Mongols when Temujin was a boy?
- 4. HS1 In his early life, Temujin displayed impressive physical characteristics and skills. What were they?
- 5. **HS1** How did Temujin gain the title *Genghis Khan*? Explain what it means.
- 6. HS1 In what ways did Genghis Khan show great leadership?
- 7. HS1 What did Genghis Khan gain from his first military victory as the universal ruler? Why was it so important?
- 8. **HS1** Match the names in column A with the description in column B.

| Column A | Column B |
|--------------|--|
| Temujin | Genghis Khan's mother |
| Yusegei | The Mongol tribe Genghis Khan belonged to |
| Yulun | Title meaning 'the universal ruler' |
| Anda | The Mongol leader who became Genghis Khan |
| Genghis Khan | Mongol warrior who was the father of Temujin |
| Oirat | A tie of sworn brotherhood |

7.5 Exercise 2: Apply your understanding

- 1. HS3 What well-known aspects of Temujin are captured in the sculpture in SOURCE 1?
- 2. HS3 How does SOURCE 2 visually recognise the khan's great power?
- 3. HS3 How long had Genghis Khan been the universal leader by the time the conversation in SOURCE 3 took place?
- 4. HS3 The Yuan dynasty was established by Genghis Khan's grandson Kublai Khan. Is SOURCE 4 a primary or secondary source? Why would they want to establish a fierce reputation for Genghis Khan?
- 5. HS3 How is Genghis Khan depicted in SOURCES 2, 3 and 4? What might account for the difference in these depictions?
- 6. HS3 Which source in this subtopic do you think is the most reliable? Explain your answer using evidence.
- 7. HS4 Explain the terms quad, anda and nökör in your own words. Describe how these terms were used to create strong bonds between the Mongolian tribes who became a great force in the region.
- 8. HS4 Using the knowledge you have gained from this subtopic, write a paragraph explaining the qualities Genghis Khan had that allowed him to become such a great leader.
- 9. HS4 What aspects of the Mongol life did the khan draw on to create a superior warrior force?

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7.6 The Mongol army

7.6.1 Mongol soldiers

With a mighty army consisting of the Mongol tribes from the southern deserts, the steppe lands of central Mongolia and the mountains of the freezing northern frontiers, Genghis Khan invaded China in 1211. Swift-footed horses carried the Mongol **cavalry** with incredible speed over vast distances. The cavalry combined military skill with discipline and toughness; Mongol commanders believed that winter provided the best opportunity for war, and used frozen lakes and rivers as their highways to battle.

SOURCE 1 Mongol horsemen could turn and shoot arrows from their composite bow with great accuracy and speed. The composite bow was made from combining a layer of sinew, wood and horn to create the frame.



The Mongol soldier was well equipped and carried a variety of weapons:

- a lance fitted with a hook for pulling enemies from their horses
- a curved sword and a dagger that was strapped to the arm
- two bows; one used to shoot from horseback and another heavier bow for use on foot. The typical Mongol bow could shoot arrows that pierced armour 200 metres away
- a shield, an iron helmet and armour made from leather that was waterproofed with a coating of lacquer.

The Mongol warrior's greatest strength lay in his horse, a short and stout wild animal that was tough and hardy like the soldier that rode it. Mongol horses could survive the bitter winter of the north because they had coarse coats and the ability to find and feed from the grasses that lay beneath winter snow. The Mongol army provided each soldier with about five horses to accompany him on campaign, as the rule was that no horse could be ridden for more than one day in four. It was said that Mongol soldiers could live in the saddle for up to ten days and would eat the raw meat of dogs, rats, mice and horses when they were on campaign. Stories of the discipline and strength of the Mongol army spread fear across Asia and Europe.

7.6.2 Military structure and discipline

Mobilising an army

The Mongol tribal organisation developed military strength. Even in peacetime all able-bodied men between fifteen and sixty years of age were under military orders, meaning that they could be called upon to fight. Promotion in the Mongol army was not related to high birth, but achieved as recognition of bravery and skill. The Mongol army was reformed and reorganised under Genghis Khan. It was composed of:

- arban a group of ten men from different Mongol clans, ordered to be loyal to each other regardless of clan connections
- zuun a company, consisting of ten arban
- myangan a battalion, consisting of ten zuun
- tumen an army, consisting of 10 myangan.

The tribal links of the clan groups were broken up by the army structure to ensure old loyalties could not threaten Mongol unity. In battle the close-knit and tightly drilled units used skills developed in the traditional Mongol hunt, encircling, trapping and then cutting the enemy to pieces. The use of couriers enabled the various sections of the Mongol armies to keep close contact with each other.

Death and duty

One of the most important features of the Mongol army was the principle of strict discipline known as *Yasa*, meaning an order or decree. The thirteenth century writer Juvaini explains the Yasa as a 'rule for every occasion and a regulation for every circumstance while for every crime [there was] a penalty'. Genghis Khan was unable to read and write because Mongol civilisation had not developed literacy. Adapting Uigher script from the northern Turkic tribe, the Great Khan had the rules of the Yasa written down on scrolls. During wartime, desertions, failing to rescue captured colleagues, plundering without permission, sleeping on duty, fighting with other tribal groups within the army and showing unnecessary kindness to a captive were all punishable by death.

SOURCE 2 Genghis Khan declared in the Yasa that 'if the military leaders and the leaders of the many descendants of the ruler who will be born in the future, should not adhere strictly to the Yasa then the power of the state shall be shattered and come to an end'. Although a complete list of the laws has never been found, it is believed that they covered all aspects of public and private life. The Yasa was of particular importance to the discipline and structure of the army.

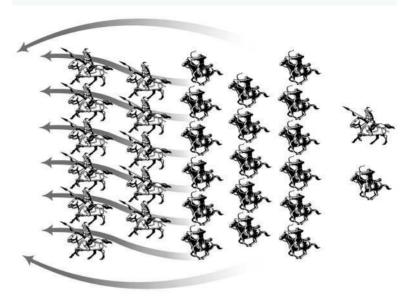
- The ruling that divides men of the army into tens, hundreds, thousands, and ten thousands is to be maintained. This arrangement serves to raise an army in a short time, and to form the units of commands.
- The moment a campaign begins, each soldier must receive his arms from the hand of the officer who has them in charge. The soldier must keep them in good order, and have them inspected by his officer before
- Forbidden, under death penalty, to pillage the enemy before the general commanding gives permission; but after this permission is given the soldier must have the same opportunity as the officer, and must be allowed to keep what he has carried off, provided he has paid his share to the receiver for the emperor.
- To keep the men of the army exercised, a great hunt shall be held every winter. On this account, it is forbidden any man of the empire to kill from the month of March to October, deer, bucks, roe-bucks, hares, wild ass and some birds.

7.6.3 Conquering the world

Mongol military campaigns involved thorough planning and reconnaissance. Not only did this make it possible for the Mongols to defeat their foes, but they were also able to learn new battle strategies from their enemy. From the Chinese and the Persians, the Mongols learned about siege machines and gunpowder. They then transported catapults on horseback to the battlefield and hid their movements behind smoke grenades and firebombs.

Most people in the path of the Mongol army had a choice: surrender and live or resist and die. If a city rebelled after agreeing to surrender, the population was massacred and the city was annihilated. As the Mongols moved across western Asia, they used terror as a weapon of war, exterminating town after town and

SOURCE 3 The *tulughma* was a Mongol tactic using heavy and light cavalry in tight formation. Heavy cavalry charged the enemy and broke enemy lines. Light cavalry were protected by heavy cavalry and used lightning speed and manoeuvrability to launch a second wave of attack.



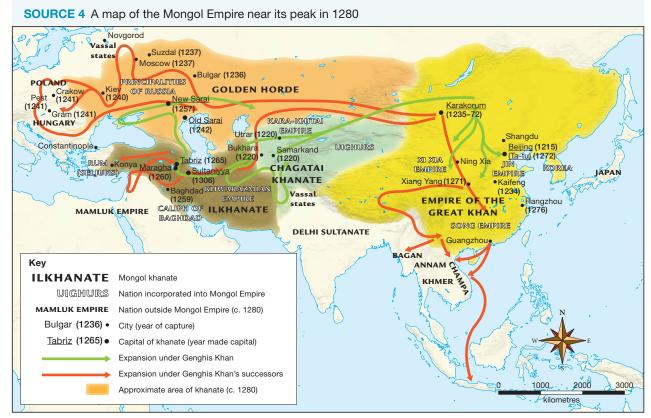
encouraging the spread of stories about their conquests. Genghis Khan began his invasion of China by attacking the Jin (pronounced 'chin') people of northern China and Manchuria. In 1213, the Mongol armies broke through the Great Wall of China and within two years conquered and destroyed the Jin capital city of Yanjing (later known as Beijing). So many thousands of people were killed in the conquest of northern China, it was said white hills appeared that were made of the bones of the dead.

In 1227 Genghis Khan died during a campaign in China. His vast empire was divided between the four sons and grandsons of his chief wives to create four Mongol kingdoms:

- Kublai Khan ruled China the Yuan dynasty.
- Hulegu ruled Persia the IlKhanate.
- Batu Khan ruled southern Russia the Golden Horde.
- Chagatai ruled Central Asia the Chagatai Khanate.

In 1268, the Mongols launched their second colossal invasion of China. Mongol forces were now led by Genghis Khan's grandson, Kublai Khan. Kublai Khan's army **blockaded** the Yangtze River and began advancing on the cities of the southern Song. The Song were well defended with their modern gunpowder weapons, such as rockets and flamethrowers. The Mongol armies changed their fighting tactics and surrounded the great walled Song cities, cut off supplies and starved them. For four years the **sieges** continued until the Mongols were victorious. Every Song city that fought against the Mongols was destroyed. The only chance for survival was unconditional surrender.

The closing defeat of the southern Song came in 1276. The Mongols again used their siege tactics to destroy the Song navy. For two weeks they encircled the Chinese fleet and blocked all supplies. With the last Song forces weakened, the Mongols attacked on a morning shrouded in rain and fog. Mongol victory was swift. Among the thousands of Chinese who died on that day was the last Song emperor, a child named Bing, and his empress mother. Mongol victory was complete when Kublai Khan declared himself the first foreign emperor of China. By this time, the Mongol army had conquered territory stretching from the Arctic Ocean to the Persian Gulf and from Hungary to Korea.



Source: Map drawn by Spatial Vision.

SOURCE 5 Despite the Mongol army's domination of much of Asia, attempts to conquer Japan failed, as shown in this nineteenth-century Japanese woodcut. In both 1274 and 1281, Mongol invasions were thwarted by a combination of resistance from Japanese warriors and destructive typhoons, which shattered the Mongol ships and killed many thousands of the Mongol invaders.



7.6 ACTIVITIES

- Draw a diagram that shows the decimal structure of the Mongol army, as restructured by Genghis Khan.
 Make sure that your diagram is labelled clearly. Identify how this made the army stronger and more efficient.
 Analysing cause and effect
- Look back to your work in subtopic 7.5. Using the internet and/or your library, find out about the significance
 of the Silk Road in bringing the Black Death to medieval Europe around this time and discuss your findings
 with the class.
 Determining historical significance
- Begin a timeline of the history of Mongol expansion, beginning with the conquest of the Jin. Leave enough
 room so that, as you learn more about the creation of the Mongol Empire, you can continue adding details of
 events and personalities to your timeline.

 Sequencing chronology

7.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

7.6 Exercise 1: Check your understanding

- 1. **HS1** Briefly describe the weapons carried by a Mongol soldier.
- 2. **HS1** What made the Mongol horse so useful for the warriors?
- 3. HS1 How many horses did each soldier take with him on campaign? Explain why.
- 4. **HS1** What was the basis for promotion in the Mongol army?
- **5. HS1** Why were the tribal links of the clans broken up by the army structure?
- 6. **HS1** How did the different sections of the army communicate during the battle?
- 7. HS1 Refer back to section 7.6.2.
 - (a) What was the Yasa? What script was it written in?
 - (b) Why did Genghis Khan not just use his own language for the Yasa?
 - (c) Why did Genghis Khan have the Yasa developed?
- 8. **HS1** What was the purpose of reconnaissance in a military campaign?
- 9. HS1 What did the Mongols learn from the Chinese and Persians?
- 10. HS1 What did Genghis Khan achieve outside of Mongolian lands? What was his main tactic?
- 11. HS1 When did Genghis Khan die?
- 12. HS1 What happened to Genghis Khan's empire after he died?
- 13. HS6 What was Kublai Khan's great military achievement?

7.6 Exercise 2: Apply your understanding

- 1. HS3 Describe the weapons and armour that you can see in SOURCE 1.
- 2. HS3 Read the laws outlined in the Yasa in SOURCE 2.
 - (a) What was the benefit of dividing the army into tens, hundreds, thousands and tens of thousands?
 - (b) Whose responsibility was it to hand out the arms to the soldiers?
 - (c) Are the soldiers allowed to pillage (rob violently) the enemy at all?
 - (d) How did Genghis Khan intend to keep his armies fit during winter?
- 3. HS3 Explain the military tactic *tulughma* as shown in the diagram in SOURCE 3. What is its benefit as a form of attack?
- **4. HS3** The Mongol Empire continued to expand after the death of Genghis Khan. Examine **SOURCE 4**, which depicts the expansion of the Mongol Empire.
 - (a) How far west did Genghis Khan's campaigns go?
 - (b) Which three Asian empires were conquered by the Mongols?
 - (c) What city was at the centre of the Mongol lands? (Hint: From where did many of the campaigns begin?)
 - (d) Which modern countries were once part of the Mongol Empire?
- **5. HS3** Using the illustration in **SOURCE 5**, as well as the information in the caption, explain why the Mongols' attempt to conquer Japan was unsuccessful.
- 6. HS3 Imagine you have been given the task of training a group of young Mongol warriors. Refer to SOURCES 1–3 to write a speech you will present to your trainees clarifying how they should dress, the skills they will need and the rules they will have to follow.

- 7. HS5 During a discussion with your classmates, identify what you see as the five main causes of the successful growth of the Mongol Empire. Put these in order of importance with the top being the most important. Justify the order you choose.
- 8. HS6 Based upon what you now know about the Mongol army's strategy, write two short accounts of one of the final battles before the fall of the southern Song stronghold during the siege of 1276. The first should be written from the perspective of a member of the Song royal family and the second from the perspective of a Mongol warrior.

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7.7 Mongol rule — the Yuan dynasty

7.7.1 Yuan government

Now the emperor of China, Kublai Khan named his new dynasty Yuan, meaning 'creative force'. He abandoned the old Mongol capital of Karakorum and established the imperial Chinese capital in the modern-day city of Beijing, where he developed a very different style of government that blended Mongol and Chinese traditions. By doing so, he created a Chinese state that was bilingual, multicultural and tolerant of religious differences.

Kublai Khan brought Confucian scholars to his court to help govern Yuan China. He appointed a General Secretariat, composed of 14 trusted officials, to enforce his laws and ensure efficient government. The population of China was divided into four groups or classes:

• *Mongols* — the elite of Yuan dynasty society who were given all the most important government jobs. The Mongols did not have to pay taxes

SOURCE 1 A thirteenth-century painting of Kublai Khan, the first emperor of the Yuan dynasty. As emperor, the khan placed the whole of China under Mongol control.



- and were granted large estates that were worked by Chinese peasant labourers.
- non-Chinese allies and mercenaries from the west appointed as government officials across the empire
- northern Chinese Khitans, Jurchens and Koreans
- southern Chinese all subjects of the former Song dynasty.

The northern and southern Chinese had limited rights, were punished more severely than non-Chinese, were forbidden to gather in public and paid heavy taxation to support the Yuan government.

SOURCE 2 The coat worn by the emperors showing the 12 symbols of power in China



The 12 symbols and their meaning

- A Moon of Heaven and enlightenment
- B Fu justice
- C Water weed purity
- Constellation Heaven and enlightenment
- E Axe punishment
- F Cups respect for parents

- G Sun Heaven and enlightenment
- H Dragon adaptability
- Mountains Earth and protection
- K Pheasant literary achievements
- Grain abundance for the people

7.7.2 Rebuilding China

Millions of workers were set the task of rebuilding China after decades of Mongol war and conquest. Transport links were constructed with thousands of kilometres of roads and a Grand Canal linking north and south China. To protect against possible famine, granaries were built throughout the empire. Kublai Khan built schools, hospitals and orphanages, and established a regular postal service connecting every corner of his Yuan kingdom. The khan also sent explorers to map China's great river systems and record the geography of the vast land. This encouraged merchants to journey overland to the Middle East and South-East Asia, and eventually led to the development of trade links with Europe. In 1269 Kublai Khan established a printing office so that pamphlets could be published to communicate government decrees to the people. He also encouraged the printing of books on a wide range of subjects including agriculture, law, medicine, mathematics, art and history. Yuan dynasty printing presses were so widespread that books were mass produced and cheap to buy. Paper money was printed with such success that, for the first time in human history, paper money became the main form of currency.

source 3 Despite the positive achievements of the Yuan dynasty, the population of China plummeted due to the harsh conditions imposed upon them by Mongol rule. This Yuan dynasty painting by a Chinese artist shows death luring a baby away from his sister. His mother is powerless to save him.



7.7.3 Fantastic cities and 'gardens bright'

Kublai Khan built a magnificent palace for himself in his winter capital, on the site of the ancient city of Chung-tu. He renamed it Tai-du, meaning 'Great Capital'. The khan's city was an architectural marvel of Arabic, Mongolian, western Asian and Chinese styles. It was said that the elaborately decorated dining room seated more than six thousand guests. In inner Mongolia, approximately 300 kilometres north of Beijing, Kublai Khan built his summer city Xanadu. It was designed according to the layout of a traditional Chinese city, but also included many features of nomadic Mongolian culture. Here, the khan slept behind screens of ermine skin to remind him of the hunt.

SOURCE 4 An excerpt from Samuel Taylor Coleridge's nineteenth-century poem Xanadu. The poem was based on Marco Polo's account of Kublai Khan's summer palace.

In Xanadu did Kubla Khan A stately pleasure-dome decree: Where Alph, the sacred river, ran Through caverns measureless to man Down to a sunless sea. So twice five miles of fertile ground With walls and towers were girdled round: And there were gardens bright with sinuous rills, Where blossomed many an incense-bearing tree; And here were forests ancient as the hills, Enfolding sunny spots of greenery.



7.7 ACTIVITIES

- 1. Write a newspaper article as an observer over the first ten or so years of Kublai Khan's rule over China, reflecting on the strengths and weaknesses of his achievements. **Determining historical significance**
- 2. Refer to the text and SOURCE 4. Using the same metre, write your own poem about an aspect of Kublai Khan's rebuilding of China. Using historical sources as evidence

7.7 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

7.7 Exercise 1: Check your understanding

- 1. HS1 What name did Kublai Khan give to his new dynasty and what did it mean?
- 2. **HS1** Where did Kublai Khan establish his new rule?
- 3. HS1 Consider the people of China.
 - (a) What were the different groups or classes of people in the population of China at this time?
 - (b) What were their rights?
 - (c) Why were the Chinese treated more harshly than non-Chinese?
- 4. **HS1** Why did China need rebuilding at this time?
- 5. **HS1** Summarise the main developments that Kublai Khan achieved in reconstructing and rebuilding Chinese society.
- 6. **HS1** Where was Kublai Khan's winter palace? In what styles was it built?
- 7. HS1 What elements in his summer palace tell you that, despite embracing Chinese culture fully, he never forgot his origins?

7.7 Exercise 2: Apply your understanding

- 1. HS3 Describe how SOURCE 1 portrays Kublai Khan. Do you think that the painter was trying to show him in a good light or not? Explain your answer.
- 2. HS3 Examine SOURCE 2. From what you know of Kublai Khan's achievements in rebuilding China, which of the 12 symbols would he have valued and why?

- 3. HS3 Examine SOURCE 3 carefully.
 - (a) What comment is the artist making about life in Yuan China?
 - (b) Given that Kublai Khan put so much effort into rebuilding China, why do you think the artist might feel like this?
- 4. HS3 How long after Kublai Kahn's rule did Samuel Taylor Coleridge write his poem Xanadu (SOURCE 4)?
- 5. **HS3** After reading the extract of the poem in **SOURCE 4**, do you think Coleridge imagined Kublai Khan's palace accurately? Explain your response.
- 6. HS3 What symbols in SOURCE 2 would the people in SOURCE 3 feel that the emperor has not lived up to?
- **7. HS5** Which of Kublai Khan's achievements in rebuilding China would have had the most impact on the people? Explain why you think this?
- 8. HS5 What were the negative aspects of the changes brought about by the khan? Who suffered the most?
- 9. HS5 Could you argue that the Yuan social policy was discriminatory?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

7.8 Culture and beliefs at the khan's court

7.8.1 Honouring China's heritage

During the Yuan dynasty, Kublai Khan's court was the centre of political, artistic, philosophical and religious debate and expression. In order to maintain stability within the empire, the khan sought to find a balance between Chinese and Mongolian culture.

The influence of royal women had begun with Genghis Khan's mother. It continued into the reign of Kublai Khan. His wife, Chabi Khatun, played an important role in shaping the government of the empire

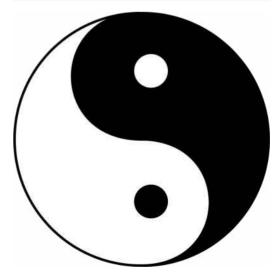
when her support of Tibetan monks encouraged many members of the Mongol ruling class to convert to Tibetan Buddhism. The emperor's mother, Sorghaghtani Beki, realised that Kublai Khan would need to understand the Chinese if he was going to successfully rule over the 100 million people of Yuan China, and encouraged him to study their belief systems. Taking his mother's advice, Kublai Khan invited scholars and religious leaders to attend his court and debate matters of religious and philosophical importance. During the Yuan dynasty, Chinese religion, ideas, art and culture flourished.

Yin and yang

The Chinese believed that two opposing forces shaped the universe. Known as yin and yang, these forces were two halves of the same whole and could be seen in the rise and fall of the tides, the yearly cycle of the seasons and the cycle of night and day:

- Yin was the female forces darkness, cold, wet, softness, earth, moon and even numbers.
- Yang was the male forces brightness, heat, dryness, activity, heaven, sun and odd numbers.

SOURCE 1 The relationship between yin and yang is often compared to the movement of the Sun over a mountain or valley. The yin is the shady place while the yang lies in the sunlight. Over the course of the day, the yin and yang change places, expressing their unity.



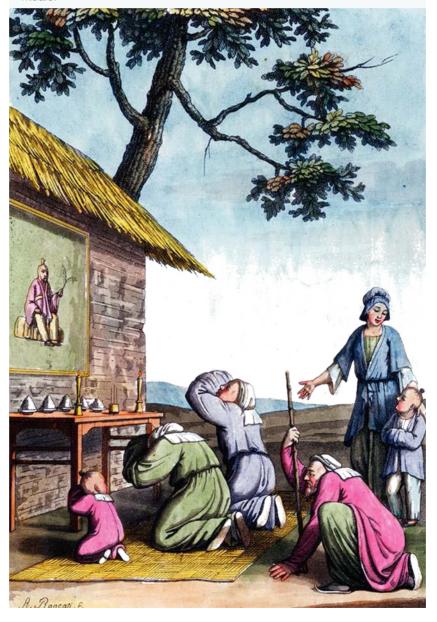
7.8.2 The path to enlightenment

During the Song dynasty, three great religious traditions had merged to produce a set of beliefs and principles shared by Chinese people of all social classes:

• Confucianism — developed in the sixth century BCE by the Chinese philosopher Confucius, this philosophy valued qualities of honesty, morality, loyalty, self-sacrifice, love and good manners. Confucianism also taught people about their place in society.

- Daoism a way of thinking based on the teaching of the philosopher Laozi who stressed the importance of living a simple life that honoured the natural world. Daoism eventually became a religion with deities, temples and priests, and taught people how to improve society by understanding their place in nature.
- Buddhism a religion that came to China from India in the first century CE, Buddhism emphasised the need to reject material possessions as a path to enlightenment. Buddhism gave people a hope of life after death.

SOURCE 2 In this seventeenth-century painting the farmer and his family are shown making offerings to the gods at the family shrine. Even the poorest home had a shrine located in the central part of the house where the names of ancestors were recorded and offerings of food, incense and flowers were made every day. Symbols that came from Buddhism, Daoism and Confucianism were included in daily religious



7.8.3 Art and culture

In Chinese culture, painting, poetry and calligraphy were known as the 'three perfections'. Poets and painters aimed to express spiritual peace and tranquillity through their art, while the calligrapher aimed to capture the beauty of every line of a Chinese character. Traditionally, Chinese art was rich in symbolism. Plants and animals represented objects and ideas of importance.

- The butterfly represented the human spirit or joy.
- The chrysanthemum represented courage.
- The crane represented a long life and great happiness.

With Kublai Khan's encouragement, Chinese writers, painters and calligraphers recorded the history of the earlier Tang, Jin and Song dynasties. Although many Chinese artists agreed to work for their Mongol emperors, some expressed their true feelings about the Mongol occupation of China through art and literature.

SOURCE 3 Huang Gongwang was the oldest of the four painters known as the Masters of the Yuan dynasty. This painting shows the Fuchun Mountains to which he retired after serving briefly in the Mongol administration.



The most highly regarded painters of this period were known as the *literati*. These scholarly Chinese artists turned away from depicting everyday life in China and concentrated on painting landscapes. Rather than painting images designed to please their audience, they sought to depict nature as *they* experienced it, a practice that would influence generations of artists to come.

SOURCE 4 In this poem, the hawk symbolises the Mongols and the thrush represents what remained of Chinese culture under Mongol rule.

In the eighth month the Mongol hawk flies low over the ground; In a flurry [the thrush] takes refuge under a tree. The beautiful little bird knows in advance to hide itself; How much more should people act according to circumstances.



7.8.4 Visiting the court of Kublai Khan

Kublai Khan's palace was a vibrant place full of visitors from around the Mongol Empire and beyond its borders. The khan was attended by religious and political advisers, and encouraged the free exchange of ideas. Although the court was multicultural and was tolerant of its members practising different religions, it still had its share of conflict.

SOURCE 5 A modern artist's impression of the court of Kublai Khan



- Foreign dignitaries were welcome at the court of Kublai Khan. Such visits were an opportunity to increase trade between the East and the West.
- B Under the rule of Kublai Khan, Tibetan Buddhism thrived and became one of the official religions of the Yuan dynasty.
- C Women who were close to Kublai Khan were encouraged to engage in political discussions during his rule. His mother and wife were particularly influential.
- D Confucianists, some of whom had advised the Song, were invited to the khan's court. Xu Heng was a well-respected Confucianist and educator, and was appointed the first leader of the dynasty's National Academy in 1271.
- E The court was filled with poets, artists and calligraphers, whose work was displayed for all to see. Influential poets included Zhang Yanghao, who challenged government policies, and Huang Gongwang, who was one of the four great painters of the Yuan dynasty. After retiring to the mountains, he spent three years painting one scroll.
- F Diet was of great importance. It was believed many diseases could be cured or prevented through diet alone. Assorted foods that may have been eaten included duck, chicken, fish, rice and vegetables.
- G In the thirteenth century, the court of Kublai Khan regularly saw high-level meetings between the Mongolian ruling class and dignitaries from around the world. Through these meetings, ideas flowed into China, while tales of the now-famous emperor spread all over the world.
- H During the Yuan dynasty, there were many debates between Daoists and Buddhists at the khan's court. After losing a debate in 1281, Kublai Khan ordered many Daoist texts to be burned.

DID YOU KNOW?

It was not until 1707 that the Europeans were able to imitate the Chinese process of producing porcelain.

7.8 ACTIVITIES

Using the internet and/or your library, research one of Confucianism, Daoism or Tibetan Buddhism and answer the following:

- a. How and where did this belief system begin?
- b. When and how did it enter China?
- c. Why might it have appealed to the people of China during this time period?
- d. How may its teachings have guided Kublai Khan in ruling over the Chinese people?

Determining historical significance

7.8 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

7.8 Exercise 1: Check your understanding

- 1. HS1 Consider the influence of the women in Kublai Khan's life.
 - (a) Who was Kublai Khan's wife?
 - (b) What was her influence in shaping the government?
 - (c) Who was Kublai Khan's mother?
 - (d) What effect did her beliefs have on Yuan China?
- 2. HS1 Explain what the Chinese concept of yin and yang are.
- 3. HS1 What were the three main religious traditions shared by the Chinese people during the Song dynasty?
- **4. HS1** Briefly outline each religion identified in question 3, with an emphasis on what it gave or taught the Chinese people.
- 5. **HS1** What were the 'three perfections'?
- 6. **HS1** What did the poets, painters and calligraphers aim for in their work?
- 7. **HS1** Who were the *literati*? What did they do?
- 8. HS1 Why was Kublai Khan's court a vibrant and exciting place to be?

7.8 Exercise 2: Apply your understanding

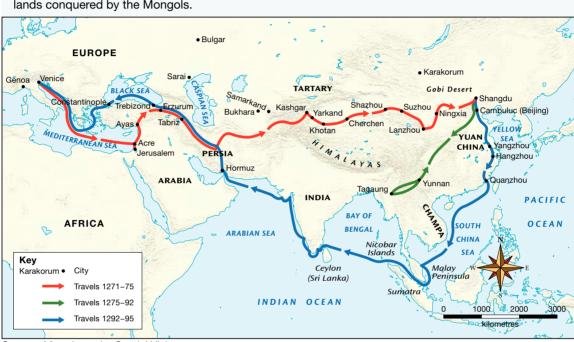
- 1. HS3 How does the visual representation of yin and yang in SOURCE 1 help explain its meaning?
- 2. **HS3** In Song China it was said that 'the three teachings flow into one'. Describe how the harmonious relationship between China's three religious traditions has been expressed in **SOURCE 2**.
- 3. HS3 Read SOURCE 4. Explain the symbolism of the birds and the message the Chinese artist is expressing.
- 4. HS3 Explain how the artist of SOURCE 3 can be seen as a member of the literati from this painting.
- 5. **HS3** Use **SOURCE** 5 to explain where there might have been possible sources of conflict within the court, despite its multiculturalism and political stability.
- **6. HS3** Imagine that you have the opportunity to meet the artist and poet of **SOURCES 3** and **4**. Compose a series of questions to find out more about their perceptions of Yuan art, literature, beliefs and values. Do you think that they would have similar views, or would they be opposing?
- 7. **HS3** Drawing on all the information given in this subtopic both text and images write a short report on the topic 'Art and beliefs during the Yuan dynasty'.
- 8. HS4 Consider the court of Kublai Khan.
 - (a) Describe how the court of Kublai Khan was different from the courts of the past.
 - (b) What was still the same, or similar?
- 9. HS6 Is it fair to describe Kublai Khan's rule as an 'occupation' of China? Why or why not?
- 10. HS6 You are an outsider who has been invited to visit the khan's court in order to share your ideas on religion and politics. Write a short piece back to your country's ruler describing your feelings upon approaching his court for the first time.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

7.9 The travels of Marco Polo

7.9.1 Building ties with the Far East

In 1260 two brothers, Nicolo and Maffeo Polo, departed from the rich Italian trading city of Venice on a long and dangerous journey to China. They eventually arrived in China by way of the ancient trade route known as the Silk Road. Like many before them, they were amazed by the grandeur of Kublai Khan's court and the splendour of his palace. The brothers journeyed back to Venice by 1269 and immediately began planning to return.



SOURCE 1 Polo's work for the khan would take him around Asia and Europe and through many of the lands conquered by the Mongols.

Source: Map drawn by Spatial Vision.

Kublai Khan was fascinated by the Polo brothers and their distant homeland. He was keen to learn more about their strange beliefs and customs, so he invited European teachers and Christian missionaries to Yuan China. The brothers returned to Europe as **ambassadors** for the Yuan dynasty.

In 1271 the Polo brothers left Venice for China once more, this time with the task of presenting a message from the Pope to the Great Khan. The brothers were accompanied by Nicolo's young son, Marco. After a four-year journey through the Holy Land, Persia and Tartary, they entered the khan's court in Cambuluc (Beijing), where they received a warm welcome.

7.9.2 Marco Polo becomes the khan's ambassador

While Nicolo and Maffeo concentrated on establishing trade between China and Europe, Marco studied the Mongol language and culture. When Kublai Khan asked him to travel for six months to a distant part of his territory, Polo agreed and brought back a number of relevant observations that the khan's older advisers had failed to notice. He spent the next seventeen years of his life as the khan's trusted adviser and ambassador, carrying messages and collecting information and even taxes for the Yuan Empire. Having gained the khan's trust, he was promoted to governor of the city of Yangzhou.

SOURCE 2 An illustration showing the Polos setting sail for China



SOURCE 3 This thirteenth-century French illustration shows Marco Polo arriving at the court of Kublai Khan with his father, Nicolo, and his uncle, Maffeo.



7.9.3 Spreading the legend

Marco Polo returned to Venice in 1295, but his adventures did not end there. After accepting the position of 'gentleman commander' of a Venetian galley, he joined the battle of Curzola. With the Venetian Navy defeated, he was taken prisoner by the Genoese.

Between 1296 and 1297, Marco Polo was held as a prisoner in the city of Genoa, during which he told the story of his remarkable travels to a writer named Rusticello of Pisa, a novelist who had previously written The Romance of King Arthur. Based upon their conversations, Rusticello of Pisa wrote The Travels of Marco Polo, which was peppered with tales of strange customs and legends, marvellous creatures, powerful warlords and lands of untold wealth.

SOURCE 4 As an ambassador for Kublai Khan, Marco Polo was given the duty of retrieving a holy Buddhist relic from Sri Lanka — the tooth of Buddha.

... They succeeded in getting two of the grinder teeth, which were passing great and thick; and they also got some of the hair, and the dish from which that personage used to eat, which is of a very beautiful green porphyry. And when the Great Kaan's ambassadors had attained the object for which they had come they were greatly rejoiced, and returned to their lord.

SOURCE 5 In The Travels of Marco Polo, experiences are often 'larger than life', leading to claims by many people that the book was more fiction than fact. Some people have even claimed that Marco Polo never made it to China.

... I will tell you another very wonderful thing; for there are men in this kingdom who have tails like dogs, larger than a palm, and who are covered with hair. They remain in the mountains, never visiting the towns. There are unicorns, with various beasts and birds for hunting.

How much of *The Travels of Marco Polo* is true was questioned by people in the fourteenth century but, even on his deathbed at the age of 70, the intrepid explorer insisted that *The Travels* was a true account of his experiences. When asked by a priest to retract his 'fables', Marco Polo said, 'I have not told half of what I saw'. Whether the stories were true or not, what cannot be questioned is Marco Polo's influence on the popular imagination of the day. When Christopher Columbus set off to find China more than a century after Polo's death, he carried a copy of the book with him. To Columbus, as to many others, Marco Polo was both inspiration and guide.

DISCUSS

Many people of the time nicknamed Marco Polo's book *The Million Lies* because they found it so hard to believe; however, he left a famous epitaph, 'I have not told half of what I saw'. Debate whether or not you think The Travels of Marco Polo was a true account. Find evidence to support your opinion.

7.9 ACTIVITY

Using the sources and information in this subtopic, make a timeline of the journeys and events in the life of Marco Polo. Illustrate it using images from the internet or hand drawings if you can. Sequencing chronology

7.9 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

7.9 Exercise 1: Check your understanding

- 1. HS1 Why was Kublai Khan interested in the Polo brothers?
- 2. **HS1** What was the purpose of the Polo brothers' 1271 journey back to China?
- 3. HS1 What did Marco Polo learn when he finally got to Kublai Khan's imperial China?
- 4. HS1 What did the khan think of Marco Polo? How do you know this?
- 5. HS1 How long was Marco Polo in China?
- 6. HS1 When did Marco Polo return to Venice?
- 7. **HS1** After Marco Polo returned to Venice what was the next position he accepted? What happened to him in this position?
- 8. **HS1** (a) Who wrote *The Travels of Marco Polo?*
 - (b) Under what circumstances did he write it?

7.9 Exercise 2: Apply your understanding

- 1. HS3 According to SOURCE 1, where did the Polo brothers first sail to on their 1271 journey to China?
- 2. HS3 Where does SOURCE 2 show the brothers leaving from? What evidence does the illustration contain to support this?
- 3. HS3 Is SOURCE 3 an accurate representation of the Polos' arrival at the court of Kublai Khan? Why or why not?
- 4. HS3 What task in SOURCE 4 does Marco Polo undertake for Kublai Khan? What does this tell us about how the khan viewed him?
- 5. HS3 What aspects of SOURCE 5 are beyond belief?
- 6. HS3 Based on SOURCES 4 and 5, what descriptive language did Rusticello of Pisa use to create a sense of excitement about the travels of Marco Polo?
- 7. **HS6** What sort of person was Marco Polo? How can you tell?
- 8. **HS6** Based upon what you know of Kublai Khan, would he have been happy with the publication of *The Travels of Marco Polo*? Explain.
- 9. HS6 What was the long-term impact of Marco Polo's journey and his tales?

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7.10 Defeat of the Mongol Empire

7.10.1 A failing leadership

From its humble beginnings on the steppe, the Mongol Empire grew to become the largest land empire the world has ever seen. Although its beginning was marked by military conquest and unity between the tribes, its end was marked by corruption, in-fighting and the rebellion of its citizens.

When Kublai Khan died in 1294 he was succeeded by his grandson Temur, who called himself Emperor Chengzhong. Temur ruled according to his belief in the principles of Confucianism and worked towards establishing a more just society:

- he brought northern and southern Chinese into the government
- he held an investigation into government corruption and found 18 473 officials guilty of stealing from the state.

Following Temur's death in 1307, the Yuan leadership was in an almost-constant state of flux, with seven emperors taking the throne within 25 years. These emperors lacked Kublai Khan's strength and vision and were increasingly distrusted by Mongolians because they were seen as being too Chinese. In trying to re-establish their Mongolian identity, these emperors distanced themselves from Chinese society by passing harsh laws discriminating against the Chinese. The Chinese continued to regard the Yuan emperors as foreigners heading an occupying army. Over time, Yuan government became weak and corrupt.

For generations, Mongol women had been noted for their independence and the influence they held within traditional Mongol society. By the fourteenth century, however, the granddaughters of Kublai Khan no longer played a prominent role in government. Although the binding of the feet of the Song Chinese women was never accepted by Mongol rulers, life for the women at the Yuan court had become more limited, reflecting the adoption of Imperial Chinese traditions. As the Mongols of Persia embraced Islam, women's traditional Mongolian dress was replaced by the **chador**, a symbol of **piety**.

SOURCE 1 To many cultures, the Mongols always remained 'barbarians'. This Japanese artwork depicts the Mongols as lacking sophistication.

7.10.2 Rebellion

With their leadership weakening, the powerful Mongol clans began fighting with each other and disobeying the emperor. During the fourteenth century, there were numerous Mongolian rebellions against the Yuan and China was hit by a series of natural disasters. The Yellow River broke its banks, thousands drowned and China starved in the terrible famine that followed the flood. The Yuan government increased the suffering of the Chinese people when it forced armies of Chinese peasants to work on the rebuilding of the Yellow River's dykes and waterways. As conditions worsened, rebellion spread. In addition to this, it is believed that the bubonic plague started somewhere in China during the fourteenth century and had a significant negative impact on the population of Yuan China.

SOURCE 2 In the first century BCE, the historian Yuan Káng explained the Chinese belief in the **mandate** of heaven and the principles of good government.

The king Tsu Chia [from the Shang dynasty] had been one of the ordinary people. When he came to the throne he knew what the people needed and so was kind and protective towards them. He didn't dare treat with contempt those who needed him. He remained on the throne for 33 years . . .

The kings of the later Shang dynasty did not know anything of the hardships of the peasants and so did not know their people. They didn't know anything except the pursuit of pleasure; and so not one of them had a long life. They only ruled for three or four years.

Zhu Yuanzhang

Chinese hatred of Mongol rule led to the growth of Chinese secret societies and rebellions against the Yuan dynasty. The most successful rebel leader was a peasant named Zhu Yuanzhang. After his family died in the famine, he became a bandit and rebel leader. In 1356, Zhu Yuanzhang led an army of rebels to capture the strategically important city of Nanjing. Over the next decade, from his stronghold in Nanjing, Zhu Yuanzhang used his knowledge of military strategy and government policy to extend his control over all of southern China. In 1368, he moved his army north and captured Beijing without a fight. Victorious, Zhu Yuanzhang declared himself the first emperor of the Ming dynasty, meaning 'brilliance'.

The last Yuan emperor, Toghun, fled Beijing and the Mongols retreated with him to the vast grasslands and open plains of their homeland. Only a century after the death of Genghis Khan, the mighty Mongol Empire had fallen.

SOURCE 3 Zhu Yuanzhang rose from humble beginnings to lead the rebellion that destroyed the rule of the khans.



7.10 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

7.10 Exercise 1: Check your understanding

- 1. HS1 What happened to the Yuan leadership following Kublai Khan's grandson Temur's death?
- 2. HS5 How did the Chinese view their Yuan leaders? How did this lead to a weakening of their leadership?
- 3. **HS4** How did the role of Mongol women change over the generations?
- 4. **HS1** Why did the Mongol tribes start fighting among themselves?
- 5. HS5 How did the flooding of the Yellow River lead to a Chinese rebellion against the Yuan government?
- **6. HS1** What was the family background of Zhu Yuanzhang?
- 7. **HS1** What year did he become emperor?
- 8. **HS1** Name the new dynasty that Zhu Yuanzhang started.
- 9. HS1 What happened to the Mongol rulers after Zhu Yuanzhang started the new dynasty?

7.10 Exercise 2: Apply your understanding

- **1. HS3** There are many Chinese artworks similar to **SOURCE 1** that depict Mongols in unflattering ways. Describe what you can see them doing here. Do you think that this is an accurate portrayal?
- 2. **HS3** Read **SOURCE 2** carefully. Explain what the Chinese belief of the mandate of heaven and the principles of good government were.
- 3. HS3 Examine SOURCE 3. Describe the pattern on Zhu Yuanzhang's robe. What might it symbolise?

- 4. HS3 Examine SOURCES 1 and 3. What do these sources tell us about the attitudes of the artists to their subjects? Analyse the reasons that they may have made the decisions that they did in creating the images.
- 5. HS3 Reread SOURCE 2 and, using your earlier summary, explain how, in the eyes of their Chinese subjects, the khan of the Yuan dynasty broke the 'mandate of heaven'.
- 6. HS3 Imagine you are a Mongol artist and have been asked to make alterations to the artwork in SOURCE 1. Explain the changes that you intend to make to communicate your sense of Mongol leadership.
- 7. HS5 Write a paragraph explaining how and why the Yuan dynasty fell. Identify where you have outlined the main reasons for the retreat of the Mongols back to their homelands.
- 8. **HS5** Examine the background and life of Zhu Yuanzhang in the lead-up to becoming emperor. What did he do that supported his rise from peasant to emperor?

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7.11 The Mongol legacy

7.11.1 Pax Mongolica

The rule of the khans led to a period in the thirteenth and fourteenth centuries of relative peace across their realm. This peace, referred to by Western scholars as Pax Mongolica, or the 'Mongolian peace', broke down the walls separating the great civilisations of Europe from those in the Middle East and Asia. During the rule of the khans, different ways of living and different belief systems were brought together: farmers and nomads; Asians and Europeans; and Christians, Muslims and Buddhists. Mongol control of the Asian trade routes gave protection to the caravans of precious goods, and encouraged European merchants to make the long journey to the Far East. During the reign of the khans, the region was so tightly controlled that it was said 'a maiden bearing a nugget of gold on her head could wander safely throughout the realm'.

As people and their trade goods moved back and forth across the Eurasian world, they brought with them skills and understanding. European travellers to China brought goods such as silver, fine cloth, horses, linen and musical instruments, and important foods like the cereal grass sorghum. They also spread technical knowledge of processes such as sugar refining and distillation. From Persia, Europeans gained Islamic insight into mathematics, astronomy and science. From China, they adopted the wonderful technical, medical and scientific advances pioneered by the Song dynasty, including:

- printing
- new methods of paper-making
- the magnetic compass
- gunpowder
- porcelain.

SOURCE 1 The cultural and technological legacy of the Mongol **Empire**



SOURCE 2 A traditional Mongolian artwork showing polo, a game played by the Mongols to develop their horsemanship skills. This sport is still played today.



The Mongols created the first paper money accepted by any government as payment for tax, and the value of Yuan dynasty paper money was guaranteed through exchange for gold or silver. The long-distance trade of the Pax Mongolica introduced new ways for people to do business:

- merchants could use bills of exchange rather than having to carry metal coins
- a banking system that allowed deposit and withdrawal of money
- insurance for valuable cargo.

The cities of the Pax Mongolica trading empire grew rapidly in size, prospering from the influx of European money. Within the multicultural Mongol empire, freedom of religion was guaranteed, as was the safety of envoys or ambassadors from foreign lands. The Yasa provided the principles of law and order that governed Mongol territory. With each Mongol victory, civilisations were joined, new trade routes established and new technological and economic advances made. In bringing together these diverse people and cultures, the Mongol Empire began to shape the modern world.

But not everybody was guaranteed safety within the realm of the khans. The suffering of the Chinese people under Mongol rule can be judged by the number of people who did not survive. The total population of China is estimated to have been approximately 120 million when the Mongol invasion began in 1225; by the end of the Yuan dynasty, it had fallen to 85 million.

SOURCE 3 Marco Polo describes the making and use of paper money in Yuan China.

In this city of Kanbalu is the mint of the grand khan, who may truly be said to possess the secret of the alchemists, as he has the art of producing money by the following process. He causes the bark to be stripped from those mulberry-trees the leaves of which are used for feeding silk-worms, and takes from it that thin inner rind which lies between the coarser bark and the wood of the tree. This being steeped [soaked], and afterwards pounded in a mortar, until reduced to a pulp, is made into paper . . . but quite black. When ready for use, he has it cut into pieces of money of different sizes, nearly square, but somewhat longer than they are wide . . .

The coinage of this paper money is authenticated with as much form and ceremony as if it were actually of pure gold or silver; for to each note a number of officers, specially appointed, not only subscribe their names, but affix their signets also; and when this has been regularly done by the whole of them, the principal officer deputed [appointed] by his majesty, having dipped into vermillion [red] the royal seal . . . stamps with it the piece of paper, so that the form of the seal tinged with the vermillion remains impressed upon it, by which it receives full authenticity as current money, and the act of counterfeiting it is punished as a capital offence.

DISCUSS

As a class, discuss how a flourishing dynasty like the Song were able to be overcome by a supposedly barbaric tribal people like the Mongols. [Critical and Creative Thinking Capability]

7.11 ACTIVITY

- a. In groups of four or five research and discuss one of the following areas:
 - (i) the characteristics of the Song dynasty
 - (ii) everyday life under the Song dynasty
 - (iii) the Mongol way of life
 - (iv) the features of the Mongol army
 - (v) the characteristics of the Yuan dynasty.
 - Ensure that you have detailed notes from your group research and discussion. In your discussion, make sure that you focus on the differences between the Song and the Mongols, considering their everyday lives, their religious beliefs and their attitudes and ideas. Then, as a group, design a guiz that tests the key ideas you have learned. Develop a series of questions that test factual knowledge as well as the concepts of change and continuity that you are exploring.
- b. Move into another group that consists of a member from each of the groups from question (a). In this new group, each person is the expert in their field and must explain their findings to everyone in the group, ensuring that they share the knowledge by the end of the sharing session.
- c. Give the group your quiz as soon as you have finished explaining and re-explain any parts that they did not remember.
- d. Share any notes from your topic with your new group so that everyone has the information.

[Ethical Capability]

7.11 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

7.11 Exercise 1: Check your understanding

- 1. **HS1** Explain the term *Pax Mongolica*.
- 2. **HS1** What did China learn from the European travellers?
- 3. HS1 What did the European world learn from China because of trade?
- 4. **HS1** What were the benefits of the creation of paper money?
- **5. HS1** What were the benefits of the multiculturalism of Mongol China?
- 6. HS1 What provided the rules for law and order for the Mongol Empire?
- 7. HS1 Who may have suffered under Mongol rule? How do we know?

7.11 Exercise 2: Apply your understanding

- 1. **HS3** List the items in **SOURCE 1** given to the rest of the world by the Mongols through trade.
- 2. HS3 What is the Mongol sport, depicted in SOURCE 2, which is still played today?
- 3. HS3 Read SOURCE 3.
 - (a) What is the 'secret of the alchemists'? You may need to refer to other sources to find this out.
 - (b) Marco Polo seems to see money-making as an almost mythical process. What words and phrases contribute most to this sense? Quote them.
- 4. HS4 Imagine you are a Yuan dynasty official. Write a short speech summarising the biggest changes to China under Mongol rule.
- 5. **HS4** Explore who gained the most from the Mongol expansion. Who lost the most?
- 6. HS6 Was the term Pax Mongolica an appropriate description for the Mongol Empire? Why or why not?
- 7. **HS6** What could we learn today from the successes and failures of the Mongol Empire?
- 8. **HS6** Was the legacy of the Yuan dynasty positive or negative? Explain.
- 9. HS4 Look back to the cultural and technological items you listed from SOURCE 1 that the Mongols had introduced to the world. Which do you think has had the most significant impact upon the world? Justify your answer.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

7.12 SkillBuilder: Analysing different perspectives



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Why is it important to recognise different perspectives?

Sources help you develop a balanced picture of history by analysing the perspectives different people have had about events of the past and how reliable those sources actually are.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.



7.13 Thinking Big research project: The Mongol expansion show

SCENARIO

Use your skills in research, design and entertainment to create an exciting show that depicts one important aspect of the culture and society during the Mongol expansion.

Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources

projectsPLUS Thinking Big research project: The Mongol expansion show (pro-0163)

7.14 Review



7.14.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

7.14.2 Reflection

Reflect on your learning using the activities and resources provided.



eWorkbook Reflection (doc-31332)

Crossword (doc-31333)

Interactivity Mongol expansion crossword (int-7589)

KEY TERMS

ambassador an authorised messenger or representative

blockade the shutting off of a location to prevent entry or exit

cavalry a unit of the army mounted on horseback

chador a dark dress or cloak that covers the body and face below the eyes

civil servant a person who works for the public

civilian an ordinary citizen

courier a messenger, often carrying important government documents

distillation the purification or concentration of a substance

dyke a barrier or bank of earth for controlling water of the sea or river

dynasty a sequence of rulers from the same family

granary a storehouse for grain

imperial the rule of an emperor or something belonging to an empire

literacy the ability to read and write

magistrate a minor judicial officer

mandate a command or order from a superior power

mercenary a soldier who fights for money rather than for patriotic reasons

metre arrangement of words in measured, patterned or rhythmic lines or verses

mutton the flesh of a mature sheep used as food

occupation invasion, conquest, and control of a nation or territory by foreign armed forces

piety religious devotion

porter a person who carries luggage and heavy loads

reconnaissance a search made to gain military information

rickshaw a small two-wheeled vehicle pulled by a man

siege capturing a protected place by surrounding it and cutting off supplies

steppe a vast plain without trees

tribute a tax or regular payment given to ensure protection or peace

ward a district in a city or town

7.12 SkillBuilder: Analysing different perspectives

7.12.1 Tell me

What is perspective in history?

It is said that history is written by the victors. In many cases, this is true. In the case of the Mongol expansion, however, it is important to remember that the Mongols were mostly illiterate. Therefore, much of the empire's written history was created by their literate enemies and allies.

Why is it important to recognise different perspectives?

When you are trying to understand historical events, places or people, it is important that you find a balance of sources. When investigating the world of the Mongols, these sources may include written accounts, pictures and other artwork, and artefacts. Some sources might have been created by the Yuan dynasty and others by the people they came into contact with at the time. History texts can also be reliable sources because their authors have the benefit of hindsight.

7.12.2 Show me

How to recognise different perspectives

When using sources, it is essential that you determine how reliable they are. You can do this by asking a number of questions. Note that not all of these questions will apply to all sources.

- When was this source created?
- Who created this source and why?
- Who was the intended audience of this source, and how might this have affected its construction?
- In what ways does this source confirm or refute what I already know?
- How reputable was its creator(s)?
- How might the political/social/cultural pressures of the time have influenced the creation of this source?

Only after you have found a number of sources, and assessed their strengths and weaknesses, can you say you have a balanced picture of history.

An example

SOURCE 1, an excerpt from a book written by the Franciscan Friar John of Plano Carpini, is used as an example of how the previous questions could be answered.

SOURCE 1 In the thirteenth century, a Franciscan friar named John of Plano Carpini was sent to Mongolia by Pope Innocent IV, who, like many other European rulers, was worried by the rapid expansion of the Mongol Empire. The friar met with Khan Kuyuk to ask him to stop attacking Christian land. The friar's book, *History of the Mongols*, outlines some of the Mongol beliefs and customs, which the friar viewed as threatening and primitive.

Although they have no law concerning the doing of what is right or the avoidance of sin, nevertheless there are certain traditional things, invented by them or their ancestors, which they say are sins; for example to stick a knife into a fire, or even in any way to touch fire with a knife, or to extract meat from the cauldron with a knife, or to chop with an axe near a fire; for they believe that if these things were done, the fire would be beheaded . . . On the other hand, to kill men, to invade countries of other people, to take the property of others in any unlawful way, to commit fornication, to revile other men, to act contrary to the prohibitions and commandments of God, is considered no sin by them.

- 1. When was this source created? This book was based upon the friar's journey in 1245–1247.
- 2. Who created this source and why? Friar John of Plano Carpini wrote this book after visiting Khan Kuyuk to plead, on the Pope's behalf, for him to cease his attacks on lands occupied by Christians. The book focuses on the Mongols' customs, religion and culture, as well as the best way to resist their army.
- 3. Who was the intended audience of this source, and how might this have affected its construction? Pope Innocent IV was the primary audience. The fact that he perceived the Mongols as a threat to the Christian way of life seems to have coloured many of the Friar's descriptions.
- 4. *In what ways does this source confirm or refute what I already know?* This source highlights the often brutal practices of the Mongols, particularly during times of war. However, from other sources, we know they were often tolerant of people of other religious persuasions, including Christians.
- 5. How reputable was its creator(s)? This is hard to say for certain without further research. The book is noted for being one of the more accurate books of its sort written during this period; however, the friar's Christian beliefs and loyalty to the Pope may have affected his depiction of the Mongols' way of life.
- 6. How might the political/social/cultural pressures of the time have influenced the creation of this source? The Pope, like many other world leaders, was afraid of the khan's power and his apparent disregard towards Christians. The friar seems to have responded to this by highlighting the more threatening aspects of Mongol culture.

7.12.3 Let me do it

Complete the following activities to practise this skill.

7.12 ACTIVITIES

- 1. Examine **SOURCE 2**, from the writings of Marco Polo, and answer the following questions. You may need to refer to 7.9 The travels of Marco Polo to find out more about him and his book.
 - (a) When was this source created?
 - (b) Who created this source and why?
 - (c) Who was the intended audience of this source, and how might this have affected its construction?
 - (d) In what ways does this source confirm or refute what I already know?
 - (e) How reputable was its creator(s)?
 - (f) How might the political/social/cultural pressures of the time have influenced the creation of this source?

SOURCE 2 An excerpt from *The Travels of Marco Polo*, written in the thirteenth century. Marco Polo was an employee of the Yuan dynasty and one-time governor of a major Chinese city.

The great khan, lord of lords, named Kublai, is of a fine middle size, neither too tall nor too short; he has a beautiful fresh complexion, and well-proportioned limbs. His colour is fair and vermeil like the rose, his eyes dark and fine, his nose well formed and placed . . . He maintains also a number of concubines. There is a race of Tartars who are called Migrat or Ungrat, and are a very handsome people. From them are selected 100 girls — the most beautiful in all their country, who are conducted to court . . . It may be asked, if the people of this province do not feel aggrieved by having their children thus forcibly taken away. Assuredly not; on the contrary, they regard it as a favour and an honour; and the fathers feel highly gratified when their daughters are thus selected. If, says one, my daughter is born under an auspicious planet, his majesty can best fulfill her destiny by marrying her more nobly than I can do. On the contrary, if the young lady, by bad conduct or any misfortune, be found disqualified, he attributes the disappointment to her malignant stars.

SOURCE 3 An illustration from the thirteenth century showing Marco Polo in the grandeur of Kublai Khan's court



- 2. Based on your work interpreting sources on the Mongol expansion, answer the following questions.
 - (a) Explain why most of the Mongol history has been recorded by their enemies.
 - (b) What are some of the questions to ask of a text to check whether it is reliable or not?
 - (c) Explain how we can best gain a balanced picture of a historical period.
 - (d) How can you work out who the intended audience of a text might be?
 - (e) What do you know about how reputable the writer of Marco Polo's history was?

7.13 Thinking Big research project: The Mongol Expansion show

Scenario

The team from a leading educational website has decided to employ teenagers to create content, beginning with a History video series. They want the episodes to be historically accurate, but – just as important – they want them to be entertaining. Dramatic, humorous, or something in between, the team want to see how creative you can be in bringing your topic to life!



Task

Use your skills in research, design and entertainment to create an exciting video that depicts one important aspect of the culture and society during the Mongolian Expansion. In order to do this, you will need to ask valid questions about the past that you can answer using the sources at your disposal, and you will need to be able to turn your research into a video presentation that will be clear and enjoyable for people of your age. To make your video entertaining you can be dramatic or humorous, but you must ensure that the information you convey is accurate. You will be finishing your presentation with a test that your classmates should be able to take, and pass, based upon the information you have provided.



Follow the steps detailed in the **Process** section to complete this task.

Process

- Open the ProjectsPLUS application for this topic. Click the Start new project button to enter the
 project due date and set up your project group. Working in groups will enable you to share
 responsibility for the project. Save your settings and the project will be launched.
- Navigate to the Research forum, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the Research report in the Research forum to easily view all the information you have gathered. In the Media centre you will find an assessment rubric to guide your work.
- Choose one event from the Mongolian Expansion that changed society and culture for better or worse. Focusing on this single event, consider:
 - What was life like for people before this event?
 - How did things change after this, and who did they change for?
 - Was the change mostly social, cultural, economic, environmental, or political?
 - Who was responsible for this change?
 - Did this change ultimately lead to progress, or decline, for the society?
 - What sources have you found, and how valid do you judge them to be?
- Once you have chosen your event and conducted your research, write a script that will either be
 presented to camera by a single presenter or a dialogue between different people. Within your script,
 highlight any facts you are including.
- Use the facts that you have highlighted to create a comprehension test that you will administer after presenting your video to the class. It might be a quiz, a wordsearch, a cloze activity, or any other comprehension task that will be easy to mark as correct or incorrect.
- After writing your script, identify where you might use still or moving images, and source these online. Also consider how you can increase the drama, humour, or other elements to make it as entertaining (and memorable) as possible.
- Record and edit your video using editing software.
- Present your video to the class.
- Test your classmates on their understanding of your topic by administering your quiz or other activity.





7.14 Review

7.14.1 Key knowledge summary

7.2 Examining the evidence

- There are a number of primary and secondary sources from which historians draw their knowledge of the Mongols of the thirteenth and fourteenth centuries.
- There are official records such as the official history commissioned by the khan, as well as the writings of explorers who visited the Mongol Empire from Europe, such as Marco Polo.
- There is a lot of surviving artwork, from calligraphy to paintings that depict both ordinary life and famous battles. Some of these were painted at the time and some in the centuries after.
- There are many artefacts such as jewellery, tools and other everyday objects.

7.3 Life in imperial China before the Mongol conquest

- The ruling family before the Mongols were the Song who ruled from 960 CE.
- Under the Song a strong civilian government was built up, leading to a period of peace during which the population grew significantly.
- As a result of the peace under the Song, the cities became busy and bustling places, with a lot of trade.
- Song cities were built in the shape of a square with strong defensive walls. The houses were grouped together and there was organised rubbish and waste collection.
- There were many peasants living traditional agricultural lives, who were bound to the land through farming.
- The family was a strong unit, with loyalty to the family coming before loyalty to even the government.
- During the Song dynasty inventions flourished, many of which eventually spread to the Western world such as gunpowder and printing.
- The peace of the Song dynasty opened it to weakness, as their enemies grew stronger through war with other tribes
- Eventually the Jurchen murdered members of the imperial family and drove the Song out of northern China, establishing their dynasty in Beijing and leaving southern China to the Song until eventually they were defeated by the Mongols.

7.4 The Mongol people and their land

- The Mongols were a nomadic tribal people from the cold and barren lands of Mongolia to the north and west of China.
- The Mongol region was too cold and dry for crops so the tribes raised animals, such as herds of cattle, goats, yaks and sheep.
- The lives of the Mongol people were harsh, with few luxuries, and shaped by the seasons.
- The Mongols used camels and oxen for carrying things. However, horses were their most treasured asset, used for transport, hunting and warfare.
- The Mongols were powerful and seasoned warriors.
- They lived in small clans who formed a tribe, ruled by a chieftain, or khan.
- Many of the links within the tribe were formed by marriage connections.
- Women managed the daily camp life and were valued for this.

7.5 The rise of Temujin

- Temujin was born around 1162, the son of a warrior and minor chieftain.
- Temujin's father died when he was young and his mother Yulun raised Temujin, instructing him in the skills of a warrior.
- He was a striking young man who developed his reputation as a fierce leader.
- Temujin became tribal chief and in 1206 was elected the khan, leader over his fellow tribal chieftains, taking the name Genghis Khan, meaning the 'universal ruler'.

- To ensure stability, Genghis Khan used the three ties that held these nomadic warriors together: marriage, sworn brotherhood and friendship.
- Genghis Khan began a military campaign that saw him control a major section of the trading route, the Silk Road, and gave his army direct access to China.

7.6 The Mongol army

- The Mongol tribes made up a mighty army of tough and disciplined horsemen.
- Genghis Khan successfully invaded China in 1211.
- Mongol soldiers were equipped with a variety of weapons, such as lances, bows, swords and daggers, as well as a shield, helmet and armour made of leather and iron.
- Their horses were stout and hardy animals who could survive bitter winters and each soldier had five, which meant that they could travel long distances rapidly.
- Genghis Khan reorganised the army, increasing its strict discipline, creating tightly drilled units. This strict code of discipline was written onto a scroll called the Yasa.
- The Mongols moved across western Asia, defeating all who resisted, beginning with northern China and moving west.
- When Genghis Khan died in 1227 his empire was divided between four of his sons and grandsons.
- Eventually one grandson, Kublai Khan, stood out and took over, advancing further into southern China, defeating the Song.
- In 1276 the final victory was complete. The Mongol Empire stretched from the Arctic Ocean to the Persian Gulf, and from Hungary to Korea.

7.7 Mongol rule — the Yuan dynasty

- When he became emperor of China, Kublai Khan named his new dynasty Yuan, meaning 'creative force'.
- He established the capitol in what is now Beijing and established a government that blended the Mongol and Chinese traditions.
- He appointed a General Secretariat to enforce his laws and ensure efficient government.
- He worked hard at rebuilding China after the decades of war and conquest and he rebuilt trade connections out of China.
- He encouraged the printing of books and the spread of knowledge.
- Kublai Khan built himself a magnificent palace on the site of the ancient city of Chung-tu, and a summer palace in Mongolia in Xanadu.

7.8 Culture and beliefs at the khan's court

- Kublai Khan's wife and mother both influenced him in accepting the Chinese belief system in order to rule over the 100 million people of Yuan China.
- His court became a place where scholars and religious leaders debated matters and ideas, and where art and culture flourished.
- The three main religions in the Song dynasty were Confucianism, Daoism and Buddhism; these were all tolerated in the Mongol court.
- Painting, poetry and calligraphy flourished as well. A group of painters known as the *literati* depicted nature as they experienced it and were very influential on future artists.
- The court was a vibrant place, welcoming of visitors and the khan encouraged free exchange of ideas, making it quite multicultural and tolerant for its time.

7.9 The travels of Marco Polo

- In 1260 two Italian brothers travelled from Venice and took the long and dangerous journey along the Silk Road to China.
- The brothers were welcomed at the court of Kublai Khan and eventually returned home as ambassadors for the Yuan dynasty.
- In 1271, the Polo brothers returned, this time with Nicolo's son Marco.

- Marco spent the next seventeen or so years of his life as the khan's trusted advisor and ambassador, travelling around the Yuan empire on the khan's business.
- When he eventually returned to Europe, he joined the Venetian navy. During a skirmish with the Genoese he was taken prisoner and it was here that he told the tale of his travels to the writer Rusticello of Pisa, who went on to write *The Travels of Marco Polo*.
- Many people questioned the truth of Marco's stories but he stuck by them, inspiring many others who followed him in later years.

7.10 Defeat of the Mongol Empire

- In the years following Kublai Khan's death, the Yuan leadership was constantly changing and this weakened the empire.
- The Mongols thought the Yuan leaders too Chinese and the Chinese thought them too Mongol.
- The leaders became corrupt and weak. With the leadership weakening, the Mongol clans began fighting with each other again.
- China was also hit by a series of natural disasters that led to great suffering for the Chinese peasants. As the Chinese hatred of the Mongols grew, there was a growth in planned rebellions.
- A peasant rebel leader Zhu Yuanzhang began a takeover of strategically important cities, eventually capturing Beijing and declaring himself the first emperor of the Ming dynasty, meaning 'brilliance'.
- The mighty Mongol Empire had fallen only a century after the death of Genghis Khan.

7.11 The Mongol legacy

- Western scholars refer to the period of the Mongol dynasty as *Pax Mongolica*, or Mongolian Peace, because the period of relative peace allowed the barrier between the East and the West to be crossed by trade and an exchange of ideas.
- Under the rule of the khan, different ideas were tolerated and many different belief systems were brought together.
- Ideas from China were passed to Europe, such as printing, new methods of paper-making, the magnetic compass, gunpowder and porcelain, as well as the concept of paper money.
- The Mongol Empire flourished in many ways, but there were still many Chinese people who suffered under the Mongol rule, with the Chinese population dropping from 120 million at the start of the Mongol Empire to 85 million by the end of the Yuan dynasty.



7.14.2 Reflection

Complete the following to reflect on your learning.

7.14 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Khans, clans, courts and culture. How did a band of rural warriors conquer half the world?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry guestion, outlining your views.





eWorkbook Reflection (doc-31332)

Crossword (doc-31333)



Interactivity Mongol expansion crossword (int-7589)

KEY TERMS

ambassador an authorised messenger or representative

blockade the shutting off of a location to prevent entry or exit

cavalry a unit of the army mounted on horseback

chador a dark dress or cloak that covers the body and face below the eyes

civil servant a person who works for the public

civilian an ordinary citizen

courier a messenger, often carrying important government documents

distillation the purification or concentration of a substance

dyke a barrier or bank of earth for controlling water of the sea or river

dynasty a sequence of rulers from the same family

granary a storehouse for grain

imperial the rule of an emperor or something belonging to an empire

literacy the ability to read and write

magistrate a minor judicial officer

mandate a command or order from a superior power

mercenary a soldier who fights for money rather than for patriotic reasons

metre arrangement of words in measured, patterned or rhythmic lines or verses

mutton the flesh of a mature sheep used as food

occupation invasion, conquest, and control of a nation or territory by foreign armed forces

piety religious devotion

porter a person who carries luggage and heavy loads

reconnaissance a search made to gain military information

rickshaw a small two-wheeled vehicle pulled by a man

siege capturing a protected place by surrounding it and cutting off supplies

steppe a vast plain without trees

tribute a tax or regular payment given to ensure protection or peace

ward a district in a city or town

8 Japan under the shoguns (c.794–1867)

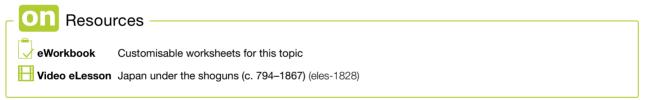
8.1 Overview

Emperor, daimyo, samurai or shogun. Who really had power and control during shogunate Japan?

8.1.1 Links with our times

Japan and Australia share a very important relationship. After China, Japan is Australia's most important trading partner. Japanese companies sell us many goods, such as motor vehicles and electronics. In return, Australia sells primary industry products, such as minerals and beef. Australia and Japan are also linked through education.

Throughout its long history, Japan has retained much of its traditional culture. Our friendly links also include sister city relationships, where Australian and Japanese cities promote cultural understanding. For example, our capital city, Canberra, is paired with the city of Nara in Japan and welcomes important visitors from Nara when they come to Australia. The Second World War was a time when the two countries were enemies. However, they now share common goals and work together in a spirit of friendship and cooperation.

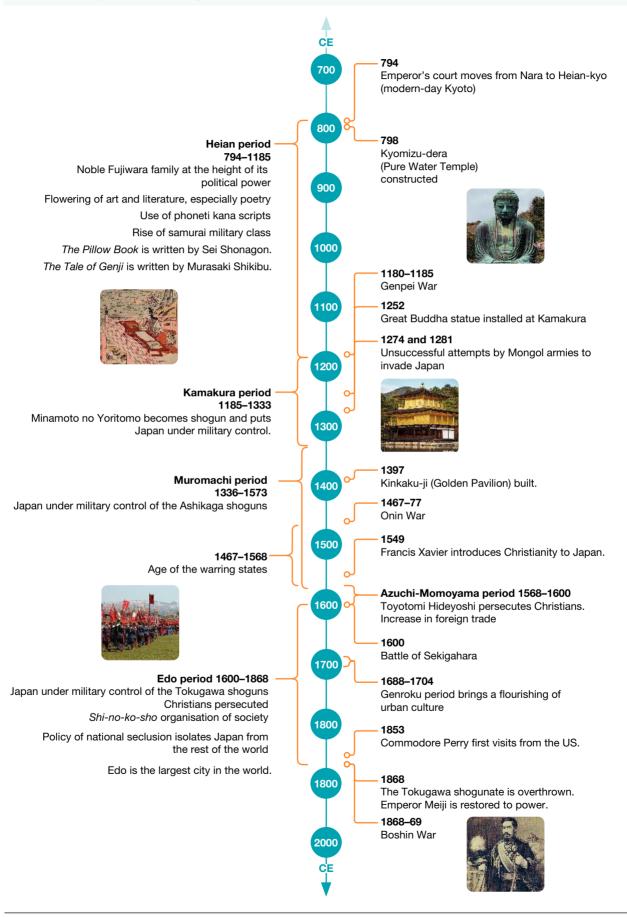


LEARNING SEQUENCE

- 8.1 Overview
- 8.2 Examining the evidence
- 8.3 Ancient and Classical Japan
- 8.4 The rise of the shoguns
- 8.5 Challenges to shogunate rule
- 8.6 The Tokugawa shogunate
- 8.7 Japanese feudal society
- 8.8 The samurai
- 8.9 The role of women
- 8.10 Arts and culture
- 8.11 Land use under the Tokugawa shoguns
- 8.12 Foreign devils
- 8.13 Emperor Meiji and modern Japan
- 8.14 SkillBuilder: Analysing cause and effect
- 8.15 Thinking Big research project: Shinto and Buddhism guidebook
- 8.16 Review

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To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.



8.2 Examining the evidence

8.2.1 How do we know about Japan under the shoguns?

Japanese museums, temples and shrines preserve many relics that tell us about Japan's past. The most precious items are listed as National Treasures. These could be buildings, sculptures, paintings, documents, artefacts or even people.

8.2.2 Architecture

A lot can be learned about Japan's past by examining surviving buildings. Their construction techniques, materials and designs give us valuable information about architecture, technology and the way people lived. Some of the oldest buildings are in the cities of Nara, Kamakura and Kyoto. These three cities were centres of government at various times in Japan's history. They were also religious centres that built shrines for Japan's ancient **Shinto** faith, great Buddhist temples and pagodas.

The type of architecture from each different period of Japanese history can tell us much about that period. For example, a period in which a large number of temples were built would tell us that religion was very important to the people at that time. A period in which large castles were built would tell us that wealthy families were very significant during that era. Architecture can also tell us about the technology of the time. Large wooden structures built without nails are an indication of a high level of skill among craftsmen of the time.

SOURCE 1 Todai-ji is the largest wooden structure in the world and was built without the use of nails. There has been a Buddhist temple on this site since the eighth century CE.



8.2.3 Arts and crafts

Many examples of Japanese arts and crafts survive today, and these provide a great deal of evidence of life in Japan over the centuries. Paintings often provide detail of the way of life of all classes of people, as well as the clothing they were and the buildings in which they lived. Many famous events in Japanese history have also been depicted in artworks of the time. Crafts such as **origami**, printmaking and pottery can also give us insights into Japanese life in past centuries.

Japanese artists developed woodblock printing as early as the eighth century CE, but woodblock art really flourished from the sixteenth century onwards. The different styles and schools of woodblock art over the next three hundred years provide a great deal of evidence of the Japanese way of life. Traditional Japanese sculpture evolved from the production of small clay figures in early eras, to the casting of huge bronze statues from the Classical period onwards. Sculptures were often religious in nature, depicting the different gods that were worshipped at different times. Large bronze sculptures of Buddha indicate the importance of the Buddhist religion at different eras in Japanese history.

SOURCE 2 This statue of Buddha is made of bronze and was constructed in the thirteenth century. It is 13.35 metres high and weighs approximately 94 tonnes.



SOURCE 3 This print by nineteenth-century artist Ando Hiroshige shows peasants in paddy fields planting rice.



DID YOU KNOW?

The Japanese language is written with three different sets of characters. These include Chinese characters known as kanji, as well as two sets of characters that represent different sounds or syllables. These two sets of characters are known as hiragana and katakana. Hiragana primarily represents Japanese words and katakana is used for foreign words. The use of katakana immediately lets the reader know that the word is borrowed from another language.

8.2.4 Literature and National Treasures

Many great works of early Japanese literature also survive, and these reveal many aspects of life in the past. Murasaki Shikibu, sometimes known as Lady Murasaki, was the author of the first great Japanese novel, *The Tale of Genji*, written over 10 years between 1000 and 1010 CE. Although this is a work of fiction, it provides us with a great deal of information about the life of the wealthy and influential aristocrats of this time.

In addition to great literary works by Japanese writers, a large number of historical documents have been kept and stored as National Treasures. These include letters written by emperors and important officials, the official records of a number of Buddhist and Shinto temples, and some family histories. One such family collection is that of the Shimazu family, which includes over 15 000 family documents covering over a thousand years from the eighth century to the nineteenth century. These documents can provide historians with great insights into Japanese life over many centuries.

SOURCE 4 Murasaki Shikibu wrote the first great Japanese novel *The Tale of Genji*. This artwork was created in 1767.



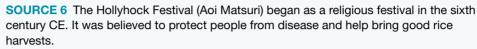




8.2.5 Traditions and festivals

Many traditional festivals and religious ceremonies are still practised in Japan today. Some of these have not changed for many hundreds of years so can provide valuable information about the way of life of Japanese people in past centuries.

Many of the festivals are religious in nature and have their origins in ancient and medieval Buddhist and Shinto ceremonies. Others have artistic and cultural significance, such as the re-enactment of traditional Kabuki theatre performances. These can provide an insight into the artistic and cultural activities of the past.





8.2 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.2 Exercise 1: Check your understanding

- 1. **HS1** Which two religions were followed in Japan during the shogunate period?
- 2. HS3 What can the study of architecture tell us about life in Japan in the past?
- 3. HS3 What can arts and crafts tell us about life in Japan over the centuries?
- 4. HS1 Why might religious images have been important in Japanese art?
- 5. HS3 How might works of fiction, such as The Tale of Genji, that are written by people living at that time be useful in historical research?
- 6. HS1 Why might historical documents be classified as National Treasures?
- 7. HS6 Why can the observation of traditional festivals and religious ceremonies be useful to historians?

8.2 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1.
 - (a) What can this source tell us about the importance of religion in traditional Japanese society?
 - (b) What impressive technology was used in the construction of the temple?
- 2. HS3 Examine SOURCE 2.
 - (a) This statue was cast in bronze. Use your dictionary or an encyclopedia to find out more about the words 'cast' and 'bronze'.

- (b) Draw and label a sketch of the casting process to explain how this statue was made.
- (c) What conclusions can you draw about the metalworking skills of craftsmen in the thirteenth century?
- 3. HS3 Examine SOURCE 3.
 - (a) What does it tell us about farming methods used in Japan in the past?
 - (b) Describe the typical clothing worn by Japanese peasants at this time.
 - (c) What does it tell us about the availability of suitable land for growing rice in Japan?
- 4. HS3 Examine SOURCE 4. How can we tell that Murasaki Shikibu was a member of the wealthy classes?
- **5. HS3** Examine **SOURCE 5**. What might be an advantage of recording written information on scrolls such as this? What might be a disadvantage of using this method?
- 6. HS4 Study SOURCE 6.
 - (a) The costumes used in the Aoi Matsuri procession are copies of garments that no longer exist. What historical evidence could modern designers use to find out what the original clothing looked like?
 - (b) **SOURCE 6** provides an example of the respect for the traditional festivals that exists in Japan. How important is it for any society to maintain ancient and traditional rituals as a part of their modern way of life?
- 7. **HS5** For a significant part of its history, Japan attempted to isolate itself from outside influences. What is the effect of a country cutting itself off from outside contact? Give reasons for your answer. Identify a modern example or an example from history.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.3 Ancient and Classical Japan

8.3.1 The Yamato state

About twelve thousand years ago, Japan was joined to the Asian mainland by several land bridges. The nomadic hunters and fishermen who walked across them on expeditions became Japan's first inhabitants. However, at the end of the last ice age, the Earth's climate warmed and rising oceans covered the land bridges. The islands that formed became the Japanese **archipelago** we know today. Later, attracted by the islands' natural beauty and rich resources, sea-faring peoples from various parts of Asia reached Japan by boat. As their settlements spread, the original inhabitants were gradually driven into the far north wildernesses.

The first migrants from South-East Asia settled on the southern island of Kyushu. However, around the fourth century CE, the Yamato clan established the first Japanese state in an area around Nara on the island of Honshu. The Yamato rulers set up a central government based on a legal system and Chinese traditions. With support from other clan leaders, descendants of the Yamato became the first recognised emperors of Japan.



Conquering and ruling Japan was always going to be difficult for the emperors. Prior to the establishment of the Yamato state, different areas of the Japanese islands had been settled by different ethnic groups over thousands of years. The Emishi people lived in northern Honshu and the Ainu lived in northern Honshu and Hokkaido. Neither group recognised the authority of the Yamato state and were ultimately conquered by military force. The Japanese imperial state was going to rely on strong military support over the coming centuries to maintain control over all of its territory.

8.3.2 Strengthening the state

This era is often referred to as the beginning of the 'Classical' period of Japanese history. It was during this period that the first great works of Japanese literature were written and Buddhism was firmly established in Japan. The Chinese influence was also very strong at this time: Chinese characters were used in Japanese writing, and the architecture of the capital, Nara, was modelled on the Chinese city of Xian.





DID YOU KNOW?

The imperial Yamato dynasty claimed descent from Amaterasu, the sun goddess. In Japanese mythology, when the sun goddess hid in a cave the world was plunged into darkness. Eventually she emerged and a number of her ornaments were changed into human form, one of them becoming the ancestor of the Japanese imperial family.

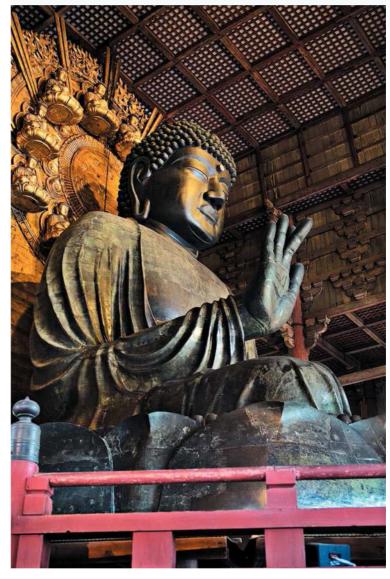
More areas of Japan gradually came under the control of the emperor, but there were struggles for influence in the imperial court. The Buddhist religion became a popular force and Buddhist priests tried to claim powerful positions. It was during this period that the Todai-ji Buddhist temple was built at Nara. Its Great Buddha Hall contains the largest bronze statue of Buddha in the world, completed in 751 CE (see **SOURCE 3**). Noble families like the Fujiwara also wanted power, so the emperor had many challenges to his authority. Nevertheless, by the eighth century, the capital city of Nara had grown strong and was an urban centre of about 200 000 people. It had a taxation system, many roads and bustling commerce. Outside the capital though, most people still lived in farming villages.

During the seventh century there had been an attempt at land reform. based on a Chinese model of land ownership. Land was to be distributed fairly to peasant farmers and could not be inherited by their children. At the death of the farmer, the land would revert to state ownership and be re-allocated to a new owner. During the eighth century this system was gradually abandoned as emperors granted lands to members of their extended family, or to friends and loyal officials. Gradually these estates increased in size, with the wealthy nobles gaining great wealth and power, and peasant farmers working the land and paying taxes to the wealthy landlord.

8.3.3 The Heian period and the growth of the military

In 794 the Emperor Kammu moved the imperial capital from Nara to Heian-kyo, now known as the city of Kyoto. This was the beginning of the Heian period, named after the city that was its capital. The Heian period lasted for almost 400 years and saw the flowering of the Classical period of Japanese history. During this time, the wealthy nobles in the countryside began to significantly increase their power. These nobles were known as daimyo and they usually controlled large estates throughout the countryside. Emperors at this time found they were

SOURCE 3 The 15-metre-high Great Buddha of Nara, completed in 751 CE, indicates the influence of Buddhism in the Japanese Classical period.



increasingly dependent on the daimyo to maintain their power. In order to help them control their interests, and prevent rival daimyo taking over their lands, wealthy nobles employed large numbers of warriors. These warriors developed into a distinct social class, and became known as **samurai**. The term samurai in Japanese literally meant 'those who serve', and the samurai developed their own very strict code of conduct. They were very proud of their loyalty to their daimyo lords.

The emperors also relied heavily on this warrior class to help them defeat rebellious daimyo clans that challenged imperial power. Often the ability of the emperor to maintain power would depend on the number and skills of the samurai he could command. During his reign, Emperor Kammu bestowed the title of *seii taishogun* ('barbarian-conquering great general') on a leading samurai, Otomo no Otomaro, who was the commander-in-chief of his military forces. The holder of this office had a great deal of power to maintain order throughout the country on behalf of the emperor. This title was later shortened to **shogun** and became the official title of whoever held the position of head of the imperial military forces. The very nature of his position meant that an emperor had to place complete trust in the shogun, so would have to select someone he could rely on to be loyal to himself and his family.

SOURCE 4 One of many ornate gates to the old imperial palace in Kyoto



8.3 ACTIVITY

Japan today still has an emperor who is descended from the same Yamato clan that established the first Japanese state. Using the internet and your library, find out all you can about the current emperor, his role in Japanese society and his current powers. Identifying continuity and change

8.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.3 Exercise 1: Check your understanding

- 1. HS2 When and by whom was the first recognised Japanese state established?
- 2. HS1 Identify a major problem faced by the Yamato rulers in maintaining a unified Japanese state.
- 3. **HS1** What evidence is there that Japan borrowed much of its culture from China?
- 4. HS1 How did the system of land ownership change during the eighth century CE?
- 5. **HS1** How did the nobles grow in power at this time?
- 6. **HS2** Why was the period from 794 CE onwards known as the Heian period?
- 7. HS1 Which groups in Japanese society did the emperors come to rely on to help maintain their power?
- 8. **HS1** What is the origin of the title 'shoqun' and why was the role of the shoqun so important?

8.3 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1 and list the names of Japan's four main islands. Which island is the largest and which is the smallest?
- 2. HS3 Why might the geography of the Japanese islands have made it difficult to achieve a unified state with its capital in Nara?
- 3. HS3 How has the artist in SOURCE 2 tried to show the power and importance of the sun goddess Amaterasu to the people around her?

- 4. HS3 Examine SOURCE 3. How can you tell that Buddhism had become an important religion in Japan by the eighth century CE?
- 5. **HS3 SOURCE 4** is one of many gates in a high wall that surrounded the old imperial palace in Kyoto.
 - (a) Why was it necessary to surround the palace with a high wall?
 - (b) What does this gate tell us about the wealth and power of the emperor?
- **6. HS5** Identify those features of Japan's geography and early history of settlement that might have become barriers to its long-term political unity.
- 7. **HS5** Why was it likely that Japanese rulers were going to have to rely on strong military force to maintain order?
- **8. HS6** How important was the Chinese influence in the development of Japanese culture during the Classical period?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.4 The rise of the shoguns

8.4.1 The struggle for power

Nobles from the powerful Fujiwara clan dominated Japanese politics from the seventh century until the end of the Heian period in the twelfth century. They controlled all the most important offices in the royal court and were governors of many provinces in the countryside. Most emperors married Fujiwara women, and senior members of the family became **regents** if an emperor was too young to rule. At some stages, the Fujiwara family, rather than the emperor, ruled Japan.

The Heian period was characterised by struggles for influence among the three most powerful daimyo clans: the Fujiwara, the Minamoto and the Taira. After the long period of dominance by the Fujiwara, in 1068 the Emperor Go-Sanjo reduced their power by appointing members of the rival Minamoto clan to important government offices. Go-Sanjo was the first emperor for more than two hundred years whose mother had not been a member of the Fujiwara clan. He himself married members of the Minamoto clan, so his heirs were loyal to the Minamoto rather than the Fujiwara.

The twelfth century was a very unstable time in Japan. The Minamoto family had become the most powerful daimyo clan in Japan, but their power was challenged by the Taira clan.

In 1180, Emperor Takakura was forced to give up the throne and his two-year-old son, Antoku, became emperor. Antoku's mother was a member of the Taira clan and because he was so young his grandfather ruled as regent. The Minamoto clan were resentful of this grab for power and led a rebellion against the Taira clan, leading to civil war that lasted until 1185. A famous historical account of the civil war, *The Tale of the Heike*, was written by a number of authors and is considered one of the great works of

SOURCE 1 This thirteenth-century illustration shows the escape of the Taira clan and their supporters from Kyoto during civil war.



Japanese literature. In 1183, the Minamoto clan forced the Taira clan and the young emperor to flee Kyoto, and installed another three-year-old member of the imperial family, Go-Toba, as Emperor. The Minamoto clan were ultimately successful in the civil war and Go-Toba remained as emperor until 1198.

8.4.2 The Kamakura shogunate

In 1192 Emperor Go-Toba appointed the head of the Minamoto clan, Minamoto no Yoritomo, as shogun, to lead the Japanese armed forces. Yoritomo set up his government in the city of Kamakura, about 50 kilometres south of modern-day Tokyo, while the Emperor remained in his imperial capital of Kyoto. The establishment of this shogunate was important because it saw real power pass from the emperor to the shogun. It is regarded as the end of the Classical period and the beginning of the shogunate or feudal period of Japanese history. For the next 700 years Japanese emperors were restricted to religious and ceremonial duties, while the shoguns and their samurai warriors effectively ruled Japan. Japanese society was based on a farming economy, with a governing class of warriors and great lords who granted land to their vassals in return for their military support and total loyalty.

The Kamakura shogunate lasted nearly 150 years and brought political stability to Japan. New laws outlined the rights of the samurai and Buddhism gathered strength. It had previously been the religion of only the ruling class but now spread to the common people. One of Japan's most famous sights, the Golden Pavilion in Kyoto, was built during this period as a Buddhist temple. Art and culture also flourished, especially poetry, music, painting and wood sculpture.

SOURCE 2 Twelfth-century artwork of Minamoto no Yoritomo, the first shogun to rule Japan.



SOURCE 3 The Golden Pavilion in Kyoto



8.4.3 Why did the shogun become so powerful?

How can we explain why the shogun took over from the emperor as the most powerful person in Japan after 1192? We need to examine both the events of the civil war period and the longer term trends in Japanese society to find the causes for this change. The following are some issues worth considering:

- The granting of large estates to daimyo during the eighth century gave enormous wealth and power to these daimyo families. It provided them with the money to be able to pay large numbers of samurai to protect and support them.
- The distance of some of these estates from the capital meant that it could be difficult for the emperor's rule to be enforced without assistance from the daimyo. This gave the daimyo additional power.
- The development of the warrior class of samurai during the Heian period had led to an increased respect for military power. The ability to command and lead military forces became highly valued in Japanese culture.

- Emperor Antoku in 1180 and Emperor Go-Toba in 1183 were only infants when they inherited the throne. In each case they relied on members of powerful daimyo families to act as regent for them. In fact more than half the emperors in the previous hundred years had been children when they became emperor. This gave additional power to the families who acted as regents, and weakened the power of the emperor.
- By the twelfth century, Japanese emperors had become little more than puppets, manipulated by wealthy daimyo clans. This is demonstrated by the events of the civil war of 1180 to 1185, when the Taira and Minamoto clans each had a young boy as their nominated emperor, but the war was really between the clans fighting for power.

In the period leading up to the twelfth century it would seem that the power and authority of the emperor was in gradual decline, while some of the daimyo clans were becoming increasingly more powerful. As the position of shogun was filled by the most powerful of the daimyo nobles, perhaps it was only a matter of time before the power of the shogun would exceed that of the emperor.

SOURCE 4 A commemorative statue of one of the shoguns



SOURCE 5 Fourteenth-century Emperor Go-Daigo, holding implements associated with Buddhist worship



8.4 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

8.4 Exercise 1: Check your understanding

- 1. **HS1** Name the three powerful clans who were competing for influence during the Heian period.
- 2. HS1 Why were Japanese emperors so dependent on regents during the period from 1180 to 1185?
- 3. HS1 Which clan was ultimately successful following the period of civil war?
- 4. HS5 How did the appointment of Yoritomo as shogun dramatically change the power balance in Japan?
- 5. **HS4** What role did Japanese emperors have after 1192?
- 6. HS1 In what ways did stable government by the shogunate benefit Japanese society?
- 7. HS4 Identify two ways in which the power of the daimyo increased during the Heian period.
- 8. HS1 Why had the position of regent become increasingly important during the twelfth century CE?

8.4 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1.
 - (a) Which groups in Japanese society can you identify in the source?
 - (b) What does this source tell us about the power of the emperor during the period of the civil war?
- 2. HS3 Examine the portrait of Yoritomo in SOURCE 2. Identify two possible characteristics that suggest he had the ability to win the loyalty of the daimyo and samurai, and thus gain supreme power in Japan.
- 3. HS3 Buddhism emphasises meditation to achieve peace of mind. Why might the Golden Pavilion (shown in **SOURCE 3)** have been a good place to meditate?
- 4. HS3 Compare SOURCES 4 and 5.
 - (a) What does each source tell us about the different roles of the shogun and the emperor during the period of shogunate rule?
 - (b) Which, the shogun or the emperor, looks the most likely to be able to rule the country? Give reasons for your answer.
- 5. HS6 Yoritomo became the effective ruler of Japan as shogun. What personal abilities did he have to have to take on this role?
- 6. HS6 Why could the appointment of Yoritomo as shogun be considered a major turning point in Japanese history?
- 7. HS5 Identify the reasons why the shoguns were able to ascend to supreme power in Japan in 1192. Divide them up as follows:
 - (a) those features in Japanese society that would have made military rule a strong possibility (the long-term causes of the rise of the shoguns)
 - (b) the immediate events before 1192 that resulted in the shift of power from the emperor to the shogun (the short-term or immediate causes).

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.5 Challenges to shogunate rule

8.5.1 The end of the Kamakura shogunate

The establishment of the Kamakura shogunate in 1192 represents the victory of the daimyo over the power of the emperor. However, long-term stability in Japan was still under threat because the power of the shogun was dependent on the strength of the daimyo clan that held them in that position. The position of shogun sometimes passed peacefully between members of powerful families, but there were also periods when Japan descended into civil war as feuding daimyo clans fought for power and influence.

During the Kamakura period, the position of shogun was shared between the Minamoto, Fujiwara and Hojo families. The shogunate maintained stable government but faced a number of challenges and threats before its final downfall in 1333.

Mongol invasions

China presented the most serious threat to Japan in the Kamakura period. The Mongol emperor of China, Kublai Khan, demanded that Japan respect his authority and become a tributary state. When the shogunate refused, Kublai Khan ordered his army to invade Japan. But on two occasions, in 1274 and 1281, the Mongol ships were sunk by typhoons. The Japanese came to believe kamikaze or 'divine winds' protected their country. Unfortunately, thousands of samurai who fought the Mongol attackers became angry when the shogun could not afford to pay them. They waited for an opportunity to oppose the shogunate.

The Ashikaga shogunate

A chance to restore the rule of the nobles and the royal court came in 1333 when Emperor Go-Daigo resisted the military government. Samurai from the Ashikaga clan supported him and the Kamakura shogunate collapsed. However, other samurai were outraged at this challenge to their prestige and authority. The Ashikaga clan turned against the emperor and forced him to flee into the mountains. From 1336, the Ashikaga clan ruled Japan as shoguns for the next 237 years. It was a time of great artistic achievement, especially in theatre, literature, gardening and development of the **tea ceremony**.



SOURCE 1 A Japanese painting showing the destruction of the Mongol invasion fleet by 'divine wind'

DID YOU KNOW?

The name *kamikaze*, meaning 'divine wind', was used to describe the storms that helped repel Mongol invaders in the thirteenth century. Revived by the Japanese during World War II, the name was given to units of fighter pilots who deliberately crashed their bomb-laden planes onto enemy ships. These suicide pilots were another type of 'divine wind' directed against Japan's enemies.

8.5.2 The age of the warring states

For the first hundred years of their rule, the Ashikaga clan maintained control of the country by developing alliances with other daimyo families. Often they were able to maintain this support because of the personal skills of the family member who held the position of shogun. In 1464, a dispute arose between two brothers of the Ashikaga clan as to who would succeed as shogun and different daimyo clans declared allegiance to each of the brothers. This led to ten years of civil war from 1467 to 1477, severely weakening the authority of the Ashikaga shogunate. The next hundred years saw frequent outbreaks of hostility as different daimyo clans formed alliances and went to battle against each other to try and gain more power and influence. The Ashikaga shoguns became little more than puppets, controlled by different clans at different times throughout this period. During this age of the warring states, vassals overthrew their lords, farmers led armed uprisings and the economy was seriously weakened. Japan needed a strong leader to bring peace and order once again.

SOURCE 2 A battle between rival samurai during the period of the warring states



8.5.3 Order is restored

The long rule of the Ashikaga shoguns had descended into chaos and the situation was only resolved when a succession of three powerful warlords gradually united the country under one authority. The first of these was Oda Nobunaga who used his military power to impose his will on rival daimyo clans. The second was Toyotomi Hideyoshi, who brought an end to the period of the warring states. The third was Tokugawa Ieyasu, who founded the Tokugawa shogunate in 1603. These men are sometimes referred to as the three great unifiers of Japan.

Oda Nobunaga — a cruel military genius

Oda Nobunaga was the son of a daimyo from a small domain on the coast of Honshu. When he was 21, he killed a rival lord and planned to unite Japan under his own leadership. When the Ashikaga shogun Yoshiteru was murdered in 1565, his brother Yoshiaki appealed to Oda for help and Oda had him installed as shogun. Yoshiaki was little more than a puppet, as the real power lay with Oda and his forces. In 1573 Yoshiaki tried to rebel against Oda but was driven out of Kyoto. He became a Buddhist monk. The position of shogun remained effectively vacant for the next 30 years. Through a series of ruthless battles, Oda began to create a **centralised** government. He was especially cruel in crushing Buddhist opponents, burning some alive and destroying monasteries. His victories were helped by the use of **muskets** that had only recently been introduced to Japan from Europe. Oda's rule came to an end in 1582 when he committed seppuku after being surrounded by enemy forces.

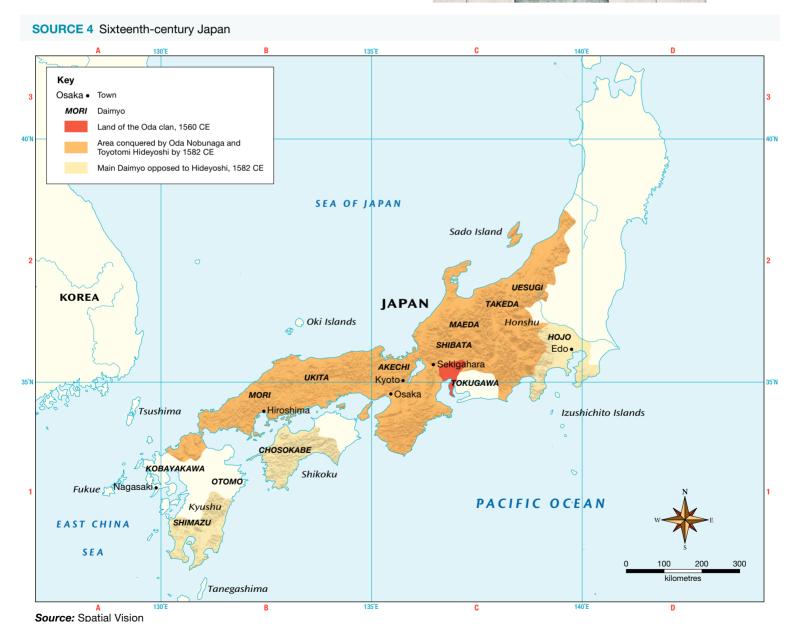
DISCUSS

At various times, the Japanese emperors or shoguns were puppets for other powerful figures. What does the term 'puppet' mean in this context? What advantage would there be for one person to use another person as a 'puppet'? Discuss as a class. [Critical and Creative Thinking Capability]

Toyotomi Hideyoshi — from soldier to leader

Toyotomi Hideyoshi was a soldier in Oda's army and took over leadership after Oda's ritual suicide. He developed a strong central government that expanded control over the islands of Shikoku and Kyushu. Hideyoshi also opposed European Christian missionaries. He expelled them from Japan, prohibited Japanese from becoming Christians and later executed 26 Japanese and foreign Christians. Before Hideyoshi died in 1598, he set up a council of five senior elders whom he trusted to pass power to his son.

SOURCE 3 The Twenty-six Martyrs
Monument was built in 1962 in Nagasaki
to commemorate the Christians executed by
Toyotomi Hideyoshi in 1597.



8.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.5 Exercise 1: Check your understanding

- 1. HS5 In what ways did the defeat of the Mongols actually weaken the power of the Kamakura shoguns?
- 2. **HS1** How were the Ashikaga clan able to take over the shogunate in 1336?
- 3. **HS1** What was the key dispute that led to civil war from 1467 to 1477?
- 4. HS5 In what ways did the period of the warring states weaken the power of government in Japan?
- 5. **HS1** How was Oda Nobunaga able to rise to importance in Japan after 1565?
- 6. HS1 Do you believe Oda would have been a popular leader? Give reasons for your answer.
- 7. HS1 What actions did Hideyoshi take to restore traditional Japanese religious practices?

8.5 Exercise 2: Apply your understanding

- 1. HS3 SOURCE 1 shows the destruction of the Mongol invasion fleet in 1281. What appears to be the cause of the Mongol defeat?
- 2. HS3 Why might the Japanese believe that the gods had decided to save Japan?
- 3. HS3 Examine SOURCE 2.
 - (a) Describe what is happening in this painting.
 - (b) How can we tell that the battle involves a challenge to the power of a daimyo?
- 4. HS3 Examine SOURCE 4. Compare the area of land controlled by the Oda clan in 1560, with the area conquered by 1582. How many daimyo clans had Oda and his armies conquered during this period?
- 5. **HS1** Identify one daimyo clan that was opposed to Hidevoshi in 1582.
- 6. HS1 Why was opposition from the Shimazu clan probably not very significant?
- 7. HS3 SOURCE 3 shows a monument to the Christian martyrs of 1597. Constructed many years after the event, what does this indicate about the ability of the Japanese Christians to survive persecution? Use the internet to find out who built the monument and how the finance was raised.
- 8. HS3 Examine SOURCE 4. To what extent would you describe Japan as either united or divided in 1582?
- 9. HS4 Explain how the power and status of each of the Fujiwara, Minamoto and Taira clans changed during the eleventh and twelfth centuries.
- 10. HS5 At various times, the Japanese emperors or shoguns were puppets for other powerful figures. What does the term 'puppet' mean in this context? What advantage would there be for one person to use another person as a 'puppet'?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.6 The Tokugawa shogunate

8.6.1 Tokugawa leyasu a ruthless leader

Building on the work of Oda and Hideyoshi, Tokugawa Ieyasu continued to unify Japan and to impose his will on the other daimyo clans. He eventually established the Tokugawa shogunate, which proved to be the most powerful of all Japanese feudal governments. He managed to weaken the power of the other daimyo families so that this shogunate remained in power until 1867.

Tokugawa Ieyasu was born in 1542, the son of an arranged marriage between teenaged members of a powerful daimyo clan and a samurai family. His original name was Matsudaira Takechiyo, and during his life he

SOURCE 1 A statue of Tokugawa leyasu, one of many erected in different parts of Japan to commemorate this important leader



changed his name a number of times. In 1567 he changed his name to Tokugawa Ieyasu and claimed that he was descended from the Minamoto clan, the founders of the original Kamakura shogunate. By this time he had aligned himself with Oda Nobunaga and his soldiers fought beside Oda's in a number of battles against other daimyo families during the period of the warring states. When Oda died in 1582, a number of provinces that were ruled by his vassals were left without a strong leader and Ieyasu was able to take control of some of these.

In 1584, Ieyasu joined with Oda Nobunaga's son Oda Nobukatsu in a military campaign against Toyotomi Hideyoshi, who was now the most powerful daimyo in Japan. This rivalry eventually ended in a truce, with an agreement to divide up control of a number of provinces between them. This agreement made Ieyasu the second most powerful daimyo in the country. When Hideyoshi set up the Council of Five Elders in 1598, Tokugawa Ieyasu became a member of that council.

8.6.2 Founding a new shogunate

Although Tokugawa Ieyasu was a member of the council of five, he had his own ambitions. Instead of supporting Toyotomi Hideyoshi's son, he forced him into battle. The son then committed suicide in Osaka Castle. Ieyasu won a great military victory in 1600 and three years later declared himself the new shogun. Altogether, there were 15 Tokugawa shoguns between 1603 and 1868, and this powerful samurai family had branches throughout Japan. In 1603, Ieyasu set up his shogunate in the small fishing town of Edo. (This town eventually grew to become the modern Japanese capital city of Tokyo.) He took over a small castle and developed it into a massive Tokugawa residence and military headquarters. As the administrative centre of Japan, Edo housed thousands of samurai and it soon attracted merchants, artisans and other common residents. About one hundred years later, Edo was the biggest city in the world.

Law and order

The Tokugawa shoguns had come to power after a long period of civil war in Japan. They realised that they might have to compete for power with other powerful daimyo clans, so they set about finding ways to reduce the power and influence of these clans. They ordered all daimyo to travel to Edo every second year



SOURCE 2 Daimyo travelling to Edo were carried in palanquins and escorted by long processions of samurai.

to pay respect to the shogun. Long processions of samurai accompanying daimyo in palanquins became a common sight. When they returned to their domains, daimyo had to leave their families behind in Edo as hostages. The expense of feeding armies of samurai on the road, maintaining a residence in Edo and providing gifts to the shogun ensured that daimyo could not become too rich and powerful.

8.6.3 The period of isolation

The Tokugawa were very suspicious of foreigners who tried to change Japan's traditions. Christianity was forbidden as an 'un-Japanese' religion. Japanese citizens were also forbidden to travel overseas. The Tokugawa shoguns isolated Japan from the rest of the world for over 260 years.

One feature of the Tokugawa shogunate was the gradual assertion of control over international trade by the shogun. During this period, only Dutch, Korean and Chinese traders were permitted to trade with Japan, while other nationalities such as the Spanish and Portuguese were banned by the shogun. Trade could only take place through the port of Nagasaki and the goods allowed into and out of the country were strictly regulated. Merchants involved in trade were subject to fees and taxes in exchange for the right to engage in foreign trade. The shogunate owned most of the Japanese ships engaging in overseas trade, or controlled these by issuing permits to favoured merchants to operate such ships.

Why did the shogun control trade?

Today we are used to individuals and businesses engaging in overseas trade within a framework of basic government rules. These rules are designed to ensure that customs duties are applied when necessary, and that illegal goods cannot be imported into the country. The situation was quite different in Japan during the Tokugawa shogunate, with the shogun tightly controlling all aspects of foreign trade. Why did the Tokugawa shoguns choose to maintain such tight controls over trade? The following may provide some clues:

- Tokugawa shoguns were very concerned about the spread of Christianity into their country. They believed this religion was un-Japanese and would undermine traditional Shinto and Buddhist beliefs. Catholic Portuguese and Spanish traders had first brought Christianity to Japan in the mid-sixteenth century, and traders from those two countries had demonstrated a desire to promote and spread their religion. Dutch traders were less concerned about spreading religious beliefs and so were allowed to continue as the only Europeans trading with Japan.
- The shoguns wanted to maintain the existing social order, with strict divisions of the different social classes. They were very suspicious of all foreigners and foreign ideas and so wanted to limit the exposure of Japanese to outside influences. During this period, Japanese were forbidden to travel overseas and anyone who did was banned from returning. Maintaining control over trade was a means of maintaining isolation from foreign influences.
- Other daimyo were generally excluded from engaging in trade. By not permitting daimyo outside the shogun's immediate clan from engaging in foreign trade, a possible source of wealth was denied to those nobles. This would prevent them from becoming too wealthy and being able to challenge the power of the shogun.
- Nagasaki was a city controlled by the Tokugawa clan. By restricting trade to that city, all fees and taxes that came from trade would be directed to the Tokugawa family. This enabled the shogun to maintain his wealth and power over the other daimyo clans.
- Foreign trade proved to be very profitable. The shogunate held the **monopoly** on many of the goods traded and charged fees and taxes to any merchants who were granted the right to engage in the import or export of particular goods.
- Copper and silver mined in Japan had been one of the main exports to other countries. By controlling trade, the shoguns were able to limit the amount of these metals exported. This enabled them to ensure Japan maintained stocks of these valuable metals.

| Classical and feudal Japan | | | |
|-----------------------------|----------------|--|---|
| Dates | Period | Power held by | Other features |
| Fourth century CE to 794 | Nara | Yamato clan emperors | Establishment of the imperial dynasty; the first central government of Japan |
| 794–1185 | Heian | Emperors | Capital city moved to Heian-kyo (Kyoto); first shoguns appointed; growth in power of daimyo and samurai |
| 1185–1333 | Kamakura | Kamakura shoguns | Stable government for 150 years; successful defeat of the Mongols |
| 1336–1573 | Ashikaga | Ashikaga shoguns | Gradual breakdown of shogunate as daimyo fought for power during the age of the warring states |
| 1573–1603 | Warring states | Oda Nobunaga; Toyotomi Hideyoshi; Tokugawa leyasu | Breakdown of shogunate rule; centralising of government under the 'three great unifiers' |
| 1603–1867 | Edo | Tokugawa shoguns | Capital moved to Edo (Tokyo); stable government under the shogunate; isolation from the rest of the world |

SOURCE 3 From the Closed Country Edict of 1635

- 1. Japanese ships are strictly forbidden to leave for foreign countries.
- 2. No Japanese is permitted to go abroad. If there is anyone who attempts to do so secretly, he must be executed. The ship so involved must be impounded and its owner arrested, and the matter must be reported to the higher authority.
- 3. If any Japanese returns from overseas after residing there, he must be put to death.
- 4. If there is any place where the teachings of the [Catholic] priests is practiced, . . . you must order a thorough investigation.
- 5. Any informer revealing the whereabouts of the followers of the priests must be rewarded accordingly. If anyone reveals the whereabouts of a high ranking priest, he must be given one hundred pieces of silver. For those of lower ranks, depending on the deed, the reward must be set accordingly.
- 6. If there are any Southern Barbarians who propagate the teachings of the priests, or otherwise commit crimes, they may be incarcerated in the prison.
- 7. All incoming ships must be carefully searched for the followers of the priests.
- 8. No single trading city shall be permitted to purchase all the merchandise brought by foreign ships.
- 9. Samurai are not permitted to purchase any goods originating from foreign ships directly from Chinese merchants in Nagasaki.

DISCUSS

The Tokugawa shogunate largely cut Japan off from the rest of the world for over 250 years. To achieve this, it passed the *Closed Country Edict* in 1635, which declared that any Japanese who attempted to travel overseas or any who returned after living overseas would be put to death.

In small groups discuss whether or not you agree with this action. You need to bear in mind:

- a. the desire to keep out foreign ideas, which the shogun feared would undermine the traditional Japanese way
 of life
- **b.** the Tokugawa shogunate was a period of great peace, prosperity and the flourishing of art and culture in Japan.

[Critical and Creative Thinking Capability]

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• The Asia-Pacific world Japan under the shoguns

8.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.6 Exercise 1: Check your understanding

- 1. HS1 Why would Tokugawa leyasu have aligned himself with Oda Nobunaga?
- 2. **HS1** What advantage did leyasu gain in forming a truce with Hideyoshi?
- 3. HS1 Outline how leyasu was able to gain the position of shogun by 1603.
- 4. **HS1** What was the major challenge facing leyasu in taking on this position?
- 5. **HS1** Explain one method used by leyasu to weaken the power of rival daimyo clans.
- 6. HS1 Identify two ways in which the Tokugawa shoguns attempted to control Japan's foreign trade.
- 7. **HS1** Why were the Dutch the only Europeans permitted to trade with Japan?

8.6 Exercise 2: Apply your understanding

- 1. HS3 Identify two features of the statue in SOURCE 1 that indicate that Tokugawa leyasu was seen as a powerful leader by the artist.
- 2. HS3 Study SOURCE 2.
 - (a) What does it show you about the way common people had to behave when a daimyo procession
 - (b) What do you think might have happened to these common people if they had not behaved in this way?
- 3. HS3 Examine SOURCE 3.
 - (a) What was the punishment for Japanese returning after living overseas?
 - (b) What incentives were offered for Japanese citizens reporting the location of Catholic converts?
 - (c) What punishment was imposed on anyone promoting the Christian religion?
- 4. HS4 What methods were used in the Tokugawa period to isolate Japan from the rest of the world?
- 5. HS4 Were the Tokugawa shoguns attempting to prevent changes from occurring in Japanese society or simply attempting to control those changes?
- 6. HS5 What do you think is meant by the famous Japanese saying: 'Nobunaga pounds the national rice cake, Hideyoshi kneads it, and in the end leyasu sits down and eats it'?
- 7. HS5 Explain three possible reasons for the decision of the Tokugawa shoguns to take control of trade in and out of Japan.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

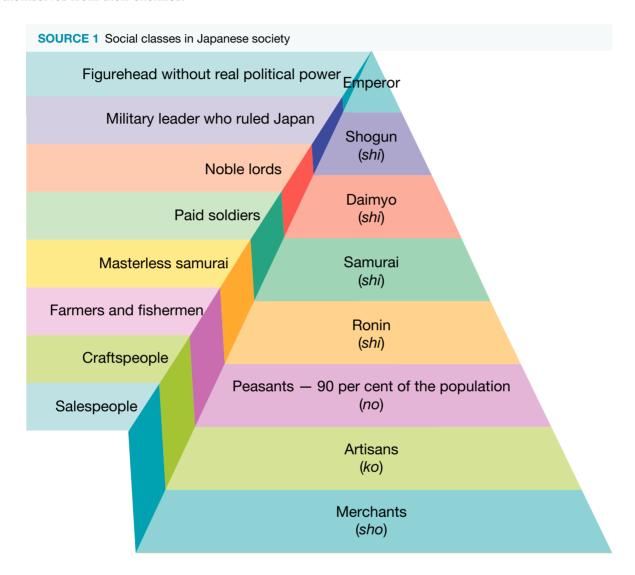
8.7 Japanese feudal society

8.7.1 The emperor and the nobles

For about a thousand years, from the Heian period until the end of the Tokugawa shogunate in 1867, Japan maintained a feudal society, similar in some ways to the feudal societies of medieval Europe. Society was divided into rigid social classes, each person belonging to a class that reflected their status and the role they fulfilled in society. Once a person was born into a particular class, he or she would remain in that class for life.

The emperor held the highest status, and he and his family were at the top of the class structure. During the shogunate period the emperor had very little actual power, but he was an important religious leader and was worshipped as a descendant of the sun goddess. He lived a rich, artistic life surrounded by families of nobles. Although he was a highly respected figure, the emperor could not control the more distant regions of Japan. To do so he needed the support of the daimyo, the powerful nobles to whom he gave land in return for their support. During the feudal, or shogunate, period the most powerful of the daimyo became

the shogun, who was the effective ruler of Japan. As well as leading the army, the shogun took care of all the routine matters involved in governing the country. Each of the daimyo had his own estates and armies and so was very powerful. In the Kamakura and Ashikaga periods the shogun was often challenged by other powerful daimyo. During the Edo period the daimyo were brought under the control of the shoguns of the Tokugawa clan. The daimyo built huge castles surrounded by moats and high stone walls to protect themselves from their enemies.



The next level of society was the warrior class, or samurai. These soldiers were paid by the daimyo to control their **domains**, and each samurai warrior swore an oath of loyalty to his own daimyo. As well as fighting for the daimyo during conflicts with other nobles, the samurai often ran the estates, collected taxes and kept order among the peasants. During the period of the warring states, the daimyo relied on their samurai to protect them and their interests.

DID YOU KNOW?

Japanese castles were built mainly of wood on top of high stone foundations. The wooden framework of the walls was covered with thick layers of clay and plaster. Inside the castle, people had to climb steep wooden stairs to go from one level to the next.

SOURCE 2 Himeji Castle belonged to daimyo from the Akamatsu clan.



8.7.2 Shi-no-ko-sho

In the early shogunate period, Japanese society had only two main groups. The 'good citizens' included nobles, farmers and other free people. Slaves, servants and guards were 'low citizens'. In the late sixteenth century, Japanese society established a class system based on the Confucian idea of four main ranks. The daimyo and samurai belonged to the warrior class or shi. They were at the top because they protected the nation from invasion and were supposed to set moral standards for the rest of society.

Beneath the warriors came farmers or no. Without food, no-one could survive, so farmers were viewed as essential members of society.

The artisans or ko came next in rank. Although they used raw materials produced by others, they made items like paper, fine swords and reed mats that people needed. Near the bottom of the social structure came merchants or sho. Their social status was low because they did not make anything at all. They lived by trading rice, selling items that other people had produced or by charging interest on money that they loaned.

Even lower than the merchants was a group of outcasts called *eta*. They lived on the fringes of towns and were confined to their own communities under the leadership of a headman. They made a living handling ritually unclean products like animal skins for leather, or worked as labourers carrying out the distasteful work of garbage collection and burial of the dead.

Other people lived outside the rank system altogether. The *hinin* were regarded as non-people and often survived by begging. Wandering priests, actors and mime artists also had a low position in society.

SOURCE 3 Merchants had a low social status because they were seen to contribute little to society. This artwork was created by Katsuhika Hokusai (1760–1849).



8.7 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

8.7 Exercise 1: Check your understanding

- 1. **HS1** What was the role of the emperor in Japanese feudal society?
- 2. **HS1** How did the daimyo maintain their power?
- 3. HS1 In addition to their military role, what other duties did samurai often perform for the daimyo?
- **4. HS1** Why did farmers rank higher than artisans or merchants in the *shi-no-ko-sho* arrangement of social classes?
- **5. HS1** Who were the two groups that lived outside the *shi-no-ko-sho* arrangement? How did each group survive?

8.7 Exercise 2: Apply your understanding

- **1. HS3** Examine **SOURCE 1**. Compare this with the diagram of the European feudal system in subtopic 2.6. In what ways is the Japanese system similar to the European one, and in what ways is it different?
- 2. **HS3** Explain how the castle shown in **SOURCE 2** could be defended against the enemies of its daimyo owners.
- 3. **HS3** Examine **SOURCE** 3, which depicts a merchant in his shop.
 - (a) What do you think the merchant is doing in this picture?
 - (b) Who is his customer?
 - (c) Identify three important items in the picture and explain what they were used for.
 - (d) In terms of class, what could be concluded by the postures and body positions of the people in the painting?

- 4. HS6 From an examination of the structure of Japanese feudalism, which human qualities and skills do you think were most highly valued in this society? Which do you think were considered to be the least important?
- 5. HS4 Japanese feudal society lasted for over a thousand years from the Heian period until the mid-nineteenth century. Identify two features of the society that allowed it to continue for such a long time.
- 6. HS6 What were the positive aspects of Japanese feudal society? What were its negative aspects? Draw up two lists, one showing what you believe were the positive features of this society and one to show the negative features.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.8 The samurai

8.8.1 The daimyo and samurai

Warriors were influential throughout Japanese history but they gained special importance during feudal times. Under feudalism, society was based on military power. Although the daimyo were powerful warlords, their power depended on the fighting skills of the samurai under their control. These warriors swore an oath of loyalty to their daimyo. They controlled his lands for him when he was away in the capital and fought on his behalf when he came into conflict with other daimyo.

During the Classical and shogunate periods in Japan, the emperors found it increasingly difficult to control all of the country. Although the daimyo swore allegiance to the emperor, many of them were actually more powerful than the emperor. They had their own power bases in the provinces and had large numbers of vassals in their service. At first the men who served them were members of their own families but the daimyo soon gathered vassals who were not related to them by blood. These men were known as samurai, which means 'a person who serves a noble'. Later, some of the more powerful vassals challenged the authority of their lords and used military force to seize lands for themselves. They too became daimyo and built alliances by granting land to their followers.

SOURCE 1 A scene from the film The Last Samurai, set in the late nineteenth century, when the influence of the samurai was in decline

The warrior code

A true samurai had to follow the warrior code of **bushido**. His first duty was to be loyal and obedient to his daimyo lord. A samurai was expected to defend to the death his own family honour and the honour of his daimyo. Under bushido, a samurai was required to learn seven martial arts: archery, the spear, fencing, horse riding, military strategy, use of firearms and techniques of **jujutsu**.

SOURCE 2 A sword from the Kamakura period with its beautifully crafted mounting, or koshirae



The Buddhist religion encouraged the samurai to adopt an attitude of 'carelessness' with life through full control of body and mind. Samurai practised special meditation, so they would know what to do in battle without being confused by thoughts or feelings.

Rank

Hierarchy and rank were very important in Japanese society. Some daimyo had higher status than others due to their noble ancestry or the value of their land. There were also ranks within samurai, just as there is in an army. It was possible to advance in rank, and a daimyo might reward a loyal samurai with promotion or a grant of land.

8.8.2 Samurai life

Samurai boys were raised to become professional soldiers in a lord's service. Soon after they were born, they were given a small sword in a special ceremony. From a very early age they were taught archery, horse riding and sword fighting as well as unarmed combat. They learned these skills not only from their fathers and senior samurai but often by attending

SOURCE 3 Samurai armour varied greatly during the shogunate period.



martial arts schools. They had to learn to read and write as well, for they were expected to be educated people who could assist their lord in the governing of his domain. Their two main responsibilities were often described as 'the pen and the sword'.

A samurai woman was also required to demonstrate courage and honour. However, instead of military training, the emphasis in a girl's education was on becoming a faithful wife and mother. Her education prepared her for managing a household as a future samurai wife. When her husband was away at war, she was expected to keep everything in order until he returned.

Ronin

If a daimyo lost his land in battle or had his domain confiscated by the government, his samurai became masterless. They were considered **ronin** or 'wave men' floating on the sea of life. At various times in history, Japanese society had many of these unemployed warriors. Some of them simply ran away to begin a new life. Others joined new commanders or became farmers. But some ronin became bandits or mercenary soldiers who terrorised the countryside.



SOURCE 5 The tale of the 47 ronin — a true story

At Japanese New Year, it was the custom for the emperor to send greetings to the court of the shogun, Japan's military ruler. The shogun appointed Lord Asano as one of his representatives to attend the ceremonies. Unaware of the proper behaviour and dress required, Lord Asano asked Lord Kira for advice, but was greatly embarrassed when the information proved to be false. Outraged, Lord Asano drew his sword and attacked Lord Kira in the shogun's palace. This was an extremely serious offence and the shogun ordered Asano to commit suicide. After saying goodbye to his family and faithful samurai, Lord Asano plunged a short sword into his stomach and cut it open in the ritual suicide called seppuku. In the world of the warrior, this was an honourable way to die. Having lost their master, Lord Asano's samurai were now ronin and 47 of them plotted revenge. It took them two years of planning, but finally one snowy night in 1703, they attacked and killed Lord Kira. The shogun was furious because he had personally forbidden revenge. He demanded that all 47 ronin commit seppuku. Having avenged their dead master, the ronin all did as the shogun ordered. By committing seppuku, they paid the highest debt both to their lord and to their ruler.

DID YOU KNOW?

A famous ronin named Musashi fought over sixty duels and was never defeated. He began his samurai training at the age of seven and had his first duel when he was thirteen. As an adult, Musashi wrote The Book of Five Rings to explain his unique fighting methods.

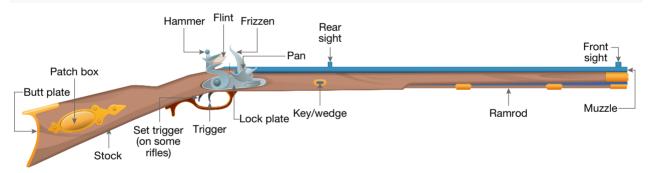
8.8.3 The end of the samurai

The samurai disappeared from Japan for some of the same reasons that knights disappeared from Europe. After Portuguese traders introduced guns to Japan in the sixteenth century, Japanese metal smiths quickly copied the flintlock mechanism. Guns became easier to obtain and samurai eagerly learned how to use them. However, this change meant that traditional samurai skills like sword fighting, horse riding and unarmed combat were no longer as effective. From the beginning of the seventeenth century, Japan experienced over 250 years of peace and so the samurai did not have opportunities to practise their combat skills. Instead, they became mainly government officials. Samurai also fell into debt with the rising merchant class and this weakened their social standing. The samurai class was finally abolished altogether in the late nineteenth century.

How the flintlock gun works

Gunpowder is poured into the muzzle, followed by a lead ball. These are rammed in firmly with the ramrod. A small amount of powder is poured into the pan and the pan lid, or frizzen, is closed over it. The hammer is pulled back and when the trigger is squeezed the flint on the hammer strikes the edge of the frizzen. This creates a spark, which ignites the priming powder in the pan. A small hole in the barrel allows the burning powder in the pan to ignite the powder in the barrel, which explodes — firing the lead ball. The flintlock rifle had a range of 75 to 100 metres. Since the samurai method of fighting involved close hand-to-hand combat, any weapon that allowed fighting from a distance would make the traditional martial arts of the samurai far less effective.

SOURCE 6 The introduction of flintlock guns contributed to the decline of the samurai.



8.8 ACTIVITY

Research the making of a traditional samurai sword and discover why they have been highly regarded by experts.

Using historical sources as evidence

8.8 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.8 Exercise 1: Check your understanding

- 1. HS1 What was the role of the samurai in feudal Japanese society?
- 2. HS1 What was bushido?
- 3. **HS1** Explain the main methods of fighting employed by the samurai.
- 4. **HS1** Outline the differences in the education of samurai boys and girls.
- 5. HS1 Why was it important for samural to learn how to read and write, as well as fight?

- 6. **HS1** What circumstances could lead to samural becoming ronin?
- 7. HS5 What impact did the introduction of the flintlock gun have on the traditional skills of the samurai?
- 8. HS4 What changes occurred within Japan during the Tokugawa shogunate that led to the eventual decline of the samurai?

8.8 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCES 1 and 3. What would be the advantages and disadvantages of fighting in armour like this?
- 2. HS3 Examine SOURCE 4. How can we tell from this photograph that the 47 ronin are still admired and respected in Japan?
- 3. HS3 What does the tale of the 47 ronin in SOURCE 5 tell us about the values and duties of samurai warriors?
- 4. HS3 Compare SOURCE 2 with SOURCE 6. Why did weapons such as the sword in SOURCE 2 eventually become ineffective in battle?
- 5. HS6 The samurai were the Japanese equivalent of medieval European knights. Examine the material in topic 4 on the European knight and explain the similarities and differences between these two types of warrior. Which would be more effective at the time? Why?
- 6. **HS4** Make a list of the values the samurai followed in the code of bushido.
 - (a) Which of these values do you think are important to modern-day Australian military forces? Give reasons for your answer.
 - (b) Give some examples of how these values might be seen or used in practical situations today in Australian society.

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8.9 The role of women 8.9.1 Women of The Pillow Book

Sei Shonagon was the author of *The Pillow Book* and a lady-inwaiting to Empress Teishi in the middle Heian period, c. 1000 CE. Sei's book provides fascinating insights into Japanese life over a thousand years ago, particularly the role of women in Japan under the shoguns.

Sei Shonagon's description of Empress Teishi playing the biwa, a stringed instrument like a lute, can tell us much about court life at the time (see **sources 1** and **2**). Empress Teishi died at the age of 25 in 1001 CE after giving birth to her second child.

SOURCE 1 An extract from The Pillow Book

There she sat, in a scarlet robe with quite indescribably lovely gowns and starched robes beneath, in layer upon layer . . . the sharp contrast of her wonderfully white forehead, clearly visible at the side of the shielding instrument.

SOURCE 2 The Japanese biwa was first developed in the eighth century. It derives from similar instruments found in Asia and the Middle East.



DID YOU KNOW?

Until the early twentieth century, Japanese emperors had many concubines and mistresses. Concubines ranked lower than an official wife but were mothers to some of the emperor's children. In the seventeenth century, Emperor Go-Mizunoo was the father of at least 33 children from his empress, concubines and ladies-in-waiting.

Other women described in *The Pillow Book* include:

- farming women planting the rice fields and 'wearing hats that look just like newly-made serving trays'. They are singing a song about a bird, saying 'it's your chanting sets us planting!'
- ladies-in-waiting, who spend their time writing poetry, playing music and indulging in witty conversation
- fisher girls with thin ropes tied to their waists diving out of boats to collect shellfish. Sei criticised the men who were singing and moving the boat while the women were gasping for breath (see **SOURCE 3**)
- **shaman** chanting and praying to the spirits for a child's health. During the shogunate period, the Japanese believed that bad health was due to evil spirits possessing a person's body
- an old Buddhist nun 'dressed in horribly grimy clothes and looking like a little monkey'. She begs for offerings and shocks the ladies-in-waiting by singing a rude song
- a serving lady pouring water for the empress. Other female servants act as hairdressers, food preparers or nurses to the emperor's children.



SOURCE 3 Poem of Sangi Takamura by Katsushika Hokusai depicts women diving for abalone.

Katsushika Hokusai, Japan 1760–1849 Poem of Sangi Takamura (Sangi Takamuro) c. 1835–6 Colour woodblock, 24.8×36.7 cm National Gallery of Australia, Canberra Gift of Orde Poynton Esq, AO, CMG 2000

8.9.2 Family life and fashion

On average, women lived only 27 years and men 32 years. Diseases like **tuberculosis** and **beri-beri** were common, and women faced the extra risk of dying during childbirth. Many children died young due to poor diets, unsanitary living conditions and childhood diseases.

Marriages were usually arranged between families. Husbands often had more than one wife and lived with a wife's family, although this custom later changed when wives moved to their husband's family.

Girls from rich families spent many hours copying famous poetry and practising handwriting. In this way, they learned to read and write the Japanese characters called kana at home. Beautiful writing was a mark of good taste and high social class. Boys went on to study the Chinese characters, but such learning was discouraged for girls. The vast majority of people — both male and female — were illiterate.

For Japanese noblewomen, beauty meant a plump figure, small red lips, a pale complexion and very long hair. Ladies used heavy rice powder to whiten their faces and necks, and blackened their teeth with an iron-based liquid. This process helped to maintain healthy teeth. They also shaved their eyebrows and drew new ones high on their foreheads with a mixture of black ash. They wore richly coloured silk gowns, skirted trousers and Chinese **brocade** jackets. However, women from farming families could not afford such clothes. They wore simple garments of coarse fabric.

SOURCE 4 Japanese noblewomen often wore heavy make-up and elaborate clothing.



8.9.3 Geisha culture

The term 'geisha' means literally 'art person', and geishas in Japan have traditionally been performing artists who entertain their clients with a variety of artistic skills. In the West we have often equated the geisha profession with prostitution but this is not generally the case, even though their clients were usually men. The world of the geisha was traditionally a completely feminine world. Young geishas were trained by senior geishas and the geisha house was staffed only by women. Geishas were trained in music, poetry, dance, conducting interesting conversations with clients and serving tea according to the traditional tea ceremony. Unlike married women, who were traditionally dependent on their husbands, the geisha was considered to be an independent businesswoman, who earned her own living with her skills at entertaining her clients. The management of the geisha house and its finances has always been entirely in the hands of women. Geishas traditionally did not marry and many continued to entertain into their seventies and eighties. If a geisha did marry, she was required to leave the geisha house as geishas were expected to be single. The refined culture of the geisha emerged during the Edo period and remains in existence in Japan to this day.



SOURCE 5 A geisha performs the traditional tea ceremony for a client.



8.9 ACTIVITIES

- 1. Using the internet, listen to someone playing the biwa. Describe the sound made by this instrument.
 - Using historical sources as evidence
- Murasaki Shikibu was another famous woman during the Heian period. Use the internet and your library to prepare a report about her life and work.
 Determining historical significance

8.9 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

8.9 Exercise 1: Check your understanding

- **1. HS1** Noblewomen were only a small fraction of Japan's population during the shogunate period. What occupations did the majority of other women have?
- 2. **HS1** Why would the *biwa* have been played only by noblewomen?
- 3. HS4 Why did women in shogunate Japan generally have shorter life spans than women in Australia today?
- 4. HS1 What skills and personal qualities did noblewomen in the Heian period aim to possess?
- 5. **HS1** What were the skills required to be a successful geisha?
- 6. HS1 In what ways was life in the geisha house controlled by women?
- 7. HS1 Why do Westerners often make the mistake of confusing geishas with prostitution?

8.9 Exercise 2: Apply your understanding

- 1. HS3 What does the scene in SOURCE 3 tell us about the social position of the women divers?
- 2. HS3 How do we know that the description in SOURCE 1 is of a wealthy noblewoman?
- 3. HS3 Which European musical instrument is most like the biwa shown in SOURCE 2?
- **4. HS3** Most of us would recognise the image in **SOURCE 4** as being typically Japanese. Why is this not an accurate representation of the appearance of the majority of Japanese women during the shogunate period?
- **5. HS3** Examine **SOURCES 5** and **6**. What traditional skills of the geisha are demonstrated in these sources?
- 6. HS3 Compare the dress and make-up of the geisha in SOURCE 6 with the woman in SOURCE 4. Why might the life of a geisha have been attractive to a young woman from a poor family?
- **7. HS3** Suggest reasons why we know so much about the lives of rich and powerful nobles in shogunate Japan, but very little about the way ordinary people lived.

- 8. HS4 How are ideas about female beauty in Australia today different from the standards admired during the Heian period? What are some of the reasons for this?
- 9. HS6 To what extent was the life of the geisha an unusual feature of a society that was otherwise very male-dominated?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.10 Arts and culture

8.10.1 The importance of the arts

Japanese artists and craftspeople aimed for perfection in all they created. They considered their skills a sacred gift, respected their materials and gave thanks for the successful creation of a beautiful object. For example, sword-makers prayed while they worked and believed a finished sword had its own spirit. Potters, too, often produced items of a semi-religious nature. The Japanese tea ceremony had its beginnings in Chinese Buddhist rituals, so cups and pots used in the ceremony had to be special. Sake was important in Shinto festivals, so sake containers also had a religious connection.

Painting

In the early feudal period, painters were strongly influenced by Chinese styles. Using ground-up minerals to produce different coloured paint, many Japanese paintings followed Shinto and Buddhist religious themes. Buddhist art often depicted saints, demons or sinners suffering in hell. These pictures served as a warning to live a good life. By the middle Heian period, a distinctive Japanese style of painting developed. Sliding and folding screens in wealthy residences were often richly decorated with scenes from nature or paintings of animals. Many picture scrolls told famous stories such as the *Tale of Genji* or stories of other Japanese heroes. Artists also created elegant portraits of eminent nobles and monks. The Muromachi period (c. 1333–1573) was notable for colourful Shinto religious paintings and monochrome ink landscapes painted by Zen Buddhist monks.



SOURCE 1 A painted Japanese folding screen created in the early seventeenth century

JAPANESE

Horse stable (early seventeenth century)

Six panel screen: ink, pigment and gold paint on paper, lacquer on wood, silk, paper, metal 150.2 × 238.0 cm (image and sheet) National Gallery of Victoria, Melbourne

Purchased, Allan and Maria Myers Fund for the Acquisition of Asian Art, 2008

Calligraphy and handmade paper

Traditional Japanese writing uses a pointed brush dipped in ink. Many ancient letters, poems and religious texts survive today. They are valued not just for their content but for their beautiful handwriting or **calligraphy**. Wealthy calligraphers could afford fine quality handmade paper (**washi**) coloured with pigments and sometimes flecked with gold or silver leaf. Calligraphy is still taught in Japanese schools, and annual competitions showcase Japan's best calligraphers.

Woodblock printing

Japanese woodblock printing emerged in the eighth century CE as a means of printing books of Buddhist texts. The Heian period saw the development of woodblock printing to produce a variety of images. The process involved drawing an image onto a thin sheet of paper and then gluing it to a block of wood. The wood on either side of the drawn lines would then be chiselled away to leave the outline drawing exposed. This would then be brushed with ink, and

SOURCE 2 Calligraphy is still taught in Japanese schools.



sheets of paper pressed against the inked wood to produce an image. Most of the prints produced by this method were a plain black ink outline on a white or pale coloured paper background. In the latter part of the eighteenth century, a process was developed of using different woodblocks for different colours in the one image. One of the greatest practitioners of woodblock printing was Katsushika Hokusai, who lived from around 1760 to 1849. He employed this process for some of his greatest works, which included his series 36 Views of Mount Fuji. The print The Great Wave off Kanagawa is the most famous of this series.

SOURCE 3 Hokusai woodblock print — The Great Wave off Kanagawa

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Lacquer

Lacquer was made from the sap of particular trees, with pigment added to create different colours. The sap formed a glossy coating as it hardened, which artists used to paint many thin layers over wooden articles such as cosmetic boxes or items made from woven bamboo, pottery or metal. During the early shogunate period, red and black were favoured colours; however, brown and amber were also known to be used. Some objects were decorated with patterns of leaves, grass or flowers, while others were engraved, inlaid with pearly shell, or had gold or silver particles sprinkled on them before the lacquer hardened.

Pottery

Japan's long history of pottery stretches back to the earliest human settlements. Japanese potters created a great range of items, from unglazed vessels for food storage to beautifully glazed decorative vases. Kilns in many regions produced ceramics with distinctive styles and designs. By the Muromachi period, even everyday household wares began to be glazed. Some of the finest Japanese ceramics were cups and pots made for the tea ceremony.

Over many centuries, Japanese potters developed special styles and techniques. Toyotomi Hideyoshi was so impressed with hand-moulded tea bowls made by one tile maker that he awarded him a special seal to mark his products. From then on, the potter's family was called 'Raku' after the Chinese character on the seal and the pottery was called raku ware. Pottery kilns in Japan still produce distinctive local ceramics. Craftspeople from many parts of the world visit Japan to learn from Japanese masters and take knowledge back to their home countries.

Kabuki theatre

The long and generally peaceful rule of the Tokugawa shogunate contributed to art and culture reaching a new peak in the Genroku period (1688-1704).

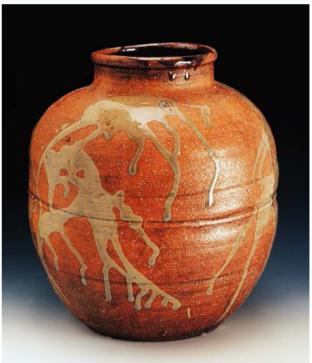
With their bustling ports, lively pleasure districts and busy markets, large

towns were exciting places to live. Attending plays at the kabuki theatre was a popular pastime (see **SOURCE 6**). Kabuki was a highly stylised form of theatre combining drama and dance with very elaborate costumes. The plays usually told stories of ordinary life and attracted all classes of people. About 40 per cent of the people could now read and write, so new literature was also popular.

SOURCE 4 A lacquered tebako (cosmetics box) dating back to the Heian period. The box has a design of plovers.



SOURCE 5 A freshwater jar created in the sixteenth century for use in the tea ceremony



SOURCE 6 A modern artist's impression of a kabuki theatre from the Edo period



- Hanamichi A walkway leads from the stage to the back of the theatre. It is used for dramatic entrances and exits.
- B Suppon A man-powered lift-trapdoor is set in the walkway three metres from the stage. Ninjas, ghosts and monsters appear from here.
- **c** Kuromiso Bamboo blinds on the left-hand side of the stage conceal musicians who play instruments to make the sounds of wind and rain.
- D Marawibutai The centre of the stage can revolve. This is useful for changing scenes and clearly contrasting the previous scene from the present one.
- Masuseki These square, box-like seats can seat four people.
- (F) Gidayuyuka (choboyuka) This place on the right-hand side of the stage is used to hide narrators and musicians.
- G Omuko Seats in the gallery on the second floor are quite cheap. Kabuki fans and experts sit here to get a good view and cheer their favourite actors.

8.10 ACTIVITIES

- Using the internet, describe the three different writing systems in use in Japan today. Why do they use three?
 Using historical sources as evidence
- 2. In groups of three or four, select one of the following topics for investigation and make an illustrated poster to be used as part of a class presentation.
 - Raku (pottery)
 - Ink landscapes
 - · Woodblock printing
 - · Buddhist art
 - Washi (paper)
 - Japanese screens
 - · Kabuki theatre

Your poster should explain:

- (a) the materials used to create the object
- (b) the practical methods employed by the artist
- (c) the significance of this art form as an influence on artistic works in other parts of the world today.

Determining historical significance

8.10 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.10 Exercise 1: Check your understanding

- 1. HS1 What methods did Japanese artists use to produce different coloured paints?
- 2. **HS1** How did religious beliefs influence the work of Japanese painters?
- 3. **HS1** In what ways was traditional Japanese writing a very demanding skill?
- 4. HS1 What is the significance of the use of expensive washi paper in producing works of calligraphy?
- 5. **HS1** Explain the process used to produce woodblock prints.
- 6. HS1 Why would most woodblock prints have been produced in monochrome?
- 7. **HS1** Describe the method used for producing lacquer work.
- 8. HS1 List some of the materials that were inlaid in the lacguer to produce some of the more elaborate designs.
- 9. **HS1** What is raku pottery? What is the origin of the name?
- 10. HS1 Why were some of the finest ceramics produced for the traditional tea ceremony?
- 11. HS1 Why was the Tokugawa period such a successful one for cultural activities such as kabuki theatre?
- 12. **HS1** What were major features of kabuki theatre?

8.10 Exercise 2: Apply your understanding

- 1. HS3 What would the artwork in SOURCE 1 have been used for?
- 2. HS3 Examine SOURCE 3. How many different woodblocks do you think the artist Hokusai would have used to produce this image?
- 3. HS3 Examine SOURCE 4.
 - (a) Write a one-paragraph description that would help museum visitors understand what this item looks like and how it was made.
 - (b) What does this object tell us about the people who made it and used it?
- 4. HS3 Examine SOURCE 5. What evidence is there that the techniques and colours used in pottery were inspired by the Japanese love of nature?
- 5. HS3 What do you think was the level of audience participation in a kabuki play? First study the labels and then provide evidence from SOURCE 6.
- 6. HS3 Examine SOURCE 2. From the appearance of the writing, where did Japan's writing system originate?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.11 Land use under the Tokugawa shoguns

8.11.1 Patterns of land use

As we have seen, Japan is an archipelago of many different islands. It covers an area of around 378 000 square kilometres, of which over 70 per cent is mountainous and heavily forested, making it unsuitable for agricultural production. As a result, land management has always been an important priority for the rulers of Japan.

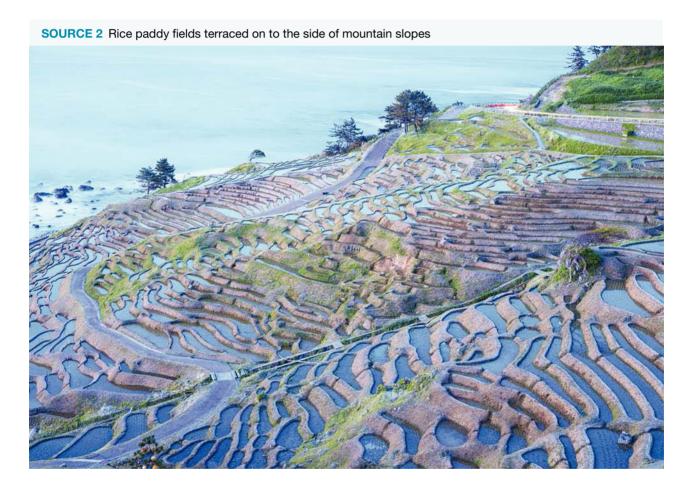
Since the earliest days of Japanese civilisation, as much available land as possible has been used for the growing of crops. Rice has been the main crop, and it formed the staple diet of the vast majority of the population. At the beginning of the Tokugawa shogunate, over 90 per cent of Japanese were peasants who worked the land. The land was owned by the daimyo and samurai families but the peasants did the actual work. Farming was based around family units and each peasant family was required to pay an annual 'rice tax' to the wealthy landowner in return for the right to farm the land. Provided this tax was paid, the peasants were relatively free to use the land as they wished, although the tax was so high that they had to put most of their effort into rice growing.

The early part of the Tokugawa shogunate saw a rapid increase in the amount of land being farmed. During this time, large-scale water projects allowed land previously not accessible to be made into new rice paddies. At the beginning of the Edo period, in 1603, it is estimated that just over 1.6 million hectares of land was under cultivation throughout Japan. By 1720 this had grown to almost 3 million hectares (see **SOURCE 1**). This period also saw a rapid increase in population, probably as a result of peace following the period of warring states, as well as from the increase in available food.

SOURCE 1 The growth in Japanese land under cultivation — tenth century CE to nineteenth century.

| Estimated land under cultivation | | | |
|----------------------------------|-----------|--|--|
| Year | Hectares | | |
| 930 CE | 862 000 | | |
| 1450 CE | 946 000 | | |
| 1600 CE | 1 635 000 | | |
| 1720 CE | 2 970 000 | | |
| 1874 CE | 3 050 000 | | |

From Professor Shinzaburo Oishi, Edo Jidai (The Edo Period), *Chuko Shinsho* no. 476, 1977.



8.11.2 Environmental and land-use problems

During the seventeenth century, Japan was beginning to experience a serious deforestation problem. Timber had always been used for most buildings throughout the country, from humble farmers and workers' cottages to the largest castles of the daimyo. The most commonly used fuel for heating and cooking was also wood, so the forests were an essential resource. Timber was also used by the daimyo in supplying their samurai armies during the period of warring states. While the population was small, the available forests were able to supply all the timber needed. In 1570, the population had reached about

10 million, but by 1670, the population had tripled to almost 30 million. As well as all the other uses, the early Edo period also saw a building boom, with the rapid growth of the cities, and the building of new castles and temples. The demand for timber was so high that large areas were soon completely deforested. In addition, the expansion in farming land during this period had seen many previously forested areas taken over for cultivation. The supply of timber was rapidly running out, while the lack of forest cover was leading to dramatic soil erosion, landslides and serious flooding in many areas. Without serious action, Japan was facing an environmental disaster.



SOURCE 3 Houses of farmers and rural workers were made almost entirely of wood.

8.11.3 Solving the deforestation problem

By 1670, the deforestation situation became so severe that it required urgent action from the shogun. In the remaining forest controlled by wealthy daimyo, strict controls on the use of timber were implemented. No logging could occur without an official permit and anyone who stole timber from the lands controlled by the shogun or other daimyo was severely punished. Sustainable forest management was also undertaken. This involved only harvesting selected mature trees, protecting small seedlings and careful thinning of forests to allow younger trees a chance to grow.

Large-scale development of plantation forests began in areas previously cleared of natural forest. Many daimyo grew plantation forests on their own land and villagers were taught to propagate seedlings from the seeds of the different pine and cedar varieties found in Japan. Peasant farmers were then encouraged to plant seedlings in areas near their farming land to increase the supply of timber. In many areas, timber plantations became a commercial operation, with sustainable logging to provide timber as a cash crop.

During the eighteenth and nineteenth centuries, Japan became a world leader in forest management.

Changes in building techniques were also important during the Edo period. One reason for the high demand for timber for buildings was the frequency of fires in towns and cities. A fire could spread rapidly among timber houses built close together and the destroyed dwellings would need to be rebuilt. This would put extra pressure on the supply of timber. The use of tiles on the roof instead of thatch and the plastering of the timber-framed walls reduced the risk of fire, helping to reduce the demand for timber to rebuild.

SOURCE 4 A house from the Edo period. The use of tiles on the roof and the plastering of the walls were designed to minimise the risk of fire.



8.11 ACTIVITY

Another action of the Tokugawa shogunate was its forestry policies, which introduced severe punishment for anyone who stole timber from lands controlled by the shogun.

- a. Imagine you are a village leader, and a member of your village has taken a small amount of timber for firewood to keep a sick child warm. Outline the arguments you would put to the local daimyo in begging for mercy for your villager.
- **b.** The daimyo has to consider the case:
 - (i) Give one reason why he might be prepared to show mercy.
 - (ii) Give one reason why he might not be prepared to show mercy.

[Ethical Capability]

8.11 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.11 Exercise 1: Check your understanding

- 1. **HS1** What was the 'rice tax'?
- 2. HS5 What factors may have contributed to the rapid increase in population during the early years of the Tokugawa shogunate?
- 3. HS1 Why was the supply of timber in Japan not a serious issue before the period of the Tokugawa shogunate?
- 4. HS5 Outline the factors that contributed to the deforestation problem faced by Japan by the end of the seventeenth century.
- 5. **HS1** Why was deforestation such a critical problem?
- 6. HS1 List the ways in which the harvesting of timber was restricted by the shogun and many of the daimyo
- 7. **HS1** Outline two examples of sustainable forest management introduced during this period.
- 8. HS1 Identify one benefit of creating new plantation forests in Japan during this period.

8.11 Exercise 2: Apply your understanding

- 1. HS3 Compare the period 1600 to 1720 with the period from 1720 to 1874 in SOURCE 1. What do you notice about the second period when compared with the first?
- 2. HS3 Examine SOURCE 2. How was it possible to expand the area of land under cultivation in a mountainous country such as Japan?
- 3. HS3 Study SOURCE 3.
 - (a) How might the construction of large numbers of houses such as that in SOURCE 3 have contributed to the deforestation problem?
 - (b) Identify a major risk if large numbers of these houses were built close together in a village or town.
- 4. HS3 How were the new building techniques demonstrated in SOURCE 4 able to contribute to solving the deforestation problem?
- 5. HS4 The population continued to grow in the period 1720 to 1874, but SOURCE 1 indicates that the area under cultivation remained fairly static. What do you think this tells us about changes in farming methods during this period?
- 6. HS5 Would it have been likely that the shogunate would have intervened in forestry practices across Japan if the deforestation problem had not become so severe? Give reasons for your response.
- 7. HS5 What does the ready acceptance of different forestry practices by all levels of society in eighteenth century Japan tell us about the distribution of power and influence during the Edo period?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.12 Foreign devils

8.12.1 The breakdown of isolation

The Tokugawa shoguns pursued a policy of isolation from the rest of the world, although some very limited contact was allowed through relationships with Chinese and Dutch traders. The contact with the Dutch continued through the Edo period, and provided the Japanese with access to some European scientific knowledge and literature. By the middle of the nineteenth century, with so many nations pursuing trade in the Pacific region, it would prove impossible for Japan to continue to restrict contact with the 'foreign devils'.

Despite 250 years of Tokugawa shogunate rule and its policy of isolation, such a policy was ultimately doomed to failure. By the nineteenth century, European countries and the United States of America were expanding their empires and influence into the Pacific Ocean. Even a country with the population and wealth of Japan could not keep foreign influences out forever.

Dejima Island and Rangaku

From 1640 onwards the Dutch and Chinese were allowed to maintain a limited presence on the artificial island of Dejima in Nagasaki harbour. The Dutch traders were not allowed to cross onto the mainland, except for an annual trip to Edo to pay homage to the shogun. On these visits the Dutch would bring samples of European technology as gifts for the shogun. In this way, Western inventions such as clocks, telescopes and medical instruments were introduced to Japan. Many Japanese scholars pursued a study of what they called Rangaku ('Dutch learning') during the period of isolation, when many Dutch books were translated into Japanese.

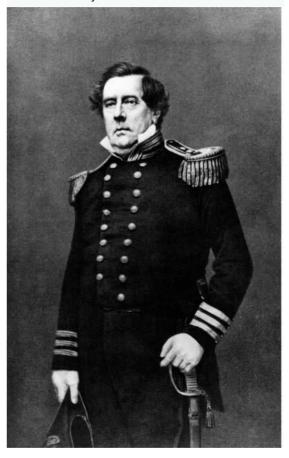
Black ships

During the 1830s and 1840s, a number of Western countries attempted to establish contact with the Japanese shogunate government, which rejected such approaches as being hostile to their way of life. In 1853, Commodore Matthew Perry of the United States Navy sailed into Edo harbour with four heavily armed warships. He wished to negotiate the opening up of trade with Japan, and threatened to take military action if the Japanese refused. The Japanese feared a return of the 'black ships' and built stronger forts around Edo. However, in 1854 Perry returned with twice as many ships to get a reply to the letter. He found the Japanese had drafted a **treaty** agreeing to the US demands.

SOURCE 1 Extract from Commodore M.C. Perry, Narrative of the Expedition of an American Squadron to the China Seas and Japan, McDonald & Co., London, 1954, p. 62

The Commander-in-Chief will not go to Nagasaki and will receive no communication through the Dutch or the Chinese . . . if this friendly letter of the President to the Emperor is not received and duly replied to, [the Commander-in-Chief] will consider his country insulted, and will not hold himself accountable for the consequences.

SOURCE 2 A photograph of Commodore Matthew Perry



Unequal treaties

In 1854, the Treaty of Kanagawa between Japan and the US opened two ports to North American trade and guaranteed good treatment of shipwrecked US sailors. Four years later the Japanese were pressured into another treaty. More ports were opened to foreign trade, which allowed North Americans to live and work in Japan. The treaty also set very low **tariffs** on foreign goods imported to Japan. Soon the Russians, French and British forced the Japanese to sign similar treaties.

The Nagasaki Naval Training Centre

Faced with the increasing threat of foreigners, in 1855 the shogunate government established a naval training centre near Dejima Island in Nagasaki harbour. To ensure they had access to the latest in marine technology and naval organisation, the training centre employed instructors from the Dutch Navy. They acquired steam-driven warships and set out to develop a modern Japanese navy.

SOURCE 3 A nineteenth-century map of the Nagasaki Naval Training Centre, established near Dejima Island in 1855



DID YOU KNOW?

The island of Dejima was created in 1634 by cutting a canal across a narrow isthmus connecting a small peninsula to the mainland. The resulting island was then linked to the mainland by a bridge, which was guarded day and night to prevent any unauthorised crossing.

8.12.2 Declining power of the shoguns

The emperor had appointed the shogun to protect Japan from barbarians but the shogun had failed in this duty by opening ports for trade. Some samurai clans still supported the shogun but others were very angry that the Tokugawa shogunate had not defended Japan from foreign invasion. They looked to the traditional authority of the emperor as the only strength capable of unifying the country. Over the next ten years, supporters and opponents of the shogunate clashed violently.

Some samurai acted independently to attack and kill the foreign intruders. The powerful Choshu clan even closed an important waterway and bombed foreign ships. However, the Western powers retaliated by later attacking Choshu territory and destroying its guns and forts.

Japanese scholars had a different answer to the problem. They suggested building on the skills already learned from Dutch traders and Portuguese missionaries. Their idea was to adopt Western knowledge in order to protect Japan's culture and traditions and help it survive as an independent country.

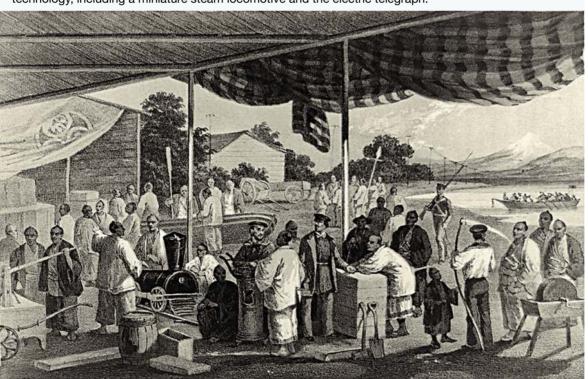
Edo surrenders

In the end, the Choshu, Satsuma and Tosa samurai clans and some important court nobles forced the resignation of Shogun Yoshinobu, the last of the Tokugawa shoguns. The clans then seized the imperial palace in Kyoto and declared the 'restoration' of the emperor to full power. The shogunate forces tried to defeat them but fell back to defend Edo. Recognising the strength of the imperial forces, Shogun Yoshinobu surrendered the city peacefully. The new emperor was carried in a heavily guarded royal palanquin from Kyoto to his new home, the shogun's palace, Edo Castle. The city of Edo was renamed Tokyo, meaning 'eastern capital'. It was the beginning of a new age.

Why did the shogunate decline in power?

After more than 250 years of stability under the Tokugawa shoguns and almost 700 years of shogunate government, why were the shoguns unable to maintain their power and to continue the long period of isolation from the outside world? Examining the following developments may help us to explain this decline in shogunate power:

• The Tokugawa shoguns had never been able to completely isolate Japan from outside influences. The study of Rangaku had increased in popularity as many scholars realised that Europeans were making discoveries in science and technology that could be of benefit to Japan. It was probably inevitable that Japanese scholars would realise that many of the discoveries made in other countries could be of benefit to Japan.



SOURCE 4 When Commodore Perry returned to Japan in 1854 he introduced examples of Western technology, including a miniature steam locomotive and the electric telegraph.

• The Tokugawa policy of limiting the wealth of rival daimyo allowed their clan to maintain power and control, but the shogun could only survive as the head of a strong, functioning feudal system. As the power and wealth of the daimyo declined, they would be less able to provide the support needed to maintain a functioning government structure. When the shogun relied on daimyo support to keep the 'foreign devils' at bay, most of that class no longer had the resources to provide that support.

- The samurai class was also unable to provide the necessary defence for the traditional feudal system. The Tokugawa shogunate had seen over 250 years of peace in Japan, so many of the traditional martial arts of the samurai had lapsed and were no longer an active part of samurai life. Large numbers of the samurai class had become bureaucrats within the Tokugawa government. They were no longer in a position to provide the military support that might be needed to repel outside influences.
- Despite the fact that the merchant class held low status within the Japanese feudal structure, involvement with trade and commerce had seen the emergence of many wealthy merchant families by the early nineteenth century. These business people held very little power within the traditional social structure but were often wealthier than some of the daimyo families. The samurai and daimyo classes came to depend on the commercial classes to provide them with the goods and services they required. It was highly unlikely that this emerging merchant class would be satisfied with their lack of power and with the restrictions on trade that prevented them from increasing their wealth.
- The early nineteenth century saw a period of frequent crop failures in different parts of Japan. A particularly devastating four-year famine in the Osaka region led to an uprising of the peasants in that area. One of the leaders of the rebellion set fire to his own house with the aim of it spreading to the house of a government official who lived opposite him. The resulting fire burned for two days and destroyed 3300 houses. The rebels were eventually hunted down and killed. This event and other examples of peasant unrest put severe pressure on the authority of the shogunate and challenged the shogun's ability to provide sound and secure government for all members of society.
- The Treaty of Kanagawa was largely forced on the shogun because of threats from Commodore Perry. The fact that an overseas power could enforce its will over the shogun was a severe blow to the power and authority of that figure. The shogun had always been regarded as the ultimate protector of Japan and its traditions. If the holder of that position could no longer perform that role, serious questions could be raised about the relevance of that position.



8.12 ACTIVITY

Research the Opium Wars between China and Britain.

- a. What was the result of this war?
- b. Why might the Japanese rulers have been be concerned by these events?

Determining historical significance

8.12 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.12 Exercise 1: Check your understanding

- 1. **HS1** In what way did Japan maintain limited contact with the outside world during the isolationist Edo period?
- 2. **HS1** In what ways was the arrival of Commodore Perry in 1853 different from the contact made by other Western visitors in the 1830s and 1840s?
- 3. HS1 What did the United States gain from the Treaty of Kanagawa?
- 4. HS5 Explain how the Treaty of Kanagawa and similar agreements were seen to have weakened the authority of the shogun.
- 5. HS1 How did the period of the Edo shogunate come to an end?

8.12 Exercise 2: Apply your understanding

- 1. **HS3** Read **SOURCE** 1. What did Commodore Perry mean by the words, '[the Commander-in-Chief] . . . will not hold himself accountable for the consequences'?
- 2. HS3 Examine SOURCE 3.
 - (a) How was the island of Dejima originally created and what was its purpose?
 - (b) In what way was the use of the island changed after 1855?
 - (c) What does this change of use tell us about the Japanese attitude towards foreigners?
- **3. HS3** How did the examples of Western technology shown in **SOURCE 4** influence the views of many Japanese scholars?
- **4. HS3** Identify the US and Japanese figures in **SOURCE 5**. Who appears to be the most powerful in this image? Explain your answer.
- 5. HS6 What was the significance of the Treaty of Kanagawa as a turning point in Japanese history?
- **6. HS5** What might have happened if the shogun had not agreed to this treaty and the other trading treaties that followed?
- **7. HS6** Identify two ways in which the small island of Dejima was significant in leading to the eventual modernisation of Japan?
- 8. HS5 Identify the long-term causes for the decline in power of the shogunate during the nineteenth century.
- 9. HS5 What were the short-term or immediate causes of the removal of shogunate power in 1867?
- 10. HS5 Were the Daimyo 'restoring' the power of the emperor or their own? Give reasons for your answer.

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8.13 Emperor Meiji and modern Japan

8.13.1 The Meiji Restoration and the Charter Oath

When Emperor Komei died in 1867, his fifteen-year-old son Prince Mutsuhito became the next emperor of Japan. He took the reign name Meiji and in 1868 began a dangerous journey from Kyoto to Tokyo. The long procession included the new emperor's palanquin, courtiers on horseback and a large group of samurai guards. Despite the victory of his samurai supporters, the young Emperor Meiji was still at risk from shogunate forces.

The transfer of power from the shogunate to the emperor is known as the Meiji Restoration. In theory, the emperor ruled Japan but in practice this was not the case. In the new government, the emperor was just a figurehead. Emperor Meiji and over 760 daimyo signed a document called the Charter Oath, a five-point

statement supposedly introducing a new democracy. However, the main decisions were still made by the same samurai groups who had restored the emperor as the head of government in Japan.



SOURCE 1 An illustration of Emperor Meiji as a young man

SOURCE 2 The Charter Oath 1868

By this oath, we set up as our aim the establishment of the national wealth on a broad basis and the framing of a constitution and laws.

- 1. Deliberative assemblies shall be widely established and all matters decided by open discussion.
- 2. All classes, high and low, shall be united in vigorously carrying out the administration of affairs of state.
- 3. The common people, no less than the civil and military officials, shall all be allowed to pursue their own calling so that there may be no discontent.
- 4. Evil customs of the past shall be broken off and everything based upon the just laws of Nature.
- 5. Knowledge shall be sought throughout the world so as to strengthen the foundation of imperial rule.

DISCUSS

Did the Charter Oath achieve all the things it promised? Read SOURCE 2 again and, as a class, decide how many of the five points were actually put into practice during the Meiji period.

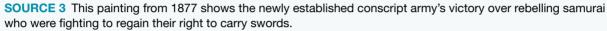
[Critical and Creative Thinking Capability]

8.13.2 The Boshin civil war

From 1868 to 1869, some significant land and naval campaigns took place between the imperial army and forces of the old shogunate. The battles were mainly on and around the islands of Kyushu and Hokkaido. It was a civil war because it involved rival groups from the same country. However, the emperor's forces defeated their enemies and strengthened the control of the central government in Tokyo.

What happened to the samurai?

The Meiji government believed that a samurai military force was too expensive and not appropriate for a modern country. Also many samurai were still loyal to their local feudal lords instead of the Japanese nation as a whole. The Meiji government replaced the samurai with a **conscript** army open to all classes of people. It ended the old four-class system, took over the daimyo domains and abolished the right of samurai to carry swords in public.





8.13.3 Japan modernises

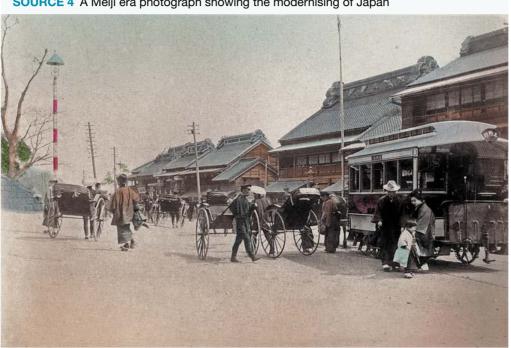
In its search for modern ideas, the Meiji government established overseas missions to foreign countries. The 1871 Iwakura Mission was the most important of these. Its purpose was to learn from the West in order to guide Japan's modernisation. Over nearly two years, its 48 members visited the United States, Britain, Europe and Asia and gathered information in many areas, especially aspects of industry, technology and military development.

Later reforms

By the end of the nineteenth century, hardly any aspects of traditional Japan remained unchanged. The country was governed by a constitution and a **diet**, where new laws could be debated and passed. Banks, post offices and schools were based on Western models and many new buildings reflected European or US architectural design. More 'loan words' came into the Japanese language from German, French and English.

Japan in the modern world

Some cultural changes occurred because the Japanese people began to accept new customs. However, a majority of the changes came from deliberate reform policies of the Meiji government. By the beginning of the twentieth century, Japan was a modern and powerful country prepared to take its place alongside other leading nations.



SOURCE 4 A Meiji era photograph showing the modernising of Japan

8.13 ACTIVITY

Create a timeline that shows the significant events that took place in Japan between 1853 and 1871. What aspects of Japanese life and society do you think changed the most? Give reasons for your opinion.

Identifying continuity and change

8.13 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

8.13 Exercise 1: Check your understanding

- 1. HS1 What was the Meiji Restoration?
- 2. **HS1** Which groups in society did Emperor Meiji depend on to regain imperial power?
- 3. HS1 Why do you think many samurai were angry about their changed social status during the Meiji period?
- 4. HS1 Why was the creation of a conscript army such a complete break with past practice?
- 5. HS1 Why did the Meiji government send the Iwakura Mission to visit other countries?

8.13 Exercise 2: Apply your understanding

- 1. HS3 How can you tell that Emperor Meiji, as shown in SOURCE 1, was influenced by European ideas rather than Japanese tradition?
- 2. HS3 Read SOURCE 2. In what ways did the Charter Oath introduce the Western concept of democracy and parliamentary-style government to Japan?

- 3. HS3 Examine SOURCE 3. Identify the differences between the samurai and the conscript soldiers as shown in this painting.
- 4. HS3 Carefully examine SOURCE 4 to identify some of the changes taking place in Japan during the Meiji period. In your workbook, draw two columns with the headings 'Old Japan' and 'New Japan'. In the appropriate columns list and describe all the traditional and modern-day items you can see in the photograph.
- 5. HS4 Why was Japan able to modernise so rapidly during the latter part of the nineteenth century?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

8.14 SkillBuilder: Analysing cause and effect

What does analysing cause and effect involve?

Analysing cause and effect involves examining events and sequences of events and looking for connections between them.

Select your learnON format to access:

- · an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- . an activity to allow you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.



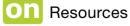
8.15 Thinking Big research project: Shinto and Buddhism guidebook

SCENARIO

You are a tour guide in Nara, the first imperial capital of Japan, and you are creating a guidebook to inform tourists of the cultural and historical importance of the Shinto and Buddhist religions.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- resources to guide your project work
- an assessment rubric.



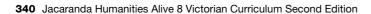
projectsPLUS Thinking Big research project: Shinto and Buddhism guidebook (pro-0164)



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8.16 Review



8.16.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

8.16.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31334)

Crossword (doc-31335)



Interactivity Japan under the shoguns crossword (int-7590)

KEY TERMS

archipelago a group of islands

artisan a skilled worker who produces handmade items

beri-beri a disease caused by a lack of vitamin B

biwa a four-stringed Japanese musical instrument

brocade a rich silk fabric with a raised pattern

bushido the way of the warrior; the rules that prescribed correct behaviour for all samurai

calligraphy the art of beautiful handwriting

centralised control of a country from one central location

civil war a war between two competing groups within one country

clan a large group of closely related people

conscript a person ordered by the government to do compulsory military duty

daimyo great feudal lord of Japan during the Classical and shogunate periods

deliberative having the power to make decisions

diet the name given to a law-making assembly in some countries

domain the territory ruled by a daimyo, including the farming and fishing villages within it

glaze a substance fused onto pottery to give it a glass-like appearance

hostage a person kept for security

iuiutsu a traditional Japanese system of physical training and unarmed combat

kabuki a colourful form of theatre combining play-acting, dance and music

kana a writing system that represents Japanese syllables

kiln an oven used at high temperatures to heat and harden ceramic items

monochrome varying tones of a single colour, usually black and grey

monopoly an organisation or group that has complete control of something

musket a muzzle-loading gun with a long barrel

origami the art of folding paper into different shapes and designs

palanquin a sort of couch for transporting passengers, with long poles on each side so that servants could carry it on their shoulders

regent a person appointed to rule a country if a monarch is too young or ill to do so

ronin a wandering samurai who had no lord or master

Sake a Japanese alcoholic drink made from fermented rice; sometimes known as rice wine

samurai the warrior class in Japan during the Classical and shogunate periods

seppuku a form of ritual suicide, carried out by disembowelling oneself (cutting open the abdomen) with a sword

shaman a person who claims to communicate with evil spirits through mystic rituals

Shinto an ancient Japanese religion that believes in nature spirits and ancestor worship

shogun literally 'barbarian-conquering great general'; the Japanese emperor's chief military adviser and

hereditary commander-in-chief, with the duty to protect Japan from foreign invasion

tariff a tax on goods imported from a foreign country

tea ceremony an ancient Japanese ritual of serving and drinking tea
treaty a formal agreement between two or more nations
tributary a state that gives payment to another state or ruler
tuberculosis a serious and infectious disease that affects the lungs
typhoon name given to big tropical storms in the Pacific or Indian ocean
vassal a person who holds land for a lord, and in return pledges loyalty and service to him
washi handmade paper created from the bark or fibre of various shrubs, grasses or trees

8.14 SkillBuilder: Analysing cause and effect

8.14.1 Tell me

The importance of analysing cause and effect

An important reason for studying history is that it enables us to understand the world we live in today. Our world has developed as a result of a whole series of different events; some of them recent, some that happened hundreds of years ago. Each of these events has had some impact on events that have followed, and this is what we understand as *cause* and *effect*. In order to fully understand a particular event or series of events, we have to be able to work out what *caused* them. In order to assess the importance of any historical event, we have to be able to recognise the *effects* of that event on later developments. Often this is not obvious, which is why historians sometimes disagree. Analysing cause and effect involves examining sequences of events and looking for connections between them. Did event A directly cause event B or was it merely coincidence that they happened close together in time? Usually we have to form judgements, by looking at the evidence and drawing conclusions from it.

Immediate causes and long-term trends

When two football teams play each other and one wins convincingly on the day, we can look at the match and recognise particular players who played well on the winning side, as well as some who played poorly in the losing side. We can identify particular strategies that worked on the day, and some that failed. Analysing these factors can give us the *immediate causes* of the match being won by one side rather than the other on that particular occasion. These are also recognised as the *short-term triggers* that worked on the day of the match.

We can also look more deeply than the immediate events on the day of the match. If the winning team is near the top of the ladder and consistently wins most of its matches, there will be *underlying causes* for this dominance. If they recruited particularly well in the previous few years, have been well coached, have few injuries and have experienced leaders in their team they are likely to do well against most other clubs. These factors form the *long-term trends* that can make the club a dominant force for a period of time.

Historical causes can be grouped in the same way. If we want to examine a particular event and find its causes, we can look at the events that happened immediately beforehand and look for connections. These are the *immediate causes* or *short-term triggers* that directly cause the event in question. We can also examine the society in which the event occurred and look for trends and longer term conditions that may have allowed the immediate causes to trigger the events in question. These are the *underlying causes*, and they are just as significant.

8.14.2 Show me

How to analyse causes and effects of significant events

To demonstrate a method of determining causes and effects we need a sample question. For the purposes of this exercise, let us examine the following question:

Why did Japan descend into the age of the warring states from the mid-fifteenth century until the establishment of the Tokugawa shogunate in 1603?

We can tackle this through the following steps.

Step 1

Identify when the period of the warring states actually occurred and compile a list of events that occurred during the period and in the years beforehand.

The period from 1467 to 1603 is the period usually known as the age of the warring states.

Some of the events that might be relevant include:

- In 1467, a civil war broke out between the followers of two brothers who were rivals for the position of shogun.
- This dispute began in 1464 over who should succeed to the position of shogun.

- The supporters of each brother were powerful daimyo clans, each seeking to increase their power.
- Wars and violence between different daimyo clans continued for over 100 years until the country became unified under Oda Nobunaga, Toyotomi Hideyoshi and Tokugawa Ieyasu, who eventually founded the Tokugawa shogunate in 1603.

Step 2

Identify some of the longer term trends that had been present in Japanese society before the outbreak of civil war and during the period.

- The Ashikaga shoguns had been in power since the fall of the Kamakura shoguns.
- The Kamakura shoguns had lost power when the daimyo and samurai rebelled against them.
- The shoguns had held official military power in Japan since 1192, when the emperor became a mere figurehead.
- The daimyo were the wealthy landowners; they held a great deal of power in Japan since the eighth century and had been backed up by samurai warriors.
- Although the Ashikaga shoguns were officially in charge as shoguns during the period of the warring states, they were really little more than the puppets of different daimyo clans.

Step 3

Use the information gained to formulate an answer to the question.

The following is a model of what the answer could look like.

The period of the warring states had both immediate causes and longer term causes. The immediate trigger was a dispute between two brothers over who would inherit the position of shogun. In 1467, this led to an outbreak of civil war between the daimyo clans supporting each of the brothers. This was the first of a series of wars and uprisings involving daimyo clans that continued for over 100 years. The wars broke out and continued because different daimyo groups were constantly competing with each other for power and influence.

This leads to the underlying cause of the period of warring states: the large amount of wealth and power of the daimyo led to constant rivalries between the different daimyo clans. Each clan had large numbers of samurai warriors supporting them. While the daimyo retained their power and wealth, there were always going to be rivalries and the likelihood of war between the powerful clans. We know that this was a major underlying cause because the Kamakura shoguns had lost their power when a significant number of daimyo and samurai had rebelled against them in 1333. The power of the daimyo was a continuing problem and an underlying cause of conflict because it was not until Tokugawa Ieyasu came to power and took steps to weaken the power of the daimyo that the fighting came to an end and the power of the shogun was restored.

8.14.3 Let me do it

Complete the following activities to practise this skill.

8.14 ACTIVITIES

- 1. Use the three steps in the Show me section to answer the following question, discussing both the long-term trends and the short-term causes:
 - Why did the Tokugawa shoguns take control of Japan's foreign trade?
- 2. Based on your analysis of the causes of the Tokugawa shoguns' decision to take control of foreign trade, answer the following questions:
 - (a) How important was the issue of religion in the policy of the Tokugawa shoguns to tightly control foreign trade?
 - (b) Why did the shoguns have a different attitude to the Dutch than they did toward the Spanish and Portuguese in matters of trade?
 - (c) Identify two examples in the *Closed Country Edict* of 1635 that are designed to reinforce the Tokugawa shoguns' control of trade.

- (d) Why would the Tokugawa shoguns have considered it important to deny other daimyo families access to foreign trade?
- (e) Outline two ways in which the Tokugawa shoguns were able to benefit personally from their control of trade.
- (f) How did the shogunate control of trade affect the availability of valuable metals within Japan?

8.15 Thinking Big research project: Shinto and Buddhism guidebook

Scenario

You are a tour guide in Nara, the first imperial capital of Japan from the fourth century CE until the year 794. You wish to prepare a guidebook for visiting tourists on the influence of the two main religions, Shinto and Buddhism, on Japanese history and culture. As Nara is home to the Kasuga Taisha Shinto shrine and the Todaiji Buddhist temple, you are going to use these two landmarks to help illustrate the features of the two dominant religions of Japan.





Task

You will prepare a guidebook on the Shinto and Buddhist religions, highlighting their importance in Japanese history and culture. The Kasuga Taisha Shinto shrine and the Todaiji Buddhist temple can be used to provide examples. Ensure your guidebook is eye-catching and informative.

Follow the steps detailed in the **Process** section to complete this task.

Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in groups will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the Research forum, where you will find starter topics loaded to guide your research. You
 can add further topics to the Research forum if you wish. When you have completed your research,
 you can print out the Research report in the Research forum to easily view all the information you
 have gathered.

Your research will need to include the following:

- origins and main beliefs of the traditional Shinto religion
- the main beliefs of Buddhism, and how it came to Japan from southern Asia
- how the two religions have existed side-by-side in Japan for centuries, and continue to do so today
- the purposes and uses of shrines and temples in both religions
- key features of Shinto shrines, such as the Kasuga Taisha, and Buddhist temples, such as the Todaiji temple in Nara Park, and the history of these two landmarks
- the influence of the two religions during the shogunate period.
- Images of the Kasuga Taisha and Todaiji are available in the **Media centre** for you to use to illustrate your guidebook, or find other images on the internet. You should find out and explain the significance of any photographs used; for example, what is the purpose of the many lanterns found at Kasuga Taisha?
- Layout your guidebook with a mixture of text and images. Ensure it is informative as well as interesting.
- Submit your guidebook to your teacher for assessment and feedback.





ProjectsPLUS Shinto and Buddhism guidebook (pro-0164)

8.16 Review

8.16.1 Key knowledge summary

8.2 Examining the evidence

- Japanese architecture tells us a lot about the way people lived.
- Artworks such as paintings provide evidence of the way people lived in feudal Japan.
- Great works of literature often describe important events and peoples' lifestyles.
- Government documents were kept as National Treasures.
- Many traditional festivals and ceremonies survive today, giving us a view of some important traditions.

8.3 Ancient and Classical Japan

- The first Japanese state was established by the Yamato clan around the town of Nara.
- During the Classical period, Buddhism was firmly established and the first great works of literature appeared.
- Land reform was attempted in the seventh century CE but was abandoned as emperors granted land to their supporters.
- In 794 CE, the emperor moved his capital to Heian-kyo (modern Kyoto), beginning the Heian period.
- The Heian period saw growth in the power and importance of the daimyo and the samurai.

8.4 The rise of the shoguns

- Disputes arose in 1180 over the succession to the imperial throne, leading to a civil war.
- The Minamoto clan supported the successful claimant to the throne and its leader Yoritomo was appointed shogun in 1192.
- From 1192, power passed from the emperor to the shogun for 700 years.
- The shoguns became so powerful because they were able to command military forces and maintain order.

8.5 Challenges to shogunate rule

- The period of the Kamakura shogunate brought stability to Japan and saw the spread of Buddhism and the flourishing of arts and culture.
- In 1274 and 1281, the Mongols attempted to invade from China but the invading ships were wrecked by fierce storms.
- The Kamakura shoguns were unable to pay their samurai warriors, who then supported an attempt to restore the emperor to power.
- The Kamakura shogunate lost power, to be replaced by the Ashikaga clan as shoguns.
- In 1464, a dispute between two members of the Ashikaga clan led to civil war and a hundred years of instability known as the age of the warring states.
- Order and unity was restored through the military conquests of the three great unifiers: Oda Nobunaga, Toyotomi Hideyoshi and Tokugawa Ieyasu.

8.6 The Tokugawa shogunate

- In 1603, Tokugawa Ieyasu became shogun, establishing the Tokugawa shogunate that would last for over 250 years.
- During the period of the Tokugawa shogunate, the shogun closely controlled all international trade.
- The Tokugawa shoguns also set up processes to isolate Japan from the rest of the world, in order to maintain the traditional Japanese way of life.

8.7 Japanese feudal society

- Feudal society divided Japan into rigid social classes, with the emperor and the noble daimyo at the top of the class structure.
- The most powerful of the daimyo was the shogun, who was the effective ruler of Japan.

- Below the daimyo were the samurai, ronin, peasants and artisans, with merchants at the bottom of the *shi-no-ko-sho* structure.
- Outside the class system were the lowest of all: the *eta* and the *hinin*.

8.8 The samurai

- The samurai class was established to serve the daimyo and provide them military support.
- The samurai followed a warrior code known as bushido.
- Samurai boys were raised to become warriors and were trained from a young age.
- A samurai girl was trained to be a faithful wife and mother, and was expected to control her household when her husband was away at war.
- Ronin were members of the samurai class that did not have a daimyo master to serve.
- The samurai gradually lost influence when their methods of fighting became obsolete and the peaceful period of the Tokugawa shogunate gave them no opportunities to fight.

8.9 The role of women

- *The Pillow Book*, written during the Heian period, gives us an insight into the lives of women in feudal Japan.
- Women in feudal Japan lived only about 27 years on average and often suffered from diseases and difficulties during childbirth.
- Marriages were arranged between families and the wife would move to live with her husband's family.
- Geishas were trained in art, music, dance and interesting conversation, and they entertained their clients with these skills.

8.10 Arts and culture

- Japanese painting was influenced by Chinese styles and often depicted religious scenes.
- Japanese calligraphy was an art in itself and a highly prized skill.
- Woodblock printing was a popular and highly skilled art form that reached its peak in the eighteenth century with the work of artists such as Katsushika Hokusai.
- Lacquer work produced many fine objects and was achieved by painting many thin layers over objects made from wood, bamboo or pottery.
- Pottery was created both for useful purposes such as food storage and decorative purposes.
- The Tokugawa period saw the blooming of the performing arts, such as kabuki theatre.

8.11 Land use under the Tokugawa shoguns

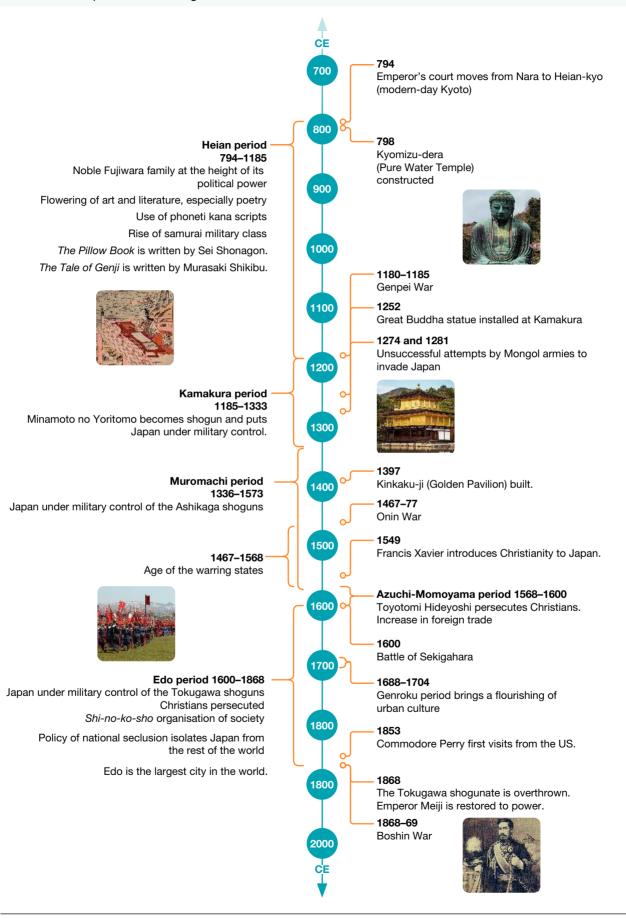
- The primary use of land throughout the feudal period in Japan was farming, particularly the growing of rice.
- The Tokugawa period saw a rapid expansion in the amount of land under cultivation.
- By the seventeenth century, Japan began to experience a deforestation problem, so a variety of measures were put in place to make forestry more sustainable.

8.12 Foreign devils

- By the nineteenth century, Western nations were expanding their empires and wanted to trade with Japan.
- In 1853, Commodore Perry threatened the Japanese government with military action if trade was not opened to the West.
- The Tokugawa shoguns were no longer powerful enough to resist foreign invaders and some clans supported the return of the emperor to supreme power.

8.13 Emperor Meiji and modern Japan

- In 1868, Emperor Meiji went from Kyoto to Tokyo to claim power.
- A number of clans loyal to the Tokugawa shoguns resisted the restoration of power to the emperor but were defeated during the Boshin civil war.
- Emperor Meiji set out to modernise Japan and sent missions to other countries to learn of new technology.
- By the beginning of the twentieth century, Japan had become a modern and powerful nation.



8.16.2 Reflection

Complete the following to reflect on your learning.

8.16 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Emperor, daimyo, samurai or shogun. Who really had power and control during shogunate Japan?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner, Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



eWorkbook Reflection (doc-31334)

Crossword (doc-31335)



Interactivity Japan under the shoguns crossword (int-7590)

KEY TERMS

archipelago a group of islands

artisan a skilled worker who produces handmade items

beri-beri a disease caused by a lack of vitamin B

biwa a four-stringed Japanese musical instrument

brocade a rich silk fabric with a raised pattern

bushido the way of the warrior; the rules that prescribed correct behaviour for all samurai

calligraphy the art of beautiful handwriting

centralised control of a country from one central location

civil war a war between two competing groups within one country

clan a large group of closely related people

conscript a person ordered by the government to do compulsory military duty

daimyo great feudal lord of Japan during the Classical and shogunate periods

deliberative having the power to make decisions

diet the name given to a law-making assembly in some countries

domain the territory ruled by a daimyo, including the farming and fishing villages within it

glaze a substance fused onto pottery to give it a glass-like appearance

hostage a person kept for security

jujutsu a traditional Japanese system of physical training and unarmed combat

kabuki a colourful form of theatre combining play-acting, dance and music

kana a writing system that represents Japanese syllables

kiln an oven used at high temperatures to heat and harden ceramic items

monochrome varying tones of a single colour, usually black and grey

monopoly an organisation or group that has complete control of something

musket a muzzle-loading gun with a long barrel

origami the art of folding paper into different shapes and designs

palanguin a sort of couch for transporting passengers, with long poles on each side so that servants could carry it on their shoulders

regent a person appointed to rule a country if a monarch is too young or ill to do so

ronin a wandering samurai who had no lord or master

Sake a Japanese alcoholic drink made from fermented rice; sometimes known as rice wine

samurai the warrior class in Japan during the Classical and shogunate periods

seppuku a form of ritual suicide, carried out by disembowelling oneself (cutting open the abdomen) with a sword shaman a person who claims to communicate with evil spirits through mystic rituals

Shinto an ancient Japanese religion that believes in nature spirits and ancestor worship shogun literally 'barbarian-conquering great general'; the Japanese emperor's chief military adviser and hereditary commander-in-chief, with the duty to protect Japan from foreign invasion tariff a tax on goods imported from a foreign country tea ceremony an ancient Japanese ritual of serving and drinking tea treaty a formal agreement between two or more nations tributary a state that gives payment to another state or ruler tuberculosis a serious and infectious disease that affects the lungs typhoon name given to big tropical storms in the Pacific or Indian ocean vassal a person who holds land for a lord, and in return pledges loyalty and service to him washi handmade paper created from the bark or fibre of various shrubs, grasses or trees

9 Polynesian expansion across the Pacific (c. 700-1756)

9.1 Overview

How did the Polynesian voyagers migrate to the Pacific Islands if they didn't even know they existed?

9.1.1 Links with our times

The sparse landscape of Easter Island, or Rapa Nui, captures the imagination of all who visit the remote island. The greatest attraction is the moai, stone statues that range in height from as small as one metre to one statue, nicknamed 'El Gigante', that is over 20 metres tall. There are some 900 statues peppering the landscape of Rapa Nui and there is still debate over their purpose and relevance. What is not being debated is that the construction and, in particular, movement of these statues led to deforestation of the island and effectively decimated the people and culture that created these imposing figures. The moai on Rapa Nui, therefore, stand as a link to a mysterious past but offer a clear lesson for our present — care for one's environment is integral to the sustainability of one's existence.

In this topic you will have the opportunity to learn about the incredible achievements of Polynesian expansion and the complexity of their history and culture.



LEARNING SEQUENCE

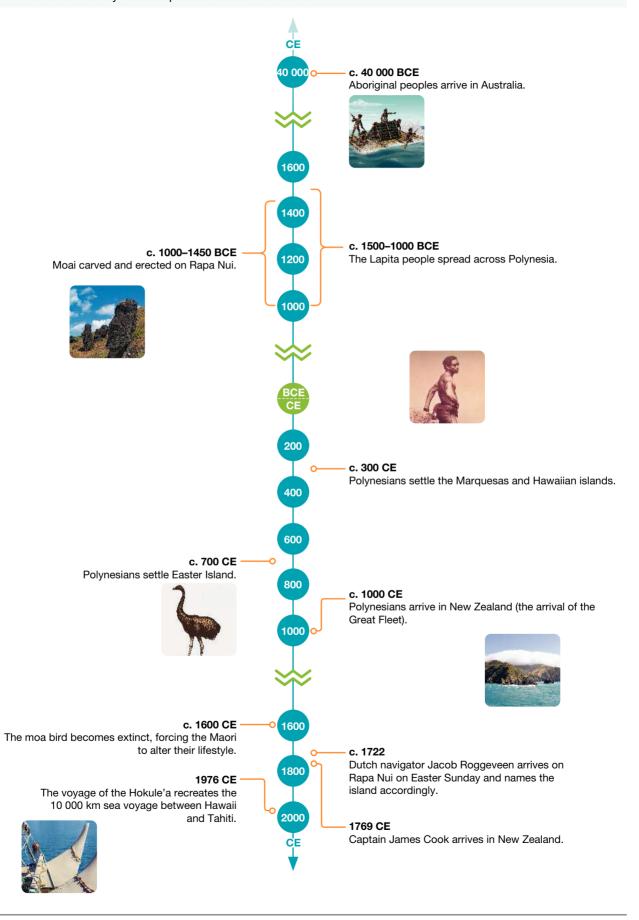
- 9.1 Overview
- 9.2 Examining the evidence
- 9.3 The Polynesian triangle
- 9.4 Rapa Nui
- 9.5 Discovery of the land of the long white cloud
- 9.6 Maori society an overview
- 9.7 People and the environment
- 9.8 Living in a Maori village
- 9.9 Customs and culture
- 9.10 SkillBuilder: Making your own notes from sources
- 9.11 Thinking Big research project: Polynesian travel show
- 9.12 Review

To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

Online ?

on line 1

online :



9.2 Examining the evidence

9.2.1 How do we know about Polynesian expansion?

The ancient Polynesian people travelled great distances to settle thousands of islands in the Pacific Ocean. One of the last areas to be settled was New Zealand. Polynesians arrived there about 1000 CE and, within a few hundred years, had developed a unique language, society and culture.

There are many sources that can tell us about the people of the Pacific. Some of the evidence is from myths and legends. Other sources include artefacts such as wood carvings, jewellery, tools and pieces of pottery. Even their language, beliefs and tattoos remain as evidence of their identity and culture.

Before written records

Much of the early history of the first voyagers in the Polynesian region is incomplete. At that time, no written records were kept and so archaeological research plays a vital role in revealing this part of history. Through a variety of evidence that has survived throughout the centuries, historians develop theories about what happened hundreds, and even thousands, of years ago. As new evidence is found, these theories are either supported or will need to be re-examined.

SOURCE 1 Pottery left behind by the Lapita people, with its distinctive markings, helps archaeologists and historians trace migration paths across Polynesia.



The pottery left behind by the early people of Polynesia provides important information about their expansion across the Pacific. Archaeologists and historians believe that a group of people called the Lapita arrived in the Pacific region over 3000 years ago. The remains of their distinctive pottery provides a record of their movements eastward through the Solomon Islands and into the wider Pacific. One thousand years later, they set sail again, moving east across 3000 kilometres of open ocean. They settled the Marquesas, Tuamotus and Society islands. Between 300 and 800 CE they discovered Easter Island and Hawaii. The distances they travelled were immense — for example, the distance between their settlements in Tahiti and Hawaii is greater than between North America and Europe.

SOURCE 2 Carved wooden paddles from the Solomon Islands. The paddle on the right is thought to show a frigate bird in the sky (possibly a symbol of the spirits of the ancestors). Although the Solomon Islands are part of Melanesia, not Polynesia, these artefacts are important as they help historians understand where the original Polynesian settlers migrated from.



9.2.2 The European perspective

Written records, which appeared only in the last few hundred years, offer historians a very different perspective on Polynesian history. There are many written records and so there is a lot of information available. However, this also provides certain challenges for historians. Much of the written evidence of the Polynesian people was recorded by outsiders, usually Europeans, and so is written from their perspective. Professor John Waiko, a historian from Papua New Guinea, illustrates the problem with this in **SOURCE 3**. Historians need to be careful when dealing with this type of written evidence.

SOURCE 3 Professor John Waiko's quote from his book *A history of Papua New Guinea and its neighbours* illustrates the problem of seeing history with a single perspective.

They [the Europeans] have emphasised the activities of the foreigners. During the colonial encounter the emphasis was on the colonisers rather than the colonised. Their documents portray the roles of the colonisers rather than the roles of the indigenous people.

Changing history

In recent years there has been a renewed focus on the history of the Polynesian people as seen through Polynesian eyes. This important work is done by the descendants of the very people who first settled the region centuries ago. But, as is the case with all oral histories, it is important to act quickly. When a person dies without the opportunity to record their story, their knowledge and unique perspective on their indigenous history is lost. Oral history is not without its own flaws as it can reveal more about what the informant wishes to record than what actually occurred. The path for the historian is a tricky one; the best process is to balance these sources against one another in order to create a fuller picture of the past.

9.2 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

9.2 Exercise 1: Check your understanding

- 1. HS1 What was one of the last areas in which the Polynesian people settled?
- 2. HS2 When did the ancient Polynesian people settle New Zealand?
- **3. HS1** Historians have gained most information about the history of early Polynesian people from what kind of sources?
- 4. HS1 Who recorded much of the written evidence of the Polynesian people?
- **5. HS1** In recent years, there has been a renewed focus on the history of the Polynesian people. How has this history been obtained?

9.2 Exercise 2: Apply your understanding

- 1. **HS6** Why is the recording of oral histories such urgent work?
- 2. **HS6** Identify one value and one problem with using oral history as evidence.
- 3. HS3 Using the text and sources in this subtopic, outline how the study of Polynesian history and the use of evidence have changed over time.
- 4. HS3 How do the remains of Lapita pottery (shown in SOURCE 1) help archaeologists trace Polynesian migration across the Pacific?
- 5. **HS3** Explain how the artefacts in **SOURCE 2** provide archaeologists with evidence of the Polynesian migration across the Pacific.
- 6. HS3 Describe how the written evidence discussed in SOURCE 3 is a 'one-dimensional' view of history.

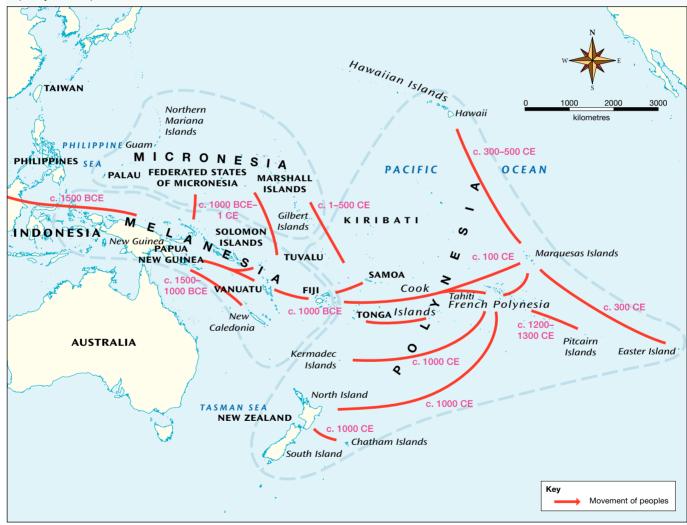
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9.3 The Polynesian triangle

9.3.1 Traversing the Pacific

Polynesia refers to the triangular region in the Pacific Ocean bordered by Hawaii in the north, Easter Island in the east and New Zealand in the south. Archaeological evidence suggests the discovery and settlement of the islands within this vast area was planned, and not the accidental result of sailors becoming lost and blown off course. The Pacific explorers were clearly well prepared for long sea journeys because they transported plants such as taro, yam, gourd and kumara, and animals such as rats and dogs. They developed new technology for long-range ocean voyaging and a sophisticated system of navigation. The region of this last frontier of exploration is known as Remote Oceania.

SOURCE 1 A map of the Pacific Ocean showing migration and settlement in the Pacific islands. The people of the Pacific islands belong to three main cultural groups — Melanesia (meaning black islands), Micronesia (small islands) and Polynesia (many islands).



Source: Map drawn by Spatial Vision.

9.3.2 A great undertaking

The settlement of the remote islands of the vast Pacific Ocean is one of the greatest stories of exploration in world history because the Pacific islands were the most difficult places for humans to reach. The Pacific Ocean covers one-third of the Earth's surface and is larger than the Atlantic and Indian oceans combined. The Pacific could contain the total landmass of the Earth and still leave enough room for another continent the size of Asia.

Exploration of the Pacific first occurred on simple boats, or dugout canoes, that brought people across the ocean passages between South-East Asia and New Guinea, Vanuatu and the small surrounding island groups. The Pacific explorers travelled in sail-powered canoes designed with unique features such as a twin hull for maximum storage over very long distances (see **sources 2** and **3**). These explorers developed an extensive knowledge of stars, weather patterns and ocean currents. They closely observed the animals and birds of the Pacific, following their paths of migration and watching for the tiny clues that pointed them towards land.

SOURCE 2 Double-hulled canoes like this one carried the Polynesian people across the Pacific Ocean. This artwork was created in the twentieth century.



SOURCE 3 The Hokule'a under sail from Hawaii in 1976



DID YOU KNOW?

In 1976 a group of modern Polynesian seafarers recreated the past when they embarked on the 10 000 kilometre sea voyage between Hawaii and Tahiti aboard a reconstruction of a thousand-year-old Polynesian double-hulled canoe named the Hokule'a. Covering a distance greater than that between Europe and North America, this event supported the theory that the epic voyages across the Pacific were intentional and marked the high point in seafaring achievements of the ancient world.

As they navigated across the vast distances, they discovered more than 20 000 islands. Most are tiny coral reefs, or the tips of high volcanic peaks jutting out of the ocean depths. These remote islands are separated by hundreds of kilometres of open sea. The navigation of these vast ocean distances remains one of the greatest achievements in human history.

Explore more with my World History Atlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

• The Asia-Pacific world > Polynesian expansion

9.3 ACTIVITIES

- 1. Investigate and research the voyage of the Hokule'a (shown in SOURCE 3), including what supplies were taken and what traditional navigation techniques were used. Using historical sources as evidence
- 2. Each of the Pacific island nations has an interesting history. In pairs, carry out research in your library or on the internet into the original human settlement and cultural traditions of one Polynesian nation of your choice. Present your information as part of an annotated wall map of the Pacific in your classroom.

Determining historical significance

- 3. Examine SOURCE 1.
 - (a) Identify three countries in Melanesia, Micronesia and Polynesia.
 - (b) Calculate the distance from Hawaii to Tahiti. Establish a context for the distances covered by Polynesian voyagers by naming a location that is the same distance from your home town or city.

Using historical sources as evidence

9.3 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

9.3 Exercise 1: Check your understanding

- 1. HS1 What is meant by the term 'Polynesia'?
- 2. HS1 How do historians know that the voyages by ancient Polynesians were not accidental?
- 3. HS6 Identify three factors that make Polynesian exploration one of the 'greatest stories of world exploration in human history'.
- 4. HS1 Fill in the gaps to complete the sentence. Migration and settlement of the Hawaiian Islands took place CE from the Islands.
- 5. **HS1** How did the ancient Polynesians know that there were other lands in their region?

9.3 Exercise 2: Apply your understanding

- 1. **HS1** Name the fauna and flora that Polynesians took with them on their guests for new land.
- 2. HS3 The scene in SOURCE 2 illustrates the Raiatea islanders sailing their canoes from Raiatea in French Polynesia to New Zealand. Referring to this information, use **SOURCE 1** to map out a possible route for this journey.
- 3. HS6 How does an event such as the voyage of the Hokule'a in 1976 provide important evidence for historians studying Polynesian expansion?
- 4. HS3 Using SOURCES 2 and 3, identify three of the features of these vessels that would make them suitable for long-distance exploration.
- 5. HS1 What maritime knowledge assisted the Polynesian explorers?

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9.4 Rapa Nui

9.4.1 The navel of the world

Easter Island, Rapa Nui and Te Pito o te Henua are all names for the tiny island 11 000 kilometres east of Australia and 3600 kilometres west of Chile. Legend states that the bold Polynesian chief Hotu Matu'a led his people to the island over 1300 years ago and they named their island Te Pito o te Henua, which has been romantically translated as the 'Navel of the world'; a more accurate translation would be 'the end of land', which is an appropriate title for one of the world's most remote islands.

The Polynesian name Rapa Nui (Big Rapa) came later, from a visiting Tahitian who noticed the resemblance of this island to one of Tahiti's islands, Rapa Iti (Small Rapa) and named it accordingly. The more common name, Easter Island, derives from the first recorded European contact with the island. A Dutch navigator, Jacob Roggeveen, arrived on 5 April 1722; it was Easter Sunday.

The rise and fall of the Rapa Nui civilisation

The sight that greeted Jacob Roggeveen on that day would have been hard for him to comprehend. He estimated a population of approximately 2000 inhabitants. How could this small population on this sparse landscape produce such a profound culture and heritage? Evidence suggests that Rapa Nui had a far greater population in the centuries before and that Roggeveen was visiting Rapa Nui when its culture and people were in decline. The Polynesians who had arrived centuries before had prospered on the island until their growth exhausted the island's resources. Archaeologists suggest that at its height there were as many as 15 000 people on the 163 square kilometres of land that is Rapa Nui. This society was relatively advanced, it had a clear political structure, it was culturally sophisticated to the point that it had the only Polynesian writing system known to historians — rongorongo — as well as the engineering ability to construct and move the impressive moai that faced Roggeveen's ship.



SOURCE 1 Easter Island's remote location allows astronomers an unparalleled view of the Milky Way.

9.4.2 The moai

Rapa Nui's isolation fostered a distinctive cultural and religious phenomenon: the sculpture and movement of stone statues known as moai. Between c. 1000 and 1600, hundreds of statues were created and transported from the stone quarries to ceremonial platforms known as ahu. There are some 900 statues on the island today but, unfortunately, they are constructed in scoria — hardened volcanic ash — which lacks the durability of stronger stone and the conservation of the moai is a key concern for their curators.

Ancestor worship

Theories abound about the reason for the moai, but most researchers agree that the construction of the moai was a form of ancestor worship, the stern expressions representing previous ariki (chiefs). The design of the moai is not uniform; some moai had topknots of different coloured stone, some are standing, while others are kneeling. The fact that no two moai are alike adds weight to the conclusion that these statues represent actual historical figures sacred to the people of Rapa Nui. More elaborate theories have been proposed including arguments about extra-terrestrial significance, but these theories do not have substantial supporting evidence. Modern reconstructions and movement of moai has proven that basic tools and skills were all that was required to sculpt and transport these huge statues.

9.4.3 Moving the moai

The moai were carved with toki (basalt chisels) from the volcanic rock that was available at the quarry known as Rano Raraku and transported where possible to the ahu. **SOURCE 2** depicts one such platform, Ahu Tongariki. Many moai did not make it to their intended locations and they lie seemingly abandoned at random sites. The reason for this could be straight forward — they were simply too heavy to move. While the largest moai at Ahu Tongariki weighs an impressive 86 tonnes this platform

is only one kilometre from the quarry. Yet other massive moai were moved impressive distances and researchers have concluded that a number of approaches could have made this possible. While legend claims that the moai simply walked to their positions, it has been argued that it was possible, using log rollers and ropes, to swivel the moai gradually into position. Another method would have been to roll the moai to the ahu once again using logs as wheels. All of these techniques had significant impact on the environment. When Captain James Cook visited the island in 1774, he described a landscape that had no trees above three metres tall.

SOURCE 2 Ahu Tongariki: the largest platform of moai. Most statues stand with their back to the sea, protecting the islanders while turning their back on the spirit world.



Deforestation

Archaeological evidence provides little doubt that there was once a dense forest of sub-tropical palm trees, shrubs and ferns on Rapa Nui. The demise of these forests has been traced to two main sources: the introduction of the Polynesian rat and, more significantly, the over-foresting by the islanders themselves. Whether it was to provide rollers for the transport of the moai or to simply provide housing for the islanders, their rich culture began to degenerate approximately a hundred years before European contact. Such was the rate of their decline that a period of violent internal conflict took place between the islanders,

where incidents of cannibalism have been uncovered by archaeologists. Compounding their decline was the lack of timber to create ships that would allow escape. Trapped on Rapa Nui, the lack of resources nearly led to the death of the people and their culture. Ironically, Rapa Nui is now a World Heritage Site and most of its more-than 5000 inhabitants are actively engaged in protecting its legacy.

9.4 ACTIVITIES

- Research the decline in population that took place in Rapa Nui in the period before European contact and identify the major events that affected the people and their environment.
 Analysing cause and effect
- 2. Rapa Nui represents a unique and rich legacy. Research and report on one of the following:
 - the diversity of moai on Rapa Nui
 - the significance of the rongorongo language.

Determining historical significance

3. Using the information in this topic, as well as further research, write a letter to the editor from the perspective of an environmentalist outlining your belief that the lessons of Easter Island need to be observed by Australians today.

You will need to include:

- a clear statement of your argument
- an explanation of the comparison you are drawing
- a series of recommendations that you believe are appropriate
- a strong concluding statement that explains the dangers of inaction.

[Ethical Capability]

9.4 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

9.4 Exercise 1: Check your understanding

- 1. HS1 Why is Rapa Nui more commonly known as Easter Island?
- 2. HS1 Identify three main achievements of Polynesian culture that occurred on the island of Rapa Nui.
- 3. **HS1** What are the main reasons provided to explain the existence of the moai?
- 4. HS1 Why have most historians concluded that the moai were symbols of ancestor worship?
- 5. **HS5** Identify the main theory put forward to explain why the moai seem to be abandoned at random sites across Easter Island. What evidence is provided in the text to support this theory?
- 6. HS1 Why is it pertinent to note that Captain Cook did not notice any trees above three metres tall?

9.4 Exercise 2: Apply your understanding

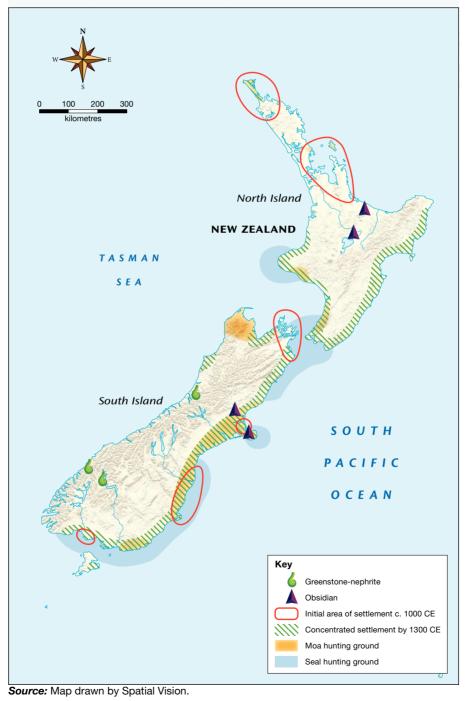
- 1. **HS3** Using **SOURCE 2** and the information provided, identify how the moai could be transported to the coastline from the scoria quarry.
- 2. HS3 Explain, using SOURCE 2 as your evidence, the impact of over-logging on the island of Rapa Nui.
- 3. HS3 What have archaeologists uncovered that prove that 'violent internal conflict' took place on Easter
- **4. HS5** Given that the island of Rapa Nui once had 15 000 inhabitants, determine how many people per square kilometre that equates to. State what conclusions you can draw from this.
- **5. HS6** Rapa Nui represents a striking lesson about environmental management. Using their experience as evidence, compose a letter that you could send to your Member of Parliament warning of the dangers of poor resource management.

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9.5 Discovery of the land of the long white cloud 9.5.1 The land of the long white cloud

Historians are not certain when and why the human settlement of New Zealand began. Archaeological evidence suggests that sometime between 800 and 1130 CE, a small group of Polynesian people, perhaps even a single family, sailed from the Cook Islands to the coast of New Zealand.

SOURCE 1 A map of New Zealand showing the areas of Maori settlement, hunting grounds of the moa and deposits of greenstone and obsidian. All of these aspects of the land would play an important role in the development of the Maori culture.



Why?

There is not enough evidence to give a definite answer to the question of why the first settlers came to New Zealand. Some theories are:

- a planned short voyage of exploration was blown off course
- an escape from war or disease
- a search for land and resources because of island overpopulation
- a spirit of adventure developed through sophisticated skills of navigation.

Although none of these has been definitively proven, most historians agree that the voyage to New Zealand was intentional and carried out by careful planning and skilful exploration. In support of that theory, it is argued that a raft or canoe blown off course would not have had enough people or supplies to establish a long-term settlement.

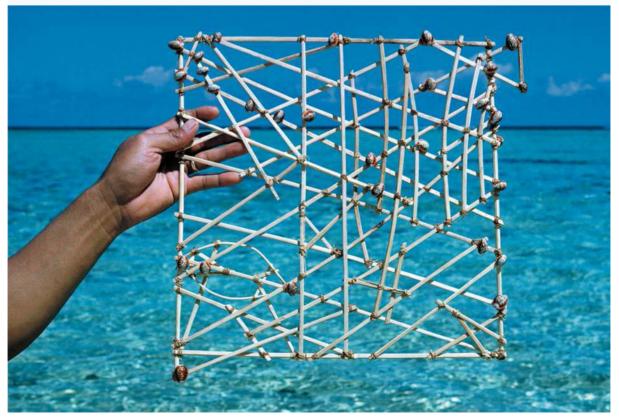
When?

Archaeological evidence indicates that the western Pacific region, including South-East Asia, New Guinea and Australia, was settled long before the islands of New Zealand. Aboriginal Australians arrived in Australia at least 40 000 years ago and the Polynesian islands were settled more than 3000 years ago. In contrast, New Zealand was first settled only about one thousand years ago.

9.5.2 Navigation techniques

The Pacific Ocean is vast. It covers a distance of half the circumference of the earth, so there is no doubt that those people who explored the Polynesian region were excellent seafarers. Charts made from sticks and shells showed islands and sea currents and were passed down from generation to generation. Knowledge of the stars and other natural signs, such as the flight patterns of birds and the shape of clouds, also helped guide the voyagers across the seas.

SOURCE 2 Charts made from sticks and shells helped the early seafarers navigate the vast distances between the islands of Polynesia. The chart shows ocean currents and islands and was a valuable tool in the absence of compasses and modern navigational instruments.



9.5.3 The Maori

The first people of New Zealand are known as the Maori, meaning 'original people'. By the time of Captain Cook's arrival in 1769, the Maori population of New Zealand is believed to have been approximately 150 000. The Maori named their land Aotearoa, meaning 'the land of the long white cloud'. Maori legend claimed the first explorer to reach Aotearoa was the navigator Kupe. He was accompanied by his wife, who called out he ao, meaning 'cloud', when she first sighted the North Island. It is said Kupe used the stars to guide him across the Pacific to find the long white cloud of New Zealand.

The Great Fleet and the Maori ancestors

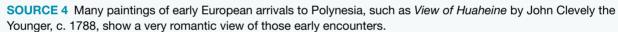
According to Maori legend the voyages of seven waka, or canoes, brought Polynesian people from the land of Hawaiki in search of a new home. In Polynesian mythology Tahiti is known as Hawaiki, and the seven canoes are known as the Great Fleet. The canoes are believed to identify the ancestors of the Maori iwi, or tribes:

- Tokomaru
- Tainui
- Te Arawa
- Aotea
- Takitimu
- Mataatua
- Kurahaupo.

SOURCE 3 Ngawaka E Whitu (The Seven Waka). This early twentieth century song (translated into English) portrays the Maori legend of the arrival of the seven waka.

Seven waka landed here Paddle, paddle on Tainui, Te Arawa, Mataatua Paddle, paddle on Tokomaru, Takitimu, Kurahaupo, Aotea ra, These waka were paddled here By our ancestors

The history of every Maori family, the whakapapa, maintains the connection with their ancestors' waka.





Maori development in Aotearoa

From the Polynesian arrival in Aotearoa to the modern day, historians divide the history of the Maori into four periods:

Nga kakano

The East Polynesian or Archaic period, also referred to as *Nga kakano*, meaning 'the seeds', spanned from about 800 to 1200 CE. This is the time of the first Polynesian settlers and their immediate descendants. The people of this period are also known as the Moa hunters. It was a time of discovery and adaptation to the new land. The farming way of life did not immediately develop in New Zealand because the Moa hunters survived well on a hunter-gatherer lifestyle.

Te tipunga

The *Te tipunga* period, meaning 'the growth', began on the North Island during the thirteenth century and had spread across New Zealand by the sixteenth century. It was the era of expansion when the Maori discovered and settled the more remote areas of their land and began developing their unique cultural traditions, beliefs and art.

Te puawaitanga

The Classical Maori period dated from the sixteenth to the nineteenth century. During this time, the earliest European explorers and settlers of New Zealand recorded the features of Maori classical society and culture. This period is known as *Te puawaitanga*, or 'the flowering', because it is regarded as the time when the most beautiful Maori art was created.

Te huringa

The final period from the nineteenth century to the present is known as *Te huringa*, or the 'turning point', because it is the time of increased Maori contact with Europeans and the introduction of the modern world into Maori culture.

9.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

9.5 Exercise 1: Check your understanding

- 1. HS1 Why are historians unable to give a definite answer as to why humans first settled in New Zealand?
- 2. HS1 Why is it considered unlikely that the first voyages to New Zealand were accidental?
- 3. HS1 In your own words, explain how New Zealand came to be known as the 'land of the long white cloud'.
- 4. HS1 What natural phenomena assisted the early navigators of the Pacific Ocean?
- **5. HS1** Given that charts made from sticks and shells were handed down from generation to generation, what does this suggest about the connection between Polynesian islands?
- **6. HS1** Define the following terms.
 - Maori
 He ao
 Iwi
 Te tipunga
- 7. **HS1** Why is the third period of Maori history called 'the flowering'?

9.5 Exercise 2: Apply your understanding

- HS3 Using SOURCE 1, explain the settlement patterns of the Maori on Aotearoa in the period between c. 1000 and 1300.
- 2. **HS3** Using **SOURCE 1**, calculate the distance between the northern-most first settlement and the southern-most one. What does this suggest about the Maori who arrived in Aotearoa?
- 3. **HS3** Explain why the concentrated settlements are mainly in coastal regions.
- **4. HS3** What do **SOURCE 2** and the information within the text suggest about the navigation and seafaring skills of the early Polynesians?
- 5. HS3 What does SOURCE 2 suggest about the language and culture of the early Polynesians?
- **6. HS3** There is an aspect of the song in **SOURCE 3** that historians considered inaccurate. Compare it with **SOURCES 2** and **3** in subtopic 9.3 and explain what it is. (*Hint:* Think about how the canoes were powered.)
- 7. **HS3** Examine **SOURCE 4**. Decide which period of Maori history it is depicting: Nga kakano, Te tipunga or Te puawaitanga.

- 8. HS3 How does SOURCE 3 illustrate the connection Maori families have with their ancestors?
- **9. HS2** Using the information in this subtopic, create a timeline reflecting the four periods of Maori history. Label each period with its key features, including the arrival of Captain Cook in New Zealand.
- 10. HS6 Compare and contrast the discovery and settlement of Aotearoa to the experience on Rapa Nui.

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9.6 Maori society — an overview

9.6.1 Structure of Maori society

Traditional Polynesian society developed complex rules that determined the relationships between people. Societies were organised according to **kinship**, tribal groups and clans. Warfare and trade were also vital aspects of Polynesian society. Both helped maintain the power and authority of tribes and their leaders.

A person's status or importance in society was of great significance to all Polynesian cultures. **Anthropologists** describe the structure of the Polynesian societies as being hierarchical, meaning a structure in which different groups of people have a particular rank or position of importance. A man's rank or importance within the *iwi*, or tribe, determined how much political power he could have.

Maori society had a clear hierarchy:

- The ariki, or supreme chief, gained his position through birth and exceptional personal qualities including
 - *tapu* (sacred wisdom)
 - *mana* (authority)
 - *ihi* (excellence)
 - *wehi* (power inherited from the gods and the ancestors).
- The *rangatira*, or chief, inherited the position from his father. He made all the major decisions in the iwi.
 - He was highly respected and held a place of great privilege. The rangatira led all major religious ceremonies and wore a whale ivory pendant as a mark of his position. He also carried a ceremonial *patu* or club.
- The *kaumatua*, or elders, appointed by the tribe because they possessed the wisdom to educate the young and guide the iwi. In early Maori society the kaumatua were believed to be the spirits of wise people who had been born again. The *kuia*, or elder women, held a position of particular respect and responsibility in guiding the rearing of the iwi's children.
- The *tohunga*, or priest, held the knowledge of clan history and ancestry running back over hundreds of years. The tohunga understood **genealogy**, history, astronomy, religious rituals and prayers, and how to heal the sick and farewell the dead. Special kinds of tohunga developed unique skills in areas such as carving, canoe building or tattooing.
- The *tutua*, or commoners, were all the members of an iwi claiming descent from the ancestors arriving with the Great Fleet.

SOURCE 1 A portrait of Chief Tamati Waka Nene painted by Gottfried Lindauer in 1890. This painting provides a great deal of information about Maori society.



• The *taurekareka* or *mokai*, slaves, were at the bottom of Maori society. They were war captives or born into slavery. The taurekareka did all of the iwi's hard physical work such as preparing food, fetching water, gardening and paddling canoes. They had no privileges and could be sacrificed during ceremonies involving **cannibalism**.

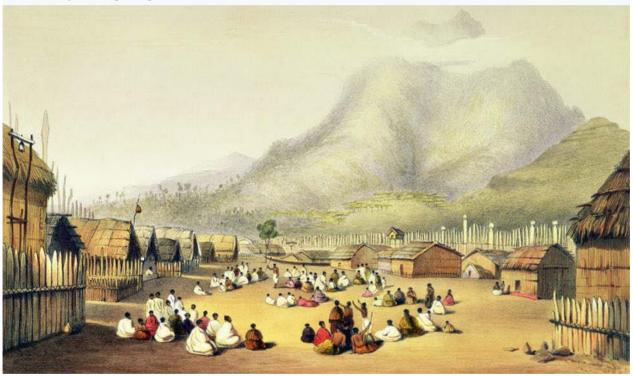
While leadership positions were primarily held by men, women had their own titles and a very important role to play in establishing alliances between different members of the family and other iwis. The first-born female of the most important families could be given the title of ariki. She would also have been shown the level of respect given to a queen in European society.

9.6.2 The community

The general term to express the many groups and levels of traditional Maori society is *tangata whenua*, meaning the 'people of the land'.

The *whanau* was the family unit at the core of Maori society. The family and the other members of the *hapu*, or clan group, decided where individuals lived, who they married, who they were friends with and who they fought. Village communities ranged in size from just a few families to over five hundred people.





Land and most of the property was communally owned. Absolute ownership of land was not common. In fact different families or tribal groups could have different rights to the same piece of land. For example, one family might have the right to catch birds in the forest while another might be allowed to fish in the nearby water or grow crops in the same area.

The village

On occasions when community meetings were held the people gathered in the open courtyard, called the *marae*, in front of the more formal meeting houses, known as the *wharenui*. The traditional Maori *pa*, or village, was designed around the marae because it was regarded as the spiritual centre of the village. It was on the marae that celebrations were held, the dead were mourned, guests were greeted and important matters were discussed.

The pa were often built on ridges and locations that could be easily defended. Rivers and lakes were also often used to provide natural barriers against enemy attack. Defences were completed by trenches, earth ramparts and palisades built from large sharpened stakes that were lashed together for strength.

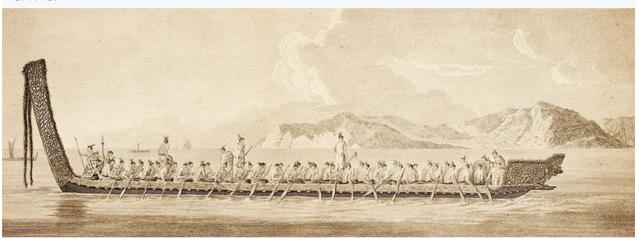
The Maori were very successful farmers. Agriculture led to the construction of larger and more permanent village settlements. Village life was organised around food gathering and growing and warfare.

9.6.3 Warfare

Power in Polynesian societies could be inherited, but it could also be gained through war. From the earliest times, warfare and the position of the warrior was a very important part of Polynesian culture. The Polynesian rulers maintained their authority over their people through brutal punishment, ritual and battle.

The leaders of Tonga, Hawaii and the tribes of New Zealand were in command of highly trained and disciplined warriors who pledged and demonstrated their obedience through rituals and ceremony. Warfare could begin as revenge for insults or kidnapping, or it could consist of larger battles over land or resources. At times, Polynesian warfare could be large-scale invasions of groups of islands involving thousands of warriors.

SOURCE 3 The Maori war canoe was up to 40 metres long and could carry dozens of warriors. It was formed from a large hollowed-out tree trunk that was then intricately carved and decorated, as shown in this etching, c. 1773.



Every Polynesian island community has an oral history telling of fierce conflict over land or political power. In the Marquesas Islands, Tahiti and New Zealand, the constant tribal warfare made it impossible for a single ruling royal family to take control. There was no concept of nationhood. Sometimes large iwi groups would temporarily join together under the control of an ariki, the supreme chief, to conduct larger scale warfare, hunting parties or trade.

SOURCE 4 The patu, shown below, was one of the hand-held weapons used by Maori warriors. Weapons were usually made from wood or bone, but the prized mere was like a club carved from the rare greenstone, found only on the west coast of the South Island. Weapons were sacred and were handed down through the generations.



Some of the first Europeans in New Zealand in the early nineteenth century were impressed by the courage of the Maori, but also shocked by the violence and incidence of cannibalism. The rangatira (chief) of a defeated tribe could be eaten by the enemy as a symbol of their victory and the end of his mana (power). The heads of important fallen enemies were preserved by smoking and oiling.

SOURCE 5 Prior to charging the enemy, Maori warriors often performed a war dance (haka), both to prepare themselves mentally for the battle and to strike fear into the enemy.



SOURCE 6 A mummified head. The traditional tattoo is clearly visible.



DID YOU KNOW?

Shrunken heads were objects of fascination for some European explorers who collected and traded them. This led to a trade in which slaves were tattooed and killed specifically to supply the European market. Since the 1980s, more than three hundred shrunken heads have been returned to New Zealand from several countries.

9.6.4 Trade

Despite the constant warfare a network of trade links developed between the Maori tribes. Trade was important because food sources and natural resources were not evenly spread across the islands. The greenstone, called nephrite, was a type of jade found only in three small regions of the South Island. The South Island tribes mined the rich greenstone deposits and then shipped the treasured stone by canoe to the coastal villages of the North Island. Greenstone was the most valuable trade item, desired both for beauty and hardness. It was used to make weapons and ornaments and was known to the craftsmen as *pounamu*. The stone was so important to Maori culture that the entire South Island was named *Te Wai Pounamu*, meaning 'place of the greenstone'. According to Maori belief, the greenstone came from the earth and was under the guardianship of the god Poutini.

Maori people also travelled and traded over long distances for the high-quality **obsidian** from the Bay of Plenty, which they used to craft the blades of their knives. Food such as mutton birds from the south was regarded as a delicacy and so preserved and also traded widely.

Tapu

Maori life was guided by a sacred law known as *tapu*, meaning taboo. Those people who broke tapu were doomed to meet with misfortune, sickness or death. Tapu was enforced through religious belief, superstition and the power of the community tohunga, or spiritual leader. Only the tohunga could declare or release tapu. The gods, or *atua*, were the sources of tapu, and only through the protection given by the atua could

humans be saved from evil. Objects that were declared tapu had to be given the highest respect. Forests and fishing grounds could be tapu during particular seasons of the year; burial grounds were tapu; and the possessions of a dead person were tapu until cleansed by a tohunga.

9.6 ACTIVITIES

- 1. Draw a diagram illustrating the hierarchy of Maori society. **Determining historical significance**
- 2. Research the history of tapu and outline the ways it could be enforced by the tohunga. Research and describe one other society (modern or historical) who has or had a similar code of laws as the tapu.

Identifying continuity and change

9.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

9.6 Exercise 1: Check your understanding

- 1. **HS1** Explain the importance of a man's rank in Polynesian society.
- 2. **HS1** Identify and explain the role warfare played in Polynesian societies.
- 3. **HS1** In what ways did the role of Maori women contrast to Maori men?
- 4. HS5 Explain the concept of tangata whenua and how it affected Maori communities.
- 5. HS1 How did the construction of the pa or Maori village reflect their values and customs?
- 6. HS1 Outline the manner in which the transference of power could take place in Polynesian societies.
- 7. HS1 Explain how the Maori intimidated their enemies through both implied and actual violence.
- 8. **HS1** Explain why trade existed alongside warfare in Maori culture.
- 9. **HS1** Outline the consequences of breaking tapu.

9.6 Exercise 2: Apply your understanding

- 1. HS3 Identify two features of SOURCE 1 that illustrate that this man holds an important rank in Maori society.
- 2. HS3 Gottfried Lindauer, the artist of SOURCE 1, created many portraits of the Maori for European audiences. What aspects of the Maori culture is he trying to emphasise in this portrait? Justify your response.
- 3. HS3 Using SOURCE 2 identify natural and man-made defences that the Maori exploited or made to protect their village.
- 4. HS3 Which building in the SOURCE 2 painting is most likely to be the wharenui? Justify your selection.
- 5. HS3 Examine SOURCE 3.
 - (a) What other warrior culture does this scene resemble?
 - (b) What conclusions about Maori warfare can you draw from the size of this vessel?
- 6. HS3 Using evidence from SOURCES 3-6, as well as the information in the text, suggest reasons why the Maori developed such a strong warrior culture.
- 7. HS4 Use an example from modern-day society to demonstrate your understanding of the term 'hierarchy'.
- 8. **HS4** Do you think the personal qualities of the ariki wisdom, authority, excellence and inherited power have modern-day equivalents? Suggest a profession or position in which these characteristics are valued.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

9.7 People and the environment

9.7.1 The geography of New Zealand

The small coral atolls and volcanic outcrops of the tropical Pacific islands provided the Polynesian people with the opportunity to farm and fish for their food. Most Polynesian communities continued to live more from the sea than from the land. But in settling New Zealand the Maori had to adapt to a new climate. They brought with them many of the plant and animal sources they needed to survive, but they also exploited the natural resources of the new land.

New Zealand was the final frontier for the Polynesian explorers and became the largest Polynesian island home. In fact, the two main islands of New Zealand are larger than all the other islands of Polynesia combined. New Zealand presented a very different climate and natural environment. This new land was large and cold. It had heavy forests full of huge trees covering thick beds of ferns that grew right down to the coastline. More than 500 million years of volcanic activity formed the great central mountain ranges, a strange and wonderful landscape covered in ice and snow. A string of volcanoes stretching from White Island in the Bay of Plenty to the heart of the North Island created **thermal** springs, **geysers** and hot mud pools.

New Zealand had been part of the great southern continent called Gondwana (formed when the original continent of Pangaea broke apart) millions of years before the arrival of the Polynesians. Gondwana also included Australia and Antarctica. Before the age of mammals began, the great landmasses drifted away from each other and became separated by vast seas. The seas around New Zealand became rough and were swept by powerful ocean currents.

SOURCE 1 An aerial shot of White Island and its volcano. The island, uninhabited today, was a favourite hunting ground for Maori clans.

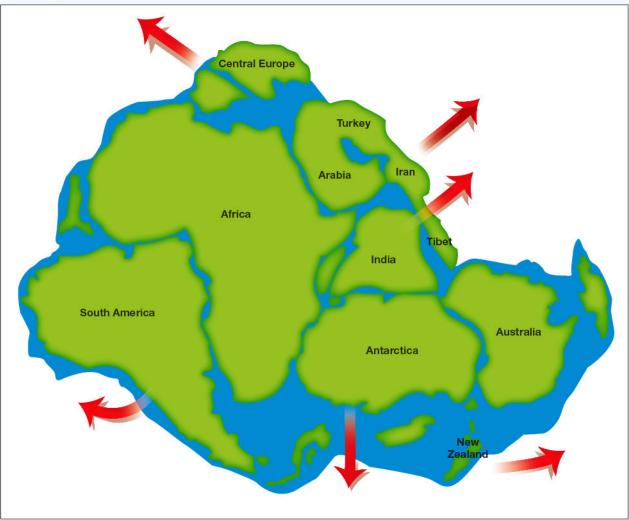


DISCUSS

The impact of humans on Aotearoa has been one ecological disaster after another. Discuss as a class.

[Ethical Capability]

SOURCE 2 The supercontinent Pangaea broke up millions of years ago. It formed the two smaller supercontinents of Laurasia and Gondwana, which then broke up further to begin resembling today's continents. This diagram shows Gondwana.



Source: MAPgraphic Pty Ltd, Brisbane

9.7.2 Flora and fauna

The only mammals in New Zealand before human settlement were the seals living along the rugged coastline, the migrating whales and two species of bats that had probably originally come from Australia. Some trees and plants were similar to Australia, but 80 million years of isolation created the real treasure of the islands — the 15 000 types of plants found nowhere else in the world. Some examples include:

- ponga or silver fern, which was found throughout the areas of sub-tropical bush landscape
- beech trees and podocarp trees such as the kauri with huge trunks measuring over 15 metres in diameter and 30 metres in height
- flax plant with very tough stems found in the wetlands across the islands
- pohutukawa evergreen coastal trees, which flowered with bright crimson flowers in December.

One of the oldest surviving orders of reptiles in New Zealand is the tuatara, which has existed for over 200 million years from the age of the dinosaurs. The tuatara is an ancient reptile resembling most lizards. It is greenish brown in colour with two rows of teeth on the upper jaw and one row along the bottom. The skeleton of the tuatara shows an evolutionary origin from a creature resembling a fish.

The early Polynesian settlers hunted the *moa*, a flightless bird native to New Zealand. It ranged from the size of a chicken to about 3.7 metres in height, and could weigh up to 200 kilograms. However, the moa was easy prey and was gradually hunted to extinction because it provided an excellent source of food during the early years of Polynesian settlement.

9.7.3 Living with a new land

At first, the Maori continued to live according to their ancient Polynesian customs and traditions, despite the changed climate and landscape. The Great Fleet had brought both people and food plants such as taro, yam, gourd and kumara to New Zealand. The first settlers also transported from Polynesia the *kiore*, which was a species of rat, and a dog called the *kuri*.

Settlements spread along the coastal regions of both islands and the Maori began to adapt. The introduced tropical plants were cultivated in the North Island, and the Maori learned to hunt and fish in their new land. The roots of the native fern and the New Zealand cabbage tree were eaten, and fibre from the native flax plant was used to make cloth to replace the bark cloth, called *tapa*, produced in the other Polynesian societies.

Another remarkable flightless bird is the *takahe*, resembling a large prehistoric purple chicken. The takahe is a gentle and inquisitive creature with small wings, strong legs and a massive red bill. The takahe was thought to be extinct by the end of the nineteenth century due to over-hunting, loss of habitat and introduced predators such as the cat and dog. However, a long search in 1948 led to the rediscovery of some breeding pairs deep in the wilds of the Murchison Mountains.

9.7.4 Rahui and the extinction of the moa

Rahui is a form of tapu that the Maori used to limit resource use. For example, rahui could be imposed over an area to prevent the gathering of food while the land recovered. It helped to conserve limited food supplies and other natural resources. All Maori tribes accepted the principles of rahui.

Unfortunately, rahui came too late for the moa. Although the young birds were an important food source of the Haast's eagle, the adult birds lacked any natural predators prior to human settlement. The moa became an abundant and **SOURCE 3** There were different species of moa, some ranging from the size of a chicken to others that were more than three metres tall. This image was published in 1907.



SOURCE 4 The takahe was rediscovered in 1948 in New Zealand's Murchison Mountains.



important food source, with both the meat of the bird as well as its large eggs providing a lifeline for the Maori. The bones of the bird were used to make ornaments and fishhooks, and even the shells of the giant eggs were used to carry water. The meat of the moa could be preserved and became a valuable trading good.

Archaeologists believe the moa was hunted to extinction by the fifteenth century. As a result, the Haast's eagle also disappeared into history. As you will see later in this topic, this had a huge impact on the Maori people.

DID YOU KNOW?

There are many examples of flightless birds around the world, including the emu, cassowary, kiwi and penguin, but the moa was unique — it had no wings. All other birds have some form of wing, even if it is a small stub of 'evolutionary leftovers'. But the moa simply had no appendages at all where wings would normally be.

9.7 ACTIVITY

Conduct some research into the extinct dodo bird that lived on the island of Mauritius. Identify similarities and differences in the circumstances of the extinction of the dodo and the moa. Analysing cause and effect

9.7 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

9.7 Exercise 1: Check your understanding

- 1. HS1 Identify the geographical features that New Zealand, or Aotearoa, possessed that made it such a suitable place for Polynesian exploration and expansion.
- 2. HS1 How did the climate differ to other Polynesian islands?
- 3. **HS1** What were the only land-based mammals in New Zealand prior to human settlement?
- 4. **HS1** Identify the factors that made the flora and fauna unique.
- 5. HS1 What were the features of the takahe that made it particularly vulnerable and caused it to nearly become extinct?
- 6. **HS1** What mammals did the first settlers introduce to New Zealand?
- 7. **HS1** Explain the meaning of rahui in your own words.
- 8. **HS1** Match the correct names with their description.

| Term | Description |
|----------|---|
| Gondwana | Flightless bird that is now extinct |
| Ponga | Flightless bird thought to be extinct in New Zealand until its rediscovery in 1948 |
| Kauri | Plant with tough stems found in the wetlands |
| Flax | Ancient southern supercontinent that included Australia, New Zealand and Antarctica |
| Moa | Huge native tree of New Zealand growing to 15 metres in diameter |
| Tuatara | Silver fern |
| Takahe | Reptile related to dinosaurs with the appearance of a lizard |

9.7 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1. Identify the features of White Island that would make it an attractive hunting ground for the Maori.
- 2. HS3 Look at SOURCE 2 and suggest how New Zealand's position in Gondwana supported the evolution of unique species.
- 3. HS3 Referring to SOURCE 3, outline how the Maori people adapted to their new environment after arriving in New Zealand.
- 4. **HS3** Is **SOURCE 3** a primary or a secondary source? Explain your answer.
- 5. HS5 Identify the natural resources that were available on Aotearoa. Explain which were used sustainably and which were not used sustainably. Justify your choices.
- 6. HS5 Compare and contrast the experience of Polynesian settlers on Rapa Nui and on Aotearoa. What similarities and differences are there between the way Maori and Rapa Nui societies used environmental

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9.8 Living in a Maori village

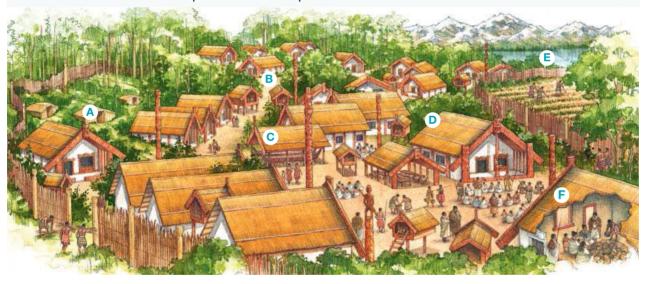
9.8.1 The pa

The extinction of the giant moa threatened the survival of the Maori people. Fortunately, the Maori were not isolated on a small island like the people of Rapa Nui and still had access to timber for sailing vessels. Therefore, many tribes were forced to migrate when the moa was no longer able to provide a reliable source of food. Because of this migration north, the Maori population of the South Island declined.

Around the fifteenth century, larger permanent settlements began to be built. People had to turn to other sources of food such as shellfish and a fern root known as *aruhe*. Aruhe is an important source of carbohydrates and added much to the Maori diet. Indeed, it became a staple food even when taro or sweet potatoes were available. Despite being a difficult food to prepare, aruhe provided the stable crop production necessary for the growing Maori population. Gardening replaced hunting as the main way of obtaining food. Competition for land increased and slaves were used to do much of the hard manual work. Due to these changes, Maori culture moved into what historians call the Classical period.

The *pa*, or fortified village, first emerged around the fifteenth century. The Maori lived in a *whare*, or house, within their fortified villages. They dug out the floors of the whare to keep the warmth in. The construction of the whare varied according to location and tribal tradition. The whare was commonly built with a framework of branches from the small *manuka* tree and then thickly thatched with the leaves of a large water plant called *raupo*.

There were many other aspects to the pa, as can be seen in **SOURCE 1**.



SOURCE 1 A modern artist's impression of a Maori pa

- A Storage pits covered by low roofs, often used for storing vegetables
- Pataka storehouses built on platforms so rats and dogs could not steal the fish, meat, berries, and other food and goods. Weapons and other valuables were also kept in the pataka.
- Shelters for canoes and cooking sites
- Whare runanga the meeting house was the focus of all cultural and tribal activities. It was a sacred building filled with symbolism. The house construction represents a man's body, with the first rafter being his extended arms stretching down to his fingers. The rafters following the arms represent the man's rib cage. A tekoteko carving is located at the front peak of each whare runanga. The tekoteko represents a protective tribal ancestor standing watch over the marae (courtyard). The ancestor's protective power is known as the mana.
- E The village water source was not usually located within the boundary of the wooden fence. Water was carried every day from the outside wells and rivers. Firewood was also collected from afar. A large area of countryside was needed to provide the tribe with food. Gardens of kumara (a type of sweet potato) were dug with long wooden sticks called ko.
- F Whare whakairo (literally translates to 'carved house') the family home of the village rangatira. A large pit filled with hot rocks was located at the centre of the whare whakairo to keep the family warm at night.

9.8 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

9.8 Exercise 1: Check your understanding

- 1. HS1 Compile a Maori language glossary by writing definitions for the following terms:
 - (a) pa
- (b) whare runanga
- (c) whare whakairo
- (d) pataka

- (e) raupo
- (f) aruhe
- (g) tekoteko.
- 2. HS1 Explain why some buildings in the pa were raised off the ground while others were dug into the ground.
- 3. HS1 Why did the Maori population of the South Island decline?
- 4. HS2 In which century did permanent settlements (fortified villages) begin to be built in New Zealand?
- 5. **HS1** What can be found within the boundary of a Maori pa?

9.8 Exercise 2: Apply your understanding

- 1. HS3 Using SOURCE 1, identify two features of a whare runanga that illustrated its importance to the village.
- 2. HS3 Using SOURCE 1, determine how the inhabitants of the whare whakairo protected themselves from
- 3. HS4 Imagine you are a visitor to a pa. Refer to SOURCE 1 and the text to write a diary entry recording a typical day of village life. Provide details of the daily activities you see taking place, the pa layout and the design and purpose of the buildings.
- 4. HS4 Identify the main differences between Maori village life in the classical period and the preceding Te tipunga period.
- 5. HS6 The Maori did not need advanced technology to survive. They had a simple material culture (basic tools and weapons), but their non-material culture (art and beliefs) was very rich and complex. Early European settlers judged the Maori by their visible material culture.
 - (a) What opinion would the Europeans form if they considered only the material culture?
 - (b) How does considering more than just the visible aspects of a society help give you a more comprehensive view?

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9.9 Customs and culture

9.9.1 The importance of art

Aotearoa was isolated from the other landmasses in the Pacific, Australia lay 1500 kilometres west across the treacherous and stormy Tasman Sea; to the south was the ice of Antarctica; and to the north were the tiny tropical islands of remote Oceania. This distance shaped a Polynesian culture that was unique in the Pacific.

The Maori people expressed their culture and beliefs through a range of arts and customs. The broad range of materials available provided a rich variety for artists and craftsmen to work with.

Art was a way of expressing status and tribal differences. Art became a part of everyday life; even the simple shape of a fishhook could be made into an object of great beauty when it was polished and crafted with skill. Every prized possession was decorated; canoes and paddles, musical instruments and hair combs, storehouses and gateways all displayed the fine artwork of the Maori people.

SOURCE 1 A traditional hei-tiki ornament, showing the head tilted to one side and with hands on hips.



Gathering together the materials required by the Maori craftsmen often involved dangerous journeys, or even war against rival villages. The South Island greenstone was the most precious material because it could be obtained only from remote locations. The people who followed the greenstone trade route walked through ice and snow, climbed steep cliffs with ropes made from flax, and crossed raging rivers on reed rafts to transport greenstone over the high passes of the Southern Alps. The Maori valued the beauty and power of their art, and so they were prepared to make great sacrifices for its creation.

SOURCE 2 Greenstone in its 'raw' form. This specimen was found on the coast of the South Island.



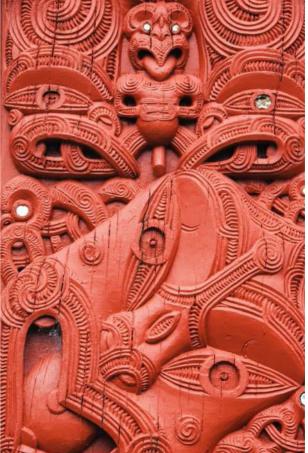
9.9.2 Carving out a history

Traditional Maori carving, known as *whakairo*, is famous for its detail and beauty, and took great skill to create. For this reason, the Maori held the talent of the wood carver in very high regard. The earliest carving tools were made from seashells and stone, such as obsidian, that was sharpened over many months in preparation for carving. The thick forests of New Zealand provided a plentiful supply of high-quality timber for the Maori craftsmen.

SOURCE 3 A carved figurehead mounted on a war canoe



SOURCE 4 The talents of the highly skilled Maori craftsmen are visible in this example of whakairo.



Maori carvings expressed religious beliefs, myths and images of gods. The finest examples of Maori art and carving were created for the whare runanga, because this was the cultural centre of the village. Supporting posts were often carved with images of the seven canoes ancestors, and interior wall panels featured ancestral figures. Bows of canoes also often displayed ornately carved and ferocious faces.

9.9.3 Dress

The quality and value of weapons, clothes and ornaments was of real significance to Maori society because it identified individual status and class groups. The design and materials used to make clothing and jewellery varied according to the tribal group, the location and the climate.

Although both men and women wore ornaments indicating their position and rank, it was the tradition for men to dress with greater decoration. Men wore their long hair wound into topknots held by beautifully crafted combs, and wore earrings made of greenstone or shark teeth. The ariki or rangatira displayed power and prestige by wearing a cloak made from the skin of a dog, and an ivory whale tooth, and carrying a ceremonial club known as a pata. Shell and bone were also used to carve jewellery such as pendants and necklaces. Faces were tattooed and bodies covered and patterned with brightly coloured ochre of blue and yellow.

Flax

The traditional Polynesian plants such as the paper mulberry tree and tropical cabbage tree did not survive in the colder climate of New Zealand. However, the Maori discovered wonderful new natural resources in New Zealand such as native flax called *harakeke*. Using a process that could take three months, the flax plant was manufactured into a sturdy fibre suitable for weaving into clothing, ropes and baskets. Flax sandals were worn on long journeys across frozen ground, flax string was used to hold pendants in place and flax clothing kept everybody warm.

A method of finger weaving was developed to produce a fine flax cloth similar to linen. Flax cloth was dyed and woven into traditional tribal patterns in red, white, yellow and black. Women wore colourful wraparound style flax skirts and delicately woven cloaks.

Korowhai cloaks were the most important and treasured item of clothing woven from flax. The korowhai were decorated with feathers from birds such as the kiwi, and woven with the traditional geometrical triangle and diamond shaped taniko patterns.



TOPIC 9 Polynesian expansion across the Pacific (c. 700–1756) 369

9.9.4 Tatau

During his eighteenth century journeys of exploration, Captain James Cook wrote about the Polynesian art of skin decoration known as *tatau*. The British called it 'tattoo'.

Archaeologists believe that the Lapita people were tattooed over 3500 years ago and carried the tradition with them on their great journeys of Pacific migration.

In Polynesia the tattoo came to have great cultural and spiritual importance. The tattoo gave Polynesians status because it signalled strength and power. The most elaborate tattoos were reserved for the chiefs and warriors. The colonising British outlawed the practice of tatau because it was considered the devil's art, but it saw a revival in the twentieth century.

Ta moko

The practice of classical Maori tattooing is called *ta moko*. A straight blade or bone chisel was used to inject a sooty pigment into the skin, leaving a grooved scar with the appearance of a carving. Maori tattooists were regarded as master craftsmen who took many years to perfect their skills.

In traditional Maori society men were marked on the face, buttocks and thighs. Facial tattoo patterns were of greater significance to the identity of a person than their natural facial features. Women were tattooed on the face and breasts. The painful process was an initiation and rite of passage taking many years to complete.

The tattoo represented culture and belief to the Polynesian people. Moko showed Maori rank, genealogy and tribal history. Moko designs were a personal statement of Maori identity that could never be lost or stolen. Only death could destroy the moko.

SOURCE 6 Captain James Cook's description of the Maori moko

The marks in general are spirals drawn with great nicety and even elegance. One side corresponds with the other. The marks on the body resemble foliage in old chased [engraved] ornaments, convolutions of **filigree** work, but in these they have such a luxury of forms that of a hundred which at first appeared exactly the same no two were formed alike on close examination.

SOURCE 7 This early European depiction of a Maori chief shows the intricately carved comb and jewellery that reflected social status. The tattooing is also visible.



DID YOU KNOW?

Legend says that tatau began when a young man called Mataora fell in love with a princess of the underworld called Niraweka. One day in a fit of rage Mataora struck Niraweka and she fled back to the underworld. He followed her and when he finally arrived at the realm of the underworld his face paint was messed and dirty from the voyage. He begged forgiveness for his wrongdoing but was mocked for his unkempt appearance. However, he was forgiven and Niraweka's father offered to teach Mataora the art of ta moko, which he then brought back to the human world.

The hei-tiki

Of all the Maori ornaments the most valuable was the *hei-tiki* (see **SOURCE 1**). The carved tiki figures are found across many Polynesian cultures; in fact, *tiki* is also a general Polynesian term meaning 'carving'.

Archaeologists believe that in Classical Maori culture the hei-tiki was worn only by people of the highest rank. It was worn by both men and women on ceremonial occasions, often hanging from a flax cord around

the neck. The hei-tiki represented a human figure, neither male nor female, with the head tilted to one side and usually shown with hands placed on the hips. Many hei-tiki had their own personal name and traditional histories that could be traced back through generations of the one family.

The traditional meaning and origins of the hei-tiki are not completely understood by archaeologists. Some suggest the figure comes from Maori mythology and the story of Tiki, the first man created by the atua Tane.

DISCUSS

The zenith of Maori culture is ta moko. Discuss as a class.

[Intercultural Capability]

9.9 ACTIVITIES

- 1. The hei-tiki pictured in SOURCE 1 refers to Maori mythology. Research the Maori myth of Tiki and compare it to other creation myths. **Determining historical significance**
- 2. If you were given the opportunity to teach this particular topic to a group of students of your own age, what key questions would you devise to lead them in their learning?

Formulate four key questions that you think would best sum up the knowledge you would like them

Brainstorm your key questions by jotting down what you consider to be the most important and/or interesting facts and concepts that can be drawn from learning about Polynesian expansion.

[Critical and Creative Thinking Capability]

9.9 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

9.9 Exercise 1: Check your understanding

- 1. **HS1** List three reasons why art was valued in Maori culture.
- 2. HS1 Identify two ways the Maori made great sacrifices for the creation of their art.
- 3. HS1 How did the Maori exploit their natural environment to create whakairo?
- 4. **HS1** What was the significance of these carvings?
- 5. HS1 Identify the manner in which fabric, clothing and ornaments helped Maori society differentiate status.
- 6. HS1 Explain how the production of clothing revealed the differences in the roles that women and men played in Maori society.
- 7. **HS1** Why did the colonising British outlaw the practice of tatau?
- 8. **HS1** Explain the significance of ta moke to the Maori.
- 9. **HS1** What have archaeologists concluded the hei-tiki was used for?
- 10. HS1 Explain why the hei-tiki was considered so valuable.

9.9 Exercise 2: Apply your understanding

- 1. HS3 Why do you think the hei-tiki was only worn by Maoris of high rank?
- 2. HS3 Examine SOURCES 1 and 2. What conclusions can you make about Maori craftsmanship?
- 3. HS3 Using SOURCES 3 and 4, explain the way in which Maori society wished to represent itself to its people and enemies.
- 4. HS3 Explain why the most ornate carvings were reserved for the whare runanga.
- 5. HS3 Identify four features in SOURCE 7 that convey the status of this Maori ariki (chief).
- 6. HS3 Using SOURCE 6 as evidence, ascertain Captain Cook's attitude towards ta moko.
- 7. HS6 Using the sources in this subtopic, explain how dress and ornament were used to display position in Maori society.
- 8. HS6 Evaluate the role that Maori art plays in modern New Zealand life. Choose one of the art forms discussed here and research its acceptance or use in New Zealand today.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

9.10 SkillBuilder: Making your own notes from sources



Why is note-making useful?

Notes summarise key information and clarify particular points in your own words. Being able to make useful notes will help you remember and understand key information easier.

Rahui is a form of tapu that the Maori used to limit resource use. For example, rahui could be imposed over an area to prevent the gathering of food while the land recovered. It helped to conserve limited food supplies and other natural resources. All Maori tribes accepted the principles of rahui.

Unfortunately, rahui came too late for the moa. Although the young birds were an important food source of the Haast's eagle, the adult moa lacked any natural predators prior to human settlement. The moa became an abundant and important food source, with both the meat of the bird as well as its large eggs providing a lifeline for the Maori. The bones of the bird were used to make ornaments and fishhooks, and even the shells of the giant eggs were used to carry water. The meat of the moa could be preserved and became a valuable trading good.

Archaeologists believe the moa was hunted to extinction by the fifteenth century. As a result, the Haast's eagle also disappeared into history. As you will see later in this chapter, this had a huge impact on the Maori people.

Select your learnON format to access:

- · an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- · questions to test your application of the skill.

9.11 Thinking Big research project: Polynesian travel show



SCENARIO

You are a reporter on a travel show and your latest assignment is to cover one of the journeys that the Polynesian explorers pioneered.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- an assessment rubric.





projectsPLUS Thinking Big research project: Polynesian travel show (pro-0165)

9.12 Review



9.12.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

9.12.2 Reflection

Reflect on your learning using the activities and resources provided.



KEY TERMS

anthropologist a person who studies the culture and beliefs of different groups of people

atoll a circular coral island often enclosing a lagoon

cannibalism the practice of eating human flesh

double-hulled canoe a canoe with two connected parallel hulls — a feature that made it light, fast and stable

filigree a type of delicate ornament made from fine threads of metal

genealogy the study of the past and present members of a family

geyser a hot spring sending a jet of steam and boiling water into the air

gourd an edible fruit with a shell that can be dried and used for storage

kinship sharing a blood relation

kumara sweet potato

obsidian a type of rock that is almost like glass

ochre a natural earthy pigment of various colours used for painting

rafter sloping timbers supporting the outer covering of a roof

taro the root of a plant that is made edible through boiling

thermal relating to heat or temperature

yam a potato-like tropical plant used as food

9.10 SkillBuilder: Making your own notes from

sources

9.10.1 Tell me

What are notes?

At the heart of any successful study of history is the ability to make effective notes. By learning this skill, you get the most out of your classes and readings. You are also more prepared for assessment as notes form the basis of revision and essay construction.

Effective notes are more than just a transcript of what has been said in class, or a direct copying of information from a textbook. Notes are a concise and comprehensive account of a topic or source. They summarise key information and clarify particular points in your own words. They also ensure that you are obtaining only the important information from a source.

Why is note-making important?

As you study a history topic, you will notice that there is a great deal of information that you are required to know. Sometimes the amount of information can seem overwhelming, but being able to make useful notes will make remembering and understanding that information easier. This is because you identify only the important information without trying to remember everything. Effective notes are not only used 'later on' when preparing for a test or essay — they are an excellent way to learn. You will find that by making notes you are helping the key information 'travel from your pen to your mind'.

9.10.2 Show me

How to make your own notes from sources

There are countless ways to make notes from sources and it is very much a personal matter. It is likely that you will develop a way that works best for you. It might be different from the way other people like to make notes. That's okay — if it works for you then it is right for you.

Summarising the key ideas from a source into dot points is a good way to start, so here are some guidelines that you should keep in mind when making notes from sources.

Step 1

Read through the source at least once without a pen in your hand. Do not make any markings or highlight anything. This will help you get an overall idea of the source before you worry about the details.

Step 2

After you have a general understanding of the source, go back and underline or highlight what you consider to be the key words and phrases (shown in blue in **SOURCE 1**). If you see words that are unfamiliar to you, you should make note of these in a different colour (shown in green in **SOURCE 1**).

SOURCE 1 Taking notes on the rahui and the extinction of the moa

Rahui is a form of tapu that the Maori used to limit resource use. For example, rahui could be imposed over an area to prevent the gathering of food while the land recovered. It helped to conserve limited food supplies and other natural resources. All Maori tribes accepted the principles of rahui.

Unfortunately, rahui came too late for the moa. Although the young birds were an important food source of the Haast's eagle, the adult moa lacked any natural predators prior to human settlement. The moa became an abundant and important food source, with both the meat of the bird as well as its large eggs providing a lifeline for the Maori. The bones of the bird were used to make ornaments and fishhooks, and even the shells of the giant eggs were used to carry water. The meat of the moa could be preserved and became a valuable trading good.

Archaeologists believe the moa was hunted to extinction by the fifteenth century. As a result, the Haast's eagle also disappeared into history. As you will see this had a huge impact on the Maori people.

Step 3

Once you have highlighted or underlined the key words and phrases, you need to organise them into dot points. Write them in your own words so that you can be sure you have understood the text. Your notes should be much shorter than the text you have read because you have summarised the important information in your own words.

SOURCE 2 A modern artist's impression of a Haast's eagle attacking young moa

SOURCE 3 Dot point notes on the rahui and the extinction of the moa

- Rahui
 - Form of tapu (sacred law)
 - Used to conserve natural resources
 - · Accepted by all Maori tribes
- Moa
 - Large flightless bird native to NZ
 - No predators for adult moa
 - Haast's eagle preyed on the young
 - Moa had many uses (food, ornaments, trade)
- Extinction
 - · Gone by the fifteenth century
 - Haast's eagle extinct also because prey disappeared
 - Principles of rahui were too late to save the moa.

9.10.3 Let me do it

Complete the following activities to practise this skill.

9.10 ACTIVITIES

1. Read **SOURCE 4** and follow steps 1 and 2 to make your own notes.

After you have written your dot point notes, compare them with someone else in the class. You should both have similar information. To refine your note-making skills, continue practising using any of the text in this topic.

SOURCE 4 Taking notes on the hangi

The Maori diet was a combination of the cultivated vegetables brought from Polynesia, such as taro and yams, and the meat from birds, fish, dogs and rats. The abundance of seafood, including seaweed, dolphins, whales and seals, provided additional variety to the Maori meal. The village cooking was not done within the *whare* (house), but was generally a communal task done in an earth oven, known as *hangi* or *utu*. The hangi was made by men by digging a deep pit and covering it with wood that was set alight. Large river stones placed on the wood pile became very hot and eventually fell into the pit. The hot stones were covered with baskets of food wrapped in wet leaves. Layers of soil and wet mats were piled over the food. The heat created steam from the wet leaves, which cooked the food over the course of a few hours.

The boiling pools and streams of the North Island region of Rotorua provided the Maori with another unique method of cooking. Small ovens were built around the vents where water and steam bubbled up through the ground. Food placed in these ovens was quickly cooked.



SOURCE 5 The taro, a Polynesian vegetable, was part of the Maori diet.

- 2. (a) Explain how the concept of rahui was used to manage natural resources.
 - (b) Given this information, explain why the moa became extinct.
- 3. How did the extinction of the moa have an impact on other aspects of the environment and on the Maori lifestyle?
- 4. Explain why the village cooking was not done indoors.
- 5. Explain how the preparation of food was an important communal activity for the Maori.
- 6. How did the Maori use natural resources to bring variety to their diet?

9.11 Thinking Big research project: Polynesian travel show

Scenario

The greatest achievement of the Polynesian peoples was their ability to traverse great distances using comparatively rudimentary sea craft. Indeed, it could be argued that no society has been able to travel so far with so little. From Tahiti to Hawaii, it is approximately 4226 kilometres, equivalent to travelling from London to Baghdad! The Polynesians were pioneers in travel and the locations they reached were as farflung as any on the planet. Intrepid, brave and determined, they conquered distances and obstacles that were unparalleled – they were the astronauts of their day in more ways than one. Alongside these incredible journeys, they found destinations that rank as among the world's most picturesque and breathtaking – Tahiti, New Caledonia, New Zealand and Hawaii, to name a few.



Task

You are a reporter on a travel show and your job is to report on one of the journeys/destinations that the Polynesian explorers pioneered.

Your report should include the following:

- an introduction that includes details of the first exploration of the island and the origin of the first settlers
- information on how they were able to traverse this distance and reach the island what navigation tools did they use and how did they survive the journey?
- a history of the island since human arrival, which also highlights unique aspects of the culture
- a final section that highlights the advantages of the destination itself, illustrating its natural appeal and resource potential perhaps a discussion of the impact of humans on the environment.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group if you wish. You may work individually or in pairs, depending on your teacher's preference. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered. In the **Media centre** you will find an assessment rubric to guide your work.
- Choose a Polynesian island or destination that you wish to investigate. Access the Polynesian Expansion myWorldHistory Atlas link in the Resources tab and watch the video to assist with your choice or confirm your selection.
- Access the Timeline of the Polynesian expansion across the Pacific (int-4285) interactivity in the Resources tab to find when your chosen destination was first settled and supplement this information with details about where the settlers came from. Use an atlas to calculate the distances travelled.
- Revisit the topic to understand navigation techniques that were common for all Polynesian voyages and summarise these in three to four bullet points.
- Summarise the key points made about the journey, the people and the culture created.
- Supplement your knowledge by conducting further research using the library or the internet. You should seek out appropriate visuals, maps and photographs.
- Add your research findings to the Research forum.
- In consultation with your teacher, decide on the medium. Some suggestions are a 3-minute video cast, an oral presentation supplemented with slides, or a blog with accompanying visuals.
- Write your report. The language should be engaging as you are celebrating the achievement of the Polynesian explorers and the destinations they uncovered.
- Rehearse your presentation. Record it if applicable and then present it to the class.





ProjectsPLUS Polynesian travel show (pro-0165)

9.12 Review

9.12.1 Key knowledge summary

9.2 Examining the evidence

- Polynesian societies did not keep written records.
- Our knowledge of their history comes from artefacts such as pottery, spears and jewellery and from oral sources such as myths and legends that have been handed down.
- There have been attempts to record Polynesian history from a Polynesian perspective because much of the recent evidence comes from sources with a European standpoint.

9.3 The Polynesian triangle

- Polynesians originally came from South-East Asia to populate the areas known as Melanesia and Micronesia.
- A large triangular area of the Pacific from Hawaii in the north, New Zealand in the south and Easter Island in the East shows the extent of exploration undertaken by the Polynesians.
- Polynesian explorers have traversed the largest expanse of water on the planet with significant skill despite their basic sailing vessels.

9.4 Rapa Nui

- By 700 CE, Polynesians had settled the area now known as Easter Island (Rapa Nui).
- They created a unique society in terms of their religious beliefs and customs, and even developed a form of writing.
- They exhausted the resources of the region and by the time European exploration had reached Easter Island, the society was in decline and the environment had been negatively affected.

9.5 Discovery of the land of the long white cloud

- Polynesian explorers reached the area now known as New Zealand sometime between 800 and 1130 CE.
- The Maori people trace their heritage to the seven *waka*, or canoes, that brought the seven *iwi*, or tribes, from Hawaii.
- The Maori developed their culture and society over the next millennium and gradually inhabited large tracts of what they called Aotearoa the land of the long white cloud.

9.6 Maori society - an overview

- Maori people were organised into a clear hierarchical structure.
- The structure was based around the importance of village life the pa.
- Women in Maori society played a role in leadership of the community as well as nurturing the youth.
- Warfare was a normal part of Maori life and status was often earned through battle prowess.
- Alongside warfare, Maori tribes traded precious stones and craft.
- Maori actions were dictated by a strict cultural and religious code called tapu.

9.7 People and the environment

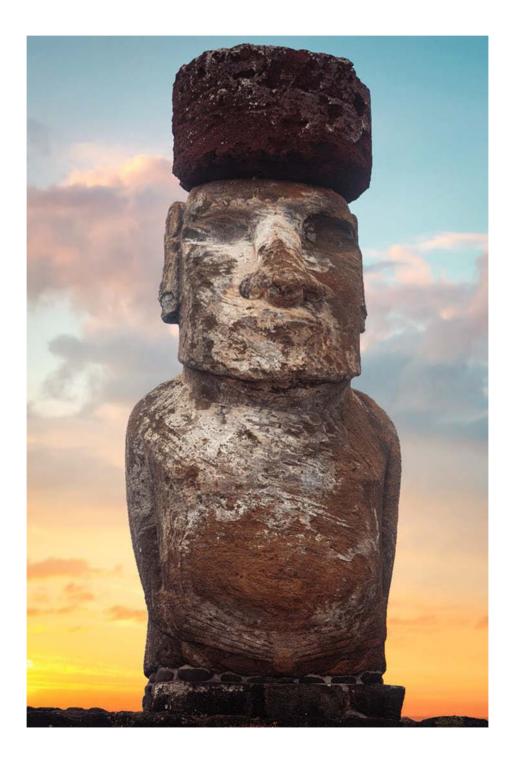
- New Zealand was once part of the supercontinent Pangaea but over millions of years it broke away to form one of the most remote areas of the world.
- The inaccessibility of New Zealand allowed unique species to flourish.
- Maori settlement had a distinct impact on the flora and fauna of New Zealand.
- Despite awareness of resource misuse, the Maori people hunted the Moa to extinction.

9.8 Living in a Maori village

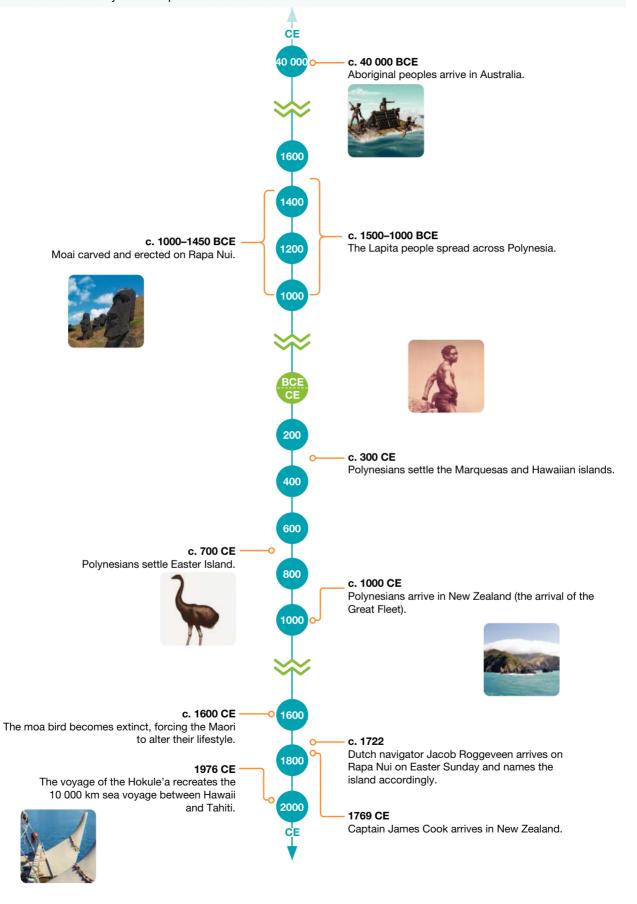
- Permanent settlements became a feature and necessity of Maori existence on Aotearoa during the fifteenth century CE.
- The pa, or village, allowed improved farming techniques and population growth.
- Village life fostered the development of Maori community traditions and culture.

9.9 Customs and culture

- Art and craft was a central feature of Maori culture.
- Carvings known as whakairo show the skill and precision of Maori craftspeople.
- Greenstone was mined to create *hei-tiki* figures, a precious Maori adornment.
- Maori people exploited their environment to develop distinctive clothing and ceremonial dress.
- The act of tatau, or tattooing, comes from Polynesian peoples and it was used in New Zealand to mark rites of passage.
- The first Europeans to interact with Maori were amazed by the Maori traditions and culture.



A timeline of the Polynesian expansion across the Pacific



9.12.2 Reflection

Complete the following to reflect on your learning.

9.12 ACTIVITIES

Revisit the inquiry question posed in the Overview:

How did the Polynesian voyagers migrate to the Pacific Islands if they didn't even know they existed?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



Resources



eWorkbook Reflection (doc-31336)

Crossword (doc-31337)



Interactivity Polynesian expansion across the Pacific crossword (int-7591)

KEY TERMS

anthropologist a person who studies the culture and beliefs of different groups of people

atoll a circular coral island often enclosing a lagoon

cannibalism the practice of eating human flesh

double-hulled canoe a canoe with two connected parallel hulls — a feature that made it light, fast and stable

filigree a type of delicate ornament made from fine threads of metal

genealogy the study of the past and present members of a family

gevser a hot spring sending a jet of steam and boiling water into the air

gourd an edible fruit with a shell that can be dried and used for storage

kinship sharing a blood relation

kumara sweet potato

obsidian a type of rock that is almost like glass

ochre a natural earthy pigment of various colours used for painting

rafter sloping timbers supporting the outer covering of a roof

taro the root of a plant that is made edible through boiling

thermal relating to heat or temperature

yam a potato-like tropical plant used as food

10 Renaissance Italy (c.1400–1600)

10.1 Overview

How did ancient ideas spark the Renaissance in Italy and what changes did it bring to the world?

10.1.1 Links with our times

The term *Renaissance* has been used to describe great changes in art, science and learning that took place in Italy during the fifteenth and sixteenth century. These changes began in Italy and spread throughout Europe.

Just like in modern times, during the Renaissance people struggled with responding to people who had different beliefs or culture from the mainstream and it was a period of great change in culture and technology. Some people were very enthusiastic about these changes. Others felt that the changes offended their beliefs and values. For example, in the modern world innovations in gene technology have caused us to reconsider our ideas about the sanctity of life. In Renaissance times, Copernicus's models of the solar system challenged existing ideas of people's central place in the universe.



LEARNING SEQUENCE

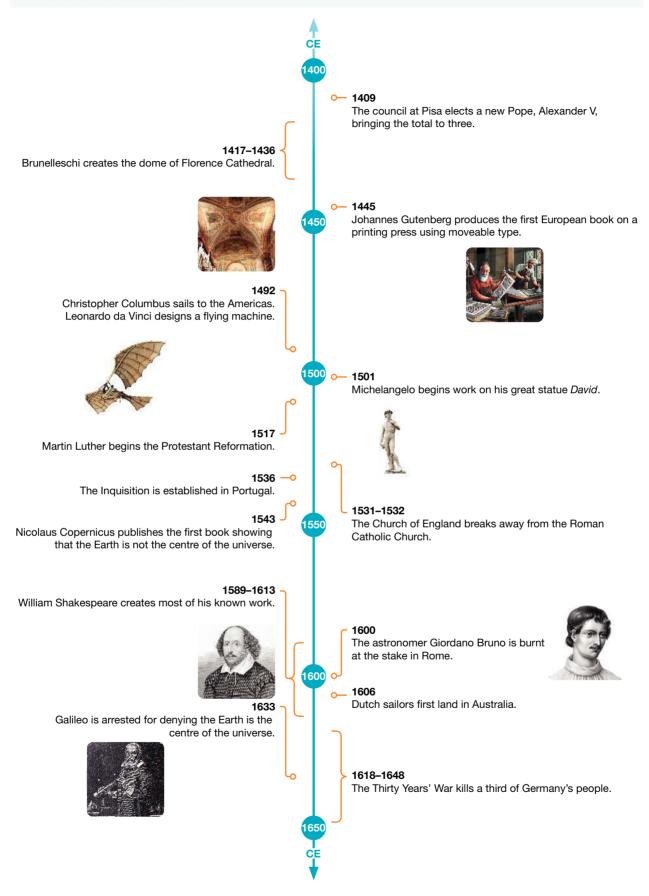
- 10.1 Overview
- 10.2 Examining the evidence
- 10.3 The origins of the Renaissance
- 10.4 Florence: the cradle of the Renaissance
- 10.5 Venice: the serene republic
- 10.6 Renaissance society
- 10.7 Artistic stars of the Renaissance
- 10.8 The spread of the Renaissance
- 10.9 A scientific revolution
- 10.10 The Reformation and Counter-Reformation
- 10.11 Legacies of the Renaissance
- 10.12 SkillBuilder: Evaluating historical significance
- 10.13 Thinking Big research project: Renaissance online magazine

10.14 Review

online

To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.

A timeline of the Renaissance



10.2 Examining the evidence

10.2.1 How do we know about the Renaissance era?

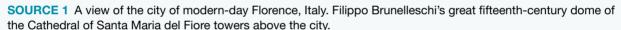
The term *Renaissance* comes from the old French term *renaistre* meaning 'rebirth' and was first used in 1860 by Swiss historian Jacob Burkhardt to describe the renewed interest in the ideas of ancient Greece and Rome during the fifteenth century in Italy.

10.2.2 What was the Renaissance?

During the Renaissance the study of classical texts and artefacts combined with innovation to create a period of great cultural change. It was a period of cultural expression and renewed intellectual curiosity that challenged some existing values, particularly in religion and politics. Humanism stressed the dignity of human beings and the importance of reason and inquiry.

The writing of the time suggests a belief that they were part of a new direction in art and literature. Italian poet and scholar Francesco Petrarch (1304–1374) rejected the medieval era as a period of 'darkness'. The idea of rebirth was used by the art historian Giorgio Vasari (1511–1574), who claimed in his *Lives of the Most Excellent Painters*, *Sculptors and Architects* (1550) that art had been 'reborn' in Italy in about 1250 and had reached maturity in Italy in the sixteenth century.

With the benefit of historical perspective, historians have argued that the social changes and cultural expression of the Renaissance developed from trends formed during the medieval period. The Crusades of the eleventh century brought Europeans into contact with exotic goods, such as spices from the East, and classical texts from Greece and Rome that had been preserved by the Byzantine and Arab civilisations. A number of universities were established in the medieval era, including Bologna in 1088, Oxford in 1096, Cambridge in 1209, Padua in 1222 and Naples in 1224. Many individuals who contributed to the changes associated with the Renaissance studied at these universities.





10.2.3 Primary sources

A great many sources of information survive from the Renaissance that enable students to understand the period. A few examples are:

- maps and diaries of travellers who explored new areas previously unknown to Europeans, including *The Travels of Marco Polo* (c. 1350)
- histories of the Renaissance period, including Vasari's history of art Lives of the Most Excellent Painters, Sculptors and Architects (1550) and political histories of Florence by both Bruni and Guicciardini
- collections of letters that have survived, including the letters of early humanist Petrarch, the letters of artist Michelangelo and letters written by women such as the collections of Isabella d'Este and Nanini Medici
- the business accounts of merchants in cities such as Florence, Venice and Genoa
- wills written by various individuals, including women and the lower classes
- the contents of libraries, including those established by Cosimo de Medici and Federico of Urbino
- the preserved diaries of many careful diary writers including Marin Sanudo, Buonaccorso Pitti, Gregorio Dati and Marco Parenti
- books written during the Renaissance, including *The Prince* (1513) by Niccolo Machiavelli and the works of William Shakespeare (1564–1616)
- some of the writing of Martin Luther (1483–1546) that was printed on a press
- the music of composers including Giovanni Palestrina (1525–1549)
- the architecture, sculpture and art of the Renaissance, including the work of Brunelleschi, Leonardo, Michelangelo and Titian
- objects, such as the instruments used by Galileo to study the planets.

SOURCE 2 The Ospedale degli Innocenti (Hospital of the Innocents), built by Filippo Brunelleschi in 1419 as an orphanage, was commissioned by the Silk Guild of Florence. It is considered to be an excellent example of Renaissance architecture for its use of symmetry, proportion and columns.



10.2 ACTIVITY

Begin a timeline of the developments of the Renaissance. Leave enough space so that as you learn about the period you can continue adding events and personalities to your timeline.

Sequencing chronology

10.2 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

10.2 Exercise 1: Check your understanding

- **1. HS1** Explain why a form of the old French word *renaistre* was used by Jacob Burkhardt to describe fifteenth-century Italy.
- 2. **HS1** Outline the ideas of humanism.
- 3. HS1 List three universities that were opened in the medieval era. For each university, provide the date it was opened.
- **4. HS1** Describe the evidence which suggests that the culture of the ancient Greek and Romans had not disappeared during the medieval period.
- 5. **HS1** List three types of written primary sources that survive from the Renaissance.

10.2 Exercise 2: Apply your understanding

- 1. **HS4** Describe the changes that occurred during the Renaissance.
- 2. HS3 Select two primary sources described in this subtopic and explain what historians can learn from them.
- 3. HS3 Study SOURCE 1. Why would one of the most prominent buildings in a European city be a church or cathedral?
- **4. HS3** Examine **SOURCE 2**. Draw a table and record your impressions of the building. Use the headings 'See', 'Think', 'Wonder'.
 - (a) What do you see in the image?
 - (b) What do you think about what you can see?
 - (c) What do you wonder about the image?
- **5. HS4** Identify any evidence that the ideas of the Renaissance were a continuation from the medieval period.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

10.3 The origins of the Renaissance

10.3.1 The growth of city-states

The fifteenth-century Renaissance began and thrived in Italy, especially in city-states such as Florence, Genoa and Venice. These cities were at the crossroads of trade routes linking Europe, the Middle East and Asia. From Italy, the Renaissance spread to northern Europe, especially after 1445 when books started to be printed in Europe.

During the Renaissance, Italy was made of independent city-states (see **SOURCE 1**). A city-state is an independent urban centre and the surrounding countryside, including small towns, that was governed by its own laws and political system. City-states were run by a variety of political systems, including **republics** such as Florence, Venice, Lucca and Siena. Others were controlled by **hereditary** rulers, such as Naples, which was ruled by a king, and Milan, which was ruled by a duke. The city-states were often at war with each other and competed for status.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

The Western and Islamic world > Renaissance Italy

SOURCE 1 A map of Italy in 1494. In the fifteenth century, Italy was several separate states that were not unified until the late nineteenth century.



Source: Spatial Vision

10.3.2 The rise of the patron

Historians believe that the Renaissance began in Italy in the 1300s with a renewed interest in the ideas of classical Greece and Rome. Franceso Petrarch was one of the first Italian thinkers to translate these works, including the works of Cicero and Livy. Greek scholars. including Manuel Chrysoloras, moved to Italy bringing with them ancient manuscripts and teaching Greek in the schools and universities of Italy.

Growing trade with the East and new industries made a new group of medieval men wealthy. These businessmen, who made their money in banking and cloth production, wanted to show off their wealth and status. To do this they commissioned art, architecture, literature and music. These patrons had a significant role in the development and spread of the ideas of the Renaissance. Artists and intellectuals often moved from place to place in search of a patron, spreading the ideas of the Renaissance across Italy and later into Europe. The desire to imitate and surpass the ancient civilisations of Greece and Rome led to developments in art, architecture, literature, music, philosophy, education and science.

DID YOU KNOW?

Marco Polo (c. 1254-1324) was a Venetian traveller who left Europe in 1271 to journey to Asia. Travelling by ship and then overland. Polo passed through the Middle East and across the Asian continent via the Silk Road to China, where he spent 17 years. Polo returned to Venice in 1295, bringing with him porcelain, silks, spices and jade, along with many tales of his extraordinary travels.

SOURCE 2 From The Travels of Marco Polo, about the kingdoms and marvels of the East

Suju is a very great noble city. They possess silk in great quantities, from which they make gold brocade . . . and they live by their manufactures and trade. There are also in this city many great philosophers and diligent students of nature.

10.3 ACTIVITY

Using the internet and your library, research examples of art and architecture of ancient Greece or Rome. Examine your examples and suggest why Renaissance Italians may have been so impressed by them.

Determining historical significance

10.3 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

10.3 Exercise 1: Check your understanding

- 1. HS1 Explain why Italy's location was important in exchanging goods and ideas.
- 2. HS1 Define a city-state and explain the different ways they were governed during the Renaissance.
- **3. HS1** Imagine that you are studying at a university during the Renaissance and write a diary entry describing your reaction to the arrival of the Greek scholar Manuel Chrysoloras.
- 4. HS1 Suggest reasons why wealthy people may have become patrons of the arts.
- 5. HS6 Explain the role of patrons in spreading the changes and ideas of the Renaissance.

10.3 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1. List the states that were:
 - · republics
 - kingdoms or duchies (ruled by dukes)
 - · controlled by the Pope.
- 2. HS3 Read SOURCE 2 and explain why Marco Polo was impressed by the city of Suju.
- 3. HS3 Read SOURCE 2. How accurate is Marco Polo's description of Suju likely to be?
- **4. HS4** The Renaissance was a time that saw the emergence of many new products and new ideas. Create a mind map of these changes.
 - (a) Begin by putting the central idea of new products and new ideas in the centre.
 - (b) Think of as many products and ideas as you can and record them. You may like to work with a partner.
 - (c) Wherever possible record an example of a change (e.g. for new books record the name of a book, such as *The Prince* by Machiavelli).
 - (d) Use arrows to show connections between your ideas and products (e.g. you could connect the printing press with new books).
- **5. HS6** Many wealthy noble and merchant families sent their sons to university. What might have been the benefit of a university education during the Renaissance?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

10.4 Florence: the cradle of the Renaissance

10.4.1 New industries

The city of Florence played a leading role in the development of the Renaissance and has been described as 'the cradle of the Renaissance'. It was a busy trading city with many people and products passing through each day. In the fifteenth century Florence had a population of 60 000.

Florence is located on the banks of the river Arno, which was important for the cloth industry. The city, surrounded by walls, controlled much of the surrounding countryside. The city made use of its local produce, such as oil and grain, to feed the population and provided work for people from the nearby villages. Previously, wealth had been based almost entirely on land ownership. However, during the Renaissance the main sources of economic wealth were banking, trade, craft goods and cloth manufacturing. In the fifteenth century the wool industry employed over 30 000 workers. Many of these workers were so poor that they were classified as *miserabili*, because they owned so little that they paid no tax. Many of the jobs in the wool and silk industries were low-paid, difficult and unpleasant jobs. For example, one part of the manufacturing process involved stamping on the wool in large vats containing urine. However, the **merchants** who owned the cloth became very wealthy from the profits.

DID YOU KNOW?

In 1339 Florence paved their roads. They were the first European city to do so.

SOURCE 1 A nineteenth-century copy of the Pianta della Cantena, a woodcut made about 1470, showing Florence at the height of the Renaissance



10.4.2 A guild government

As banking and cloth manufacturing became more profitable, merchant families campaigned for greater access to political power. Unlike some states in Italy, Florence was not ruled by one individual, it was a republic. In Florence there were many councils, each with a separate role. During the later medieval period, merchants and nobles had fought with one another for the greatest share of these offices. In 1293, a new law called the Ordinances of Justice changed the rules about who could participate in government. To be eligible to vote or have a position in any of the political bodies you had to be male, a citizen, a taxpayer and a member of a guild. In Florence during the Renaissance there were seven major and 14 minor guilds divided according to profession. The seven major guilds were: merchants; judges, lawyers and notaries; wool manufacturers and merchants; bankers; silk merchants and manufacturers; physicians and pharmacists; and furriers and skinners. As the nobility gained their income from their land they could not join a guild. However, many men from noble families used their money and friends to find a way around these rules and joined guilds.

SOURCE 2 Diary of Gregorio Dati entry from 1412

On 28 April my name was drawn out as standard-bearer for the militia company. Up until then I had not been sure whether my name was in the bags for that office, although I was eager that it should be both for my own honour and for that of my heirs . . . on the very day my name was drawn, I had taken advantage of the reprieve granted by the new laws and finished paying off my debts to the commune.

SOURCE 3 A speaker in the council assembly in Florence

The foundation of peace in democratic cities is equality in matters of offices and taxes. Our ancestors had provided for it, among other things, through the rotation of offices.

DID YOU KNOW?

Florentines were so concerned about one person taking control of the city that they created a number of rules around election to office. These included using bags to draw out names at random and voting using coloured beans for anonymity.

10.4.3 The Medici family

Despite the efforts of Florentines to share power between all eligible families, the government was dominated by the wealthiest merchant families. These families used a network of friends and family to influence politics in the city. The most famous of these was the Medici family. The wealth of the family came mainly from the Medici bank. In the mid-fifteenth century Cosimo Medici came to dominate Florentine politics; however, he took care not to attract jealousy, by riding on a donkey. Cosimo continued to influence Florentine politics until his death in 1464. The Medici family were important figures in Florence, their influence continuing under Cosimo's son Piero and then his grandson Lorenzo. The influence of the family ceased for a time with the banishing of Piero the Younger from Florence in 1494, when the Florentine government was angered because he made a deal on their behalf with the French to surrender the city. The Medici family returned to Florence in 1512 and established themselves as dukes of the city.

SOURCE 4 Niccolò Machiavelli wrote about Cosimo Medici in his History of Florence.

Although he was the chief man in Florence, he never overstepped the bounds of prudence . . . he never appeared anything but a simple citizen.





SOURCE 6 Pope Pius II writing about Cosimo Medici

... not so much a citizen as the master of his city. Political councils were held at his house; the magistrates he nominated were elected; he was king in all but name and state.

SOURCE 7 Alessandro Strozzi wrote about the great influence Cosimo Medici had over Florence.

Whoever keeps in with the Medici does well for himself.

10.4.4 Interest in the classical world

The wealthy merchants of Florence were among the first people in Italy to have an interest in the classical world and played an important role in the Renaissance as patrons. They paid for a range of work to be created for churches, public buildings and private collections. Cosimo Medici was a great patron of humanists, artists, sculptors and architects. He gave money to humanist thinkers Poggio Bracciolini and Marsilio Ficino, as well as commissioning the translation of Diogenes Laertius's Lives of Philosopher's. Both Donatello's David and Judith and Holofernes were commissioned by Cosimo for his palace. He paid for work on several churches in Florence including the Church of San Marco. Cosimo's grandson Lorenzo Medici was also a great patron and commissioned a range of work including Sandro Botticelli's *Primavera*. In the early Renaissance the patron and not the craftsmen decided many of the details of a work. This could include selecting the content, composition and colours in a painting. For this reason the patron was often considered the creator of a work. The banker Giovanni Ruccellai commissioned Leon Battista Alberti to create the facade of the church Santa Maria Novella. In the inscription on the façade, Ruccellai names himself as the maker. Many wealthy merchant families, such as the Strozzi in SOURCE 8, built their families new palaces. Ruccellai wrote that his spending on architecture reflected 'his desire to honour God and his city and in memory of himself'.

SOURCE 8 The Strozzi Palace was begun in 1489 by Benedetto da Maiano for Filippo Strozzi. Filippo bought and demolished a number of buildings on the site to make enough space for the new palace but he did not move from the site of his family's original house.



DID YOU KNOW?

Girolamo Savonarola was a Catholic priest who accused political and religious leaders of being corrupt. He was also very critical of the classical influences in literature, art and sculpture, which he described as pagan. He was particularly critical of the Medici family, who he thought were taxing the poor of Florence too heavily. He encouraged his followers to burn items he regarded as sinful, such as books, art and luxury items in the Bonfires of the Vanities. He was hanged and burnt for his criticism of the church.

10.4 ACTIVITIES

1. Draw a cartoon strip that explains how Florence was governed throughout the Renaissance. Begin with the landowning nobles in power, include a description of the Republican structure and the control of the Medici family, and end with the Medici Dukes. Don't forget to include the expulsion of Piero the Younger in 1494.

Identifying continuity and change

- Draw a Venn diagram of the similarities and differences between a modern republic and the republic of Florence.
 Identifying continuity and change
- 3. Research some of the worst jobs in the Renaissance. For example, you may look up the role of a 'fuller' or a 'carder' who worked in the wool industry. What were the conditions of this job?

Determining historical significance

- 4. Research how the river Arno in Florence was used in cloth-making during the Renaissance. What was the impact of cloth-making on the health of the river?
 Determining historical significance
- 5. Research one member of the Medici family. (Consider finding out about one of the female members of the family like Lucrezia Tornabuoni or Catherine Medici.) How did this individual contribute to Renaissance society?
 Determining historical significance

10.4 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

10.4 Exercise 1: Check your understanding

- 1. HS4 Compare the sources of wealth during the medieval era and the Renaissance in Florence.
- 2. HS4 In your opinion, were the same people wealthy in both eras? Provide reasons for your opinion.
- 3. **HS1** Describe what life was like for the majority of people in Florence.
- 4. HS1 Explain how it was decided that a person could participate in government in Florence.
- 5. **HS1** What checks and balances were in place in the Florentine government to prevent one individual from becoming too powerful?
- 6. HS1 Explain why it was important to keep on good terms with the wealthy merchant families of the city.
- 7. HS1 Explain why Cosimo Medici rode on a donkey. Do you think this strategy was effective?
- 8. **HS1** Explain how the actions of Piero the Younger contradicted the republican ideals of the Florentine government.
- 9. **HS1** Identify the different reasons individuals paid for works of art and architecture.
- 10. **HS1** Explain how a patron might influence the nature of an artwork.
- 11. HS1 Explain why Giovanni Ruccellai paid for architecture.

10.4 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1.
 - (a) Suggest reasons why most of the buildings were built inside the city walls.
 - (b) Which buildings do you think were most important in the city?
 - (c) Examine the buildings closely and suggest what each one may have been used for.
 - (d) Suggest what the river Arno may have been used for during the Renaissance.
- 2. HS3 Read SOURCE 2.
 - (a) What can we learn about the election process in Florence?
 - (b) Why was it important that Gregorio Dati had paid off his 'debts to the commune' before his election to office?
- 3. HS3 Using SOURCE 2 as evidence, explain why Gregorio Dati believed election to office was important?
- **4. HS3** How useful is **SOURCE 2** in helping us to understand the political system in Florence during the Renaissance?
- 5. HS3 Read SOURCE 3.
 - (a) According to the speaker how did democratic cities ensure equality in offices?
 - (b) The person is making a speech in one of the political bodies in Florence. Evaluate how accurate this source is likely to be in describing the government in Florence at this time.
- 6. HS3 Study SOURCES 4-7. What evidence is there that Cosimo Medici was a powerful man in Florence?
- 7. **HS3** Look carefully at **SOURCE 5**. It is a painting of the three wise men.
 - (a) Why do you think Cosimo Medici has placed himself in the painting?
 - (b) What is he trying to suggest about himself?

- 8. HS3 Some parts of SOURCE 5 are factually inaccurate. Is the painting still useful to historians trying to understand Renaissance society?
- 9. HS3 What do we learn from Pope Pius II (SOURCE 6) and Alessandra Strozzi (SOURCE 7) about the methods Cosimo Medici used to influence politics in Florence?
- 10. HS3 Given that Machiavelli was from Florence why might his account of Cosimo Medici (SOURCE 5) differ from Pope Pius II (SOURCE 6)?
- 11. HS3 Examine SOURCE 8 and suggest what impression Filippo Strozzi was trying to create about himself and his family with the design of his family palace.
- 12. **HS5** Which group or groups in Florence participated the most in the changes of the Renaissance? Why do you think this was the case? Share your ideas in a class discussion.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

10.5 Venice: the serene republic

10.5.1 A city built on a lagoon

Venice was a republic ruled by wealthy merchants. By the thirteenth century it had become a strong naval power and a centre of trade at the crossroads between Europe, Asia and the Middle East.

From humble origins on a lagoon in the Adriatic Sea, Venice grew to be one of the richest and most powerful city-states in Italy. The city is built on marshy islands so that the buildings appear to rise from the sea. The early Venetians were fishermen and sailors. They traded fish and salt for the products they could not grow. By the fifteenth century, Venice had a trading network that went in all directions as you can see in **SOURCE 2**. They had ports down the Adriatic coast through the Greek islands to Egypt, the Far East, to Constantinople and the Black Sea. Venetian ships brought timber, grain, salt, fruit and wine from the Mediterranean. From the East they brought silks, spices, drugs and jewels. People came great distances to do business in Venice. Many people came to live in Venice to do business including, Greeks, Albanians, Turks and Germans.

Cardinal Bessarion, himself from Greece, was one of many immigrants who came to live in Venice. In a letter of 1468 he said 'As all peoples of almost the entire world gather in your city, so . . . do the Greeks'.





SOURCE 2 Map of the Venetian sea trade routes



Source: Adapted from Patricia Fortini Brown, The Renaissance in Venice, pp. 12–13, The Everyman Art Library 1997. Map drawn by Spatial Vision.

SOURCE 3 A Venetian noble was not allowed to call his home a palace. He had to call it a ca', short for casa, a house.



10.5.2 Ship building

In order to trade goods the Venetians built large ships or galleys. Ship building was so important to the economy that it was controlled by the government. By 1560 Venice was the largest industrial site in Europe employing over 2000 workers. The Venetians used standardised parts for easy replacement. In times of emergency a ship could be built very quickly. In 1570 they built 100 ships in two months. Because ship building was so important the craftsmen were given special pay and conditions. This included ceremonial roles like being body guards to the head of the Venetian republic. However, the arsenalotti, as they were known, were not allowed to leave Venice because they might share the secrets of Venetian ship buildings.

SOURCE 4 A Spanish visitor's description of a Venetian ship filled with supplies

Out came a galley towed by a boat and from the windows they handed rope from one, bread from another, arms from another . . . and when the galley reached the end . . . all the necessary men were on board.

10.5.3 The Venetian Republic

Venice was a republic from 1297 until 1797 when the city surrendered to Napoleon. During this period Venetians enjoyed political stability. In 1297, a law was passed declaring that only men whose families had their name in the Book of Gold were eligible for political office. Although they were called nobles these men earned their income from trade. All eligible men over the age of 30 were expected to sit in the Great Council when they were in Venice. The Great Council was the first level of Venetian government. Its main function was to elect the other councils. The Venetian government was made up of several councils each with its own function. The head of the Venetian government was called the Doge. The Doge was elected through a very complicated process. He could do very little by himself. In fact he was not allowed to open his own mail or receive visitors alone. This was to prevent him from becoming too powerful. Both Venice and Florence were ruled by rich merchants who were determined to limit the power of individual men and families. Therefore, they used complicated voting to prevent vote rigging and multiple councils to spread the power of office.

Venetians and her visitors were impressed by the beauty of the city. They admired her canals, richly adorned buildings, thriving economy and diverse population. Art, architecture and sculpture were paid for to enhance the image of the Republic. Titian, Tintoretto, Veronese, Sansovino and Palladio all produced works that glorified Venice. Priuli said that she appeared to be 'built more by divine will than human hand'.

DID YOU KNOW?

Festivals were used to affirm the image of the state. For example, during the Ascension Day celebrations the Doge dropped a gold ring into the sea and declared, 'we wed you, sea, in token of true dominion'. **SOURCE 5** Juno bestowing gifts on Venice by Paolo Veronese, 1553-1554. The figure above is the ancient Roman god Juno and she is showering gifts on Venice, who is represented as a woman.



DISCUSS

Discuss the following statement: The Renaissance was cradled in the two major cities of medieval Italy: Florence and Venice. [Critical and Creative Thinking Capability]

10.5 ACTIVITIES

- 1. Use your library and the internet to research the ancient Roman goddess Juno. What impression are the Venetians trying to create of themselves in SOURCE 5 by depicting their city as a woman receiving these gifts from Juno?
 Using historical sources as evidence
- 2. The Venetians had a large empire, in part to protect their sea ports. Venetian rule could be harsh or benevolent. Select one sea port in the Venetian empire and use your library and the internet to find out about its history as a Venetian colony. Some questions you should investigate are:
 - (a) How did the Venetians rule?
 - (b) What evidence is there of Venetian influence?
 - (c) What was the culture of the native people?

Using historical sources as evidence

10.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

10.5 Exercise 1: Check your understanding

- 1. **HS1** Explain why it was necessary for Venetians to trade goods.
- 2. HS1 Was Cardinal Bessarion impressed by the mix of people in Venice? Justify your answer.
- 3. HS1 Imagine that you have recently arrived in Venice to do business. Write an account of your time in the city. Describe the city, including the other people you see and the types of goods being traded.
- 4. HS1 Why was ship building important in Venice?
- 5. **HS1** How did the Venetian government try to control the arsenalotti?
- 6. HS1 How did the Venetians make it easier to replace parts on the ships?
- 7. **HS1** Explain why the city of Venice was admired.
- 8. **HS1** Explain why the Venetians used a complicated voting system to elect the Doge.
- 9. HS1 Why might Priuli have believed that Venice was made by divine will?

10.5 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1 and suggest how the canals would have affected the appearance of Venice and the daily life of people in the city.
- 2. HS3 Examine SOURCE 3 and suggest why the Venetian government preferred the word ca' to palace.
- 3. HS3 Using SOURCE 2, explain what was traded by the Venetians in each location.
- 4. HS3 Explain what we learn from the Spanish visitor in SOURCE 4 about how the galleys were loaded.
- 5. HS3 Study SOURCE 5. Identify the gifts Juno is giving to Venice. What might each one represent?
- **6. HS3** Examine **SOURCE 2**. Note the locations of the Venetians ports along the trade routes. Suggest why the Venetians may have needed these ports along their trade routes.
- 7. **HS6** What evidence is there that the Venetians had connections with other cultures?
- 8. **HS6** How important was the empire of sea ports to the Venetian economy?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

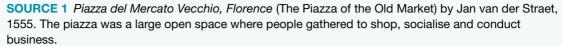
10.6 Renaissance society

10.6.1 The importance of family

Many institutions were important during the Renaissance. Family was an important source of comfort and support. In the growing cities of the Renaissance, people also relied on connections with the people living in their local area. Another important institution was the parish Church, where significant occasions were celebrated and which held many feast days and festivals.

For many people, their family provided guidance, advice and connections. As recommendations were essential, people also depended on their family and friends to make introductions for them. For the merchant families these networks were essential for conducting business. For the working class and women, networks allowed them to develop new friendships and ask for favours. Local identity and relationships

were very important in the Renaissance. In Venice, every autumn men from two districts, the Castellani and the Nicolotti, staged fights called 'the war of the fists' on bridges for the pride of their sestieri (district). The fights were bloody and ferocious.





10.6.2 The role of the Church

The Catholic Church continued to play an important role in most people's lives in Italy during the Renaissance. Significant occasions like birth, engagement, marriage and death were usually marked in the parish church. Throughout the year numerous religious feasts and festivals were held expressing religious devotion and pride in the city-state. The Pope was the head of the Catholic Church. He was also a powerful political figure with his own army. Although most people accepted its teachings, some began to question the abuses of power and corruption within the Church.

SOURCE 2 Ascension Day celebrations in Venice as described by Petrarch

The size of the multitude is . . . hard to believe; both sexes and every age and station were represented. The Doge himself with a great bank of leading men.

10.6.3 Women in Renaissance Italy

Renaissance Italy was a patriarchal society that favoured men. Women were generally believed to be inferior to men. However, there were exceptions. Some men educated their daughters and trusted their wives with important tasks like managing the estate while they were away on business. Women generally received a limited education that prepared them for tasks in the home. The women of noble or merchant families tended to be restricted to the home, while poorer families could not do without the work of women. These women often worked as servants, spinners or leather workers. For women from wealthy families, the parish church was a welcomed outlet for socialisation.

Many of the decisions in the life of Renaissance women were made by her male relations. For the wealthy, marriage was a chance to form alliances between two families and the match was a family decision. For example, Cosimo Medici was married to Contessina Bardi, who was from an old Florentine family. The bride and groom could not see each other until the ceremony. Women were usually married between the ages of 15 and 19. Men tended to marry in their mid-twenties or later. Nanini Medici wrote in frustration to her brother Lorenzo 'Don't be born a woman if you want to have your own way'.

SOURCE 3 Diary of Buonaccorso Pitti

I resolved to get married. Since Guido di Messer Tommaso was the most respected and influential man in the city, I decided to put the matter in his hands and leave the choice of bride up to him.

In order to marry, a woman needed to have a **dowry**. As a woman could not marry without a dowry, wealthy individuals donated dowries to poor girls in their city. However, some girls from poor families had to work for years to earn enough to marry. Women had few options outside of marriage. Some became nuns, but even a convent required a dowry. Some women without family who could help them were forced into prostitution. The dowries of merchant women became so large that Alessandra Strozzi declared 'Whoever takes a wife wants money'.

10.6.4 Childhood in Renaissance Italy

Life was short in Renaissance times, with few people living into their forties. Working class houses usually had no more than two rooms, a bed, table and bench, and a few utensils. Yet in most families a child was born every two years. In poorer families particularly, most children did not live long enough to reach adulthood. Childbirth itself was so dangerous that it was common for women to make their wills before a baby was due to be born.

SOURCE 4 This painting of Lucrezia Borgia (1480–1519) was created by the artist Pinturicchio. She was the daughter of Rodrigo Borgia, who later became Pope Alexander VI, and Vannozza dei Cattanei, one of Rodrigo's mistresses. The Borgia family was ruthless and corrupt, but also wealthy and very powerful. The family arranged several marriages for Lucrezia to further their own power and influence. It is generally believed that Lucrezia's brother, Cesare, had her second husband murdered.



In all social classes children were regarded as little adults and expected to dress and behave like their elders. But, unlike their elders, children had no rights. Peasant and artisan children usually had no formal education. In peasant families children were put to work in the fields as soon as they were old enough to be useful. In artisan families, children would work alongside their fathers from an early age, with boys normally learning the father's trade through apprenticeships from about age fourteen.

It was only among the wealthy classes that childhood began to be seen as a period of freedom from the responsibilities of adult life. Upper class boys usually attended colleges from around age seven to fifteen unless they had home tutors. Upper class girls might attend a convent school until they were married or became nuns.

In all classes, girls had less status than boys. Babies were often abandoned or left at orphanages because their parents had died, were unmarried or could not afford to keep them. The records of the city-states show that two-thirds of all abandoned babies were girls. To relieve the burden on poor families, many girls were sent

SOURCE 5 This illustration appeared in a Grammar text by Elio Donato and shows Maximiliano Sorfza at school. Maximiliano Sorfza was the son of the Duke of Milan, Ludovico Sorfza, and he became duke himself in 1512.



out to work as servants in wealthy households. Although some were treated well by their employers, others suffered physical and sexual abuse and the laws gave them little protection from such treatment.

10.6.5 Social minorities

Not all groups were treated equally in Italian society during the Renaissance. Non-Italians were often excluded in various ways, as were slaves, prostitutes and homosexuals. People of the Jewish faith were a vital part of Venetian society during the Renaissance as they provided loans to the Venetian merchants. The financial service provided by Jews was essential to the Venetian economy, however, as Christians, the Venetians had some prejudices about the Jewish culture. As a result, Jewish people were subjected to a number of laws. In 1516, a law required all Jews to live in one location — the area of the Foundry. Jews were also subjected to a curfew that meant they had to be indoors at sundown. The Jewish community was made to pay for the walls of the ghetto and for the wages of Christian guards.

DID YOU KNOW?

The term 'qhetto' may come from the Italian *getto* meaning foundry or from *barghetto*, a small section of town.

10.6 ACTIVITIES

- Use the internet to research the life of Lucrezia Borgia (see SOURCE 4). Prepare a presentation in which you give a brief outline of her life and explain what her story reveals about the character of Renaissance Italian society and the position of women in that society.
 Using historical sources as evidence
- As well as people of the Jewish faith, many other groups lived in Venice during the Renaissance, including Greeks, Germans and Turks. Select one group and research how they were treated. Pay attention to the privileges and restrictions placed on your chosen group.
 Analysing cause and effect

10.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

10.6 Exercise 1: Check your understanding

- 1. HS1 Explain the types of assistance family and friends provided an individual.
- 2. **HS1** Explain the role of the Church in people's lives during the Renaissance.
- 3. HS1 Explain in what ways life was difficult for women during the Renaissance.
- 4. **HS1** Explain the purpose of marriage for merchant families.
- 5. **HS1** How did childhood vary between peasant, artisan and merchant families?
- 6. **HS1** What extra risks did female babies and children face during the Renaissance?
- 7. HS1 Explain the restrictions that were placed on Jewish people in Venice during the Renaissance.

10.6 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1.
 - (a) Describe the types of social interactions you can see in the painting.
 - (b) What do you notice about the people in the painting?
 - (c) Who is in the market?
 - (d) Who do you not see in the market? Why might this be?
- 2. HS3 What does SOURCE 2 tell us about the significance of the celebration of Ascension Day?
- **3. HS3** How might Nanini Medici be different from most Renaissance women? Does this make her statement a less useful source for historians? Provide reasons for your answer.
- 4. HS3 Alessandra Strozzi declared 'Whoever takes a wife wants money'.
 - (a) What does this statement tell us about Renaissance attitudes to marriage?
 - (b) Evaluate whether Alessandra Strozzi is likely to be a reliable source about marriage in Renaissance Italy.
- 5. HS3 What evidence is there in SOURCE 3 that Buonaccorso Pitti hoped to increased his own status through his marriage?
- **6. HS3** Examine **SOURCE 5** and record the activities you see in the illustration. This illustration appeared in a book describing the different parts of language, or grammar. Suggest reasons why Elio Donato might have included Sorfza in the image?
- 7. HS3 Write four questions a historian investigating the Renaissance could ask when analysing SOURCE 3.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

10.7 Artistic stars of the Renaissance

10.7.1 Renaissance painting and sculpture

Many people consider the Italian Renaissance artists, sculptors and architects to be among the greatest of all time. Among the most famous are Michelangelo Buonarotti (1475–1564), Leonardo da Vinci (1452–1519), Raphael (1488–1520) and Titian (1488–1576).

During the Renaissance, there was a great increase in demand for the works of talented painters, sculptors and architects, and cities competed to attract them by promising great rewards. Renaissance visual artists created works that were different in style from most art of the Middle Ages (compare **SOURCES 1** and **2**). Artists experimented with technique, light and colour. Unlike earlier artists, they used rich colours and tried

to show depth in scenes by painting perspectives and distances realistically. This gave their paintings the feeling of having three dimensions. Artists began to use oil paint, and many of them created frescoes on buildings by applying paint to wet lime plaster.

Many medieval sculptures were shallow figures carved out of a background, known as relief sculptures. Renaissance sculptors were inspired by ancient Greek statues of the classical style that had developed in the fifth century BCE. They were also inspired by Roman statues that copied this Greek style. To achieve realism, Renaissance painters and sculptors used live models to create the figures in their works. They also studied anatomy to gain a better understanding of how the human body functions and moves.

SOURCE 1 An illustration from a medieval manuscript depicting the Three Graces (goddesses from Greek and Roman myths)



SOURCE 2 A detail from Sandro Botticelli's painting Primavera (c. 1482) showing the Three Graces



Subject matter

Like medieval artists, Renaissance artists still painted religious scenes, especially scenes depicting events in the Bible and the lives of saints. However, many also worked on other subjects including scenes from Greek and Roman myths, landscapes and portraits, especially of their wealthy patrons.

DID YOU KNOW?

Antonio Pollaiuolo, who lived during the fifteenth century, was probably the first artist to dissect (cut up) human corpses to study anatomy. Leonardo da Vinci did the same and even discovered that hardening of the arteries was a cause of death in older people.

SOURCE 3 The sculpture shows the Trojan priest Laocoön and his sons being crushed to death by snakes. The sculpture was rediscovered in a vineyard in Esquiline Hill on 14 January 1506 and had a great impact on Michelangelo.



SOURCE 4 Moses by Michelangelo, 1515, was influenced by the rediscovered classical sculpture of Laocoön shown in **SOURCE 3**.



10.7.2 Renaissance architecture

Like Renaissance sculptors, Renaissance architects were inspired by the reawakened interest in the knowledge and techniques of ancient Greece and Rome. The remains of ancient Roman buildings with their Greek columns and Roman arches and domes stood in many places, especially in Italy. Architects copied their styles and techniques to design new buildings.

Among the most brilliant of their works is the dome of the Cathedral of Santa Maria del Fiore in Florence. The building of this church had commenced in 1296. In 1419 Filippo Brunelleschi (1377–1446) won a competition to design its dome. Brunelleschi was inspired by the dome on the Pantheon, but he devised unique solutions to the problem of constructing a dome of such size. He used a herringbone design and a double skin. His completed dome is considered one of the greatest architectural achievements of the Renaissance (see **SOURCE 1** in subtopic 10.2).

SOURCE 5 Michelangelo Buonarotti's famous *Pieta* (meaning 'pity'). The marble sculpture depicts Mary holding the body of her son Jesus Christ after his crucifixion.



DID YOU KNOW?

The home was regarded as the place for women in Renaissance Italy. However, by the sixteenth century humanist influence made it possible for a few women from the upper classes to study painting. Although women were barred from academies where male nudes provided models, some women managed to become successful artists. Among them were Sofonisba Anguissola; Marietta Robusti, the daughter of the famous artist Tintoretto; and Caterina dei Vigri, a nun.

SOURCE 6 The School of Athens by Raphael, showing Aristotle and Plato in discussion in the centre of the painting.



10.7 ACTIVITY

Select one famous Renaissance artist, sculptor or architect to research. Find at least two examples of their work and explain the qualities of each. Identifying continuity and change

10.7 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

10.7 Exercise 1: Check your understanding

- 1. **HS4** How did art change during the Renaissance?
- 2. HS1 Why did artists study anatomy?

- 3. HS1 What subject matter did Renaissance artists include in their work?
- 4. HS1 What ancient styles inspired Renaissance sculptors and architects?
- 5. **HS1** Explain the process of painting a frescoe.

10.7 Exercise 2: Apply your understanding

- 1. **HS3** Compare **SOURCES 1** and **2**. Identify three differences between the styles of these two artworks using the following headings:
 - Depth
 - Realism
 - · Colour.
- 2. HS3 Examine SOURCES 3 and 4. What evidence is there that Michelangelo was influenced by the discovery of Laocoön?
- 3. HS3 Look closely at SOURCE 5.
 - (a) Describe the details of the sculpture.
 - (b) Describe the emotional effect of the sculpture.
 - (c) What would have been the difficulties of carving this out of a single piece of marble?
- 4. HS3 Examine SOURCE 6 and identify as many classical influences as you can. Pay attention to the use of perspective, the use of columns and arches, the figures and the style of dress.
- 5. HS4 What were the greatest changes in art, sculpture and architecture during the Renaissance?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

10.8 The spread of the Renaissance

10.8.1 A widening movement

From about 1450, the Renaissance spread from Italy to Europe. Historians call this movement the Northern Renaissance. Ideas were spread in several ways: through wealthy individuals importing Italian art and employing Italian artists and architects; through trade; through northern European students attending Italian universities; and through northern writers and scholars who were influenced by Italian humanism. But the most important reason for the spread of Renaissance ideas was the growing availability of printed books.

Influential scholars, such as Erasmus and Rabelais, spread humanist ideas as they travelled. King Francis I of France brought in Italian artists, including Leonardo da Vinci, to paint for his court. Several Italian artists came to Poland from the mid-fifteenth century. King Ivan III brought in Italian architects to design Russian buildings. Young Hungarians studying in Italy returned with humanist ideas and, in the late fifteenth century, the Hungarian city of Buda became an important centre of the arts with one of Europe's greatest collections of books.

The spread of the Renaissance was not about the copying of Italian ideas but the development of them. In Northern Europe, the brothers Hubert and Jan van Eyck perfected techniques of painting in oils. This enabled paintings to survive for a longer period of time. In the Netherlands, the painter and printmaker Pieter Bruegel (1525–1569) followed Italian artists in depicting scenes from the Bible. An example is his famous *Massacre of the Innocents* (1565–67), which depicts the biblical story of King Herod's attempt to wipe out all young male children in ancient Bethlehem. However, Bruegel also explored other ideas in his artwork, such as the horrors of war in his *Triumph of Death* (1562), and he went on to influence many artists through his landscapes and scenes of peasant life.

10.8.2 The English Renaissance

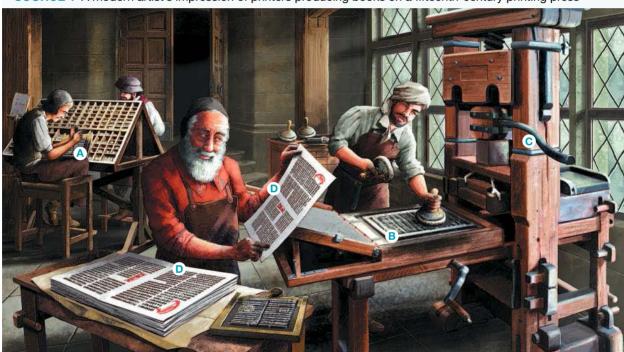
Some historians have argued that cultural developments in England were unrelated to the movement that began in Italy. However, from the early sixteenth century, Renaissance culture flourished in England, especially through the works of poets such as John Milton and John Donne, and playwrights such as

Christopher Marlowe and William Shakespeare. Of all the great figures of the English Renaissance, none has had a more lasting influence than Shakespeare.

The printing press

Even though many Europeans were illiterate, no means of spreading Renaissance ideas was more important than the printing press. A form of printing with moveable type had been used in China since the late tenth century, but the first European printing press was developed in Germany between 1440 and 1452 by Johannes Gutenberg (1398–1468), a goldsmith. Before Gutenberg's press, books had to be copied by hand or printed from wooden blocks on which each letter had to be hand-carved. This process was very time consuming and therefore very expensive.

Gutenberg's press and those that improved upon it used movable metal type. This enabled books and pamphlets to be mass-produced so that ideas could circulate widely. Books were generally printed in Latin because it was the international language of scholars. They were also printed in the various languages used by the peoples of Europe. The first book produced on Gutenberg's press was the Gutenberg Bible, which was completed in 1456.



SOURCE 1 A modern artist's impression of printers producing books on a fifteenth-century printing press

- A Metal letters, numbers and symbols called 'type' were arranged and rearranged side by side in rows held together by a frame to create each page of print.
- B A frame of type was then fixed onto the press and the surface of the type was covered with ink.
- C A press, adapted from a wine press for squashing grapes, was pulled down to press sheets of paper against the ink-covered type in the frame.
- D The press was raised and the printed pages were removed. The complete sets of pages were bound together to make a copy of a book.

DID YOU KNOW?

A Renaissance printing press could produce 3600 pages in a day. It has been estimated that more than 20 million copies of books had been produced on printing presses by 1500. By the late sixteenth century, ten times as many had been printed.

10.8 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

10.8 Exercise 1: Check your understanding

- 1. HS1 How did trade, students, scholars and artists contribute to the spread of Renaissance culture?
- 2. **HS1** Which European city had a great collection of books by the late fifteenth century?
- **3. HS1** Who developed the printing press?
- 4. **HS1** How were books printed before using the printing press?
- 5. **HS1** How many pages could a Renaissance press produce in a day?

10.8 Exercise 2: Apply your understanding

- 1. HS3 Examine SOURCE 1 and explain what skills might have been needed to operate a Renaissance printing press.
- 2. **HS6** Evaluate the claim that the most important reason for the spread of Renaissance culture was the invention of the printing press.
- 3. HS4 Identify the changes in the culture of the Renaissance as it spread from Italy to the rest of Europe.
- **4. HS6** Consider the patrons who helped to spread the ideas of the Italian Renaissance. In your opinion, was wealth an important factor in encouraging the ideas of the Renaissance? Support your opinion with evidence.
- **5. HS6** Rank in order of significance the factors that spread the ideas of the Renaissance. Provide reasons to justify the choice of most important factor.

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10.9 A scientific revolution

10.9.1 The humanists

During the Renaissance, there was a renewed interest in a broad curriculum including a range of subjects like poetry, music, mathematics, rhetoric and science. Therefore, a scholar could be a priest, philosopher, scientist, artist and inventor. That is why the terms 'Renaissance man' and 'Renaissance woman' are still used to describe someone whose knowledge spans a wide range of fields of study.

The ideas of the humanists also encouraged people to use their talents to create, invent and explore. For example, Pico della Mirandola (1463–1494) was a humanist who argued that God gave humans the potential to achieve great things if they used their talents.

Leonardo da Vinci (1452–1519)

Leonardo was one of the most remarkable of all the Italian Renaissance thinkers. He is most famous for his art, especially the *Mona Lisa* — arguably the most famous of all paintings. But he also conducted observations and experiments in biology, anatomy, geology, engineering, astronomy, mathematics and music. Leonardo was a great inventor. Among Leonardo's many designs was an underwater diving suit, a robot and a glider.

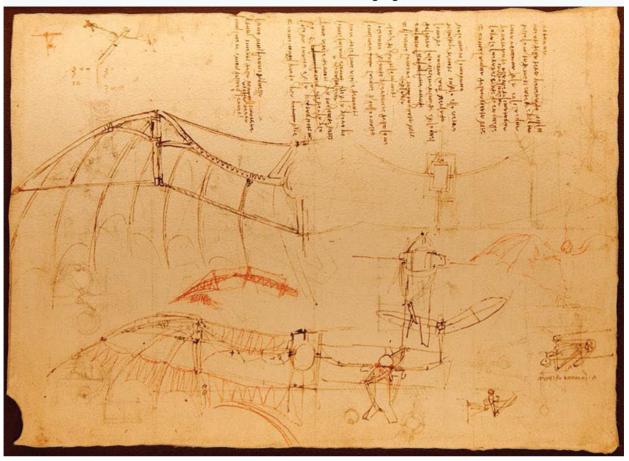
SOURCE 1 Self-portrait of Leonardo da Vinci



DID YOU KNOW?

Leonardo da Vinci recorded his observations, ideas and inventions in over 4000 pages of notebooks. These have to be read with a mirror because Leonardo wrote everything backwards.

SOURCE 2 Leonardo da Vinci's sketch and instructions for building a glider



SOURCE 3 In 2002, Steve Roberts built a glider based entirely on Leonardo's sketches and instructions produced between 1490 and 1505. Roberts used only materials that would have been available in Leonardo's time. The glider reached 10 metres above the ground and flew for up to 17 seconds on its longest flight.



Nicolaus Copernicus (1473-1543)

Copernicus was a Polish astronomer who developed a theory that put the Sun, rather than the Earth, at the centre of the universe. The Catholic Church held the view that the Earth was the centre of the universe and that the Sun, Moon and planets revolved around it. This belief had come from the ancient Greek philosopher Aristotle and had been described by the Greek astronomer Ptolemy in the second century CE.

Copernicus spent many years investigating the movements of heavenly bodies and, in 1515, he sent copies of his findings to other astronomers. After further study, Copernicus published his theory in a book called *On the Revolution of Heavenly Spheres* (1543). Copernicus's model of the planetary system is called a heliocentric system. It states that the Earth revolves around the Sun in a year and rotates on its axis once every 24 hours.

Giordano Bruno (1548-1600)

Some thinkers *were* burned as **heretics**. That was the fate of Italian **friar**, philosopher, astronomer and mathematician Giordano Bruno who accepted Copernicus's ideas but took them further, recognising that the Sun is just one of billions of suns in the universe. Several of Bruno's religious ideas also differed from those of the Church. In 1600, the **Roman Inquisition** found him guilty of heresy and had him burned at the stake.

Andreas Vesalius (1514–1564)

Vesalius is often called 'the father of human anatomy' because of his contributions to understanding the human body. The Catholic Church banned people from dissecting human bodies. This meant that up to early modern times, doctors had to rely on the writings of ancient Greeks such as Hippocrates and Galen for their understanding of anatomy. This made it very difficult to treat injuries and disease. Vesalius defied the Church and obtained the permission of the local law courts to dissect and conduct experiments on the bodies of people who had been executed. In 1543, Vesalius published a book of **anatomical drawings**, with explanations of how the various body parts worked.

Galileo Galilei (1564–1642)

Galileo was an Italian astronomer, physicist, mathematician, philosopher and inventor. He developed a telescope and carried out observations that enabled him to prove that Copernicus was right about the movement of the Earth and other planets. Galileo published his findings in 1632, and in the following year the Roman Inquisition charged him with heresy and threatened him with torture. As he was found to be 'suspect of heresy', he was forced to **recant** and was kept under house arrest for the remainder of his life.

SOURCE 4 An illustration of the human skeleton that Vesalius published in 1543



SOURCE 5 Trial of Galileo, painted in the seventeenth century



10.9 ACTIVITIES

- 1. Choose one of the thinkers from the following list:
 - Konrad Gessner (1516–1565)
 - Sir Francis Bacon (1561-1626)
 - Johannes Kepler (1571–1630)
 - Geradus Mercator (1512-1594)
 - William Gilbert, also known as Gilbard (1544-1603).

Conduct research and write a one-page biography of your chosen thinker, describing his contribution to science and technology. **Determining historical significance**

2. Working in small groups, write a script and perform a role-play based on the events depicted in SOURCE 5. Try to convey the different perspectives of Galileo and the judges and prosecutors of the Roman Inquisition. Using historical sources as evidence

10.9 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

10.9 Exercise 1: Check your understanding

- 1. **HS1** What is meant by the term 'Renaissance man' or 'Renaissance woman'?
- 2. HS1 Name three inventions of Leonardo da Vinci.
- 3. **HS1** What was the theory of Copernicus?
- 4. HS1 How was Copernicus's theory different from commonly held theories at the time?
- 5. HS1 How did the Catholic Church punish people who had ideas that disagreed with its own?

10.9 Exercise 2: Apply your understanding

- 1. **HS3** How do **SOURCES 2** and **3** support the claim that Leonardo da Vinci, shown in **SOURCE 1**, was a revolutionary thinker?
- 2. **HS3** Study **SOURCE 4**. Explain why Vesalius was able to depict the human skeleton so accurately and why it had been difficult to create accurate anatomical drawings before his time.
- 3. HS5 Explain the significance of Copernicus's theories for our understanding of astronomy.
- **4. HS5** Explain the impact of the ideas of Giordano Bruno on our understanding of the place of humans in the universe.
- 5. HS5 Evaluate the extent to which the work of Andreas Vesalius and Galieo Galilei used a scientific method.

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10.10 The Reformation and Counter-Reformation 10.10.1 Luther challenges the Church

As the name suggests the Reformation began as a series of unrelated attempts to reform the Catholic Church. The people who made these attempts were called Protestants, because they were protesting a specific aspect of the Catholic Church at the time. In particular, Protestants believed in the central place of the Bible in determining Christian **doctrine** and that the Bible should be translated into the **vernacular** language so that everyone could read it. However, as a result of these calls for change, significant and permanent divisions occurred within the Christian Church.

Martin Luther was a German Catholic monk and a professor at the University of Wittenberg. Luther believed that some Church teachings were not supported by the Bible. He disagreed with the Church's practices of selling indulgences (making people pay to have a dead person's soul enter heaven) and

selling positions of authority in the Church. He was also angry that many priests, who had taken vows of **chastity**, lived openly in sexual relationships.

Martin Luther believed that the Bible was the ultimate source of Christian teaching. He translated the Bible from Latin, Hebrew and ancient Greek into German. The project took him many years and the German New Testament was published in 1522. A complete translation was published in 1534. Many copies of the Bible were sold thanks to the recently invented printing press. This made the Bible accessible to many people who had never read it before.

In 1517, Luther nailed his *Ninety-Five Theses* to the door of Wittenberg Cathedral. His arguments included the following ideas:

- Popes, bishops and priests were not superior to other Christians.
- Indulgences were corrupt because only God could decide on punishments for sins.
- Priests should be permitted to marry.
- People were not saved (able to enter heaven) by following Church practices.
- Christians did not need priests to stand between them and God.
- People could achieve salvation only through faith in Jesus Christ.

SOURCE 1 Portrait of Martin Luther painted by his friend Lucas Cranach the Elder in 1529



10.10.2 New forms of Protestantism

Other forms of Protestantism soon appeared. In Switzerland, John Calvin formed a church that replaced bishops and priests with elected ministers and in 1536 Calvin published Institutes of the Christian Religion. Calvinists believed that only some people were chosen tobe saved. Calvinism spread into parts of France, Germany, the Netherlands and Scotland. Among other Protestants were the Anabaptists, who rejected the practice of baptising infants, preferring for individuals to make an informed decision about their faith as an adult. The Church of England was formed initially because the Pope would not grant England's King Henry VIII a divorce. Henry declared that he, not the Pope, was head of the English Church and in 1534 the Church of England became separate to the Roman Catholic Church.

10.10.3 The Counter-Reformation

From the late sixteenth century the Catholic Church attempted to reform itself by stamping out corruption and promoting Catholic beliefs. This movement was called the Counter-Reformation. The Church began this process at the Council of Trent 1545 to 1563. Among Catholicism's most effective defenders was the Society of Jesus (Jesuits). It was formed in 1534 to convert heretics and non-believers. Jesuit priests set up missions, schools and colleges in Africa and Asia. In the New World, they befriended and converted many Native Americans.

SOURCE 2 A woodcut by Jorg Breu, c. 1530, showing the Pope's representatives selling indulgences to Catholic townspeople



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Overview > Protestant Reformation

10.10.4 Wars of religion

Religious uprisings and wars raged across Europe for over a century. In Germany, under the Peace of Augsburg (1555), it was agreed that each ruler had the right to decide the religion of his subjects. However, in 1618, the Thirty Years' War began. It was partly about religion and partly a struggle for power between rival rulers. It spread over much of Europe but was worst in Germany, where a third of the population was wiped out.

SOURCE 3 The Massacre of Saint Bartholomew's Eve in Paris on 24 August 1572. In this incident, Catholic extremists dragged some eight thousand Huguenots (French Protestants) out of their beds and slaughtered them. The slaughter of Protestants continued for several weeks outside Paris.



10.10 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

10.10 Exercise 1: Check your understanding

- 1. **HS1** What is Protestantism?
- 2. HS1 What was the Reformation?
- 3. HS1 Who was Martin Luther?
- 4. HS1 Why did King Henry VIII create the Church of England?
- 5. HS1 What was the Counter-Reformation?
- 6. HS1 How did the Jesuits promote the beliefs of the Catholic Church?
- 7. **HS1** Under the Peace of Augsburg, who had the right to decide what religion people would follow in any state?

10.10 Exercise 2: Apply your understanding

- 1. **HS3** From Luther's *Ninety-Five Theses*, identify one demand that was concerned with corruption and one demand that challenged Church beliefs.
- 2. HS3 What point was Jorg Breu making about indulgences in SOURCE 2?
- 3. HS4 How were the results of the Protestant Reformation different from the intentions of those who started it?

- 4. HS3 Using SOURCE 3 as your evidence, write a paragraph describing one consequence of the Reformation.
- 5. **HS2** Order the events of the Reformation and Counter-Reformation chronologically.

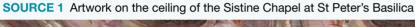
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10.11 Legacies of the Renaissance

10.11.1 Renaissance art and literature

The legacy of the Renaissance is enormous. Its spirit of inquiry encouraged change and a thirst for new knowledge and understanding. It brought in ways of thinking that are essential to the scientific advances that are so much a part of the modern world. The Renaissance era has also given us a wonderful cultural legacy, while the Reformation and Counter-Reformation have shaped relations between the different Christian **denominations** in the world today.

Millions of people visit Italy every year to see the artistic legacies of the Renaissance. In Florence, they visit sites such as the Cathedral of Santa Maria del Fiore, the Uffizi Gallery, which has some of the great works of Renaissance art, and the Accademia Gallery, which holds Michelangelo's magnificent sculpture David. The Vatican in Rome holds many more Renaissance artistic treasures, and there are others scattered around churches, galleries and museums across Italy and throughout the world.





The spirit of the Renaissance combined with the introduction of printing contributed to the rise of literature, which has been with us ever since. Among the most famous of all Italian Renaissance writers was Niccolo Machiavelli (1469–1527). His book *The Prince* described ruthless methods of gaining political power. In modern times, we use the word *Machiavellian* to describe someone who uses ruthless, scheming methods to rise in politics.



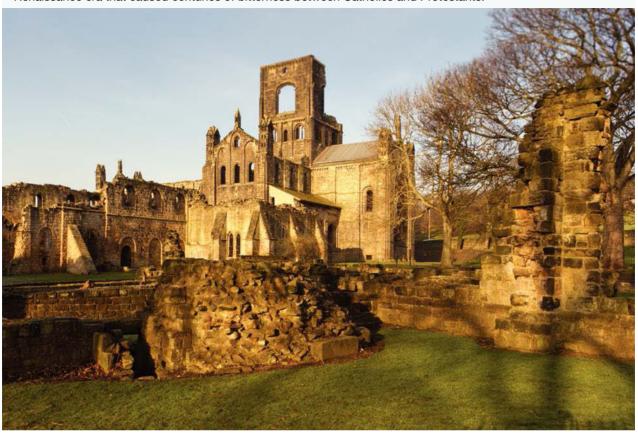
SOURCE 2 The dome of St Peter's Basilica is considered to be a Renaissance cultural treasure.

Even more significant have been the works of the great English Renaissance era playwright William Shakespeare (1564–1616) who produced about 38 plays and over 160 poems. Not since the age of the ancient Greeks had such great steps been taken to explore human behaviour through drama. In his own time, the audiences for performances of Shakespeare's plays included every level of English society. Shakespeare's plays are still widely studied. They have been translated into almost all modern languages and their performances still draw huge audiences throughout the world. This is because they portray human situations and conflicts and pose questions that are still relevant to modern times.

10.11.2 Legacies of the Reformation and Counter-Reformation

The Reformation and Counter-Reformation also encouraged the spread of education and learning. One immediate result was the translation of the Bible into the native languages of each country. Previously, the Bible could be read only by scholars who had studied Latin. The Reformation was followed by centuries of hatred and intolerance between Catholics and Protestants that lasted until the latter part of the twentieth century in some countries. However, since then, people in most Christian countries have become much more tolerant.

SOURCE 3 Ruins of Kirkstall Abbey, near Leeds in England. When King Henry VIII of England broke away from the Catholic Church he closed down the Catholic monasteries. Kirkstall Abbey was closed in 1539. The lands of such monasteries were given to powerful supporters of the king. This was one of many acts during the Renaissance era that caused centuries of bitterness between Catholics and Protestants.



10.11.3 Scientific legacies

Probably the most important of all legacies of the Renaissance era is scientific thinking. In the fifteenth and sixteenth centuries, there was no such profession as science. Scientific studies were not seen as separate from religion, and authorities saw inquiry as a threat to their beliefs and their power. We know today that there is much more to the universe than was discovered by Copernicus or Galileo, and we also know that there is still much remaining to be discovered. However, what these Renaissance thinkers did was to courageously investigate and to develop hypotheses based on observations, calculations and other kinds of evidence. We owe a great debt to those who pushed the boundaries of knowledge, knowing that asking questions could cost them their lives.

DISCUSS

In Renaissance Italy, wealthy individuals such as members of the Medici family, and wealthy institutions such as the Catholic Church, played important roles as patrons of the arts. This meant that they paid artists to produce artwork. Without such support, many great Renaissance artworks would not exist. Hold a class discussion on whether it is still important to support art and, if it is important, who should play such a role today.

[Critical and Creative Thinking Capability]

10.11 ACTIVITIES

- 1. The Renaissance was a time of new ideas and change.
 - (a) List the positive and negative consequences of the Renaissance. (Consider the changes that caused conflict as well as the changes that were celebrated.)
 - (b) Review your list with a partner. Are there any consequences that you put into different columns? Discuss your reasons for doing this.
 - (c) Would you change your list after your discussion with your partner? Why or why not?
 - (d) Having considered your list, decide if you think the consequences of the Renaissance were mainly positive or mainly negative. Justify your position with reasons.
 - (e) Review your list and decide which single consequence you think is the most important. Provide a reason for your opinion.

 Determining historical significance
- 2. Draw up three columns in your workbook.
 - (a) In the first column, make a list of legacies of the Renaissance era.
 - (b) In the middle column, give one example of each type of legacy. You may need to look back at previous subtopics for more information.
 - (c) In the third column, rank these legacies in the order in which you think they have had the most impact on the modern world.
 - (d) Share your list with the class and justify your rankings.

Determining historical significance

10.11 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

10.11 Exercise 1: Check your understanding

- 1. **HS1** Write a list of the legacies of the Renaissance.
- 2. HS1 Where might you go to see examples of Renaissance art?
- 3. **HS1** How is the term *Machiavellian* used today?
- **4. HS6** The plays of William Shakespeare continue to be read and performed. Why do they appeal to modern audiences?
- 5. **HS1** How did the Reformation change who could read the Bible?
- 6. HS6 How did the discoveries of Copernicus and Galileo change the way we think about the universe?
- 7. **HS1** Explain what is meant by the term 'scientific thinking'.

10.11 Exercise 2: Apply your understanding

- 1. HS3 Explain what SOURCES 1 and 2 can show us about the ideas, values and skills of Renaissance artists and architects.
- 2. **HS3** Examine **SOURCE 3**. Suggest how the lives of the people living nearby may have been affected by the destruction of the monastery.
- 3. **HS4** The Renaissance saw conflict between science and religion. Do you think there is still such a conflict today or can a person now be both scientific and religious?
- **4. HS5** Identify and explain the causes of the conflict between Catholics and Protestants during the Reformation and Counter-Reformation.
- 5. HS6 In your opinion, which scientific discovery of the Renaissance is most significant? Justify your position with a reason.

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10.12 SkillBuilder: Evaluating historical significance



Why do historians evaluate the significance of events, ideas, achievements or people?

Historians try to determine which events, ideas, achievements or people have the most impact. Asking questions about the impact of an individual, development or cultural achievement helps us to assess its significance in bringing about change.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.



10.13 Thinking Big research project: Renaissance online magazine

SCENARIO

You will create an attention-grabbing online magazine that provides details about the exciting changes of the Renaissance period to inform and delight the educated and refined readers of the time.

Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.







Resources



projectsPLUS Thinking Big research project: Renaissance online magazine (pro-0166)

10.14 Review



10.14.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

10.14.2 Reflection

Reflect on your learning using the activities and resources provided.



eWorkbook Reflection (doc-31338)

Crossword (doc-31339)

Interactivity Renaissance Italy crossword (int-7592)

KEY TERMS

anatomical drawings drawings showing the workings of organs and systems of the body

anatomy the scientific study of the structure of the body

arsenalotti craftsmen who built ships in Venice

chastity choosing not to have sexual relationships

denomination a religious group, especially an established church

doctrine a collective teaching

dowry a payment of money or goods as part of a marriage agreement

fresco a picture painted on a freshly plastered wall or ceiling

friar a member of a Catholic order who was supposed to live in poverty

guild an association of people engaged in a particular trade or craft for the mutual benefit of its members

hereditary passed from parent to a child

heretic a Christian who holds views that conflict with official Church teachings

merchant a person who buys and sells goods for profit

patron a person or institution who pays for a work to be created

philosophy the study of the principles underlying all knowledge

recant to take back a former opinion, usually with a confession that you were wrong

republic a state in which the head of the government is not a ruler who inherits his position as might a king or emperor

Roman Inquisition a system of tribunals set up by the Catholic Church during the sixteenth century to censor literature and prosecute people accused of heresy and other crimes

vernacular everyday language spoken by a particular group or class

10.12 SkillBuilder: Evaluating historical significance

How do we know about the developments of the Renaissance?

We have a great range of primary sources that provide evidence for the developments that occurred during the Renaissance. Many significant developments of the era occurred in the areas of religion, politics, art, literature, architecture and trade. In this subtopic we will focus on how understanding of the solar system developed as part of the scientific revolution that was such an important part of the Renaissance.

How do we evaluate historical significance?

Of all the thousands of events that happen in our lifetime, how do we determine the ones that are significant? For most of us the events that lead to a positive change are remembered as important. Historians face similar questions when they try to determine which events, ideas, achievement or people have the most impact on history. Asking questions about the impact of an individual, development or cultural achievement can help us to assess its significance in bringing about change. To do this, we must first understand the idea or achievement. When we are trying to evaluate the historical significance of a development it is important to consider:

- 1. Who created the source we are analysing and when was it created?
- 2. What is the key idea?
- 3. Who was affected by the idea?
- 4. Did the idea lead to any change?
- 5. What was the scale of the change (was it a big change or a small one)?
- 6. Who was affected by the change?
- 7. Which areas of society were affected by the change?
- 8. Did the change lead to other changes?

10.12.2 Show me

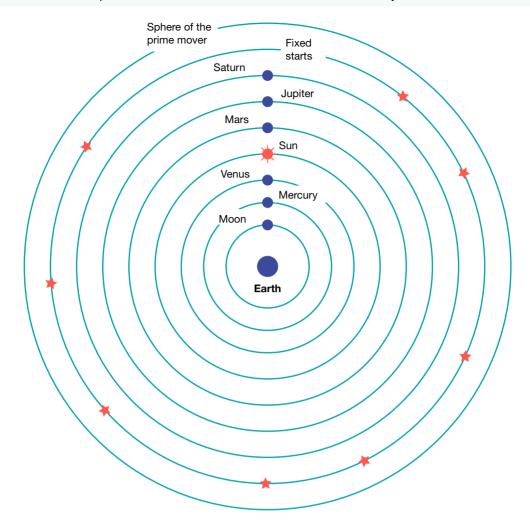
The view of the universe shown in **SOURCES 1** and **2** was developed by Aristotle (384–322 BCE), an ancient Greek thinker, and changed only slightly by Ptolemy, another Greek, in the second century CE.

Aristotle's view was taught in universities in Christian Europe from the twelfth century CE. During the Renaissance era, the Catholic Church still maintained that Aristotle's explanation was unquestionably true. Aristotle held that Earth stood still at the centre of the universe. Water, air and fire were shells around the sphere of Earth. Heavenly bodies were believed to be spheres of an element called *aether*, and they were supposed to rotate in perfect circles around Earth in the following order: Moon, Mercury, Venus, Sun, Mars, Jupiter, Saturn, fixed stars and a 'prime mover' (*Primu Mobile* in **SOURCE 1**). It was believed that beyond this system there was no wider universe.

SOURCE 1 The structure of the universe as theorised by Aristotle



SOURCE 2 An artistic impression of the structure of the universe as theorised by Aristotle



Study **SOURCE 1**. The questions for evaluating historical significance have been applied to this source.

- 1. Who created the source and when was it created? The source was created by Aristotle, an ancient Greek, in the fourth century BCE.
- 2. What is the key idea? The source explains the order of the solar system, with Earth at the centre.
- 3. Who was affected by the idea? The Catholic Church adopted this explanation of the universe and upheld it as the official explanation throughout Western Europe.
- 4. *Did the idea lead to any change?* The explanation of the solar system expressed in **SOURCE 1** was upheld for approximately 2000 years.
- 5. What was the scale of the change? (Was it a big change or a small one?) There were very few changes to this explanation until Nicolas Copernicus published his model in 1507.
- 6. Who was affected by the change? Because this explanation was sanctioned by the Catholic Church, it affected the general population.
- 7. Which areas of society were affected by the change? As the official view of the Catholic Church, Aristotle's explanation of the solar system influenced attitudes to science and heaven.
- 8. *Did the change lead to other changes?* Aristotle's explanation of the solar system did not lead to changes in the Renaissance.

10.12.3 Let me do it

Complete the following activities to practise this skill.

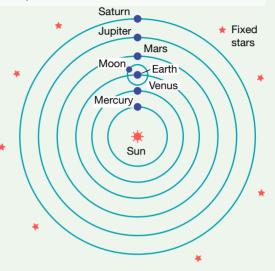
10.12 ACTIVITIES

1. Study SOURCES 3 and 4.

SOURCE 3 This alternative view of the universe was presented by the Polish astronomer and mathematician Nicolaus Copernicus.

SSECTION SAME AND ANY Production STATE AND PRODUCTION OF THE PRODU

SOURCE 4 An artistic impression of the structure of the universe as theorised by Copernicus



This alternative view of the universe was presented by the Polish astronomer and mathematician Nicolaus Copernicus (see section 10.9.1). From about 1507, Copernicus's calculations convinced him that the Earth rotated on its own axis and that it rotated around the Sun, which was the real centre of the universe. He spent much of the next thirty or more years working on this theory but he delayed publishing his ideas because he feared that the Church would call him a heretic. The theory was finally presented in his book *The Revolution of the Heavenly Bodies*, which was published in 1543 as he was dying. Like other scholarly books of the time, it was written and printed in Latin. In Copernicus's diagram, *sol* means Sun and *terra* means Earth.

Use the eight questions to analyse the historical significance of **SOURCE 3**.

- (a) Who created the source we are analysing and when was it created?
- (b) What is the key idea?
- (c) Who was affected by the idea?
- (d) Did the idea lead to any change?
- (e) What was the scale of the change? (Was it a big change or a small one?)
- (f) Who was affected by the change?
- (g) Which areas of society were affected by the change?
- (h) Did the change lead to other changes?
- 2. Apply your analysis of **SOURCE 3** and the **SOURCE 1** from the Show me section to answer the following questions.
 - (a) Explain the difference between Aristotle's theory and Copernicus's theory of the location of Earth within the solar system.
 - (b) Explain the difference between Aristotle's theory and Copernicus's theory of the movement of the planets. In your answer refer specifically to the movement of the Sun and Earth.
 - (c) The Catholic Church rejected Copernicus's findings and charged Galileo with heresy when he wrote in support of Copernicus's theory. Suggest reasons why the ideas of Copernicus and Galileo were rejected by the Church.

10.13 Thinking Big research project: Renaissance online magazine

Scenario

The Renaissance in Italy was a period that saw many notable changes. These included scientific discoveries, new directions in learning, new attitudes to religion, and developments in art and architecture. People were excited by these advances and proud to live in a time of such change. Many families were newly wealthy and keen to show that they were abreast of the trends.



Task

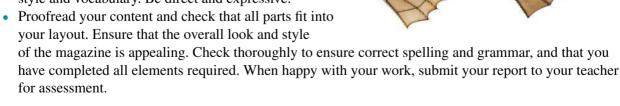
Using the information in this topic as a starting point as well as additional research, your task is to work with your group of two to four students to create an online magazine targeted at people of the Renaissance in Italy. Focus your research on interesting facts about life in the Renaissance and significant changes of the period. Remember that your task is to create a magazine that grabs people's attention and makes them want to read your publication. Your readers are educated and refined clientele.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in groups of four will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the Media centre you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Consider the style and look of your magazine. In your group discuss the following:
 - a name for your publication
 - the layout, leaving space for two features articles, reader comments, advertisements, breaking news and interesting facts
 - the graphics of your magazine.
- Your magazine should have two feature articles. The articles should be between 200 and 300 words. Your language should be engaging, and you are encouraged to focus on the significant changes and developments of the time. It is essential that your factual information is historically accurate. Include a discussion describing one invention or theory of the Renaissance. Provide an evaluation of the invention or theory for your readers. Do you consider the invention or theory to be positive or negative? Explain your reasons.
- Include a review of new piece of art and architectural building. Outline the reaction of the reviewer to the piece.
- In addition to the text you should also include:
 - headlines for each article
 - a by-line for your main article
 - images that will support your articles and engage your readers.
- Magazines include more than just articles. Have a look at some magazines online and select some additional content to interest your readers. Here are some suggestions for you:
 - social comments relating to interesting and/or famous people – what have they been doing and are they wearing new fashions?
 - short interesting facts or 'Breaking News' updates
 - advertisements from Renaissance businesses
 - comments from readers on your articles.
- Write your content. Think carefully about your writing style and vocabulary. Be direct and expressive.
- your layout. Ensure that the overall look and style





Resources

ProjectsPLUS Renaissance online magazine (pro-0166)

10.14 Review

10.14.1 Key knowledge summary

10.2 Examining the evidence

- During the Renaissance there was renewed interest in the ideas and art of ancient Greece and Rome.
- Study and innovation gave rise to new cultural expression and intellectual pursuits.
- A large range of primary sources survive from the Renaissance.

10.3 The origins of the Renaissance

- City-states became important centres, which encouraged the changes of the Renaissance.
- New industries made a new group of men wealthy.
- Wealthy individuals and groups commissioned art, architecture, literature and music.

10.4 Florence: the cradle of the Renaissance

- During the Renaissance, Florence grew into a large urban centre, with a variety of profitable industries.
- Lifestyles and experiences varied between social groups.
- Florence was governed by members of the guilds.
- Wealthy merchant families, including the Medici family, were able to manipulate the government system and exercise considerable political power.

10.5 Venice: the serene republic

- Venice became a strong naval power and centre of trade during the Renaissance.
- Advances in ship-building techniques made the Venetian industry very efficient.
- Venice was a republic until 1797, when Napoleon invaded.

10.6 Renaissance society

- During the Renaissance, family provided guidance, advice and connections.
- Social networks were important for conducting business, developing friendships and asking for favours.
- The Church played an important role in people's lives, marking important occasions like marriage and baptism, as well as holding feasts and festivals.
- Marriages tended to be arranged between families, rather than between individuals.

10.7 Artistic stars of the Renaissance

- Religious scenes continued to be popular, however, new subject matter appeared in art and sculpture.
- Artists introduced new techniques, including linear perspective that showed depth more realistically.
- New techniques and styles were introduced in architecture, including the introduction of columns and arches.

10.8 The spread of the Renaissance

- From the mid-fifteenth century the ideas of the Renaissance spread from Italy to Europe.
- The printing press meant that books were more widely available.
- The movement of artists, scholars and humanists spread ideas throughout Europe.
- In the early sixteenth century English culture flourished.

10.9 A scientific revolution

- During the Renaissance, students studied a broad curriculum, including poetry, music, mathematics, rhetoric and science.
- Many scientific discoveries were made during the Renaissance in areas of astronomy, medicine, biology and mathematics among others, including the Copernicus' model of the solar system and the observations of Galileo using a telescope.

10.10 The Reformation and Counter-Reformation

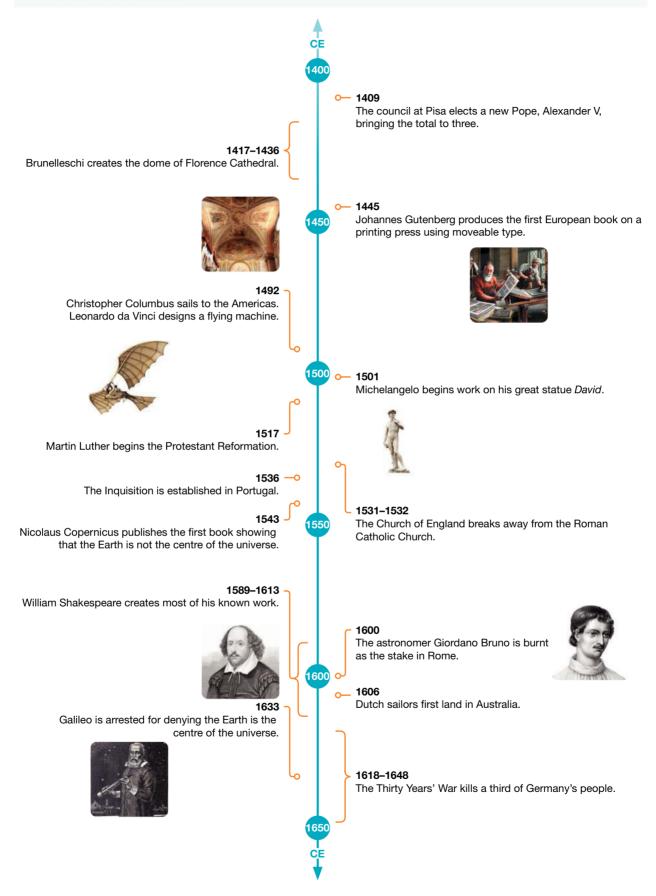
- The Reformation began as a series of unrelated attempts to reform the Catholic Church.
- One important reformer was Martin Luther, who translated the Bible from Hebrew and ancient Greek
 to local languages, making the Bible accessible to many people who had not been able to read
 it before.
- In Switzerland, John Calvin formed a church with elected ministers instead of priests and bishops.
- In England, King Henry VIII created the Church of England and replaced the Pope as its head.
- In response to the Reformation, the Catholic Church experienced its own period of reform, which is called the Counter-Reformation.

10.11 Legacies of the Renaissance

- The Renaissance gave the world an enormous cultural legacy of art, sculpture, architecture, poetry and literature.
- The spirit of intellectual inquiry in humanism influenced new generations to study and create.
- The advances in the fields of science and mathematics contributed to modern society.
- The Reformation created several new Christian denominations that exist today.
- The Bible was translated into local languages and large numbers were printed on printing presses.



A timeline of the Renaissance



10.14.2 Reflection

Complete the following to reflect on your learning.

10.14 ACTIVITIES

Revisit the inquiry question posed in the Overview:

How did ancient ideas spark the Renaissance in Italy and what changes did it bring to the world?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



eWo

eWorkbook Reflection (doc-31338)

Crossword (doc-31339)

*

Interactivity Renaissance Italy crossword (int-7592)

KEY TERMS

anatomical drawings drawings showing the workings of organs and systems of the body

anatomy the scientific study of the structure of the body

arsenalotti craftsmen who built ships in Venice

chastity choosing not to have sexual relationships

denomination a religious group, especially an established church

doctrine a collective teaching

dowry a payment of money or goods as part of a marriage agreement

fresco a picture painted on a freshly plastered wall or ceiling

friar a member of a Catholic order who was supposed to live in poverty

guild an association of people engaged in a particular trade or craft for the mutual benefit of its members

hereditary passed from parent to a child

heretic a Christian who holds views that conflict with official Church teachings

merchant a person who buys and sells goods for profit

patron a person or institution who pays for a work to be created

philosophy the study of the principles underlying all knowledge

recant to take back a former opinion, usually with a confession that you were wrong

republic a state in which the head of the government is not a ruler who inherits his position as might a king or emperor

Roman Inquisition a system of tribunals set up by the Catholic Church during the sixteenth century to censor literature and prosecute people accused of heresy and other crimes

vernacular everyday language spoken by a particular group or class

11 The Spanish conquest of the Americas (c. 1492–1572)

11.1 Overview

Exploration, conquest and colonisation. How did Spanish expansion lead to the end of a civilisation?

11.1.1 Links with our times

Each year in October, much of the United States observes the holiday of Columbus Day, in recognition of the explorer who became synonymous with the discovery of the Americas. However, over the last century more and more people have begun to question whether Columbus Day is an appropriate celebration, given the subsequent effect European exploration had on the American continents and peoples.

The three largest and most powerful civilisations were the Inca, Maya and Aztec empires. The Inca people lived on the western side of South America, in the region that is now Chile and Peru. The Maya lived in eastern present-day Mexico, on what is called the Yucatan Peninsula, and bordering them to the west were the Aztecs. The two civilisations of the Aztecs and Maya make up the region known as Mesoamerica, a region of spectacular temples, architecture and a proud heritage. This topic focuses on how the Spanish conquest affected the Aztec civilisation.



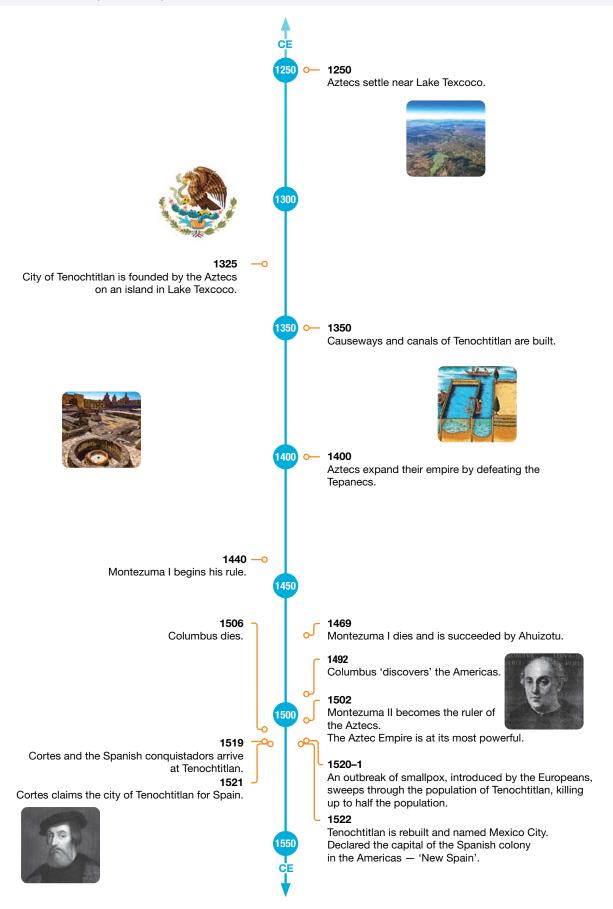
LEARNING SEQUENCE

- 11.1 Overview
- 11.2 Examining the evidence
- 11.3 The Aztecs before Spanish arrival
- 11.4 Columbus and the New World
- 11.5 Cortes, the conquistadors and the Aztecs
- 11.6 New Spain
- 11.7 Slavery in the New World
- 11.8 The impact and legacy of colonisation
- 11.9 SkillBuilder: Evaluating roles and achievements
- 11.10 Thinking Big research project: Spanish conquest exhibition

11.11 Review



To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.



11.2 Examining the evidence

11.2.1 How do we know about the Spanish conquest of the Americas?

After the conquest of the Americas, the Spanish recorded the events that took place. However, as these accounts were almost always written by the Spanish themselves, they were very **subjective**. This means they told only one side of the story. As with any historical investigation, it is important for historians to consider a range of sources from all sides to gain a clearer understanding of the truth. The SkillBuilder for this topic will investigate the importance of understanding different historical perspectives in more depth.

11.2.2 European sources

It has been said that 'history is written by the winners'. This is certainly the case with the Spanish conquest of the Americas. Both during and after the period of the conquest, many of the **conquistadors** maintained detailed accounts of their experiences. They were eager for their actions to be remembered. Hernan Cortes, who led the Spanish against the Aztecs, wrote many letters to King Charles V of Spain, providing a valuable eyewitness account of the events. However, these letters tended to glorify Cortes's victories and downplay his failures.

There were some Spaniards whose first-hand accounts of the time have been recognised as highly important and less biased. For example, Bernardino de Sahagun was a missionary who travelled to the New World in 1529, about seven years after the conquest of the Aztecs. He would remain there for the rest of his life, and from 1545 he worked to compile a series of texts that would become known as the Florentine Codex. The original was written in the Aztec language of Nahuatl. De Sahagun learned to speak Nahuatl and could communicate with many surviving Aztec wise men. The Florentine Codex provides a remarkable history and description of the Aztec civilisation prior to the Spanish arrival.

Another useful source is the writing of Bartolome de las Casas. He was a Spanish priest who settled in the New World and was appalled at the treatment of the Native Americans by the Spanish colonists. He wrote to King Charles V of Spain defending the rights of the indigenous peoples. It is important to remember though, that no matter how sympathetic to the Aztec people these sources are, they are subjective because they were written by the European settlers and therefore from a European perspective.

SOURCE 1 Letters such as this one, written on behalf of King Charles V of Spain to authorise one of the many expeditions undertaken by the Spanish conquistadors, are an important source of information for historians.



11.2.3 Aztec sources

There are very few surviving written Aztec sources from before the conquest because many of them were destroyed by the Spanish, either intentionally or during the fighting for Tenochtitlan. Most of the sources that were created after the conquest can be useful to historians, but it is important to remember they were created under the supervision of the Spanish. This means that surviving Aztec sources may still suffer from Spanish subjectivity. In the following decades, some descendants of those who experienced the conquest began to record the events from an Aztec point of view.

SOURCE 2 A scene from an Aztec codex showing ritual human sacrifice. Such practices were part of Aztec religion.



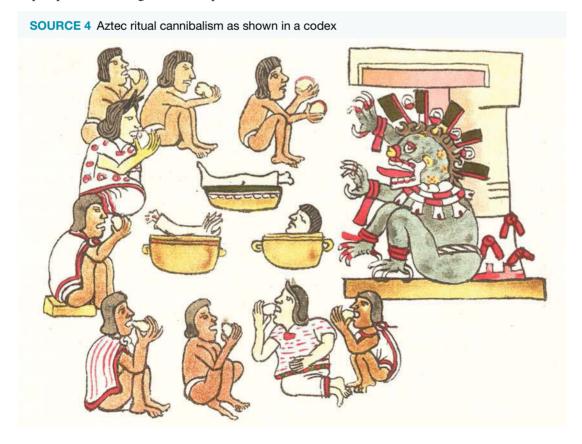
SOURCE 3 Images of skulls on the wall of an Aztec temple



11.2.4 How reliable are the sources?

All historical sources are subjective to a certain extent. This means that the authors of the sources are influenced by their own personal beliefs and feelings, rather than purely by the facts. An example of this would be the different attitudes the Spanish and Aztecs had toward human sacrifice. The Aztecs believed that their gods remained strong only through offerings of blood and human hearts, and so human sacrifice was one of the core aspects of their religion. On the other hand, the Spanish felt that the act of human sacrifice was barbaric and demonstrated the inferiority of the Aztec people compared with Europeans.

Of course, the long-term actions of the Spanish in the Americas have come to be seen as questionable and destructive by a number of historians. You will have an opportunity to investigate different points of view and perspectives throughout this topic.



11.2 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

11.2 Exercise 1: Check your understanding

- 1. HS1 Explain why the perspectives of the Spanish missionaries might differ from those of the conquistadors.
- 2. HS3 Why are there differences between Cortes's and de Sahagun's accounts of the Spanish conquistadors? How could each source be useful to historians, despite their differences?
- 3. HS5 Explain how the recording of events in the Aztec world changed after the arrival of the Spanish.
- 4. HS3 Do you think the arrival of the Spanish changes the reliability of sources that depict or record the Spanish conquest? Explain your thoughts.
- 5. **HS3** Explain why all historical sources are subjective to some degree.

11.2 Exercise 2: Apply your understanding

- 1. HS3 In what way are sources like the letter in SOURCE 1 useful for historians studying the Spanish conquest of the Aztecs?
- 2. HS3 How do you think images like those in SOURCES 2 and 4 might have affected the way the Spanish conquistadors viewed the Aztecs? Explain your answer.
- 3. HS3 Most historians would agree that historical sources that are subjective can still be valuable when finding out about the past. Why do you think this is the case?
- 4. HS6 Why might historical sources be destroyed intentionally?
- 5. HS3 What strategies could be used to minimise the effect of subjectivity when studying particular sources?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

11.3 The Aztecs before Spanish arrival

11.3.1 Everyday life in Tenochtitlan

For more than three hundred years prior to the arrival of the Spanish conquistadors, the region that is now central and southern Mexico was dominated by the Aztecs. The structure of Aztec civilisation and culture was complex and highly organised with sophisticated architecture and well-developed agriculture.

The Aztec people arrived in what is now Mexico in the late 1100s. By 1250, they had settled near the shores of Lake Texcoco, and by 1325 they had begun building the magnificent city of Tenochtitlan.

The city of Tenochtitlan, one of the best planned and most elaborate cities anywhere in the world at the time, was built in the middle of Lake Texcoco on five swampy islands. Three long causeways connected the city to land around the lake's edge. The city itself had a network of both canals and roads so that all sections could be accessed either on foot or by canoe.

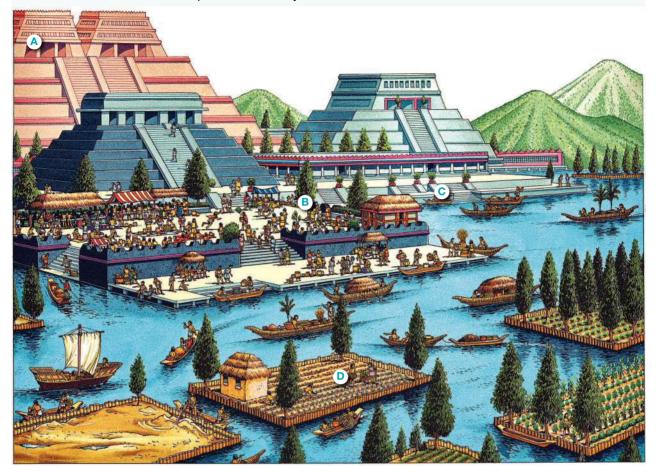
School

The Aztecs were a highly organised society. They led rewarding lives, particularly the noble classes. Young boys went to school to learn to live prudently, govern, and understand history and the ways of the elders. Girls were mainly taught at home. At 15 years old, boys could attend one of two types of school: children of the nobility went to the calmecac, which had a focus on advanced learning, administrative skills and religion, or commoners went to the telpochcalli, which was basically a military school. However, all boys learned some fighting skills, regardless of the direction their working life took.

Food

There were generally two main meals a day, with one meal being eaten during the hottest part of the day. A staple of Aztec diet was maize but this was supplemented with a large variety of meat and vegetables. The Aztecs are famous for introducing the world to chocolate; however, this was reserved for warriors and nobility, and was mixed with ground maize to make a drink. Alcohol came in the form of a drink called octli. The sap from the maguey plant was fermented but, like chocolate, this was a drink strictly for nobles, royalty and warriors, with commoners being permitted to drink it only on special occasions.

SOURCE 1 A modern artist's impression of the city of Tenochtitlan



- (A) The Aztec step pyramids dominated the skyline of Tenochtitlan. When it was decided that a larger pyramid was needed to honour the gods, the Aztecs would simply build on top of the existing pyramid.
- B The streets of Tenochtitlan were free from vehicles. Although they had knowledge of the wheel, it was applied to little more than children's toys. Large-scale transport was impractical because there were no pack animals that could pull carts or wagons.
- The canals of Tenochtitlan were the highways of the city, with boats being the primary form of transport.
- The chinampas, or 'floating islands', were used for growing crops.

Crime and punishment

By today's standards, Aztecs had incredibly harsh punishments for most crimes. For example, if a commoner was found wearing cotton clothes, the punishment was death. Likewise, a death sentence was possible if someone was found guilty of adultery or even cutting down a living tree. The accused would be sentenced by a group of judges in a way that is not so different from Australia's justice system today. Although the punishments seem harsh from our modern-day perspective, it is important to remember that Europeans from that period would not have been as shocked because punishments were equally harsh in Europe at that time.

11.3.2 Aztec warfare

Life in the Aztec Empire was not peaceful; in fact, the Aztecs were in a state of perpetual war with the Tlaxcala people who also lived in the region that is now Mexico. The Aztec army was broadly organised into two layers. One was made up of commoners who were trained in basic fighting skills. The other consisted of the professional warrior class. Among the bravest and most skilled of these were the eagle and jaguar warriors, so named because of the distinguishing and fearful uniforms they wore. In the average

battle, there were fewer casualties than compared with European battles because prisoners were highly valued as slaves or victims for human sacrifice. Most soldiers would try to disable rather than kill their opponent. This technique was used by the Tlaxcalans and other enemies, and it is likely that the Tlaxcalans used Aztec prisoners for human sacrifice just as the Aztecs did with Tlaxcalans.

army. On the right, Spanish conquistadors are visible.

SOURCE 2 An illustration from an Aztec codex showing jaguar warriors, who were the elite soldiers in the Aztec army. On the right. Spanish conquistadors are visible.

-Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

• Expanding contacts > Aztecs

11.3.3 Mythology and religion

Religion played a very important role in the lives of the Aztecs. They were a polytheistic culture, meaning they worshipped more than one god. In fact, they worshipped many hundreds of gods. They had wideranging religious beliefs, including some that were similar to those of Europeans at the time. They believed the Earth was flat and the Sun fought darkness every night so it could rise each morning. The importance of religion to the Aztecs was expressed in their art and architecture, with enormous and elaborate temples built to worship the hundreds of gods that ruled over different aspects of nature and human activity.

SOURCE 3 Some of the most important Aztec gods



- A Mictlantecuhtli god of the dead
- B Quetzalcoatl god of knowledge, creation, priesthood and wind
- Tlaloc god of rain
- Huitzilopochtli god of war, sun and the nation
- E Xipe Totec god of spring, new life and suffering

Central to Aztec religion was the belief in human sacrifice to please the gods. As many as twenty thousand people a year were sacrificed to the gods at a temple built specifically for that purpose. Most of those sacrificed were slaves or prisoners captured in wars with surrounding cities. The ritual involved priests stretching the subject over an altar and then lighting a fire on the victim's heart. The priest then tore out the heart and placed it in a sacred dish before the bodies were rolled down the steps of the temple to lie in a heap. Many Aztecs believed that dying this way would ensure a quick passage to heaven. Like many other civilisations, the Aztecs believed in the afterlife. They believed that the key to reaching the afterlife quickly was in the way they died rather than the way they lived. Someone who died quietly of old age would have to pass through the underworld before reaching the realm of the dead. But a warrior who died in battle or a mother who died in childbirth would go straight to heaven.

SOURCE 4 A gold pendant representing Mictlantecuhtli



11.3.4 Agriculture

Built in the middle of a lake, Tenochtitlan did not have easy access to any farmland, so the Aztecs had to use a special method to grow crops. This method involved using chinampas or 'floating gardens', although this second name is misleading. Chinampas were small man-made islands used for crops. An area of shallow lake bed was fenced off and gradually filled with mud, sediment and decaying vegetation until it rose above the water level. This provided a very fertile bed in which to plant a range of crops. This technique is still occasionally used today in some areas of Mexico.

SOURCE 5 A modern-day chinampa in use in Mexico



SOURCE 6 An illustration showing the cross-section of chinampas. Each is at a different stage of development.



11.3 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

11.3 Exercise 1: Check your understanding

- 1. **HS1** In your own words, describe the city of Tenochtitlan.
- 2. HS1 What were some key differences between the diet of the nobility and that of the commoners?
- 3. HS1 Why might the Aztecs' common use of the death penalty not have shocked the Spanish?

- 4. HS1 Do you think the Tlaxcalan people would have been likely or unlikely to help the Spanish conquer the Aztecs?
- 5. **HS1** What do you think they would gain from helping the Spanish?
- 6. HS1 Outline the key aspects of Aztec religion.
- 7. HS1 How accurate is the term 'floating island' when describing a chinampa? Why?
- 8. HS4 Explain why chinampas are still used in parts of Mexico today.

11.3 Exercise 2: Apply your understanding

- 1. HS3 Explain why Aztec warriors sometimes dressed as certain animals, as shown in SOURCE 2. What effect do you think this would have had on their enemies in battle?
- 2. HS3 How does SOURCE 4 support the argument that religion was important to the Aztecs?
- 3. HS3 Analyse SOURCE 3. Identify features of the illustrations that could help you identify the different gods if there were no labels.
- **4. HS3** Using **SOURCE 3** as a reference, look back to subtopic 11.2 and examine **SOURCE 4**. Can you identify which god is represented in the image? Justify your decision.
- 5. HS3 Compare and contrast SOURCES 4 and 6 with reference to the image they portray of Aztec culture.
 - (a) If you referred to only one image, how accurate and reliable do you think your impression of the Aztecs would be?
 - (b) Using your responses to part (a), explain the importance for students of history to refer to a number of different sources.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

11.4 Columbus and the New World

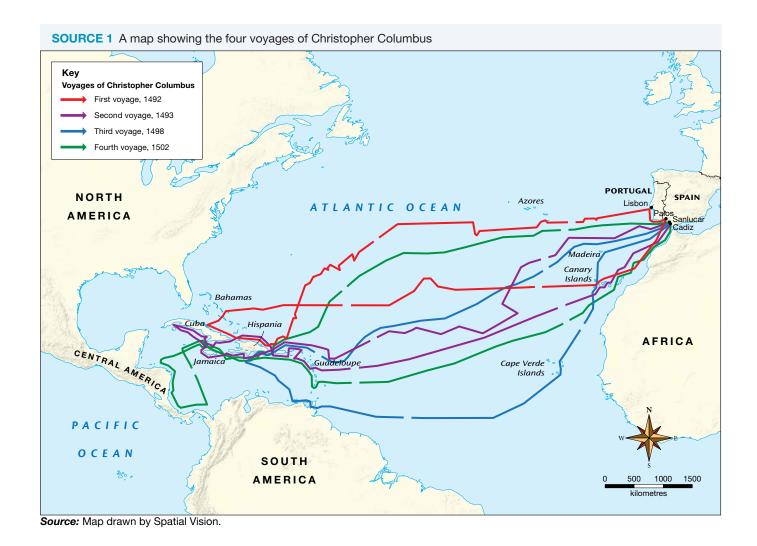
11.4.1 Columbus's voyages

The fifteenth and sixteenth centuries were a time of exploration and discovery for Europeans. The great sea-going powers of the time, Portugal and Spain, made important discoveries and opened up sea routes for trade and colonisation. But it was a young Italian who would end up having arguably the greatest impact of any European explorer.

Just like many other explorers of his time, Christopher Columbus set off with the aim of finding a sea route to the Indies (regions around South Asia and South-East Asia) so that spices could be found and trading routes established. But unlike the Portuguese explorers Bartholomew Diaz and Vasco da Gama, who sailed south around the tip of Africa, Columbus sailed west from Portugal, convinced that this would lead him to the 'Far East' or the Indies. Unable to find financial support from the king of Portugal, Columbus turned to Portugal's rivals, the king and queen of Spain, Ferdinand and Isabella. He convinced them that the voyage would bring them wealth and also help to convert the people of the Indies to Christianity.

He departed Spain on 3 August 1492, secure in his belief that his next landfall would be Asia. His fleet consisted of three ships: the *Pinta* and the *Niña*, both caravels (ships that were light and easy to manoeuvre), and his flagship the *Santa Maria*, a nao (a larger, heavier ship). Unfortunately Columbus had inaccurate knowledge of the distances involved and was completely unaware, as most Europeans were, that the continents of America blocked his path. After eight weeks his crew were becoming afraid that they would never see land again and begged Columbus to turn around. But when he sighted branches in the water he was sure that land was near. Finally, after more than two months at sea, he set foot on land on 12 October 1492, naming the island San Salvador (modern-day Bahamas). He assumed he was in the Indies and so referred to the inhabitants as Indians.

Columbus continued to explore the region, 'discovering' the islands of Hispaniola (modern-day Haiti and the Dominican Republic) and Cuba. Although he suspected he wasn't actually in China or India, Columbus thought that he couldn't be far away. He arrived back in Spain in March 1493 and was made Admiral of the Ocean Sea as well as governor of the Indies. Queen Isabella requested that the Pope recognise Spain as the owner of the newly discovered land and this was granted that same year.



SOURCE 2 Columbus taking possession of the New World for Spain. This artwork was created in 1862, more than 300 years after the event it shows.



Over the following ten years, Columbus undertook three more voyages to the New World. He discovered Guadeloupe on his second voyage. He found the Venezuelan coast on his third voyage in 1498, which was the first time he actually set foot on the mainland of the Americas. While in Hispaniola, he served briefly as colonial administrator but failed so dismally that he was sent home in irons. The Spanish king and queen restored Columbus to favour and in 1502 he set sail for what would be his last great voyage, this time exploring the southern coast of the Gulf of Mexico.

Columbus died in 1506, two years after his return to Spain from his final expedition. He died still convinced that his voyages had been along the eastern coasts of Asia.

11.4.2 Who 'discovered' America?

For centuries, it was generally accepted that Columbus discovered America when he sighted land in 1492. However, historians today regard this as inaccurate. Although Columbus was the first person to spread knowledge of the New World through Western Europe, the Viking explorer Leif Eriksson likely sailed from Scandinavia to North America almost five centuries before Columbus's voyage; however, the details of his expedition remain largely unknown. And, of course, Native Americans had inhabited North America for thousands of years before Columbus's arrival.

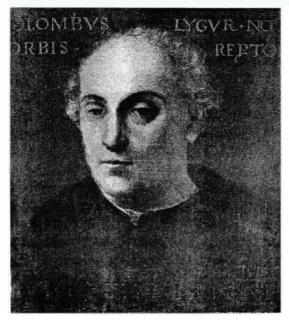
11.4.3 How did Columbus's arrival affect the Native Americans?

On 12 October each year, many Americans celebrate Columbus Day in memory of Columbus's first landing on the island of Hispaniola. Many regard this as a very important date, as it led to the eventual establishment of the United States. But for Native Americans it often has the opposite meaning. It is seen as the beginning of a time of genocide, slavery and the extinguishing of much of the Americas' indigenous culture.



422 Jacaranda Humanities Alive 8 Victorian Curriculum Second Edition

SOURCE 4 Two very different portraits, both supposedly depicting Columbus. The left image, published in the nineteenth century, is based on a sixteenth-century portrait. The image on the right is also a sixteenth-century painting.





DID YOU KNOW?

Despite his obvious importance to world history, nobody really knows what Columbus looked like. There have been hundreds of different portraits, but even the experts can't find enough evidence to prove whether any are accurate representations.

SOURCE 5 Excerpts from Columbus's journal, 1492

Thursday, 20 September. Saw a pelican coming from west-northwest and flying to the southwest; an evidence of land to the westward, as these birds sleep on shore, and go to sea in the morning in search of food.

Saturday, 22 September. My crew had grown much alarmed, dreading that they should never meet . . . with a fair wind to return to Spain.

Thursday, 11 October. The crew of the Niña saw a . . . stalk loaded with rose berries [in the ocean] . . . and they all grew cheerful.

[Friday, 12 October.] I saw some [natives] with scars of wounds upon their bodies . . . they answered . . . that there came people from the other islands in the neighbourhood who endeavoured to make prisoners of them, and they defended themselves. I thought then, and still believe, that these [other people] were from the continent.

11.4 ACTIVITIES

- 1. Create a timeline showing the voyages of Columbus. Label each voyage with a paragraph outlining the main Sequencing chronology discoveries.
- 2. Divide into small groups and agree on a definition of 'discover'. Using that definition, evaluate the significance of each of the following in the discovery of the Americas:
 - (a) Native Americans
 - (b) Leif Eriksson (see topic 3)
 - (c) Christopher Columbus.

Determining historical significance

3. How difficult was it to come to a definite conclusion in question 2? Explain how all three could be said to have contributed in different ways. **Determining historical significance**

11.4 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

11.4 Exercise 1: Check your understanding

- 1. HS1 Which two European countries were the major sea powers of Columbus's time?
- 2. **HS1** What were the names of Columbus's three ships on his first voyage? How did his flagship differ from the other two vessels?
- 3. HS1 Which explorers had previously sailed around the southern tip of Africa?
- 4. HS1 Why did Columbus call the inhabitants of the lands he discovered 'Indians'?
- 5. HS1 How many days did it take Columbus's fleet to sail from Spain to the New World?
- 6. HS1 How did Columbus's route to the Indies differ from those of Diaz and da Gama?
- 7. HS1 Why is it inaccurate to claim that Columbus 'discovered' America?
- 8. **HS1** What is a more accurate statement about America's discovery?
- 9. HS1 Describe the different attitudes towards Columbus Day in the United States.

11.4 Exercise 2: Apply your understanding

- 1. HS3 Look closely at SOURCE 1. How many times did Columbus actually set foot on the mainland of the American continent?
- 2. HS3 SOURCE 2 was created more than 300 years after the events it depicts. Explain how this affects its usefulness for historians today.
- 3. HS3 Why might the images of Columbus shown in SOURCE 4 be so different?
- 4. HS3 Read SOURCE 5.
 - (a) What suggested to Columbus that he was nearing land?
 - (b) Why was Columbus's crew frightened on 22 September, and why were they cheered up when they saw rose berries in the sea on 11 October?
 - (c) On 12 October, Columbus described some of the features of the indigenous people. Who did Columbus think they were referring to when describing 'people from the other islands in the neighbourhood'? Who might the native population actually have been referring to?
- **5. HS3** Compare and contrast the depictions of Europeans in **SOURCES 2** and **3**. What are their similarities and differences? Can you suggest an explanation for their different perspectives?
- 6. HS3 Study SOURCE 2.
 - (a) Is it a primary or secondary source? Explain your answer.
 - (b) It is sometimes said that historical sources can tell us more about the time in which they were created than the time they depict. Look back at **SOURCE 2**, which was painted by a Spanish artist. Discuss what this type of portrayal of Columbus could tell us about Spanish attitudes towards him in 1862.

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11.5 Cortes, the conquistadors and the Aztecs

11.5.1 Ambition and conquest

History is full of tales about conquest and colonisation. The fifteenth and sixteenth centuries saw a rapid expansion of European colonies throughout the world, particularly in the Americas. The Europeans clashed, often violently, with the indigenous inhabitants they encountered. In most cases, the two cultures could not **coexist** peacefully — one would dominate the other. The most well-known example is arguably that of Hernan Cortes and the Aztecs.

Born in 1485, Hernan Cortes was the son of a Spanish nobleman. He attended university at Salamanca but had a reputation for not working very hard. When he was 19, he moved to the Caribbean island of Hispaniola, which was then a growing Spanish settlement. About six years later, he took part in the conquest of Cuba under the command of Diego de Velasquez.

Cortes came to believe that the Aztecs in Mexico had much to offer the Spanish conquistadors. At this time the Spanish were interested in two things: gold and converting the Aztecs to Christianity. As a career explorer, Hernan Cortes was ambitious and greedy. He was obsessed with claiming land for Spain and glory

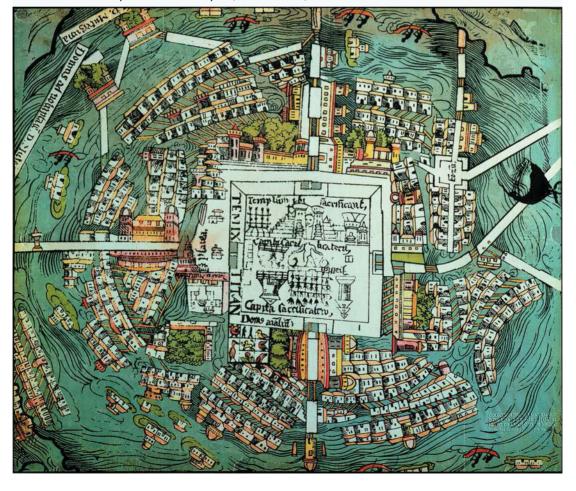
for himself. He was also looking for gold and had heard rumours that the Aztecs had lots of it. In February 1519 Cortes set sail for Mexico. Upon reaching the coast in March, Cortes destroyed his ships to ensure his men did not have any thoughts about desertion. He fought a battle against the indigenous people at a town called Tabasco before founding the town of Veracruz. He then began marching inland to the Aztec capital, Tenochtitlan. On the way, Cortes made contact with Tlaxcala, which was a kingdom that resisted the rule of the Aztecs. The Tlaxcalans initially resisted the Spanish and soon they were fighting.

The Spanish found themselves in trouble because the ground was broken and uneven, so they could not effectively use their horses and cannons. But as they fought their way to level ground the balance shifted in their favour. After the early violent encounters, the Tlaxcalans permitted the Spanish to enter their territory — no doubt they were terrified by the Spanish firearms and horses, neither of which they had ever seen before. For their part, the Spanish granted them a truce in return for their support against the Aztecs.

SOURCE 1 A portrait of Hernan Cortes, created c. 1850



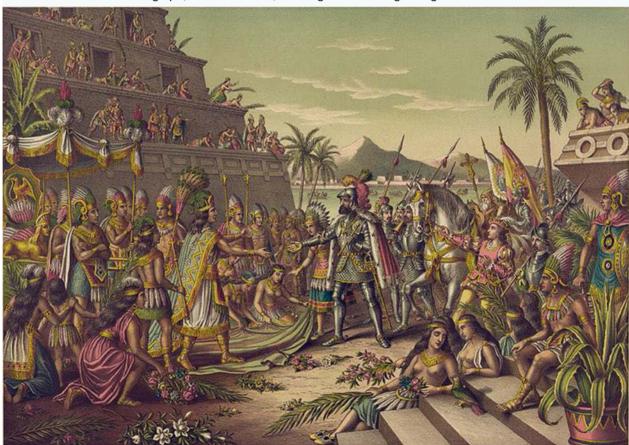
SOURCE 2 A map of the Aztec capital, Tenochtitlan, attributed to Hernan Cortes



As he moved further inland, Cortes avoided the well-travelled route to Tenochtitlan to minimise the possibility of ambush. He was also trying to recruit more allies against the Aztecs. For three months the conquistadors made their way through a variety of terrain, from arid mountains to fertile valleys. They were forced to adapt to the daytime heat as their armour was not practical for a climate that was much hotter than what the Spanish were used to. On the journey they saw strange plants and animals that were completely different to what they knew in Europe.

Upon arrival at Tenochtitlan in November 1519, the Spaniards discovered a thriving, highly organised city. Built on the islands in the middle of Lake Texcoco, the city would have appeared to the approaching Spaniards as almost floating on an inland sea. The city had a population of about 250 000 people, and it controlled much of the surrounding countryside. It was from these lands that the city drew its wealth in the form of gold, jewels and crops.

Cortes was welcomed by Montezuma II, emperor of the Aztecs. One theory suggests that Montezuma thought Cortes was the god Quetzalcoatl, who was said to have fair skin and a beard, just like Cortes. After establishing a headquarters in Tenochtitlan, Cortes attempted to strengthen his position by taking Montezuma hostage. This was a common tactic in Europe but was seen as unacceptable to the Aztecs, who attacked and drove the Spanish from the city. During this uprising Montezuma himself was killed, possibly by his own people who thought him weak in the face of the Spanish. Cortes returned in 1521 and laid siege to the city before attacking. The battle lasted for two months and the Spanish were forced to fight fiercely for every street. Tenochtitlan was reduced to rubble and many thousands of Aztecs were killed. On 13 August 1521 Cortes was able to claim the city for Spain.



SOURCE 3 A colour lithograph, created in 1892, showing Montezuma greeting Cortes in Tenochtitlan

DID YOU KNOW?

Iron was a key factor behind the successful Spanish conquest of the Aztecs. The indigenous peoples of the New World did not use iron; they still used old technologies for weapons. Iron was so important because it formed the principal component in swords, daggers, lances and knives, and was a crucial element in the workings of crossbows. It was central to cannons and other firearms and it contributed to the effectiveness of armour, helmets and shields. Iron gave the Spanish an important advantage that helped ensure the defeat of the Aztecs.

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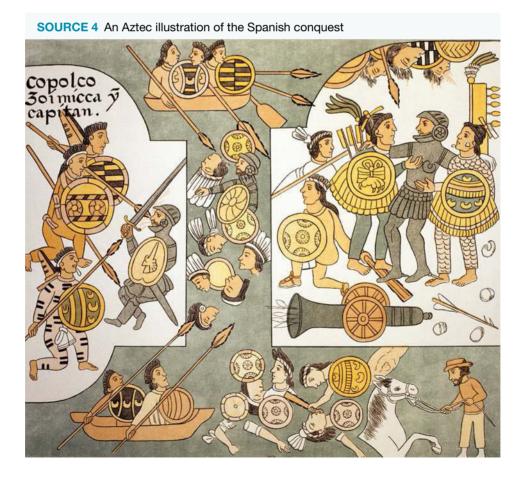
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· Expanding contacts > Spanish conquest of South America

11.5.2 End of a civilisation

It took about two years for the Spaniards to destroy the indigenous civilisation of the Aztecs. Many Aztecs died directly at the hands of the conquistadors. But thousands of others died not from violence but from famine and diseases that were introduced by the Europeans. Those who survived lost their dignity. Their wealth was stolen and their temples were destroyed. Because the Spaniards believed it was their duty to convert the Aztecs to Christianity, the Aztecs also lost much of their culture.

The success of Cortes over the Aztecs led to an unprecedented period of European expansion in the Americas. The following two centuries saw the Spanish consolidate their rule over many Native American societies, including the Inca and Maya civilisations.



The Inca civilisation occupied roughly the area of present-day Peru and Chile, which is one of the most mountainous regions in the world. The Spanish conquistador Francisco Pizarro first made contact with the Inca in 1526, but it took longer to conquer them than the Aztec Empire, largely because of the harsh geographical features. The tropical jungle and mountainous terrain hampered the progress of the conquistadors, who found their armour torturous in such a hot and humid climate. Ultimately though, the combination of superior Spanish weaponry and the longer term effect of introduced diseases meant that the Inca could not resist indefinitely. The city of

SOURCE 5 Lament on the Fall of Tenochtitlan, a poem by an anonymous Aztec poet

How can we save our homes, my people?
The Aztecs are deserting the city
The city is in flames and all
is darkness and destruction
Weep my people
Know that with these disasters
We have lost the Mexican nation
The water has turned bitter
Our food is bitter
These are the acts of the Giver of Life

Lima was founded by Pizarro in 1535 and the Viceroyalty of Peru, which was the name given to the region of South America ruled by Spain, was created in 1542.

The Maya proved more of a challenge for the Spanish, despite the fact that they were located in a less harsh geographical region. Occupying much of the Yucatan Peninsula in what is now southern Mexico, the Maya civilisation consisted of a number of independent city-states. There was no single capital city like the Aztec capital Tenochtitlan so the individual states had to be overpowered one by one, making the conquest a long and arduous one for the Spanish. It took more than 150 years before the last Mayan city was conquered.

11.5 ACTIVITY

Cortes was not the first, nor the only, Spanish conquistador in the Americas. Conduct some research into the actions of Balboa in 1510 or further research into Pizarro in 1531. In what ways were their actions, experiences and impacts on indigenous peoples similar or different to those of Cortes? In what ways were each significant in the colonisation of the Americas?

Determining historical significance

11.5 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

11.5 Exercise 1: Check your understanding

- 1. **HS1** What were the two main reasons for Spanish settlements in the New World?
- 2. HS1 How old was Cortes when he claimed Tenochtitlan for Spain?
- 3. HS1 Why did Cortes follow an indirect route from the coast to Tenochtitlan?
- 4. HS1 Approximately how long did it take the Spanish to destroy the Aztec civilisation?
- 5. HS5 Aside from violence, what else caused thousands of Aztec deaths?
- 6. HS1 Why did it take longer for the Spanish to conquer the Incan civilisation?
- 7. HS1 Why was the Mayan civilisation difficult to conquer?

11.5 Exercise 2: Apply your understanding

- 1. **HS3** Study **SOURCE 2**. What might have been the advantages and disadvantages of the layout of Tenochtitlan if the city was under attack?
- 2. HS3 What impression do you get about the initial meeting between Cortes and Montezuma as shown in SOURCE 3? How reliable do you think this source is?
- 3. HS3 Study SOURCE 4. You will see one of the conquistadors, possibly Cortes himself, embracing two Aztec warriors. Who could these people be? Why are they not fighting against Cortes?
- 4. HS3 Read SOURCE 5 and then look up the word 'lament' in a dictionary. Do you think it is an appropriate term to use for this poem?
- 5. **HS3** How would you describe the battle for Tenochtitlan as portrayed in **SOURCE** 5? Do you think you would describe the battle differently if it had been portrayed in the art style used in **SOURCE** 3?
- 6. HS5 Use a concept map to summarise the causes and effects of the Spanish invasion on the Aztec civilisation.

- 7. **HS6** Explain what you think was the most significant advantage the Spanish had over the Aztecs during the conquest. For example, was it technology, or perhaps resistance to disease? Explain your reasoning.
- 8. **HS6** Evaluate the significance of geographic features in the Spanish conquest of the Aztec, Inca and Maya civilisations.

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11.6 New Spain

11.6.1 A new empire

After the defeat of the Aztec Empire, Hernan Cortes founded the colony of New Spain, with Mexico City (formerly Tenochtitlan) as its capital. Over time, the colony would grow to encompass most of the region that is now the United States, Mexico and the islands in the Caribbean Sea. Later, it would extend across the Pacific Ocean as far as the Philippines. The Spanish domination of these regions was to last over four hundred years.

The establishment of New Spain meant the creation of a new part of the Spanish Empire. The lands that were brought under Spanish control after the conquest were very wealthy and complex, providing an opportunity for Spain to establish itself as a world power.

The viceroy (representative of the king or queen) was Antonio de Menoza, and he was eager to find out about the territory that Spain governed. In the years following the Spanish conquest, a series of expeditions



Source: Map drawn by Spatial Vision.

were sent to explore and subdue New Spain. Throughout the sixteenth century many cities were established in North and Central America. As these cities were established, missionaries were also set up so that Christianity could be introduced to the native people. Many of the cities were named after particular saints and so begin with the Spanish words for saint — 'san' or 'santa'. San Francisco is one of many cities of this kind.

The trade routes that developed between America and Europe became known as the 'Columbian Exchange'. Plants, animals, diseases and technology all criss-crossed the oceans. Tomatoes, for example, now associated with Italian cuisine, were unknown to Europe until they were introduced from the New World. Other new plants included potatoes, corn and tobacco. For their part, the Europeans introduced, among other things, bananas, coffee beans and horses to America.

Internally, the administration of New Spain was structured under the 'encomienda system'. Established in 1521, it was created to regulate labour and behaviour of the indigenous population. The Spanish conquistadors and settlers received a 'grant' of land and labourers who offered tributes in return for protection and 'Christianisation'. The idea was to 'civilise' and employ the indigenous population to work for the Spanish settlers. In reality, however, the encomienda descended into a system of forced labour and land seizure, and resulted in the quick spread of the introduced diseases against which the indigenous population had no resistance.

At the same time as the settlement of New Spain, an attempt was made to establish trade routes with the East Indies (modern-day South-East Asia). The Pacific Ocean had the potential to become a trading 'superhighway' for the Spanish by eliminating the need for the long sea voyage from Europe around the southern tip of Africa. A Spanish settlement was established in the Philippines in 1565 and soon a busy trade route developed. Silk, spices, silver and slaves were all transported from Asia to the Americas and then on to Europe.

By 1494 Spain and Portugal had become rivals, with both trying to establish world empires. In that year, they reached an agreement so that they could each explore and trade in a different part of the world without risking armed conflict with each other. This was called the Treaty of Tordesillas. Essentially, they divided the world in half, with Portugal having access to one side and Spain the other. **SOURCE 2** shows the dividing line as agreed by the two countries.



SOURCE 2 A map indicating the division of the world under the Treaty of Tordesillas. Once Spain and Portugal reached Asia, a second division under the Treaty of Zaragoza was made.

Source: Map drawn by Spatial Vision.

SOURCE 3 A galleon at sea. The galleon was a common vessel used by most European nations in the sixteenth and seventeenth centuries. It had a large cargo-carrying capacity as well as a number of cannons for defence.



11.6.2 Expansion and conflict

The signing of the Treaty of Tordesillas may have given peace of mind to the Spanish and Portuguese, but understandably it did not sit well with other European nations. In the late sixteenth century they began to establish their own colonies on the American continents. As the various colonies expanded, conflict was inevitable. The countries most active in the expansion and fight for the New World were Spain, Great Britain and France. The Dutch were also influential, but mainly in the north-east of North America. Their most famous act was founding the city of New Amsterdam, which would later become New York. All of these countries saw in the Americas the opportunity for wealth; because they were often at war with each other in Europe, no country wanted any of the others to succeed.

11.6.3 The end of New Spain

Through three centuries of conflict, Spain had established itself as the governing power across much of the North American continent. But by the beginnings of the nineteenth century the first calls for independence began. The colonies that were under Spanish control felt that they were able to rule themselves. They wanted to play a role in the decisions that would affect them. In 1810, Mexico declared independence from Spain, leading to a ten-year war that would end with that independence finally being recognised. This in turn encouraged many other parts of New Spain to seek independence as well. Britain offered support against Spain because they wanted to end the Spanish **monopoly** on trade in the region. By the 1820s, almost all of the Spanish colonies in the Americas had won their independence. New Spain was disappearing.

In 1898, the Spanish were defeated by the United States in a war that would decide who would control the remaining territories. As the victorious power, the United States took control of Cuba, Puerto Rico and the Philippines, ending more than four centuries of Spanish rule in the Americas.

11.6 ACTIVITIES

 Using the internet and other sources, prepare some promotional material about the Spanish galleon for other interested trading nations. What was it about the vessel that made it so effective in its role and so significant to Spain in its establishment of power in the Americas?
 Determining historical significance 2. Using SOURCE 1 and an atlas, find some other cities on the west coast of North America that are named after saints. Use the internet or your library to find information about these particular saints and why these cities were given these names by the Spanish. What does the location of these cities tell you about the size of New Spain?
Using historical sources as evidence

11.6 EXERCISES

Historical skills key: HS1 Remembering and understanding HS2 Sequencing chronology HS3 Using historical sources as evidence HS4 Identifying continuity and change HS5 Analysing cause and effect HS6 Determining historical significance

11.6 Exercise 1: Check your understanding

- 1. HS1 Why did Spain want to create an empire in the New World?
- 2. HS1 What does the Treaty of Tordesillas suggest about the power of Spain and Portugal in the fifteenth century?
- 3. HS1 Aside from Spain and Portugal, which other European powers had a presence in North America?
- **4. HS1** Why might these other European powers have taken issue with the Treaty of Tordesillas when it was signed?
- 5. HS1 What was New York's previous name?
- 6. HS1 What were the key threats to Spanish control over the North American continent?
- 7. HS1 Which countries or empires followed Spain as the major powers in North America?

11.6 Exercise 2: Apply your understanding

- 1. **HS3** Using **SOURCE 2**, explain why most people who live in Mexico and the western part of South America speak Spanish, but people in Brazil speak Portuguese.
- 2. HS4 What changes might have resulted from the signing of the Treaty of Tordesillas?
- 3. HS3 Using SOURCE 2 and an atlas, identify which modern-day countries would have been intersected by the line of the Treaty of Tordesillas.
- 4. HS5 In what way was the idea of the encomienda system often different from the reality?
- **5. HS5** The Treaty of Tordesillas may have been a source of conflict between the rival European nations, but in what other ways might it have resulted in conflict in the areas that those nations wanted to colonise?

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11.7 Slavery in the New World

11.7.1 Aztec slavery before the Spanish

Put simply, slavery is forced labour. A slave is a person legally owned by someone else. Because the slave is the 'property' of their owner, they have no legal rights of their own.

Although outlawed by the United Nations in 1948, slavery continues to this day in many parts of the world. There are approximately 20 million people around the world for whom slavery is a terrible reality. Forced to work in dangerous conditions or even to fight in armies against their will, slavery has been a feature of many civilisations for thousands of years. The Spanish colony of New Spain was one of many at the time that relied heavily on slave labour.

The Spanish did not bring slavery to the New World; they merely introduced a new form of it. Slavery had been an important part of Aztec culture but it was very different to the form of slavery that the Europeans practised. Aztec slaves could have possessions and often had the opportunity to buy their liberty. If an Aztec slave's master died, the slave would sometimes be freed rather than sold to someone else. People could also sell themselves into slavery as a way of paying debts, and even a murderer could be offered as a slave to the family of the person killed, if requested. One key difference between Aztec and European slavery was its **hereditary** nature. The child of an Aztec slave was not automatically a slave, unlike the European system where a person could be born into slavery.

11.7.2 Slavery in New Spain

Technically, slavery was not permitted in New Spain. In 1493, Pope Alexander VI, at the same time as granting Spain the right to colonise the New World, declared the native people were to be converted to Christianity but not enslaved. The encomienda system was intended to honour this arrangement by ensuring that indigenous people who were used for labour were protected and converted by missionaries. However, any that resisted the Catholic faith could be subjected to forced labour. For the conquistadors, this provided an easy excuse to declare that any slaves were merely natives who had refused to accept Christianity and had reverted to their own religion.

During the conquest of the Aztec Empire, many thousands of native people died not from violence but from diseases that were introduced by the Europeans. The native population did not have immunity to these introduced diseases and died by the hundreds of thousands in much the same way that Europe was ravaged by the Black Death a century earlier. After the establishment of New Spain, disease continued to claim a massive number of native lives as it followed the Europeans across the American continent. To combat the problem of losing workers, the Spanish began to import slaves from Africa. These areas had already been settled by Spain and so the native people had developed immunity from the common, but otherwise deadly,

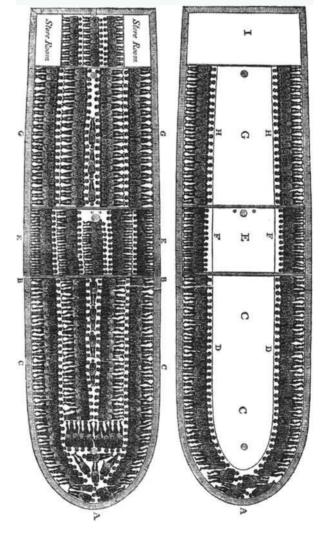
diseases. Over the course of four centuries, the colony of New Spain received approximately four million slaves from Africa.

11.7.3 A slave's journey

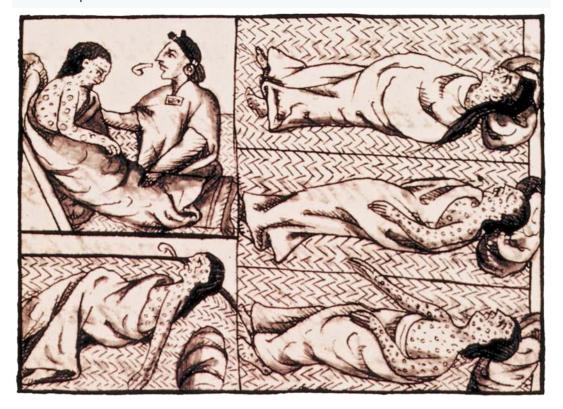
The African slave trade has been referred to as the 'triangular trade' because of the way the ships traversed the Atlantic Ocean. Trading vessels filled with non-human cargo would sail from Europe to the west coast of Africa. Once there, they would sell and trade the goods and load their ships with slaves. Laden with their valuable human cargo, they would sail west across the Atlantic Ocean and deliver the slaves to the Americas. From there they would load the ships with more goods for the journey back to Europe.

A slave was useful to their master only if they were alive, and captains of slave ships made more money if more slaves survived the horrendous fiveweek journey across the Atlantic. Some captains packed their ships 'loosely' so that diseases could not spread as easily and slaves would arrive at their destination relatively healthy. Unfortunately, it was more common for captains to pack their ships 'tightly' on the assumption that the more slaves who began the journey, the more that would survive until the end, even if some died at sea. Conditions on board these ships were horrific. Slaves' ankles and wrists were chained and they had no room to move. Poor quality food led to scurvy and lack of hygiene meant that diseases such as dysentery spread quickly. Suicide attempts were a tragic but common occurrence.

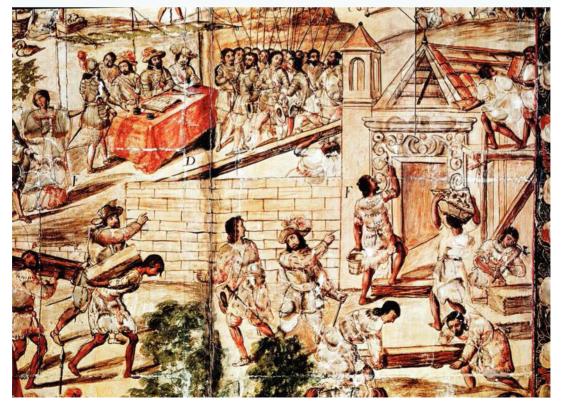
SOURCE 1 A diagram from the eighteenth century outlining the placement of slaves in a ship for transportation



SOURCE 2 An illustration from a sixteenth-century codex showing native Aztecs suffering from smallpox



SOURCE 3 An illustration of sixteenth-century native slaves building Mexico City on the ruins of Tenochtitlan





Source: Map drawn by Spatial Vision.

11.7.4 The end of slavery

The Spanish colonisation of the Americas and the slavery that followed led to discussion in Europe about the right to enslave Native Americans and Africans. As the terrible living conditions of slaves became more widely known, the anti-slavery movement gained momentum. Reverend Robert Walsh, an anti-slavery campaigner, wrote some important accounts of the conditions on board slave ships in his *Notices of Brazil in 1828 and 1829* (see **SOURCE 5**). He travelled around Brazil and at sea as part of the effort to abolish the slave trade completely. One of his proposals was to arrest any slavers and have them tried for piracy, even if they were not transporting slaves at the time. In the first half of the nineteenth century, a range of laws were passed throughout Europe that abolished the slave trade. However, in the United States, slaves were not freed until after the Emancipation Proclamation of 1863.

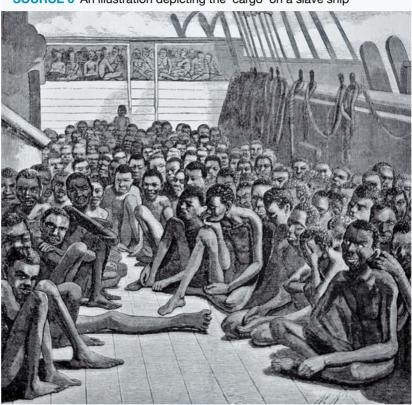
SOURCE 5 Reverend Robert Walsh served aboard a ship that intercepted the illegal slave trade. This description of the conditions on board a 'slaver' appears in his *Notices of Brazil in 1828 and 1829*.

The slaves were all inclosed . . . between decks. The space was so low that they sat between each other's legs . . . They were all branded like sheep with the owner's marks . . . 'burnt with the red-hot iron' . . .

- \dots The heat of these horrid places was so great and the odour so offensive that it was quite impossible to enter \dots
- ... Some water was brought ... They shrieked and struggled and fought with one another for a drop of this precious liquid ...
- \dots While expressing my horror at what I saw I was informed by my friends \dots who had visited so many ships, that this was one of the best they had seen.

DID YOU KNOW?

One way for an Aztec slave to win their freedom was to escape from the watch of their master while at the tianquiztli (marketplace) and run to the palace. If they reached the palace without being caught, they became free. Only the master or one of his relatives was allowed to chase the slave — if anyone else interfered, they risked being sold into slavery themselves. Look back at **SOURCE 1** in subtopic 11.3 and see whether you can find the slave escaping from his master.



SOURCE 6 An illustration depicting the 'cargo' on a slave ship

11.7 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

11.7 Exercise 1: Check your understanding

- 1. **HS1** Approximately how many people live in slavery around the world today?
- 2. HS1 Identify the ways in which Aztec slavery differed from the kind of slavery introduced by Europeans.
- 3. **HS1** Why did the Spanish begin to import slaves from Africa?
- 4. HS1 How might the conquistadors defy the law that stated slavery was not permitted in New Spain?
- 5. HS1 Why would captains of the slave ships pack their 'cargo' so tightly?
- 6. HS1 What did poor food and hygiene lead to on board slave ships?
- **7. HS5** What helped the anti-slavery movement gain momentum?
- 8. **HS1** What part did Reverend Robert Walsh play in ending slavery?
- 9. HS2 When did the United States abolish slavery? Was it earlier or later than Europe?

11.7 Exercise 2: Apply your understanding

- 1. HS3 What could SOURCE 1 suggest to you about the attitude of slave traders towards their 'cargo'?
- 2. **HS3** Using the scale on **SOURCE 4**, estimate the distance travelled by a ship from Africa to North America with its cargo of slaves.

3. HS3 Read SOURCE 5.

- (a) Is this a primary or secondary source? Why?
- (b) Do you think this is a reliable source? Why or why not?
- (c) Why were slaves 'branded like sheep'?
- 4. HS3 Study SOURCE 3.
 - (a) Explain how SOURCE 3 helps to illustrate why the native population succumbed so quickly to disease.
 - (b) How would you describe the relationship between the Spanish and the native slaves in SOURCE 3? Do you think this is an accurate representation? Why or why not? What other sources can you find to support or challenge your thoughts?
- 5. HS3 Using SOURCES 5 and 6 as a starting point, describe the conditions on board a slave ship in your own words
- 6. HS6 Create a short biography of one of the key abolitionists, such as William Wilberforce or Reverend Robert Walsh. Investigate their beliefs about why slavery should be abolished and their significance on the slavery issue.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

11.8 The impact and legacy of colonisation

11.8.1 Impact on the Aztecs

The Spanish conquest of the Americas had wide-ranging and long-term impacts. Initially those impacts were felt within the American continent, but as the Columbian Exchange and triangular trade developed, the impact was felt more widely and helped lay the foundations for the creation of the modern world.

The most obvious and significant impact of the Spanish conquest on the Aztec people was the severe decline in population over the years of the colonisation. As discussed previously, diseases introduced by the Europeans and the effects of slavery and malnutrition had serious consequences for the native population. It is estimated that the native population of Mexico had declined by 90 per cent by the early 1600s. **SOURCE 1** discusses additional reasons for the declining population in Mexico.

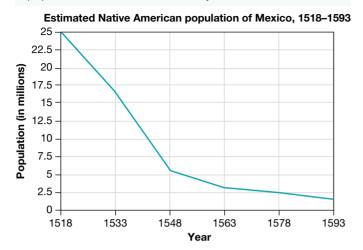
SOURCE 1 From The Population of the California Indians, 1769-1970, written by Sherburne Cook

The first [factor] was the food supply . . . the second factor was disease . . . A third factor, which strongly intensified the effect of the other two, was the social and physical disruption visited upon the Indian. He was driven from his home by the thousands, starved, beaten, raped, and murdered . . . The utter devastation caused by the white man was literally incredible, and not until the population figures are examined does the extent of the havoc become evident.

The Spanish conquest led to a loss of culture. Traditional art and music, as well as native languages, were under threat of being lost forever. For example, it has been shown that the codex, the traditional written record of the Aztecs, changed because of Spanish influence. Codices were originally pictorial; however, after colonisation, Spanish and Latin text was introduced.

As New Spain grew, native labourers travelled with the Spanish so that they could be put to work under the arrangements of the encomienda system. By doing this, the Aztec, Mayan and Incan people who had lived apart for centuries were suddenly mixing together. This blurred the distinction between the three previously unique cultures. This loss of culture was exacerbated by the efforts of the Spanish to convert the native population to Christianity. In some cases, rather than converting outright, the native population merely incorporated aspects of Christianity to their pre-existing belief systems. Some of these variations survive to this day, and the Roman Catholic Church is as present and powerful in the Americas as it is anywhere in the world.

SOURCE 2 A graph showing the decline of the Aztec population in the sixteenth century



SOURCE 3 A ceramic vase featuring the god Tlaloc from before the Spanish conquest. This artefact is held in the Museum of the Templo Mayor, which used to be a major Aztec temple, in Mexico City.



SOURCE 4 A loss of Aztec culture means that museums are essential for the preservation of many Aztec artefacts. These artefacts are part of the National Museum of Anthropology in Mexico City.



DISCUSS

In groups, consider the challenges for modern historians when confronted with information that reveals historical actions to be what modern society would judge as harsh or inappropriate. Think about how they would need to approach the following topics without using modern standards to judge past practices:

- a. the sacrificing of people in the Aztec civilisation
- b. the enslavement and transportation of people from Africa to America.

What mindset would a historian need to adopt to ensure they investigated these topics without judgement?

[Critical and Creative Thinking Capability]

11.8.2 Language and religion

Around the world, Spanish is now spoken by an estimated 420 million people. Only about 10 per cent of these people actually live in Spain, but the spread of the language around the globe during the expansion of the Spanish Empire has made it one of the most widely spoken languages in the world. It is the official language of Mexico and most countries in South America, and is spoken widely throughout the United States. In fact, the vast majority of the world's Spanish speakers live in North and South America. One major exception to this is Brazil. Because of the Treaty of Tordesillas of 1494, Portugal was able to colonise the eastern part of South America. This is why Portuguese is the official language of Brazil.

The introduction of the Roman Catholic faith to the Americas was spearheaded by the Spanish. Denounced as heathens, the Aztec, Mayan and Incan people were often forced to convert to Christianity, or face slavery or death. Today, the Roman Catholic Church is as present and powerful in the Americas as it is anywhere in the world.

SOURCE 5 When Mexico declared independence from Spain in 1810, the Aztec Empire became the inspiration for the new national flag. The central emblem is based on the founding myth of Tenochtitlan. The migrating Aztec people were directed by the sun god to build a city on the site where they saw an eagle eating a serpent while perched on a cactus growing from a stone. Legend says that Tenochtitlan was that site.







DISCUSS

Imagine you are a historian who is being interviewed about their work on the Spanish Conquest of the Aztecs. The interviewer asks the following question: In your work on the Aztecs you have had to research human sacrifice and slavery — both of which are topics that present some confronting information. How have you managed to ensure that you remain objective and without judgement when studying these topics?

How would you respond?

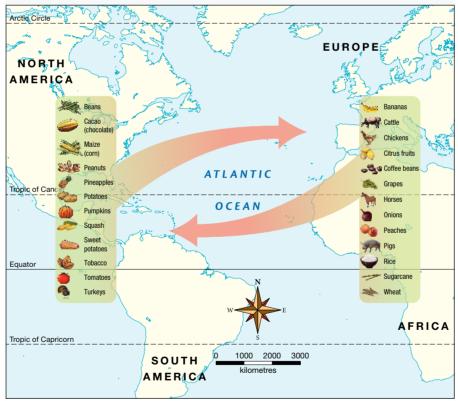
[Critical and Creative Thinking Capability]

11.8.3 Impact on the Spanish

The colonisation of New Spain meant that the Spanish Empire became one of the world's most powerful empires. The natural resources that the region contained — gold, silver, furs, sugar and cotton — helped Spain become wealthy. As the native population decreased, they were effectively replaced with huge numbers of Europeans who migrated to the region to make money.

New foods, previously unknown to Europeans, were found on the American continents; these included potatoes, tomatoes, avocados and chocolate.

SOURCE 6 The Columbian Exchange between Europe and the Americas introduced each to a range of new foods and resources, as well as diseases and slavery. Some iconic items, such as tomatoes in Italy or coffee in Brazil, were unknown before the trans-Atlantic trade began.



Source: Map drawn by Spatial Vision.

11.8.4 A truly 'New World'

The term 'New World' was originally applied to the Americas by Europeans. The meeting of different cultures and the exploration of new lands by Europeans led to an increase of geographic knowledge. Communication was established between civilisations that previously had no idea of each other's existence, and as the centuries progressed, ideas and knowledge were shared, paving the way for the modern world in which we live today.

SOURCE 7 Legacies of colonisation can be interpreted differently depending on your perspective.

The conquest of the Aztecs opened up the New World for trade and exploration, and began an exchange of ideas and goods that continues to this day.



The Spanish conquest was a dark episode in history. It caused the collapse of an entire civilisation and signalled the beginning of four centuries of slavery and brutal Spanish rule.



11.8 EXERCISES

Historical skills key: HS1 Remembering and understanding **HS2** Sequencing chronology **HS3** Using historical sources as evidence **HS4** Identifying continuity and change **HS5** Analysing cause and effect **HS6** Determining historical significance

11.8 Exercise 1: Check your understanding

- 1. **HS1** How did Aztec codices change after the Spanish conquest?
- 2. HS1 Where do the majority of the world's Spanish speakers live?
- 3. HS1 Summarise the effects of the expansion of New Spain on the Mayan and Incan cultures.
- 4. HS1 Approximately how many people speak Spanish around the world?
- 5. HS1 Why is Portuguese spoken in Brazil, but not elsewhere in South America?
- **6. HS5** What might have happened to the indigenous people of America if they had not converted to Christianity?
- 7. **HS1** Why did Europeans migrate to the region of New Spain?
- **8. HS1** What key natural resources helped Spain become wealthy?
- 9. HS1 How do you think the term 'New World' could be misleading?

11.8 Exercise 2: Apply your understanding

- 1. HS3 Read SOURCE 1.
 - (a) What reasons does Sherburne Cook offer for the decline in the Native American population?
 - (b) Sherburne Cook was not a historian by training but he did pioneer population studies of the native peoples of America. He wrote widely on the subject of pre-conquest population levels. From this information, do you think **SOURCE 1** is a reliable source? Why or why not?
- 2. HS3 Study SOURCE 2.
 - (a) What was the estimated Native American population in Mexico in 1518?
 - (b) By what year had the population dropped to approximately 3 million?
 - (c) According to the graph, in what 15-year time period did the population drop most dramatically? Why might this rapid decline have slowed later?
- 3. **HS3** Look at **SOURCE** 6. What do you think were the positive and negative impacts of Spanish contact with the Americas?

- 4. HS3 What can SOURCES 3 and 4 tell you about the attitude towards the Aztec culture in modern-day Mexico?
- 5. HS3 Look at the two different views of the Spanish conquest shown in SOURCE 7.
 - (a) How can two people have such different views of the same event?
 - (b) Do you think one of them is more 'right' than the other? Why or why not?
 - (c) Look back over this topic and decide which sources each person could have used to draw their conclusion.
- **6. HS4** Fill in a diagram like the one shown below to summarise the short- and long-term effects of the Spanish conquest of the Americas.



7. **HS6** Using your response from question 6, rank the long- and short-term effects from most significant to least significant. Compare and discuss your responses as a group, explaining why you ordered them the way you did. After discussing your thoughts, express your answer to the question in a paragraph response.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

11.9 SkillBuilder: Evaluating roles and achievements

Why do historians evaluate roles and achievements?

Historians evaluate, or judge, the role of individuals, their achievements and events so they can support historical claims that are made.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





11.10 Thinking Big research project: Spanish conquest exhibition



SCENARIO

You have been asked to curate a museum exhibition focusing on the Spanish conquest of the Americas.

It is the job of your team to select a range of historical sources from this text that best reveal the story of that time period.



Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- an assessment rubric.



Resources



projectsPLUS Thinking Big research project: Spanish conquest exhibition (pro-0167)

11.11 Review



11.11.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

11.11.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31340)

Crossword (doc-31341)



Interactivity Spanish conquest of the Americas crossword (int-7593)

KEY TERMS

codex a pictorial book

coexist live together at the same time in the same place

conquistador one of the Spanish conquerors of Mexico in the sixteenth century

hereditary passed from parent to a child

monopoly an organisation or group that has complete control of something

New World a term used to describe the Americas

subjective based on personal feelings rather than on facts

11.9 SkillBuilder: Evaluating roles and achievements

11.9.1 Tell me

What does 'evaluate' mean when studying history?

When we study history we are trying to gain a sense of the past and the way in which individuals, achievements and events affected the time period in which they occurred, as well as their lasting effect on world history. To evaluate means to judge or calculate the quality of something.

Why is evaluating important?

We evaluate the role of individuals, achievements and events so that we can piece together our historical understanding of a time period and find the answers to how past events were shaped by the people of the time. We also evaluate so that we can make our own claims about the role of different events and individuals in history. Historians evaluate the role of individuals, achievements and events in order to support historical claims that are made. When we evaluate events of the past we are studying history in a similar way to how we study science. We measure, calculate and assess to come to a conclusion about how civilisations progress through history.

11.9.2 Show me

How to evaluate the role of an individual, achievement or event

Evaluating the role of a historical figure or event can be a daunting task but it becomes more manageable if you break down the process into a number of smaller questions. Historians ask a range of questions to help organise their ideas when evaluating the topic they are studying including:

- 1. Did something change because of this historical figure or event? If so, what was the change, and was it positive or negative?
- 2. How many people's lives were affected?
- 3. How long-lasting were the changes? Did the situation return to how it was previously or did the changes remain for a long period of time?

Once these questions have been answered you will be in a position to support a claim about the importance of the individual, achievement or event.

As an example, let's consider the conquistador Hernan Cortes. The three questions can be used to evaluate his role in history.

- 1. Did something change because of this historical figure or event? If so, what was the change, and was it positive or negative? There were many changes brought about by the actions of Hernan Cortes. He led the Spanish in their conquest of the Aztec civilisation. Through his actions European diseases were introduced to Tenochtitlan, which devastated the population. Later he became governor of New Spain and further influenced the introduction of Spanish culture to the Americas. Whether those changes are considered positive or negative will depend on your perspective. The introduction of Spanish culture to the Americas would be seen as positive by the Spanish at that time, but certainly would have been viewed negatively by the Aztec people whose culture was largely destroyed.
- 2. How many people's lives were affected? In the short term the number of people affected by Cortes's actions was hundreds of thousands. This includes the Spanish soldiers who were with him on the expedition as well as the population of Tenochtitlan, which numbered around 250 000 people. In the longer term the number of people affected could be measured in millions because his victory over the Aztecs resulted in the establishment of New Spain. This would suggest that Cortes's role in history was an important one if we consider the number of people affected.
- 3. How long-lasting were the changes? Did the situation return to how it was previously or did the changes remain in place for a long period of time? The changes brought about by the actions of Cortes changed the Aztec civilisation permanently. His actions in leading the expedition led to the destruction of the Aztec empire.

So, evaluating the role of Cortes is more manageable because we have considered what elements could be measured to come to a conclusion, which might read like this:

Cortes's role in the progression of history is very important. His leadership of the Spanish expedition that led to the conquest of Tenochtitlan and the eventual downfall of the Aztec civilisation changed the American continent forever and had a lasting impact on world history.

11.9.3 Let me do it

Complete the following activities to practise this skill.

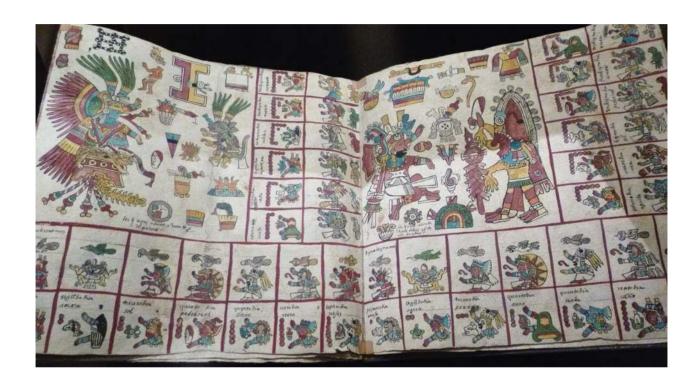
11.9 ACTIVITIES

- 1. Now that you have seen how you can approach the task of evaluation, answer the three questions to evaluate the role of Christopher Columbus:
 - (a) Did something change because of this historical figure or event? If so, what was the change, and was it positive or negative?
 - (b) How many people's lives were affected?
 - (c) How long-lasting were the changes? Did the situation return to how it was previously or did the changes remain for a long period of time?
- 2. What were two main changes brought to the Americas through the actions of Hernan Cortes?
- 3. What was the population of the city of Tenochtitlan prior to the arrival of Cortes?
- 4. Explain why it is important to evaluate the role of individuals, achievements or events when studying history.
- 5. Why do you think how long-lasting the changes were is a useful indication for evaluation?
- 6. What other factors do you think might be useful to help evaluate the role of an individual, achievement or event? Share and compare your ideas with other members of your class.

11.10 Thinking Big research project: Spanish conquest exhibition

Scenario

The National Museum is planning an exhibition focusing on the Spanish conquest of the Americas. You have been chosen to help curate this exhibition and ensure it is appealing and informative. There is room for ten historical sources to be included that best reveal the story of that time period.



Task

As part of the team of museum curators, it is your job to select the ten most appropriate sources from this topic to reveal the history of the Spanish conquest of the Americas. The sources need not be presented in chronological order, you may prefer to present them by theme; for example, 'conflict' or 'change'. Whatever you choose, you need to decide carefully which sources to include, and which to exclude.

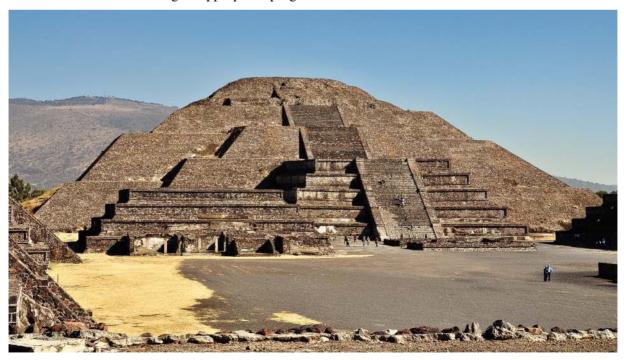
Each source will require a caption of around 100 words that not only describes what the source shows but outlines the reason why it is included in the exhibition and why it is an important source for historians.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in groups will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Revisit the Spanish conquest of the Americas topic and discuss with your group how you will
 approach the exhibition. You might decide to lay the sources out chronologically to tell the story in a
 sequence, or you might approach it thematically and show what key historical concepts can be
 identified through the topic. Perhaps you will show sources that identify continuity and change across
 the period, or sources that help to analyse cause and effect of key events of the time.
- Once you have decided on how you will approach the presentation, you need to decide which sources are the best to portray your ideas. Each group member selects the ten sources they would use, and the group comes together or uses the Research forum to discuss. There will likely be some differences in the sources chosen, and it is the group's job to decide on the final ten.
- Write captions for your sources. Be sure to include how your source reveals your chosen theme. For example, how does a Spanish codex from after the conquest illustrate 'change'? Each caption should be approximately 100 words.
- Choose a title for your exhibition. It should be one that captures the key idea, but also is interesting and exciting so that people will want to visit.
- Finally, bring your sources together and present them in a way that best captures your themes. This may need to be discussed with your teacher, but some options could include printing images in colour and arranging them on a display board with the supporting text, or presenting your work electronically as a virtual museum using an appropriate program.





ProjectsPLUS Spanish conquest exhibition (pro-0167)

11.11 Review

11.11.1 Key knowledge summary

11.2 Examining the evidence

- Most contemporary records of the conquest were written by the Spanish.
- The sources were often subjective and focused on only one side of the story.
- Few firsthand accounts of pre-Spanish Aztec life remain.

11.3 The Aztecs before Spanish arrival

- Enough Aztec sources remain for us to learn that their culture was sophisticated and organised.
- The Aztec Empire often warred with its neighbours.
- Aztec religion was polytheistic, meaning they worshipped many gods.
- Similar agricultural techniques to those used by the Aztecs are still used in Mexico today.

11.4 Columbus and the New World

- Spain and Portugal were the great sea power rivals of the fifteenth and sixteenth centuries.
- Columbus was searching for a new sea route to Asia when he 'discovered' the Americas.
- Columbus was the first person to initiate the spread of knowledge of the 'New World' through Europe but certainly was not the first to discover it.

11.5 Cortes, the conquistadors and the Aztecs

- The fifteenth and sixteenth centuries was a time of rapid expansion of European empires around the world.
- In most cases, encounters between Europeans and indigenous people ended with conflict.
- For nearly two centuries after the fall of the Aztec Empire other expeditions took place and brought to an end both the Incan and Mayan civilisations.

11.6 New Spain

- The Treaty of Tordesillas, signed in 1494, was an agreement between Spain and Portugal to designate regions that each could explore freely.
- The rise of the British, French and Dutch empires brought them into conflict with Spain and Portugal over who would control the world.
- Calls for independence from the regions under Spanish control brought an end to New Spain in the nineteenth century.

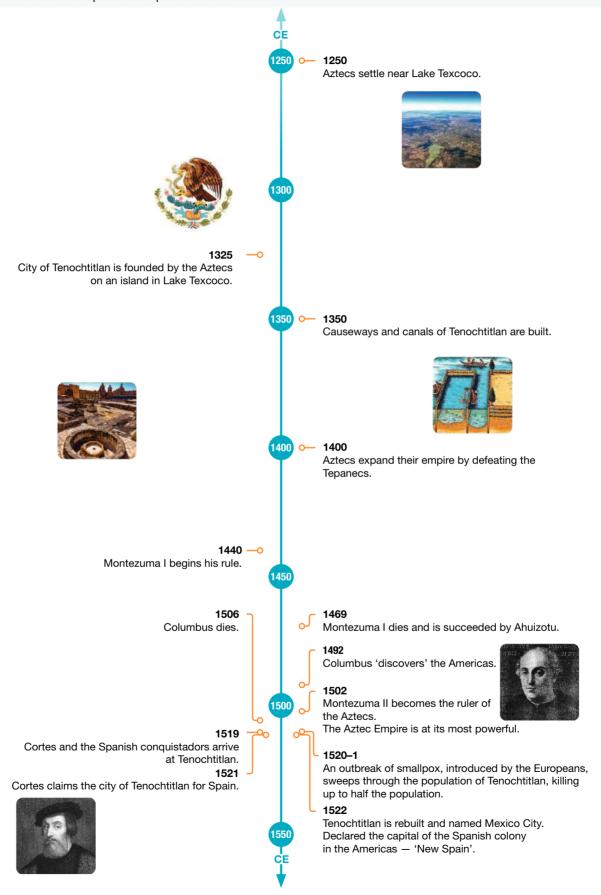
11.7 Slavery in the New World

- Aztecs practised slavery before the Spanish arrival but it was different to that introduced by the Europeans.
- Officially, slavery of native people in New Spain was only permitted if they refused to convert to Catholicism.
- As disease took its toll on the native people new slaves were transported from Africa through the 'triangular trade'.

11.8 The impact and legacy of colonisation

- The Spanish conquest of the Americas had short- and long-term impacts on the world; both the Spanish and the American continents and people were changed forever.
- Spain became wealthy because of its colonies in the Americas.
- The 90 per cent decline in the native population of Mexico was due mainly to disease.

A timeline of the Spanish conquest of the Americas



11.11.2 Reflection

Complete the following to reflect on your learning.

11.11 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Exploration, conquest and colonisation. How did Spanish expansion lead to the end of a civilisation?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



eWorkbook Reflection (doc-31340)

Crossword (doc-31341)

Interactivity Spanish conquest of the Americas crossword (int-7593)

KEY TERMS

codex a pictorial book

coexist live together at the same time in the same place

conquistador one of the Spanish conquerors of Mexico in the sixteenth century

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New World a term used to describe the Americas

subjective based on personal feelings rather than on facts

GEOGRAPHY



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12 Geographical skills and concepts

12.1 Overview

12.1.1 Introduction

As a student of Geography, you are starting to build the knowledge and skills that will be needed by you and your community now and into the future. The concepts and skills that you will use will not only help you in Geography but they can also be applied to everyday situations, such as finding your way from one place to another. Studying Geography may even help you in a future career here in Australia or somewhere overseas.

Throughout your study of Geography you will cover topics that will give you a better understanding of the world around you — both the local and global environment. You will investigate issues that need to be addressed now and also options for the future.







eWorkbook Customisable worksheets for this topic

LEARNING SEQUENCE

- 12.1 Overview
- 12.2 Work and careers in Geography
- 12.3 Concepts and skills used in Geography
- 12.4 Review



To access interactivities and resources, select your learnON format at www.jacplus.com.au.

12.2 Work and careers in Geography

12.2.1 Links to Geography

Many questions come up during a typical Geography class, such as the ones in **TABLE 1**. These questions need to be answered in the real world by people in a wide variety of occupations. They all have links with Geography.

| TABLE 1 Examples of occupations that use Geography | | | | |
|---|--|--|--|--|
| Question | Occupations/organisations that try to answer these questions | | | |
| How high is Mount Everest? How do we know? | Surveyor, Cartographer | | | |
| How can we protect our parks and wildlife? | Park ranger, Planner, Environmental manager | | | |
| Where should we establish a new suburb for our future population? | Urban planner, Demographer | | | |
| How can we prepare for future droughts and floods? | Civil engineer | | | |
| Does our town really have enough water? Should we build a new dam? Where should we build a new dam? | Coastal engineer, Hydrologist, Cartographer | | | |
| Should a boat marina be built at location X or at location Y? | Oceanographer | | | |
| Do we have good quality drinking water? | Chemist, Hydrologist | | | |
| How do countries such as India and China deal with their air pollution problems? | Environmental scientist/manager | | | |
| How do we provide aid to other countries? | Air Force, Navy, Army Officer. Red Cross, World Vision and other aid agencies. | | | |
| How do we build sustainable housing? | Architect, Landscape architect, Civil engineer/Construction manager, Town planner, Real estate salesperson | | | |

Think: who are you and what is your position in the world?

Do you know much about the occupations mentioned in **TABLE 1**? Are any of interest to you?

The first step in thinking about your future is to consider questions such as:

- Who am I?
- What are my interests?
- What do I enjoy doing?
- What am I good at?
- What would I like to do when I leave school?



12.2.2 Geography careers on the move

A great part of studying Geography is being able to explore the many occupations and areas that it opens up. In TABLE 2 are some occupations that you may not have thought studying Geography could lead you into.

TABLE 2 Would I enjoy . . .

... working indoors? ... working outdoors? ... helping people? Park ranger Land economist Surveyor Paramedic Landscape designer Mining engineer Navy officer Real estate salesperson Geologist Firefighter Geoscience technician Landscape architect Tour guide Travel consultant Cartographer ... designing new places to live? ... improving people's wellbeing? ... doing research? Natural resource manager Meteorologist Urban planner Anthropologist Architect Demographer Geophysicist Landscape architect Hydrographer Horticulturist Environmental scientist

12.2.3 Finding my way as a local and global citizen

A wide range of exciting new jobs are developing in the spatial sciences which use geographical tools such as GPS, GIS, satellite imaging and surveying. These tools help people make important decisions about managing and planning places and resources. Whether it be how to manage water somewhere in the Middle East or how best to design a new housing estate here in Australia, these skills and occupations will be an important part of working as a global citizen.

12.3 Concepts and skills used in Geography

12.3.1 Skills used in studying Geography

As you work through each of the topics in this title, you'll complete a range of exercises to check and apply your understanding of concepts covered. In each of these exercises, you'll use a variety of skills, which are identified using the Geographical skills (GS) key provided at the start of each exercise set.

The skills are:

- **GS1** Remembering and understanding
- **GS2** Describing and explaining
- GS3 Comparing and contrasting
- GS4 Classifying, organising, constructing
- GS5 Examining, analysing, interpreting
- **GS6** Evaluating, predicting, proposing

In addition to these broad skills, there is a range of essential practical skills that you will learn, practise and master as you study Geography. The SkillBuilder subtopics found throughout this title will tell you about the skill, show you the skill and let you apply the skill to the topics covered.

The SkillBuilders you'll use in Year 8 are listed below.

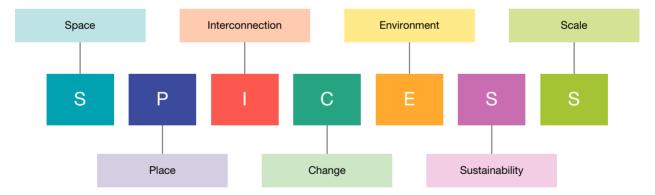
- Recognising land features
- Using positional language
- Constructing a field sketch
- Reading contour lines on a map
- Using latitude and longitude
- Calculating distance using scale
- Drawing simple cross-sections
- Interpreting an aerial photo
- Creating and describing complex overlay maps

- Drawing a précis map
- Understanding thematic maps
- Creating and reading pictographs
- Comparing population profiles
- Describing photographs
- Creating and reading compound bar graphs
- Constructing a basic sketch map
- Reading and describing basic choropleth maps
- Drawing a line graph using Excel

12.3.2 SPICESS

Geographical concepts help you to make sense of your world. By using these concepts you can both investigate and understand the world you live in, and you can use them to try to imagine a different world. The concepts help you to think geographically. There are seven major concepts: *space*, *place*, *interconnection*, *change*, *environment*, *sustainability* and *scale*.

FIGURE 1 A way to remember these seven concepts is to think of the term SPICESS.

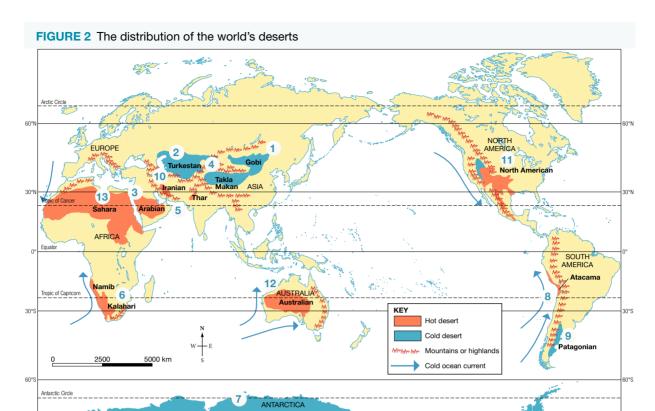


You will use the seven concepts to investigate two units: *Landforms and landscapes* and *Changing nations*.

12.3.3 What is space?

Everything has a location on the space that is the surface of the Earth, and studying the effects of location, the distribution of things across this space, and how the space is organised and managed by people, helps us to understand why the world is like it is.

A place can be described by its absolute location (latitude and longitude) or its relative location (in what direction and how far it is from another place).



Source: MAPgraphics Pty Ltd, Brisbane

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

Developing Australian Curriculum concepts > Space

12.3.4 What is place?

The world is made up of places, so to understand our world we need to understand its places by studying their variety, how they influence our lives and how we create and change them.

You often have mental images and perceptions of places — rich and poor cities, suburbs, towns or neighbourhoods — and these may be very different from someone else's perceptions of the same places.

FIGURE 3 The Paraisópolis favela (slum), home to 60 000 people, is situated next to the gated complexes of the wealthy Morumbi district of São Paulo.



-Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

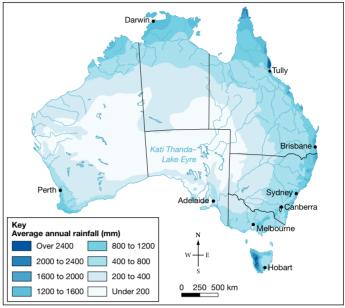
• Developing Australian Curriculum concepts > Place

12.3.5 What is interconnection?

People and things are connected to other people and things in their own and other places, and understanding these connections helps us to understand how and why places are changing.

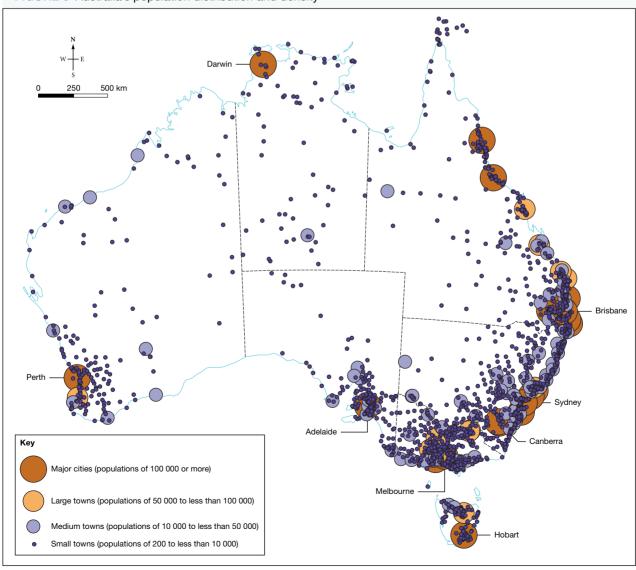
An event in one location can lead to change in a place some distance away.

FIGURE 4 Distribution of annual rainfall in Australia



Source: MAPgraphics Pty Ltd, Brisbane

FIGURE 5 Australia's population distribution and density



Source: Australian Bureau of Statistics

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

Developing Australian Curriculum concepts > Interconnection

12.3.6 What is change?

The concept of change is about using time to better understand a place, an environment, a spatial pattern or a geographical problem.

Some changes can be fast and easily observed, but others are very slow. Cities, for example, can expand outwards over a number of years. Similarly, landforms generally change very slowly, as with the formation of mountains. But some landscape change can be very fast, as is the case with landslides, volcanic eruptions and deforestation.

FIGURE 6a Landscape before deforestation Oxygen released by vegetation Evapotranspiration Trees protect soil Infiltratio from heavy rain. of water Leaf litter Water table enriches soil. Cultivated Tree roots hold so and maintain a stable water table. FIGURE 6b Landscape after deforestation Plantation crops Evapotranspiration decreases. Reduced Grazing Wind infiltration removes Land topsoil. Roads destabilise hillsides. Erosion Water table rises. Heavy rain leaches nutrients Gullies from topsoil. Silt blocks rivers

FIGURE 7 The history of Melbourne's urban sprawl Whittlesea St Andrews Diggers Re Greensborough St Kilda Mordiallo Key Fruit growing area 1954 1954 Vegetable growing area 1954 1971 Market garden / orchard 2009 2010 2030 forecast Urban growth boundary to 2030 10 km

Source: Various Victorian planning studies and current land use mapping. Map produced by Spatial Vision 2019.

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and guestions.

Developing Australian Curriculum concepts > Change

12.3.7 What is environment?

People live in and depend on the environment, so it has an important influence on our lives.

The environment, defined as the physical and biological world around us, supports and enriches human and other life by providing raw materials and food, absorbing and recycling wastes, and being a source of enjoyment and inspiration to people.

12.3.8 What is sustainability?

Sustainability is about maintaining the capacity of the environment to support our lives and those of other living creatures.

Sustainability is about the interconnection between the human and natural world and who gets which resources and where, in relation to conservation of these resources and prevention of environmental damage.

FIGURE 8 Uranium mining in Colorado, United States. Many deserts contain valuable mineral deposits.



FIGURE 9 The Vatican is the world's smallest independent state. In 2008 more than 2000 photovoltaic panels were fixed to the roof of one of the city state's main buildings - the roof of the Paul VI Hall - enabling the Vatican to cut its carbon dioxide emissions by about 225 tonnes a year. The 2400 panels heat, light and cool the hall and several surrounding buildings, producing 300 kilowatt hours (MWh) of clean energy a year.



Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > Environment
- Developing Australian Curriculum concepts > Sustainability

12.3.9 What is scale?

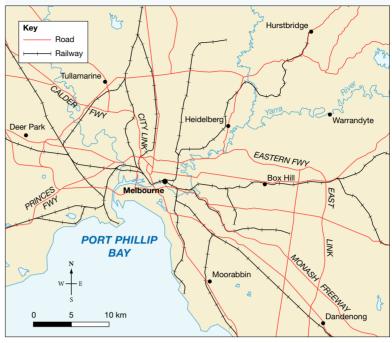
When we examine geographical questions at different spatial levels we are using the concept of scale to find more complete answers.

Scale can be from personal and local to regional, national or global. Looking at things at a range of scales allows a deeper understanding of geographical issues.

Ways to improve sustainability at the local scale include:

- reducing the ecological footprint
- protecting the natural environment
- increasing community wellbeing and pride in the local area
- changing behaviour patterns by providing better local options
- encouraging compact or dense living
- providing easy access to work, play and schools.

FIGURE 10 Melbourne, Victoria. Building sustainable communities means we have to work at various scales.



Source: Department of Environment, Land, Water and Planning





Ways to improve sustainability at the city scale include:

- building strong central activities areas (either one major hub, or a number of specified activity areas)
- reducing traffic congestion
- protecting natural systems
- avoiding suburban sprawl and reducing inefficient land use
- distributing infrastructure and transport networks equally and efficiently to provide accessible, cheap transportation options
- promoting inclusive planning and urban design
- providing better access to healthy lifestyles (e.g. cycle and walking paths)
- improving air quality and waste management
- using stormwater more efficiently
- increasing access to parks and green spaces
- reducing car dependency and increasing walkability
- promoting green space and recreational areas
- demonstrating a high mix of uses (e.g. commercial, residential and recreational).





Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

• Developing Australian Curriculum concepts > Scale

12.3 INQUIRY ACTIVITIES

- 1. Refer to FIGURE 2 and an atlas to answer the following.
 - (a) Give the absolute location (latitude and longitude) of Mecca, in the Arabian desert. What is the relative location of Mecca from Australia?
 - (b) Describe the **spatial** distribution of the world's deserts in relation to the tropics.
 - (c) In what direction and approximately how far is the Thar Desert from the Arabian Desert, the Atacama Desert and the Namib Desert?
 - (d) How is the location of the Namib Desert influenced by cold ocean currents?

Examining, analysing, interpreting

2. Describe any local action where you live that tries to improve **sustainability**. You could talk to your parents about this, or contact your local council to see what they are trying to do about the issue.

Describing and explaining

12.4 Review



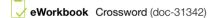
12.4.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

12.4 Exercise 1: Review

Select your learnON format to complete review questions for this topic.





Interactivity Geographical skills and concepts crossword (int-7594)

12.4 Review

12.4.1 Key knowledge summary

12.2 Work and careers in Geography

- Many occupations are linked to the study of Geography.
- New jobs are developing in the spatial sciences which use geographical tools such as GPS, GIS, satellite imaging and surveying.

12.3 Concepts and skills used in Geography

- The acronym SPICESS helps you remember the seven geographical concepts:
 - space
 - place
 - interconnection
 - change
 - environment
 - sustainability
 - scale.





Interactivity Geographical skills and concepts crossword (int-7594)

UNIT 1 LANDFORMS AND LANDSCAPES

Have you ever stood on a hill, or high ground, and looked at the scenery and landscape in front of you? From a height you can see a variety of different landforms such as mountains, valleys and plains. So, how are different landforms actually created? And what causes the hazards we need to deal with?

| 13 | Introducing landforms and landscapes | 460 |
|----|--------------------------------------|-----|
| 14 | Landscapes formed by water | 493 |
| 15 | Desert landscapes | 524 |
| 16 | Mountain landscapes | 553 |
| 17 | Rainforest landscapes | 596 |



FIELDWORK INQUIRY: LOCAL WATER CATCHMENT STUDY Your task

Your team has been commissioned by the local water authority to compile and present a report evaluating the current state of your local catchment. Your team must gather data to investigate how the catchment changes from the upper reaches to the lower.

Select your learnON format to access:

- an overview of the project task
- details of the inquiry process
- · resources to guide your inquiry
- an assessment rubric.







Resources

ProjectsPLUS Fieldwork inquiry: Local water catchment study (pro-0145)

13 Introducing landforms and landscapes

13.1 Overview

From oceans to deserts to cities, what exactly are landscapes and how is each one unique?

13.1.1 Introduction

World landscapes and landforms

Landscapes are the visible features of the land, ranging from the icy landscapes of polar regions and lofty mountain ranges, through to forests, deserts and coastal plains. Shaped by physical processes over millions of years, they have been overlaid by the presence of humans; this includes the places we build, such as towns and cities, and the changes we make to the natural landscape.





√ eWorkbook

Customisable worksheets for this topic

Video eLesson World landscapes and landforms (eles-1623)

LEARNING SEQUENCE

- 13.1 Overview
- 13.2 Different types of landscapes
- 13.3 SkillBuilder: Recognising land features
- 13.4 The processes that shape landscapes
- 13.5 Underground landscapes
- 13.6 Australian landforms
- 13.7 Landforms of the Pacific
- 13.8 SkillBuilder: Using positional language
- 13.9 Cultural significance of landscapes
- 13.10 Preserving and managing landscapes
- **13.11 Thinking Big research project**: Karst landscape virtual tour
- **13.12** Review

online है



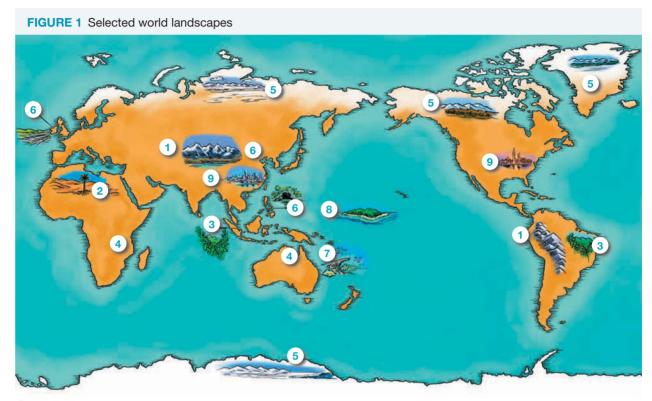


To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

13.2 Different types of landscapes

13.2.1 Types of landscapes

There are many different landscapes across the Earth, and similarities can be observed within regions. Variations in landscapes are influenced by factors such as: climate; geographical features, including mountains and rivers; latitude; the impact of humans; and where the landscapes are located.



- 1 Mountains rise above the surrounding landscape. They often have steep sides and high peaks and are the result of processes operating deep inside the Earth. Some reach high into the atmosphere where it is so cold that snow is found on their peaks.
- 2 Deserts are areas of low rainfall; they are an arid or dry environment. They can experience temperature extremes: hot by day and freezing at night. However, not all deserts are hot. Antarctica is the world's largest desert, and the Gobi Desert, located on a high plateau in Asia, is also a cold desert.
- (3) Rainforests are the most diverse landscapes on Earth. They are found in a variety of climates, ranging from the hot wet tropics to the cooler temperate areas. The lush vegetation found in these regions depends on a high level of rainfall. Over 50 per cent of all known plant and animal species are found within them. In addition, many of our foods and medicines come from rainforests.
- 4 Grasslands, or savannas, are sometimes seen as a transitional landscape found between forests and deserts. They contain grasses of varying heights and coarseness, and small or widely spaced trees. They are often inhabited by grazing animals.
- (5) Polar regions and tundra can be found in polar and alpine regions. Characterised by permafrost, they are too cold for trees to grow. Vegetation such as dwarf shrubs, grasses and lichens have adapted to the extreme cold and short growing season. Glaciers often carve spectacular landscape features.
- (6) Karst landscapes form when mildly acidic water flows over soluble rock such as limestone. Small fractures form, which increase in size over time and lead to underground drainage systems developing. Common landforms include limestone pavements, disappearing rivers, reappearing springs, sinkholes, caves and karst mountains. Around 25 per cent of the world's population obtains water from karst aquifers.
- 7 Aquatic landscapes cover around three-quarters of the Earth and can be classified as freshwater or marine. Marine landscapes are the saltwater regions of the world, and include oceans and coral reefs. Freshwater landscapes are found on land, and include lakes, rivers and wetlands.
- 8 Islands are areas of land that are completely surrounded by water. They can be continental or oceanic. Continental islands lie on a continental shelf - an extension of a continent that is submerged beneath the sea. Oceanic islands rise from the ocean floor and are generally volcanic in origin. A group or chain of islands is known as an archipelago.
- 9 Human or built landscapes are those that have been altered or created by humans.

FIGURE 2 At 8848 metres, Mount Everest in the Himalayas is the highest mountain on Earth.



FIGURE 3 These cave formations in Alabama are protected.





Interactivity Landscapes galore (int-3102)

Google Earth Mount Everest

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

• Investigating Australian Curriculum topics > Year 8: Landforms and landscapes > Grasslands

13.2 INQUIRY ACTIVITY

Investigate one of the landscapes featured in FIGURE 1 and find out some places in which it is found. Show this information on a map. Annotate your map with information from this subtopic and characteristics of your Classifying, organising, constructing landscape.

13.2 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

13.2 Exercise 1: Check your understanding

- 1. **GS2** Describe a built **environment**. What do you think a natural **environment** is?
- 2. **GS1** What factors make landscapes different?
- 3. **GS1** List as many different human or built *environments* as you can think of.
- 4. **GS2** Why do you think people *change* landscapes?
- 5. **GS2** Select two of the landscapes featured in this subtopic and explain how they are different.

13.2 Exercise 2: Apply your understanding

1. **GS4** Copy the following table into your workbook.

| Characteristics | How people use it | Positive impacts | Negative impacts |
|-----------------|-------------------|------------------|------------------|
| | | | |

- (a) Select one of the landscape types described in this subtopic and complete the table, noting the positive and negative aspects of human use.
- (b) Which list is larger the positive impacts or negative impacts?
- (c) Review the column of negative impacts. Select three of these impacts and suggest a way in which the environment could be used more sustainably.
- 2. GS2 Describe how the scale of the following landscapes might differ around the world: deserts, polar regions, aquatic landscapes and islands.
- 3. GS5 Which of the featured landscapes would you like to know more about? Draw up a list of questions that you would like to have answered.
- 4. GS5 Why do you think rainforests are described as 'the most diverse landscapes on Earth'?
- 5. GS5 Which of the featured landscapes do you think would be the least diverse? Give reasons for your answer.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

13.3 SkillBuilder: Recognising land features

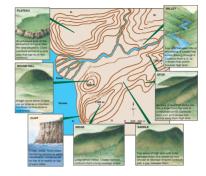


What are land features?

Land features are landforms with distinct shapes, such as hills, valleys and mountains. You can recognise these as you look around your natural environment. On topographic maps you can recognise land features from the patterns formed by the contour lines.

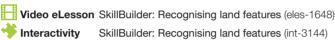
Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





Resources



13.4 The processes that shape landscapes

13.4.1 Are all processes natural?

There are processes at work that continuously sculpt and change the landscape. In the future, the Earth's surface will look very different from the way it looks today.

There are a variety of natural processes that shape and reshape not only the surface of the Earth, but also what lies beneath it. Natural processes include uplift, such as that caused by tectonic activity, **erosion**, **deposition** and **weathering**. People change the landscape when they clear land for agriculture or build cities and road networks. Sometimes they alter the course of a river or trap its flow behind the walls of a dam.

13.4.2 The role of tectonic forces

The Earth's surface, or crust, is split into a number of plates, which fit together like a giant jigsaw puzzle. These plates sit on a layer of semi-molten material in the Earth's **mantle** — the layer of the Earth between the crust and the core. Heat from the Earth's core creates convection currents within the mantle, causing the plates to move. Most of the Earth's great mountain regions were formed as a result of this movement.

When two plates collide, one plate often slides under the other, in a process known as subduction, and it becomes part of the mantle. Other rocks are forced upwards and bent or folded. Large mountain ranges that were formed in this way include the Himalayas in Asia and the Rocky Mountains in North America. You will find more information on how mountains are formed in subtopic 16.2.

13.4.3 How is the landscape worn away?

Erosion is the wearing away of the Earth's surface by natural elements such as wind, water, ice and human activity. The landscape is further eroded when agents such as wind, water and ice **transport** these materials to new locations. Eventually, transported material is deposited in a new location. Over time, this material can build up and new landforms result. The Grand Canyon in Colorado in the United States (**FIGURE 1**) is an example of these elements at work. These processes work more quickly on softer rocks.

Human activity also contributes to erosion. Deforestation, agriculture, urban sprawl, logging and road construction all alter the natural balance and increase erosion by as much as 40 per cent in some areas. Vegetation not only provides valuable habitat for native animals but is also vital for binding the soil together. Once vegetation is removed, it is more easily broken down and removed by wind and water. When topsoil (see FIGURE 6) is removed, plants are unable to obtain the nutrients they need for growth. Sometimes wide, deep channels, known as gullies, form (FIGURE 2).





FIGURE 2 Note the scale of this gully compared to the people.



FIGURE 3 After tectonic forces cause a section of the Earth to be raised (uplifted), other processes take over and resculpt the landscape.

Magma

1) Weathering is the breakdown of rocks due to the action of rainwater, temperature change and biological action. The material is not transported (removed).

It can be physical, chemical or biological.

2 Erosion is the process whereby soil and rocks are worn away and moved to a new location by agents such as wind. water or ice.

3 Transportation is the process that moves eroded material to a new location - examples include soil carried by the wind, sediment or pebbles in a stream.

4 Deposition – materials moved by wind and water eventually come to a halt. Over time new landforms are built. Sand dunes and heaches are common landforms associated with deposition.

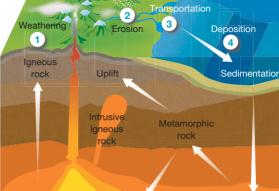
Sedimentary

rock

Physical - occurs where water is continually freezing and thawing. The water penetrates cracks and holes in the rocks. As water freezes it expands, making the cracks larger. Over time the rock breaks apart.







Melting

Chemical - some rocks, such as limestone, contain chemicals that react with water, causing the limestone to dissolve



Biological - living organisms such as algae produce chemicals that break down rocks. They can also be forced apart by plant roots.





Interactivity Break down! (int-3101)



Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Earthquakes and volcanoes > Active Earth

13.4.4 What is soil?

We rarely give much thought to the soil beneath our feet. But soil is the basis of all life on the Earth. It provides the nutrients needed for growing plants, which provide food for animals. Without soil, people could not grow crops or raise livestock. Without soil, nothing could survive.

Soil is a thin layer of material on the surface of the Earth. In it, plants can grow. In some parts of the world it is metres deep, but in Australia it is a thin layer of 15 to 20 centimetres depth. The composition of soil is shown in FIGURE 4 and the factors that influence soil formation are shown in FIGURE 5.

Australia generally has poor soils when compared with those found on other continents such as North America and Europe. Australian soils are generally low in nutrients and, in some areas, especially arid zones, they have a high salt content. Patches of good soil, though, are scattered throughout the continent. For example, there is:

- volcanic soil on the Darling Downs in Oueensland and around Orange in New South Wales
- alluvial soil in river valleys such as around the Clarence River in New South Wales and Margaret River in Western Australia.

In many parts of Australia, it takes more than 1000 years for natural processes to produce three centimetres of soil.

How is soil formed?

Factors that influence soil formation are shown in **FIGURE 5**.

FIGURE 4 While the composition of soil varies widely across the Earth, an average soil will have these characteristics.

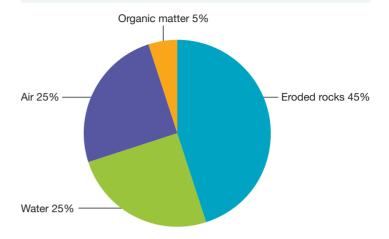


FIGURE 5 Influences on soil formation

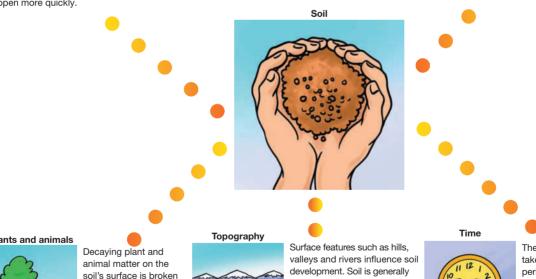


Climate affects the rate of weathering of soil. In high rainfall areas, soil develops more rapidly, but excess moisture also washes out or leaches nutrients. In rainforests, for example, the rich supply of humus from decaying plant matter produces lush vegetation. However, high rainfall means that without this constant supply of humus, soil fertility is quickly lost. In arid regions, where evaporation is high, soils often contain too

much salt to support plant growth. Weather also plays a role; a climate with a freezing and thawing cycle will speed up the breakdown of rocks. In warm climates, the activity of soil organisms is high, and chemical processes also happen more quickly.



Surface rocks and bedrock are broken down through weathering and erosion. The type of soil that forms depends on the parent material and the minerals it contains. A coarse, sandy soil will develop from sandstone. Bedrock that is mainly granite produces a sandy loam, while shale turns into heavy clay soil.





soil's surface is broken down by microorganisms into material that is incorporated into the soil, making it nutrient rich



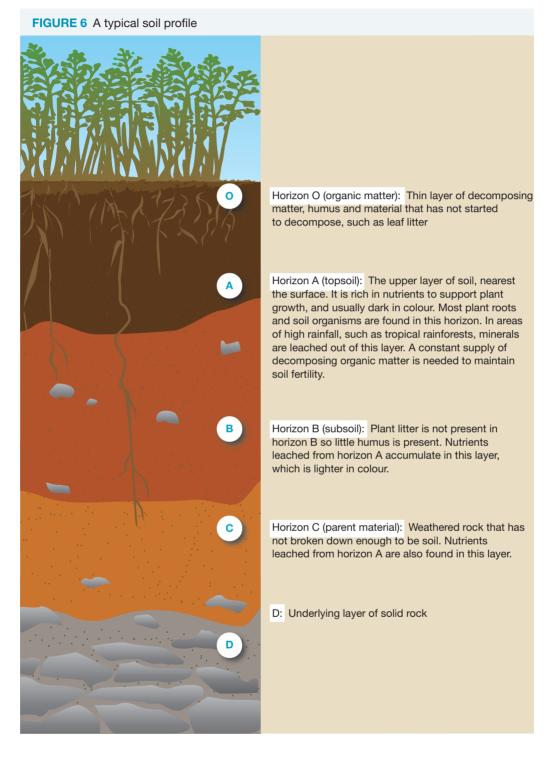
deeper on the top and at the base of a hill than on its slopes. Floodplains next to river valleys are often nutrient rich, due to sediment being deposited as floodwaters recede.



These processes take place over long periods of time. Soils undergo many changes with the passage of time.

13.4.5 What is a soil profile?

Soil forms in layers called horizons (see **FIGURE 6**). A soil profile is a side view or cross-section of these different layers or horizons.





13.4 INQUIRY ACTIVITIES

1. Use the internet to discover a landform that you find interesting. Copy and paste an image of the landform into a Word document. Annotate your image with information about its location and how it was formed. Add further annotations to describe how your landform might have changed over time. Detail how it might have looked in the past and how it might look in the future. Think carefully about the scale of this change.

Classifying, organising, constructing

2. Study the *environment* around your home or school and find a *place* where there is evidence of erosion. Make a sketch and label the features of the landscape. Highlight areas where erosion is evident and add annotations to explain what you think might have caused this change, and in particular, the scale of this change. Estimate the proportion of this environment that has been affected. What proportion do you think is the result of human activity? Compare your estimate with the figure of 40 per cent given in section 13.4.3.

Classifying, organising, constructing

- 3. Use the internet to investigate soils found in desert and rainforest environments. Construct a soil profile for each place and highlight the differences between them. Find out if the percentages shown in FIGURE 4 are different in each *place*, and add this information to your soil profiles. Classifying, organising, constructing
- 4. Use the Soil formation weblink in the Resources tab. Describe the main steps in the formation of soil.

Examining, analysing, interpreting

- 5. Think about what you have learned about soil formation.
 - (a) Dig a hole outside where the soil has not been disturbed too much. Dig until you find small pieces of weathering rock. Measure the depth of your hole. How does this compare with the depth of soils in Australia and overseas?
 - (b) Find two pieces of rock that show signs of weathering. Check the hardness of these rocks; the harder the rocks, the more difficult it will be to obtain a sample. Rub them together over a piece of paper. Were you able to collect a spoonful of grains in a reasonable amount of time? If so, how long did it take to rub off a spoonful of particles?
 - (c) The rate of soil formation is estimated at less than 0.05 millimetres a year in eastern Australia. How long would it take to develop one centimetre of soil? How long would it take to form enough soil to replace what was in the hole you dug earlier?
 - (d) Write a paragraph explaining what this exercise tells you about soil formation and the need to use soil in a sustainable manner.

Examining, analysing, interpreting

13.4 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

13.4 Exercise 1: Check your understanding

- 1. GS1 What is soil?
- **2. GS1** Why is soil important?
- 3. GS2 In your own words, define the natural processes at work shaping the Earth.
- 4. **GS2** Explain the difference between weathering and erosion.
- 5. **GS1** Identify human factors that might contribute to erosion.

13.4 Exercise 2: Apply your understanding

- 1. **GS2** Explain how and why human activity might contribute to weathering and erosion.
- 2. **GS2** Using terms such as *uplift*, *erosion*, *deposition*, *weathering* and *transportation*, explain the interconnection between physical processes and the environment.
- 3. GS2 In your own words, explain how soil is formed and why it is not uniform across the surface of the Earth.
- 4. GS2 Using examples, describe two different ways that mountain ranges can be formed.
- 5. GS5 Australia is an ancient landmass. Which processes described in this subtopic are currently shaping Australia's landforms? Justify your answer.

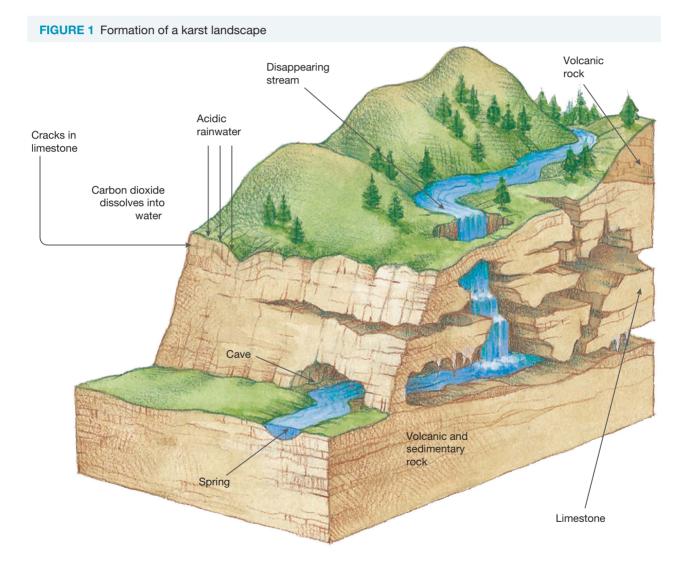
Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

13.5 Underground landscapes

13.5.1 What is karst?

Apart from rivers and streams that flow across the surface of the Earth, vast networks of rivers also exist under the ground. The result is a network of caves and channels that carve a very different landscape, known as karst.

Karst is a landscape formed by water dissolving bedrock (solid rock beneath soil) over hundreds of thousands of years (see FIGURE 1). On the surface of the Earth, sinkholes (holes in the Earth's surface), vertical shafts (tunnels), and fissures (cracks) will be evident. Rivers and streams may seem to simply disappear, but underground there are intricate drainage networks, complete with caves, rivers, stalactites and stalagmites (see FIGURE 2).



Karst topography makes up about 10 per cent of the Earth's surface; however, a quarter of the world's population depends on karst environments to meet its water needs.

13.5.2 How are karst landscapes formed?

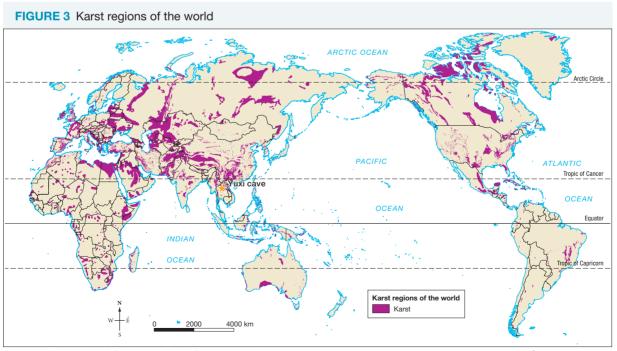
Water becomes slightly acidic when it comes into contact with carbon dioxide in the atmosphere (as it does when raindrops form) or when it filters through organic matter in the soil and percolates into the ground. Acidic water is able to dissolve soluble bedrock, such as limestone and dolomite. This creates cracks or fissures, allowing more water to penetrate the rocks. When the water reaches a layer of non-dissolving rocks, it begins to erode sideways, forming an underground river or stream. As the process continues, the water creates hollows, eventually creating a cave. Some karst landscapes contain aquifers that are capable of providing large amounts of water.

FIGURE 2 Caves in Guilin, Guangxi Province, southern China

13.5.3 Where are karst landscapes found?

Karst landscapes are found all over the world, as shown in FIGURE 3, in locations where mildly acidic water is able to dissolve soluble bedrock such as limestone and dolomite.

In tropical regions, where rainfall is very high, karst mountains sometimes develop. This is because the high rainfall levels wear away the soluble rock much faster than rock is worn away in karst areas with lower rainfall. Examples of tropical karst mountains include the peaks of Ha Long Bay in Vietnam and the Guilin Mountains in China.



Source: World Map of Carbonate Rock Outcrops v3.0.

The Earth's largest arid limestone karst cave system is located on Australia's Nullarbor Plain, covering 270 000 square kilometres. It extends 2000 kilometres from the Evre Peninsula in South Australia to Norseman in the Goldfields-Esperance region of Western Australia, and from the Bunda Cliffs on the Great Australian Bight in the south to the Victoria Desert in the north. The extensive cave system provides a unique habitat for a variety of native flora and fauna. Within the caves are fossils that can reveal much about our distant past, along with important Indigenous heritage sites.



Interactivity Underground wonders (int-3103)

13.5 INQUIRY ACTIVITIES

1. Examples of karst landscapes in Australia include the Buchan, Naracoorte, Jenolan, Labertouche, Princess Margaret Rose, Judbarra and Abercrombie caves. Working with a partner, investigate one of these environments and prepare an annotated visual display. Show its location on a map, and include the scale, features, land use and any concerns or threats to the environment. Include information on what is being done to ensure the sustainable management of the place. Share your findings with the rest of the class.

Classifying, organising, constructing

2. The Nullarbor Plain cave *environment* is a popular destination for caving groups. Use the internet to investigate this *environment* and why people are attracted to it. Compare this *environment* to the one you studied in activity 1. Pay particular attention to the scale and change that has occurred in each place. Is one more fragile than the other? Explain. Suggest strategies for the sustainable management of karst in the Nullarbor. Examining, analysing, interpreting

13.5 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

13.5 Exercise 1: Check your understanding

- 1. **GS2** In your own words, explain how a karst landscape is formed.
- 2. **GS2** Describe the global distribution of karst landscapes.
- 3. GS2 Do you think we should preserve karst landscapes? Give reasons for your answer.
- 4. GS1 Karst landscapes are predominantly found underground. Identify evidence on the surface of the Earth that might indicate the existence of a karst landscape.
- 5. **GS1** What percentage of the Earth's topography could be described as karst?

13.5 Exercise 2: Apply your understanding

- 1. **GS6** The world's largest arid limestone karst system is found on the Nullarbor Plain. Australia.
 - (a) The Nullarbor Plain is an example of a desert landscape; suggest how an environment formed by water can occur in this location.
 - (b) Describe how you think this landscape would be different if it were located in Australia's tropical north.
- 2. **GS5** Explain how the karst landscape can provide us with a link to our distant past.
- 3. GS2 Explain how the karst landscape can provide a quarter of the world's population with water.
- 4. **GS6** Karst is often described as 'a hidden landscape'. Suggest reasons for this description.
- 5. **GS6** Suggest a reason for the absence of karst landscapes in Antarctica.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

13.6 Australian landforms

13.6.1 What processes have shaped Australasia?

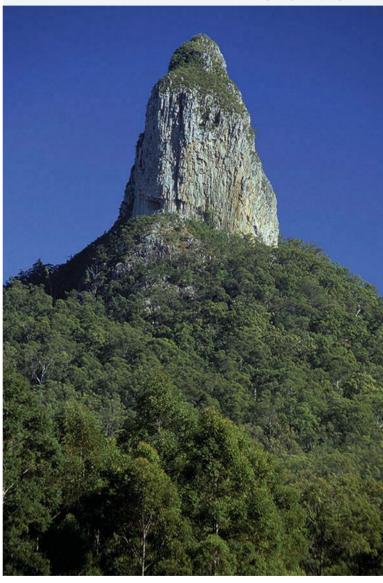
The tectonic forces of folding, faulting and volcanic activity have created many of Australia's major landforms. Other forces that work on the surface of Australia, and give our landforms their present appearance, are weathering, mass movement, erosion and deposition.

Australia is an ancient landmass. The Earth is about 4600 million vears old, and parts of the Australian continent are about 4300 million vears old.

Over millions of years, Australia has undergone many changes. Mountain ranges and seas have come and gone. As mountain ranges eroded, sediments many kilometres thick were laid down over vast areas. These sedimentary rocks were then subjected to folding, faulting and uplifting. This means that the rocks that make up the Earth's crust have buckled and folded along areas of weakness, known as faults. Sometimes, fractures or breaks occur, and forces deep within the Earth cause sections to be raised, or uplifted. Over time the forces of weathering and erosion have worn these down again. Erosion acts more quickly on softer rocks, forming valleys and bays. Harder rocks remain as mountains, hills and coastal headlands.

Because it is located in the centre of a **tectonic plate**, rather than at the edge of one, Australia currently has no active volcanoes on its mainland, and has very little tectonic lift from below.

FIGURE 1 Many of Queensland's mountain peaks were formed by volcanic activity around 20 million years ago. The Glasshouse Mountains, north of Brisbane, are volcanic plugs. They are composed of volcanic rock that hardened in the vent of a volcano. Over millions of years, weathering and erosion have worn away the softer rock that surrounded the vent, leaving only the plugs.



This means its raised landforms such as mountains have been exposed to weathering forces for longer than mountains on other continents and are therefore more worn down.

About 33 million years ago, when Australia was drifting northwards after splitting from Antarctica, the continent passed over a large hotspot. Over the next 27 million years, about 30 volcanoes erupted while they were over the hotspot. The oldest eruption was 35 million years ago at Cape Hillsborough, in Queensland, and the most recent was at Macedon in Victoria around six million years ago. Over millions of years, these eruptions formed a chain of volcanoes in eastern and south-eastern Australia, that are known today as the Great Dividing Range (see FIGURE 2). At present, the hotspot that caused the earlier eruptions is probably beneath Bass Strait.

The present topography of much of Australia results from erosion caused by ice. For example, about 290 million years ago a huge icecap covered parts of Australia. After the ice melted, parts of the continent subsided and were covered by **sediment**, forming sedimentary basins (a low area where sediments accumulate) such as the Great Artesian Basin. On a smaller scale, parts of the Australian Alps and Tasmania have also been eroded by glaciers during the last ice age.

Rivers and streams are another cause of erosion, having carved many of the valleys in Australia's higher regions.

When streams, glaciers and winds slow down, they deposit or drop the material they have been carrying. This is called deposition. Many broad coastal and lowlying inland valleys have been created by stream deposition. These areas are called floodplains.

13.6.2 Australia's landform regions

The topography of Australia can be divided into four major regions (see **FIGURE 3**).

- The coastal lowlands around Australia's edge are narrow and fragmented. The plains often take the form of river valleys, such as the Hunter River Valley near Newcastle.
- The eastern highlands region (which includes the Great Dividing Range) is mainly a series of tablelands and plateaus.

 Most of the area is very rugged, because rivers have cut deep valleys.

 It is the source of most of Australia's largest rivers, including the Fitzroy, Darling and Murray. The highest part is in the south-east, where a small alpine area is snow-covered for more than half the year.

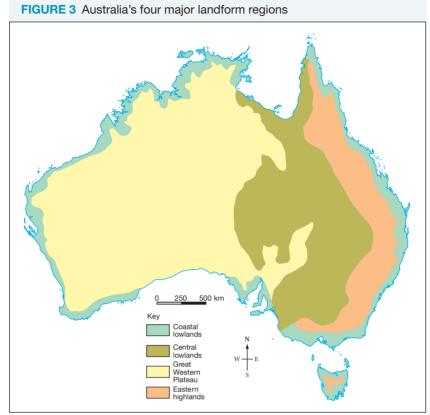
• The central lowlands are a vast area of very flat, low-lying land that contains three large **drainage basins**: the Carpentaria Lowlands in the north, the Lake Eyre Basin in the centre (see **FIGURE 4**) and the Murray–Darling Basin in the south.

• The Great Western Plateau is a huge area of tablelands, most of which are about 500 metres above sea level. It includes areas of gibber (or stony) desert and sandy desert. There are several rugged upland areas, including the Kimberley and the MacDonnell Ranges.

FIGURE 2 Relief map of Australia's east coast. The Great Dividing Range stretches from north of Cairns in Queensland to Mount Dandenong near Melbourne in the south.

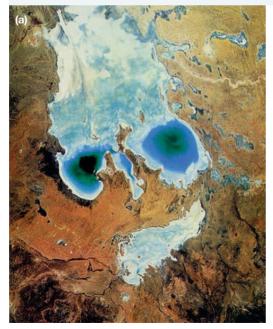


Source: Spatial Vision



Source: MAPgraphics Pty Ltd Brisbane

FIGURE 4 Kati Thanda-Lake Eyre, the lowest point on the Australian mainland, is part of the Great Artesian Basin. It is 15 metres below sea level. Once a freshwater lake, the region is now the world's largest salt pan. The evaporated salt crust shows white in the satellite image (a) below. The lake fills with water only three or four times each century, transforming it into a haven for wildlife. Deep water is shown as black in image (b) below.





13.6.3 CASE STUDY: Water issues in the Murray-Darling Basin region

The Murray–Darling Basin covers about one million square kilometres, and more than 20 major rivers flow into it. It has a wide variety of landscapes, ranging from alpine areas in the south-east to plains in the west. The basin produces 43 per cent of Australia's food and over 40 per cent of Australia's total agricultural income.

The Murray–Darling Basin is the largest and most important drainage basin in Australia, covering one-seventh of the continent. However, the amount of water flowing through it in one year is about the same as the *daily* flow of the Amazon River.

The basin is facing severe problems.

- Only about 20 per cent of the water flowing through the basin ever reaches the sea. The rest is diverted for agriculture, industry and domestic use.
- The Murray supplies about 40 per cent of Adelaide's drinking water. The quality of the water continues to decline, mainly because of salinity levels.
- Approximately 50 to 80 per cent of the wetlands in the basin have been severely damaged or destroyed, and more than a third of the native fish species are threatened with extinction.
- River system inflows vary from year to year. The long-term average is 9030 GL. In 2018, inflows were around 2740 GL, among the lowest on record.
- An estimate of weather trends shows that the flow to the Murray River mouth may be reduced by a further 25 per cent by 2030. However, with the added problem of climate change, it is predicted that precipitation in the Murray–Darling catchment will decrease, so that the reduction in flow to the mouth could be as high as 70 per cent.



FIGURE 5 Aerial view of the Murray River, where it enters the Coorong and Lake Alexandrina in South Australia

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

• Investigate additional topics > Managing water resources > Murray-Darling Basin



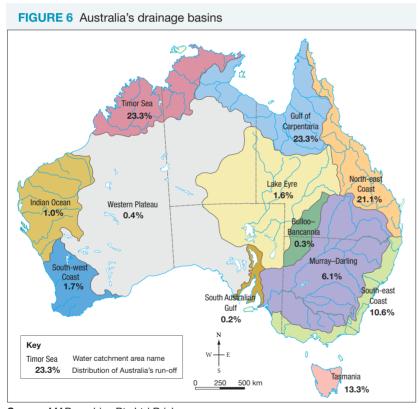
Roogle Earth Lake Eyre

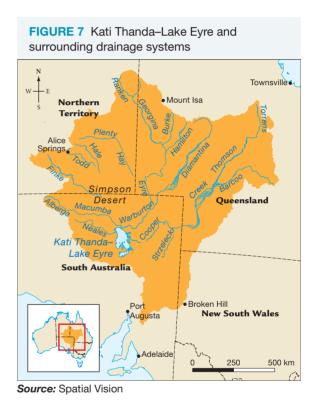
Murray-Darling River

13.6.4 How does water flow across the land?

Permanent rivers and streams flow in only a small proportion of the Australian continent. Australia is in fact the driest of all the world's inhabited continents. It has:

- the least amount of run-off
- the lowest percentage of rainfall as run-off
- the least amount of water in rivers
- the smallest area of permanent wetlands
- the most variable rainfall and stream flow.





Source: MAPgraphics Pty Ltd Brisbane

Australia has many lakes, but they hold little water compared with those found on other continents. The largest lakes are Kati Thanda–Lake Eyre (see FIGURES 6 and 7) and Lake Torrens in South Australia. During the dry seasons, these become beds of salt and mud. Yet an inland sea did once exist in this area. It covered about 100 000 square kilometres around present-day Kati Thanda-Lake Eyre and Lake Frome. South Australia is Australia's driest state, and has very few permanent rivers and streams.

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

• Investigating Australian Curriculum topics > Year 8: Landforms and landscapes > Uluru

13.6 INQUIRY ACTIVITIES

- Use your atlas to list the highest mountains in each Australian state and territory. Describe the location of each.
 Describing and explaining
- 2. Use Google Earth to view any part of the Murray-Darling Basin. Describe the landscape that you see.

Describing and explaining

- 3. Divide your class into four groups. Assign each group one of Australia's landform regions to investigate. Collectively compile a list of landforms that are found in each region. Then have each member of the group investigate a different landform and prepare a series of PowerPoint slides that show the following:
 - (a) the landform
 - (b) where it is located
 - (c) how it was formed
 - (d) whether people might want to visit this landform, including the reasons why it is or is not a popular landform.

Put the individual presentations together for viewing by the rest of the class.
Describing and explaining

- Australia is an ancient landmass and has undergone many changes over millions of years. In groups, brainstorm and compile lists under the following headings.
 - Physical changes that have taken place on the Australian landmass
 - Tectonic processes that have contributed to these *changes*
 - Changes caused by processes such as weathering and erosion
 Within your group, write a series of paragraphs that explain the *interconnection* between these factors.
 Examining, analysing, interpreting

13.6 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

13.6 Exercise 1: Check your understanding

- 1. **GS1** In your own words, explain what is meant by the terms *folding*, *faulting* and *uplift*.
- 2. GS2 Describe some of the physical changes Australia's landmass has undergone.
- 3. GS2 Describe the major characteristics of Australia's four main landform regions.
- 4. GS2 Explain why Australia is so low in altitude and flat compared with other continents.
- 5. GS1 Why is the Murray-Darling Basin Australia's most important drainage basin?

13.6 Exercise 2: Apply your understanding

- 1. GS6 Use your atlas to find the Cape Hillsborough and Macedon volcanoes, or refer to FIGURE 2.
 - (a) Calculate the distance between them.
 - (b) Use the information in this subtopic to work out the rate at which the Australian landmass is moving.
 - (c) How far has Australia moved over the Bass Strait hotspot? Now calculate where under Bass Strait this hotspot might now lie.
 - (d) Use the information in this subtopic to explain why this hotspot has *changed* its location over time.
- 2. **GS3** It is said that the amount of water that flows down the Amazon River in a day is more than flows down the Murray in a year.
 - (a) What does that tell you about how dry Australia's climate is?
 - (b) How might this affect the *environment* around the Murray River?
- 3. **GS2** Describe the role of the Bass Strait hotspot in creating the landforms on Australia's east coast.
- 4. GS6 Describe how Kati Thanda–Lake Eyre has changed over time. Suggest a reason for these changes.
- 5. GS6 Approximately 80 percent of the water flowing through the Murray-Darling Basin is diverted.
 - (a) What is this water used for?
 - (b) What impact might this have on people and the environment?

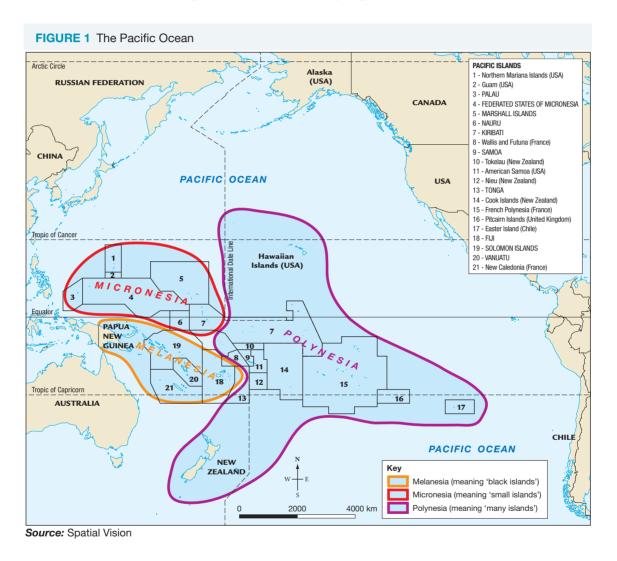
Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

13.7 Landforms of the Pacific

13.7.1 What is the Pacific landscape like?

The Pacific Ocean is the world's largest ocean, and occupies almost a third of the Earth's surface, making it larger than all the Earth's land areas combined. It stretches from the Arctic in the north to Antarctica in the south and is bordered by Australia and Asia in the west and the Americas in the east. The 25 000 Pacific Islands of Polynesia, Micronesia and Melanesia (including Papua New Guinea) are home to around 10 million people.

The Pacific islands are broken up into three main island groups (see FIGURE 1).



Melanesia extends north and north-east of Australia, from the west Pacific Ocean to the Arafura Sea. It includes the islands of New Guinea (the nation of Papua New Guinea and the Indonesian province of Papua), New Caledonia, Vanuatu, Fiji and the Solomon Islands.

Micronesia has hundreds of small islands and is located north-east of Papua New Guinea. It is bounded by the Philippines in the west, Indonesia in the south-west and Melanesia to the south. Micronesia includes the Northern Marianas, Guam, Palau, the Marshall Islands, Kiribati, Nauru and the Federated States of Micronesia.

Polynesia forms a triangle, with its three corners at Hawaii, New Zealand and Easter Island. There are around 1000 islands in this part of the central southern Pacific Ocean. The other main islands are Samoa, Tonga, French Polynesia, Tuvalu and the Cook Islands.

Amazing Pacific facts

Apart from being the world's largest ocean, the Pacific holds a number of other records.

- At 10 203 metres, Mauna Kea in Hawaii is the highest mountain from base to summit.
- Mauna Loa is the world's largest active volcano. It is 120 kilometres long and 50 kilometres wide. It has been active for over 700 000 years and will most likely continue to erupt for another 500 000 years.
- The Mariana Trench in the western Pacific is the deepest point on Earth 11 032 metres.
- Australia's Great Barrier Reef is the world's largest coral reef, stretching some 2027 kilometres.
- Kwajalein in the Marshall Islands, with a length of 125 kilometres, is the world's largest **coral atoll**. It actually comprises 97 islands and **islets** and surrounds one of the world's largest **lagoons**, covering 2173 square kilometres.
- Grand Lagoon Sud in New Caledonia is the world's largest lagoon, covering an area of 3145 square kilometres.
- The Pacific Ocean is encircled by the Pacific Ring of Fire, the world's most active tectonic region. Approximately 75 per cent of the world's active volcanoes are here and 90 per cent of the world's earthquakes occur in this region.

13.7.2 High islands and low islands

What are high islands?

A number of the high islands in the Pacific were once part of either the Australian or Asian continents. These include New Zealand, New Guinea and most of the islands in Melanesia.

Other high islands are volcanic and are really the tops of undersea mountains. They are made up of magma that was forced up through fissures (cracks) in the ocean floor before being cooled by sea water and hardening. Many of the islands found in Micronesia and Polynesia were formed in this way. Sometimes volcanic islands are formed in a chain called an archipelago.

New Zealand has more than 200 islands and 220 mountains higher than 2300 metres, the highest being Mount Cook at 3754 metres.

New Guinea is also mountainous. It has a central spine formed by high mountain ranges, the

FIGURE 2 An underwater volcanic eruption in 2009 created a new island off the coast of Tonga, an island group in the South Pacific.



highest of which is Puncak Jaya at 5030 metres. Tahiti, Fiji, Vanuatu, the Caroline Islands and Raratonga in the Cook Islands are also volcanic islands.

Many large rivers flow from these high mountains, including the Fly River in Papua New Guinea, the Waikato in New Zealand, and the Rewa and Sigatoka Rivers on Viti Levu in Fiji. Many high islands have fertile volcanic soils that support a variety of vegetation types, including rainforest, mangrove forests and palms.

What are low islands?

Some of the low islands in the Pacific are the remains of volcanoes that have eroded over time and are now only just above sea level. Examples include some of the smaller islands in Hawaii and Bora Bora in French Polynesia.

Other low islands are reefs, or atolls built on coral reefs, and are usually quite small, some barely reaching above sea level. Low islands are often a series of very small islands and islets with a lagoon at their centre, known as atolls. Some coral atolls were built by volcanic activity millions of years ago. Eventually, when the volcanic island erodes, it leaves a lagoon in its place.

Micronesia and Polynesia are dominated by low islands. Mount Orohena and Mount Aorai on the island of Tahiti and Mount Tohiea on the island of Moorea (both in French Polynesia) are examples of old volcanoes. They have fringing reefs surrounding a shallow lagoon formed when the island was eroded. These reefs have become barrier reefs that protect the island and the lagoon from the force of the ocean waves.

Coral atolls have no rivers, and the soil is generally thin and not very fertile. Some low islands receive high rainfall, and have more fertile soils that can sometimes support forests.

FIGURE 3 The volcanic island of Moorea, French Polynesia, surrounded by a fringing reef







Roogle Earth Moorea

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and guestions:

Exploring places > Pacific > Pacific nations

13.7 INQUIRY ACTIVITIES

- 1. Pacific islands are popular tourist destinations. Have each member of your class investigate a different island as a possible holiday destination. Prepare an itinerary for a one-week holiday. Include information about the formation, landforms and culture of the island as well as activities that might be undertaken by Classifying, organising, constructing
- 2. Use an atlas to locate 10 of the places and features mentioned in this subtopic. Use direction, latitude and longitude to create a 'What am I?' or 'Where am I?' puzzle. Swap your quiz with another member of the class and see if they can solve your puzzle. Classifying, organising, constructing

13.7 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

13.7 Exercise 1: Check your understanding

- 1. **GS2** Explain the difference between low islands and high islands.
- 2. **GS2** Explain the *interconnection* between the Pacific landscape and tectonic activity.
- 3. GS4 The Pacific Islands are broken up into three main island groups. Identify each group and indicate whether it is made up of mainly low islands or high islands.
- 4. **GS1** Define the following terms: atoll, lagoon, fringing reef, barrier reef.
- 5. GS2 Describe the location of the Pacific Ring of Fire and explain how it got its name.

13.7 Exercise 2: Apply your understanding

- 1. GS2 Refer back to section 13.7.2.
 - (a) Which island groups in the Pacific Ocean are dominated by low islands and which are dominated by high islands?
 - (b) Do any of the island groups contain both low and high islands? If so, which ones?
- 2. GS6 More people in the Pacific islands live on the larger volcanic islands in Melanesia than in other parts of the Pacific. Suggest two reasons why this might be the case.
- 3. GS4 Make your own sketch of a Pacific island and annotate your sketch to show how this place might change over time. Indicate the type of island you are describing.
- 4. **GS2** Explain the *interconnection* between lagoons, fringing reefs and barrier reefs.
- 5. **GS2** Describe the process that might lead to a new island to be created in the Pacific Ocean.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

13.8 SkillBuilder: Using positional language



What is positional language?

Positional language uses compass points to locate places and provide directions between places. North, north-east, east, south-east, south, south-west, west, and north-west are shown on an 8-point compass. We can use positional language to describe the location of one feature in relation to another.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





Resources

Video eLesson Using positional language (eles-1649)

Interactivity

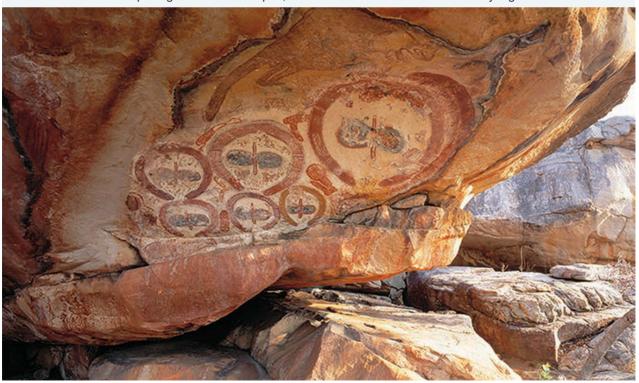
Using positional language (int-3145)

13.9 Cultural significance of landscapes

13.9.1 The Australian context

Landscapes are the product of processes that have operated for millions of years. While all humans have come to realise the importance of the landscape and the role it plays in our lives, indigenous groups were the first to recognise that it is important to work with nature rather than always seek to change and exploit it.

FIGURE 1 Rock art depicting a cloud or rain spirit, found in Western Australia's Kimberley region



Aboriginal peoples and Torres Strait Islander peoples are recognised as the first Australians. Evidence of their presence in Australia is found across the continent in their rock art (as shown in **FIGURE 1**), in **archaeological** records, and through their cultural heritage passed down through generations. As **hunter–gatherers** they relied on the plants, animals and the environment for their survival, and so have an understanding of the complex nature of Australia's varying landscape.

Europeans, on the other hand, arrived in 1788 and occupied areas of Australia. They had a very different view of the landscape, based on ideas they brought with them from Britain. They sought to change the landscape and adapt it to meet their needs. They established permanent settlements and depended on agriculture to provide for their needs.

The perspective of Indigenous Australian peoples is one of being part of the landscape, while the European perspective is based on the idea of land ownership.

13.9.2 Kakadu — Australia's first World Heritage Area

Kakadu National Park, as seen in **FIGURE 2**, covers an area of approximately 20 000 square kilometres of the Northern Territory — an area roughly a third the size of Tasmania. It stretches 200 kilometres from north to south, and spans 100 kilometres from east to west. Within the boundaries of the park are vast uranium deposits. Kakadu is unique in that it is recognised for both its natural beauty and its cultural value.

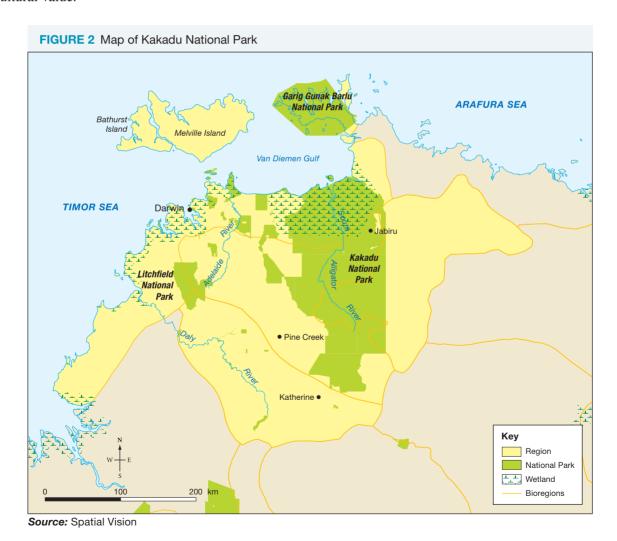
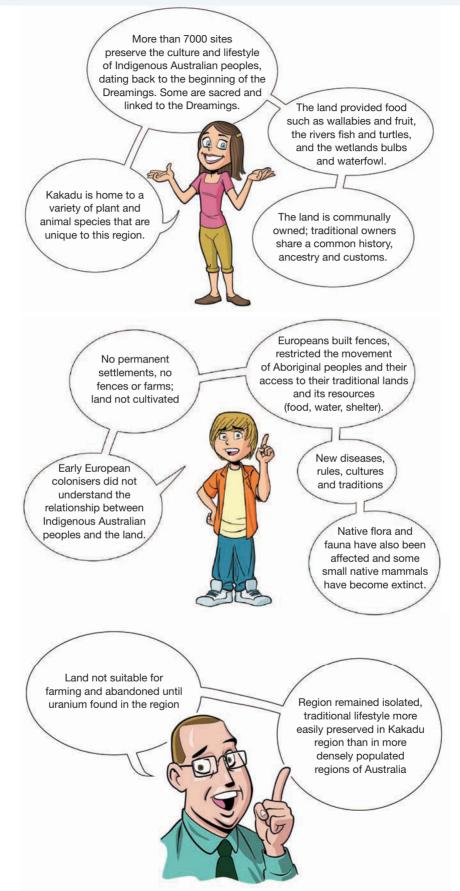


FIGURE 3 Why Kakadu is valued



13.9.3 Kakadu and its resources

Kakadu is rich with the historical records and ancestry of the first Australians. In addition, it supports a treasure trove of native plant and animal species and provides a temporary home to a large number of migratory birds. More than 200 000 tourists visit Kakadu annually, attracted by its vast wetlands and scenery, including steep gorges, Aboriginal rock art, lookouts, and waterfalls such as Jim Jim Falls (see **FIGURE 4**).

Kakadu also has vast deposits of uranium ore, which is a potentially valuable export for Australia. Opponents of uranium mining are concerned about the possibility that Australia's uranium could be processed and used to make nuclear weapons. Others fear the effects of mining on the environment and the potential for a devastating pollution event.

The Ranger uranium mine has been operating since 1980 and lies within the boundaries of Kakadu National Park. Three kilometres downstream from the mine, the Mirrar people (a local Aboriginal community) swim and fish. Since the mine opened, there have been more than 200 leaks and spills, and the mine has generated some 30 million tonnes of liquid radioactive waste (see FIGURE 5). The mine is scheduled for closure in 2021. Some parts of the mine area are undergoing rehabilitation, with an extensive \$800 million rehabilitation program scheduled for when the mine finally closes.

FIGURE 4 Jim Jim Falls at Kakadu is a popular tourist destination.



FIGURE 5 Timeline of major breaches at the Ranger uranium mine since 2002



DISCUSS

Why do you think the Australian government allows uranium mining in such an important region of Australia?

[Ethical Capability]



🤽 Google Earth Mount Everest

Kakadu

13.9 INQUIRY ACTIVITY

Write a letter to the editor of a newspaper outlining your views on uranium mining in environmentally sensitive areas. Explain whether you consider this type of activity a *sustainable* use of the landscape.

Describing and explaining

13.9 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

13.9 Exercise 1: Check your understanding

- 1. GS1 Where is Kakadu National Park and why is it important?
- 2. GS3 Copy the table below into your workbook and use it to compile a list of differences in the way the Australian landscape was viewed by Aboriginal and Torres Strait Islander peoples and non-Aboriginal and Torres Strait Islander Australians. The first one has been done for you.

| Aboriginal and Torres Strait Islander peoples views | Non-Aboriginal and Torres Strait Islander views |
|---|---|
| The land is communally owned. | Individuals own the land. |
| | |
| | |

- 3. GS2 Consider the Indigenous Australian population.
 - (a) Where are the more densely populated regions of Australia? Hint: Find a map in your atlas that shows population distribution.
 - (b) Why would it be more difficult for Aboriginal and Torres Strait Islander communities in these areas to maintain their traditional lifestyle and culture?
- 4. GS2 Describe the interconnection that Aboriginal and Torres Strait Islander peoples have with the landscape. What evidence of this interconnection is found in this subtopic?
- 5. **GS1** Consider the resources in the Kakadu region.
 - (a) What is uranium used for and why is it considered a valuable resource?
 - (b) What risks does uranium mining pose in the Kakadu region?

13.9 Exercise 2: Apply your understanding

- 1. GS5 Think about your personal values and beliefs and analyse how they might be similar or different to those reflected in FIGURE 3.
- 2. **GS6** Think back to the section on mining in the Kakadu region.
 - (a) Suggest three possible impacts on the landscape if a new uranium mine was opened in the Kakadu region.
 - (b) Do you think *changes* would have a large-scale or a small-scale impact? Explain.
- 3. GS6 Predict what pressures decision makers in Australia might face in future when balancing the needs of the different groups who have an interest in Kakadu's resources.
- 4. GS2 Australia's first people did not have a written language. Explain how we have such an extensive knowledge of their culture, history and beliefs.
- 5. GS6 Present one argument for and one argument against granting leases to mine resources such as uranium in the Kakadu region.

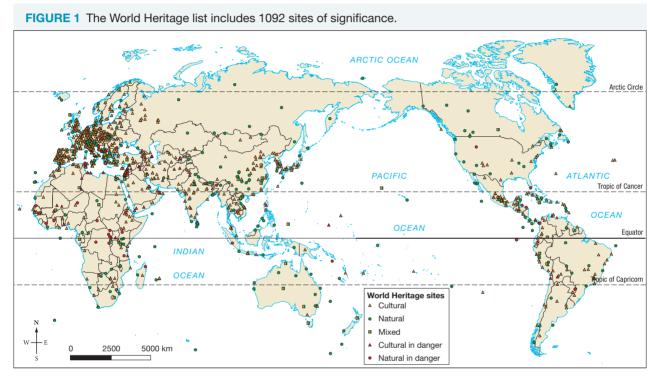
Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

13.10 Preserving and managing landscapes

13.10.1 The World Heritage Convention

Worldwide, people recognise the value of landscapes and the need to protect their natural beauty and cultural heritage, and to manage their resources sustainably. Landscapes are easily damaged or destroyed but are difficult to recreate and repair. The key is to ensure that they are carefully managed so that the landscapes we value today are still present in the future.

From the middle of the twentieth century, there was growing concern about the need to protect areas of both cultural and natural significance (see **FIGURE 1**).



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DISCUSS

Some natural landscapes can be loved to death when they are visited and used by large numbers of people, sometimes having a negative impact on the landscape. As a class, discuss how several Victorian landscapes could be managed and whether people should be allowed to use them.

[Critical and Creative Thinking Capability]

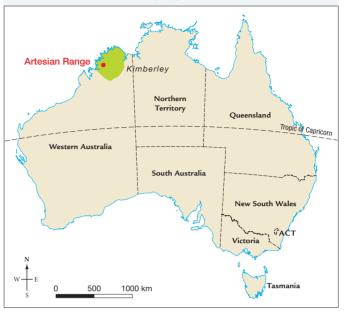
13.10.2 The Artesian Range

The Artesian Range is a unique part of the Australian landscape. It has been described as a lost world, a modern-day Noah's Ark, our last opportunity to protect and preserve a part of the Australian mainland that has had little contact with modern civilisation. Within its hidden valleys and canyons lies a diverse range of flora and fauna. The rich tropical rainforests and woodlands provide vital habitats for some of Australia's most endangered wildlife.

The Artesian Range covers 1800 square kilometres (see FIGURE 2). It is largely inaccessible; the only way in is by helicopter or boat. It is a maze of hidden valleys and canyons, rocky ranges and plateaus, towering escarpments, wide valleys and deep gorges (see FIGURE 3). Its sandstone ranges were formed as a result of tectonic plate activity. These rock formations date back some 1.8 million years.

Although it is difficult for humans to reach the area, exotic species such as donkeys, horses, pigs and cats have gradually invaded the Kimberley. And while fire is a natural part of the landscape, changing fire patterns and the increasing number of late-season wildfires are also a threat to the Artesian Range. Australian Wildlife Conservancy (AWC), an independent non-profit organisation funded by donations has now secured the land and manages it for conservation. AWC undertakes fire management, feral animal control, and biological surveys and monitoring, protecting the full length of the Artesian Range.

FIGURE 2 The Artesian Range covers 1800 square kilometres of the Kimberley region.



Source: Spatial Vision

FIGURE 3 The Artesian Range is a rugged and largely inaccessible landscape, renowned for its natural beauty and unique wildlife.



Source: AWC/Wayne Lawler

Explore more with my World Atlas-

Deepen your understanding of this topic with related case studies and questions.

• Exploring places > The world > World Heritage sites

| - On Resources —— | | |
|-----------------------------|--|--|
| Weblink World Heritage list | | |

13.10 INQUIRY ACTIVITIES

- Use the World Heritage list weblink in the Resources tab and select a site in one of the countries listed on the map. Prepare a visual presentation of one of the sites listed, outlining its importance and how it is protected.
 Classifying, organising, constructing
- 2. In small groups, investigate an invasive species and describe the ways in which it has changed the environment. Is this change occurring on a small or large scale? Explain. Suggest a strategy that the Australian Wildlife Conservancy could employ to eradicate invasive species from this environment.
 Evaluating, predicting, proposing
- 3. (a) Explain what you understand by the terms cultural significance and natural significance.
 - (b) Is it possible for *places* to have both cultural and natural significance? Draw up a table like the one below. With the aid of a partner, add as many *places* as you can to the list. Try to have a balance of Australian and international examples. Compare your list with that of another pair of students.

| Cultural significance | Natural significance | Cultural and natural significance |
|-----------------------|----------------------|-----------------------------------|
| | | |
| | | |
| | | |

- (c) Which column has the most entries? Suggest a reason for the pattern you observe.
- (d) Select one *place* from column 3. Find a picture of this *place* and copy and paste it into a Word document. Add annotations to explain the major features of your chosen *place* and why it is of cultural and natural significance.
 Examining, analysing, interpreting

13.10 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

13.10 Exercise 1: Check your understanding

- 1. GS2 Why is it important to protect sites that have cultural or natural significance?
- 2. **GS2** Describe the location of the Artesian Range and why it is unique.
- 3. **GS2** Suggest why the Artesian Range has been largely inaccessible to people.
- 4. GS1 Identify two management strategies used by the Australian Wildlife Conservancy (AWC) to manage and conserve the Artesian Range.
- **5. GS6** Do you think invasive species or wildfires pose the greatest risk to the Artesian Range? Give a reason for your answer.

13.10 Exercise 2: Apply your understanding

- 1. GS2 Explain how exotic species such as cats, foxes and camels have been able to become established in the Artesian Range when it is difficult for people to enter the region.
- 2. GS6 Evaluate the ways in which the community demonstrates the value it places on cultural diversity and why this is important to the community.
- 3. GS5 The Artesian Range has been described as a 'modern-day Noah's Ark'. Explain what you understand by this description.
- 4. GS2 Describe the processes that have led to the formation of the Artesian Range and its different landscape
- 5. GS6 Uluru is considered to have both cultural and natural significance. Suggest a reason for this classification.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

13.11 Thinking Big research project: Karst landscape virtual tour

SCENARIO

To acknowledge the importance of the karst environment and its connection to Indigenous Australian Dreaming stories, you are to create a karst landscape virtual tour for the National Museum.

Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources



projectsPLUS Thinking Big research project: Karst landscape virtual tour (pro-0168)

13.12 Review



on line $\frac{2}{5}$

13.12.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

13.12.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31344)

Crossword (doc-31345)



Interactivity Introducing landforms and landscapes crossword (int-7595)

KEY TERMS

aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater archaeological concerning the study of past civilisations and cultures by examining the evidence left behind, such as graves, tools, weapons, buildings and pottery

coral atoll a coral reef that partially or completely encircles a lagoon

deposition the laying down of material carried by rivers, wind, ice and ocean currents or waves

drainage basin an area of land that feeds a river with water; or the whole area of land drained by a river and its tributaries

erosion the wearing away and removal of soil and rock by natural elements, such as wind and water, and by human activity

escarpment a steep slope or long cliff formed by erosion or vertical movement of the Earth's crust along a fault line

glacier a large body of ice, formed by an accumulation of snow, which flows downhill under the pressure of its own weight

hotspot an area on the Earth's surface where the crust is quite thin, and volcanic activity can sometimes occur, even though it is not at a plate margin

hunter-gatherers people who collect wild plants and hunt wild animals rather than obtaining their food by growing crops or keeping domestic livestock

islet a very small island

lagoon a shallow body of water separated by islands or reefs from a larger body of water, such as a sea **mantle** the layer of the Earth between the crust and the core

permafrost a layer beneath the surface of the soil where the ground is permanently frozen

plateau an extensive area of flat land that is higher than the land around it. Plateaus are sometimes referred to as tablelands.

sediment material carried by water

soluble able to be dissolved in water

stalactite a feature made of minerals, which forms from the ceiling of limestone caves, like an icicle. They are formed when water containing dissolved limestone drips from the roof of a cave, leaving a small amount of calcium carbonate behind.

stalagmite a feature made of minerals found on the floor of limestone caves. They are formed when water containing dissolved limestone deposits on the cave floor and builds up.

tectonic plate one of the slow-moving plates that make up the Earth's crust. Volcanoes and earthquakes often occur at the edges of plates.

transportation the movement of eroded materials to a new location by elements such as wind and water **weathering** the breaking down of bare rock (mainly by water freezing and cooling as a result of temperature change) and the effects of climate

13.3 SkillBuilder: Recognising land features

13.3.1 Tell me

What are land features?

Land features are landforms with distinct shapes, such as hills, valleys and mountains. You recognise these as you look around your natural environment. On topographic maps you recognise land features from the patterns formed by the contour lines.

Why is it useful to recognise land features?

By recognising land features, we understand our natural environment. This is useful for a wide range of activities including:

- planning housing estates, freeway routes and reservoirs
- organising outdoor recreational pursuits such as orienteering, trail-biking and flying
- managing hazards such as flooding.

Recognising land features on a map involves identifying the shapes created by the pattern of contours.

13.3.2 Show me

How to recognise a land feature

By reading the contour lines an understanding of the shape of the land is obtained. Land features are identified from the contour lines.

You will need:

• a topographic map.

Procedure

Use the contour lines to identify land features.

Step 1

Look at the contour lines on **FIGURE 1**. You will see that sometimes the lines are close together and sometimes the lines are further apart. Identify two areas where this is the case.

Step 2

Using your hand, create the shape of a hill. For every 50 metres increase of the hill slope, move your hand higher and at each step visualise that this is the next contour line on a map.

Try this for some other landforms that you are familiar with, such as a valley or a beach cliff.

Did you recognise that if the contours are close together then the shape of the land is steep, and if the contours are further apart then the land is flatter?

Step 3

Landforms have distinctive shapes with contours, which a geographer recognises on a topographic map as a particular land feature. Use **FIGURE 1** as a guide to understanding the shapes on maps as land features. Create your own hand models of the shape of each land features.

Model

FIGURE 1 shows a simple topographic map including a spur, cliff, valley and plateau. These land features are identified by the way the contour lines come together to create shapes on the map.

FIGURE 1 Landforms matched to a topographic map VALLEY PLATEAU X. land which is higher than the land around it. Close Low land between hills or contours surround a wide mountains. It usually has area that has no or few a river flowing through it. contours. Contours form a U- or V-shape that points **ROUND HILL** towards high land. 400 SPUR 600 850 m A high round piece of land, 160 m Ocean not as large as a mountain. An area of land that sticks out Contours form a circle or like a finger from the side of oval shape. a mountain or hill. Contours form a U- or V-shape that points away CLIFF from high land. 200 400 m RIDGE SADDLE A high, steep, rocky slope formed by erosion or earth Two areas of high land with a dip movements. Contours are between them. It is shown by two Long narrow hilltop. Closely spaced circular or sausage-shaped contours on top of or nearly on top contours form a long sausage shape. of each other. with a gap between them. Resources Digital doc Topographic map of Yarra Yarra Creek Basin (doc-31343) Interactivity Recognising land features (int-3144) ── Video eLesson How to recognise land features (eles-1648)

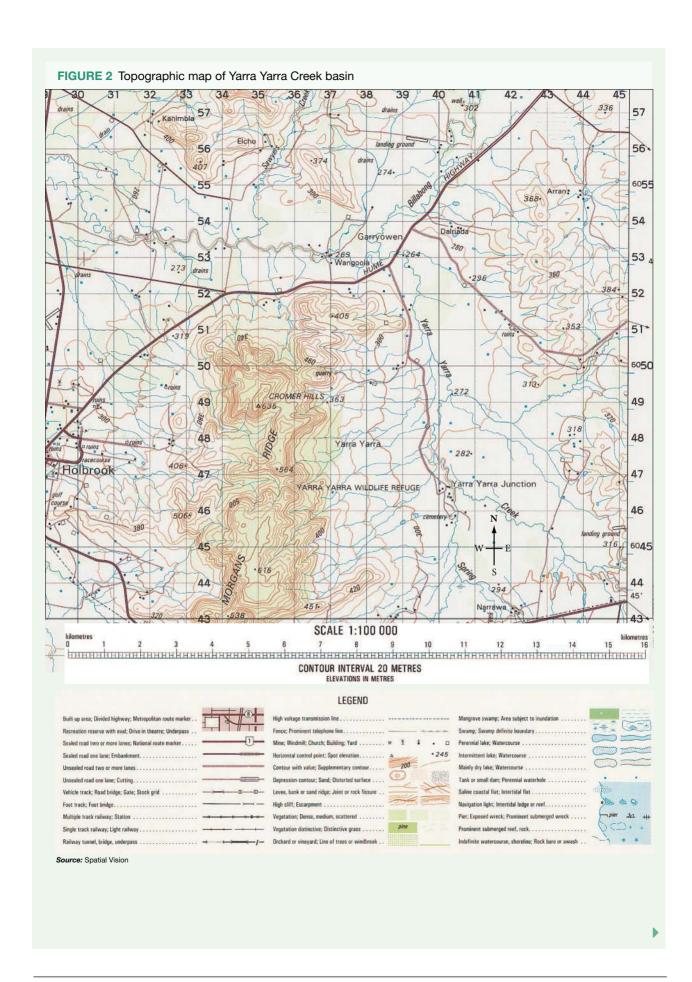
13.3.3 Let me do it

Complete the following activities to practise this skill.

13.3 ACTIVITIES

- 1. Use **FIGURE 2**, the map of Yarra Yarra Creek Basin, New South Wales, to identify the following landforms.
 - Ridge
 - · Very steep slope
 - Spur
 - Saddle

- Wide valley
- Spot height of 635 metres
- Plateau



- 2. Apply your skills to answer the following questions.
 - (a) Which slope of Morgans Ridge would be the most difficult to climb?
 - (b) What two natural features can be seen from Morgans Ridge to the east?
 - (c) What are the heights of the peaks on Morgans Ridge?
 - (d) Can you see the town of Holbrook from Wangoola? Explain your answer.
 - (e) What land features form part of Morgans Ridge?

Checklist

I have:

- identified patterns in contour lines
- recognised the major land features on a topographic map.

13.8 SkillBuilder: Using positional language

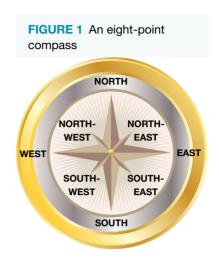
13.8.1 Tell me

What is positional language?

Positional language uses compass points to locate places and provide directions between places. A magnetic compass will always point to north. All other directions are taken from this reference point. An 8-point compass — with points north, north-east, east, south-east, south, south-west, west, and north-west — is standard in most Geography books and atlases. A 16-point compass provides even further detail.

Why is positional language useful?

Positional language allows geographers to be accurate when giving directions and locations of places. It avoids the confusion that can occur with positioning if words such as left and right, up and down, top and bottom are used. No matter what direction you are facing, compass direction always remains the same, based around north.

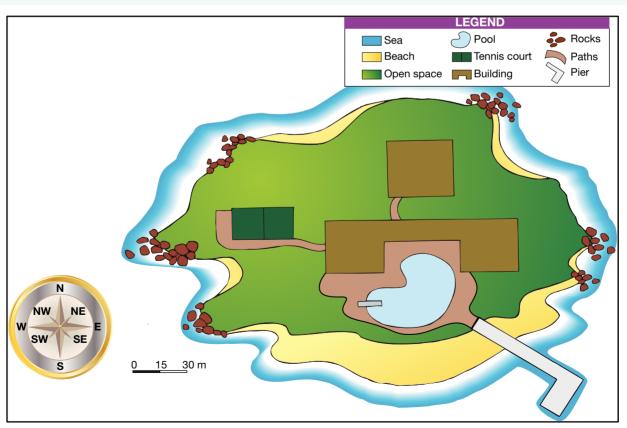


13.8.2 Show me

How to use positional language

Model

FIGURE 2 A cartographer's map of Holiday Island



As we check in at the main building for our stay on Holiday Island, a guide explains the features of the holiday resort. 'You arrived at the pier, which is to our south-east. On the way to this building you passed the paved poolside area, which is now to your south. There are four beach areas — the largest is to the south, a small moon-shaped beach is to the west-south-west and the other beaches are to the north-north-west and north-east across the open spaces. To the'

You will need:

- a map (use **FIGURE 2**, subtopic 13.9)
- a pencil
- tracing paper.

Procedure

Practising using the positional language of a 16-point compass can be done with any type of map such as in an atlas, street map, topographic map, a plan, sketch or an image such as aerial images, oblique images and satellite images.

Step 1

On the piece of tracing paper, draw a simple 16-point compass based on that shown in **FIGURE 1**. You will need to add the following points: NNE, ENE, NNW, WNW, SSE, ESE, SSW, WSW. Ensure that you mark the centre of the compass with a dot.

Step 2

Place the centre of the 16-point compass (the dot) on the point of origin from which a direction is being given. Ensure that north is in the vertical position. On all maps/images, unless an indicator determines otherwise, north is assumed to be vertical (i.e. pointing to the top).

For example, to discover that place A is north-north-west of place B, the direction is taken from place B, so the centre of the compass should be on place B.

Step 3

Read the compass direction from the centre dot to the place identified and write down that direction.

Step 4

The placement of the centre of the compass must be moved for each individual direction required.



13.8.3 Let me do it

Complete the following activities to practise this skill.

13.8 ACTIVITIES

1. The completed example in **TABLE 1** uses the map in **FIGURE 3** (**FIGURE 2** from subtopic 13.9) to show directions from one place to another place.

In this example, you are at Kakadu National Park and you want to give a direction so that someone arrives at Litchfield National Park.

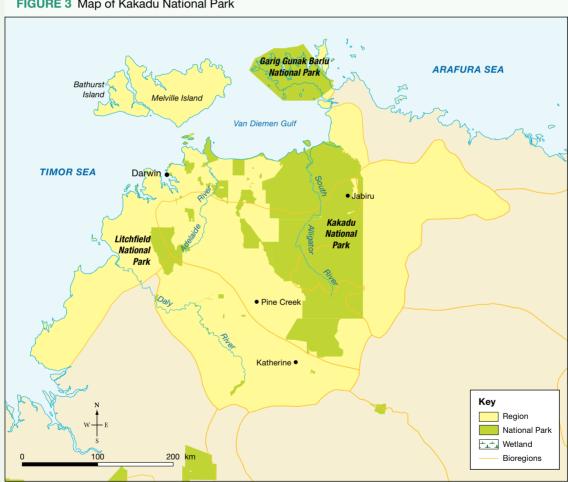
Copy the table below into your workbook. Using the map and your tracing paper compass, create five more examples of positional language in the table. Ensure that you use a range of directions from your 16-point compass.

TABLE 1 Examples of positional language

| Place of origin | Place of arrival | Direction |
|----------------------|--------------------------|-----------|
| Kakadu National Park | Litchfield National Park | West |
| | | |
| | | |
| | | |
| | | |
| | | |

Ask a class member to check your directions.

FIGURE 3 Map of Kakadu National Park



- 2. Apply your skills to answer the following questions.
 - (a) In which direction from Katherine would you need to fly to get to Kakadu National Park?
 - (b) In what direction is Jabiru in Kakadu National Park from Darwin?
 - (c) In what direction is Jabiru from Pine Creek?
 - (d) If I was to drive from Katherine in a north-west direction, would I arrive in Jabiru or Darwin?
 - (e) I want to drive from Pine Creek to Jabiru. Describe the directions in which I would need to travel while on the road.

Checklist

I have:

- drawn and labelled an accurate 16-point compass
- used the compass to indicate direction using positional language.

13.11 Thinking Big research project: Karst landscape virtual tour

Scenario

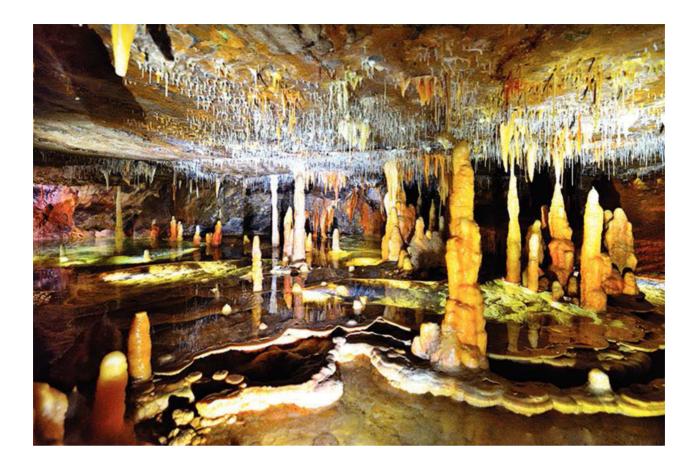
Karst environments are the topic of Indigenous Australian creation stories. They feature in their ceremonies and are thought to have curative powers. Part of their mystique is that they predominantly exist underground and are difficult to access. The Australian government is creating a display at the National Museum and wants to include a diorama that showcases this environment and its connection to 'The Dreaming'.



Task

Together with a partner you will create a virtual tour of a karst landscape that:

- showcases how the landscape was created from both the geographical perspective and Aboriginal Dreaming stories
- includes a guided tour of a unique karst environment within Australia.



Process

- Open the ProjectsPLUS application for this topic and then click the **Start new project** button to enter the project due date and set up your project group. Working in groups will enable you to share ideas, store your research and collaborate on the finished product. Save your settings and the project will be launched.
- Check the assessment criteria before you begin.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- Revisit the relevant subtopics and the suggested weblinks before branching out and conducting additional research. Don't forget to compile your bibliography as you progress through the task use the bibliography template in the **Media centre**.
- Use internet research to find a series of images that will showcase the karst landscape and a map that shows the location of karst environments in Australia.
- Investigate and select a 'Dreaming' (creation) story related to the creation of the karst landscape, and its importance to the Indigenous people in the region where the story originates.
- Place your images into the diorama template and write a script that includes:
 - the 'Dreaming' (creation) story
 - key features of the karst landscape.
- Record your script and attach the audio file to your diorama images.
- Carefully check your timing to ensure that the audio and images are synchronised.
- Submit your completed project and bibliography.





ProjectsPLUS Karst landscape virtual tour (pro-0168)

13.12 Review

13.12.1 Key knowledge summary

13.2 Different types of landscapes

- Landscapes are influenced by factors such as climate, geographical features and latitude.
- The type of landscape that develops is determined by the mix of these factors.
- There are variations within landscapes and they are impacted by human activity.

13.4 The processes that shape landscapes

- Landscapes are continually changing; tectonic forces are at work to build landscapes, and processes such as weathering and erosion wear them away.
- Human activity such as deforestation increases the rate of erosion.
- Soil varies across landscapes and ultimately determines the type of vegetation that a landscape
 can support.

13.5 Underground landscapes

- Karst landscapes are found all over the world, predominantly in tropical regions.
- Karst forms where slightly acidic water filters through soluble bedrock, such as limestone, forming hollows and caves beneath the surface of the Earth.
- The largest arid limestone karst cave system is located on Australia's Nullarbor Plain.

13.6 Australian landforms

- Australia is an ancient landscape and has undergone many changes over millions of years.
- Tectonic forces have uplifted the land, creating mountain ranges. The landscape was been worn away and sculpted by the processes of weathering, erosion and deposition.
- Australia has also migrated, so that its climate and vegetation are vastly different to what they were millions of years ago.

13.7 Landforms of the Pacific

- The Pacific Ocean makes up almost one-third of the Earth's surface and is dominated by three major island groups.
- The islands within these major groups are classified as low islands and high islands.

13.9 Cultural significance of landscapes

- Indigenous Australians have been in Australia for around 60 000 years and have a close bond with the land.
- The Australian landscape is culturally significant to Indigenous Australians and their ancient beliefs conflicted with those of the European settlers.
- Addressing the competing needs of culture and resources involves striking a delicate balance.

13.10 Preserving and managing landscapes

- The World Heritage List ensures that places of natural and cultural significance are preserved and managed so they are not lost for future generations.
- Australia has several sites that are culturally significant and also considered natural wonders, such as the Artesian Range.
- The inaccessible nature of the Artesian Range has protected it from human activity, however, it is threatened by introduced species.

13.12.2 Reflection

Complete the following to reflect on your learning.

13.12 ACTIVITIES

Revisit the inquiry question posed in the Overview:

From oceans to deserts to cities, what exactly are landscapes and how is each one unique?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



Resources



eWorkbook Reflection (doc-31344)

Crossword (doc-31345)



Interactivity Introducing landforms and landscapes crossword (int-7595)

KEY TERMS

aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater archaeological concerning the study of past civilisations and cultures by examining the evidence left behind, such as graves, tools, weapons, buildings and pottery

coral atoll a coral reef that partially or completely encircles a lagoon

deposition the laying down of material carried by rivers, wind, ice and ocean currents or waves

drainage basin an area of land that feeds a river with water; or the whole area of land drained by a river and its tributaries

erosion the wearing away and removal of soil and rock by natural elements, such as wind and water, and by human activity

escarpment a steep slope or long cliff formed by erosion or vertical movement of the Earth's crust along a fault line

glacier a large body of ice, formed by an accumulation of snow, which flows downhill under the pressure of its own weight

hotspot an area on the Earth's surface where the crust is quite thin, and volcanic activity can sometimes occur, even though it is not at a plate margin

hunter-gatherers people who collect wild plants and hunt wild animals rather than obtaining their food by growing crops or keeping domestic livestock

islet a very small island

lagoon a shallow body of water separated by islands or reefs from a larger body of water, such as a sea mantle the layer of the Earth between the crust and the core

permafrost a layer beneath the surface of the soil where the ground is permanently frozen

plateau an extensive area of flat land that is higher than the land around it. Plateaus are sometimes referred to as tablelands.

sediment material carried by water

soluble able to be dissolved in water

stalactite a feature made of minerals, which forms from the ceiling of limestone caves, like an icicle. They are formed when water containing dissolved limestone drips from the roof of a cave, leaving a small amount of calcium carbonate behind.

stalagmite a feature made of minerals found on the floor of limestone caves. They are formed when water containing dissolved limestone deposits on the cave floor and builds up.

tectonic plate one of the slow-moving plates that make up the Earth's crust. Volcanoes and earthquakes often occur at the edges of plates.

transportation the movement of eroded materials to a new location by elements such as wind and water weathering the breaking down of bare rock (mainly by water freezing and cooling as a result of temperature change) and the effects of climate

14 Landscapes formed by water

14.1 Overview

From gentle rain to rushing rivers, how does simple water form and transform landscapes?

14.1.1 Introduction

Water is one of the most powerful agents in creating landscapes. If you have ever been caught outside in a heavy downpour, walked through a fast-flowing creek, or been dumped in the surf, then you have felt and seen the energy of flowing water. It can knock you off your feet, move buildings and carve huge holes in the Earth's surface. Landscapes created by water are found everywhere.



Resources

Customisable worksheets for this topic

Video eLesson Landscapes sculpted by water (eles-1624)

LEARNING SEQUENCE

- 14.1 Overview
- 14.2 Landscapes formed by water
- 14.3 Coastal erosion
- 14.4 Which coastal landforms are created by deposition?
- 14.5 Managing coasts
- 14.6 Indigenous use of coastal environments
- 14.7 Comparing coastal landforms
- 14.8 How do I undertake coastal fieldwork?
- 14.9 SkillBuilder: Constructing a field sketch
- 14.10 How does water form river landscapes?
- 14.11 Managing river landscapes
- 14.12 Landscapes formed by ice
- 14.13 SkillBuilder: Reading contour lines on a map
- 14.14 Thinking Big research project: Coastal erosion animation
- **14.15** Review

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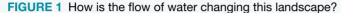
on line

To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

14.2 Landscapes formed by water

14.2.1 How does water change landscape features?

A torrent of gushing water can shift rocks, remove topsoil or shape river valleys. Gentle rain can change the chemical structure of any surface material, sculpting the imposing coastal landforms we see around the world. In cold climates, compressed snow in glaciers works like a slow-moving bulldozer to erode land and create unique landscape features. Once fresh water has made its way to the ocean, the power of waves creates coastal landscape features.





As you learned in topic 13, landscapes are predominantly changed or created by two processes: **erosion** and **deposition**. Through erosion, water can carve through rock — reducing once-mighty cliffs to lowly sea-stacks. Through deposition, water creates beaches, spits and sand dunes as it carries sand across the oceans of the world. In **FIGURE 1** you can see the power of water as it rushes over a rockface and carves pools in its hard surface. You may have seen pools of a similar shape carved by waves in rocky coastal landforms.

As water makes contact with landscapes, it can change the shape and size of its features or landforms (FIGURES 1 and 3). The coastal landscape that you see today is not the same as it was hundreds or thousands of years ago. FIGURE 2 is a photo of the Twelve Apostles, located on the south-western coast of Victoria. The name suggests that there may once have been twelve pillars of rock, or stacks, visible along this stretch of coastline. In the foreground you can see the remnants of two quite recently collapsed stacks. Even these stacks were once joined to the cliffs as part of the mainland. This highly erodible coastline has been constantly altered by many years of rainfall and wave action on the soft limestone cliffs.

FIGURE 2 The Twelve Apostles in Port Campbell National Park, Victoria. How might the potential for erosion change along this coast if the waves were larger and it was high tide?

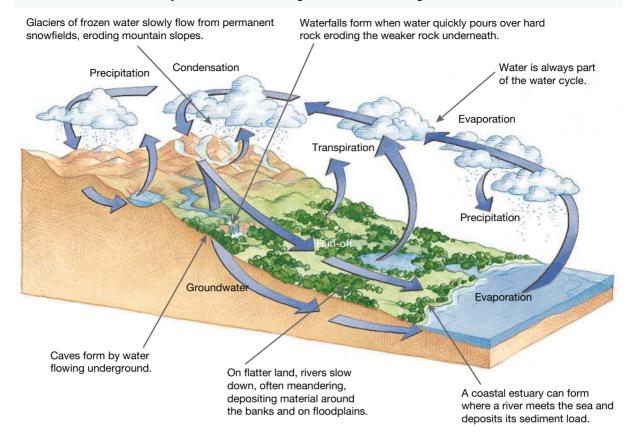
Stacks show where the coastline used to be.

Current coastline

Current coastline

Current coastline

FIGURE 3 Water constantly moves over and through the Earth and through the air.



14.2 INQUIRY ACTIVITY

Use your research skills to create a list of world water facts on the following:

- a. the biggest glacier
- b. the longest river
- c. the biggest wave
- d. the highest waterfall
- e. the widest river
- f. the biggest ocean
- g. a world water fact of your choice.

Show on a map where each is located.

Classifying, organising, constructing

14.2 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

14.2 Exercise 1: Check your understanding

- 1. **GS1** Landscapes are in a state of continual *change*.
 - (a) Which two natural processes powered by water are most responsible for continually *changing* landscapes?
 - (b) How are these two processes linked?
- 2. GS2 Where would FIGURES 1 and 2 be placed on the landscape depicted in FIGURE 3? Explain.
- 3. **GS2** Explain how the water cycle and the formation of landscapes are *interconnected*.
- **4. GS4** Draw your own copy of the diagram shown in **FIGURE 3**. Make sure that you included your own versions of the annotations as well.
- **5. GS1** Of the two processes discussed in this subtopic, which is the most powerful erosion or deposition?

14.2 Exercise 2: Apply your understanding

- 1. GS2 Many landscapes change rapidly; for example, the Twelve Apostles.
 - (a) Describe another example of a landscape that has been shaped by the power of water.
 - (b) Do you think the *changes* to the landscape have been positive or negative?
 - (c) To what extent should people try to stop the changes caused by water?
- 2. GS2 Water can be considered one of the most important architects of desert landscape features. After looking at the images in this subtopic, try to explain how you think water can change the landscapes of arid or desert environments.
- 3. **GS6** Identify three possible ways that people can *change* the flow of water, either across the surface of the Earth or along the coast. Predict how you believe this may alter landscape features. Examples may include the use of river water for irrigation or the construction of a marina.
- **4. GS2** Think back to the last time you visited a coastal **environment**. What features were prominent in the **environment** you visited? What processes were responsible for the creation of these features?
- **5. GS6** Erosion and deposition are two processes that can transform coastal landscapes. Describe an additional way in which coastal landscapes can be *changed*.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

14.3 Coastal erosion

14.3.1 How do waves change an environment?

The coast is the zone or border between land and ocean. It is in this collision zone that the movement of sea water and the impact of the ocean on the land together create coastal landscapes. Coastal landscapes have landforms that are common to coastlines in different places around the world because they are built up or worn away in similar ways.

Before we investigate the different types of coastal landforms that exist, we need to first understand the processes which shape these landforms. Coastal erosion is mostly caused by the continued presence of waves in an environment. Waves are caused when the wind blows over the ocean. The size of a wave depends on the strength of the wind and the distance the wind has been blowing (referred to as the *fetch*). A strong wind and a long fetch will result in a powerful wave with a high degree of erosive potential. These waves are called **destructive waves** and they are involved in creating landforms by erosion. A gentle wind and a small fetch will create less powerful waves known as constructive waves. While these waves are not involved in erosion, they do create depositional landforms (see subtopic 14.4).

Next time you are walking along a beach, stop to check whether the waves in this environment are constructive or destructive. You can do this by analysing the strength of the **swash** and **backwash**. As a wave hits the shore it sends water (as well as sand, shells and other debris) onto the beach. This is called the swash. Water is then pulled back into the ocean by gravity in what is known as the backwash. If the swash is more powerful than the backwash, the waves are constructive and you should see depositional landforms. If the backwash is more powerful than the swash, the waves are destructive and you should see more landforms which have been caused by erosion. The structure of constructive and destructive waves can be seen in **FIGURE 1**.

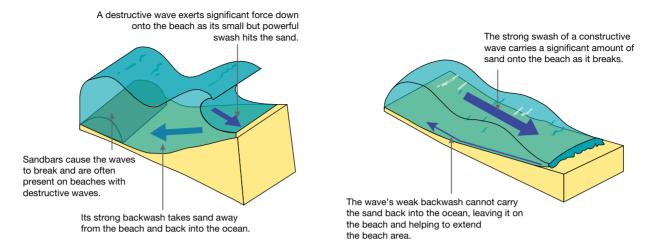
Coastal landforms are not solely created by the power of waves. Rainfall and constant strong winds can also influence the appearance of coastal landforms. For example, after a puddle of rain water evaporates, it leaves behind salts and minerals which can interact with rocks. This can lead to scarring of the rock surface and, over time, deep crevasses can be formed. Other physical processes can also greatly affect the coastal landscape; for example, the tectonic force of earthquakes and volcanoes; changing sea levels; and human activities such as building roads, ports and houses, and damming rivers.

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Oceans and coasts > Coastal processes

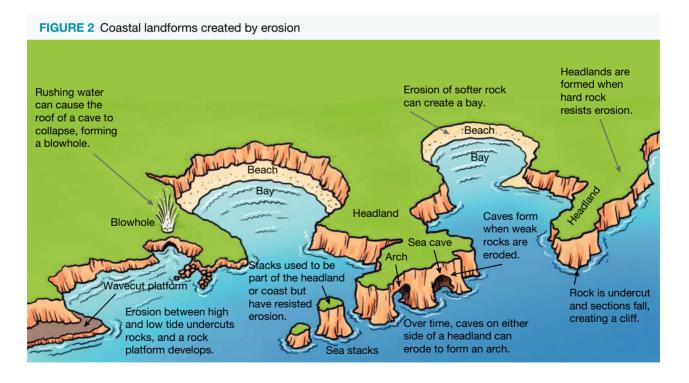
FIGURE 1 Comparing constructive and destructive waves



Which coastal landscape features are created by erosion?

Features such as cliffs, headlands, bays, arches, caves, blow-holes and stacks are all landforms found along an eroding coastline (FIGURE 2). These features are formed by wave action and rainfall, which attack the cliffs and find points of weakness that are then eroded. Water running off a cliff face can carry eroded material into the sea below. When waves hit the cliff face, they undercut the base of the cliff to form a notch. As the notch increases in size it forms a cave and eventually the cliff gets undercut, becomes unstable and falls into the sea.

Destructive waves can also alter a sandy coastline. They can remove sand from a beach, destroy the vegetation on dunes, and remove management features designed to protect landscape features.





Interactivity Coastal sculpture (int-3124)

Roogle Earth Twelve Apostles

14.3 INQUIRY ACTIVITIES

1. Create an annotated diagram that explains the difference between swash and backwash.

Describing and explaining

- 2. Use internet resources to find a video or animation on coastal erosion or stack formation. Take note of the process of erosion. Examining, analysing, interpreting
- 3. In small groups, create your own claymation or stop-motion movie, Prezi, or animated PowerPoint to show the **changes** that happen to a cliffed coast eroding to form a notch, cave, arch and stack.

Classifying, organising, constructing

- 4. Most Australians live within an hour's drive of the coast, and many people either spend regular holidays on the coast or move to the coast in their retirement, for a 'sea change'. How might the continually **changing** coastal landscape (as seen in FIGURE 2) affect coastal housing and popular holiday places? Brainstorm this Evaluating, predicting, proposing with a small group.
- 5. Using a sketch map, identify how several of the *changes* identified in question 4 might affect the coastal Evaluating, predicting, proposing landscape of your favourite beach.
- 6. Rising sea levels, whether they are a naturally occurring process or have resulted from human activity, will affect coastal landscapes. Use a diagram, with annotations, to explain how rising sea levels could change two of the landforms illustrated in FIGURE 2. **Describing and explaining**

14.3 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

14.3 Exercise 1: Check your understanding

- 1. GS1 What is a coast?
- 2. GS1 What are three physical processes that have influenced the creation of coastal landforms?
- 3. GS1 What are three human activities that have influenced the creation of coastal landforms?
- 4. **GS1** Place the following landforms in the order in which they would be created:
 - (a) arch, cave, headland, stack
 - (b) blowhole, cave, cliff,
- 5. **GS2** Explain the difference between constructive and destructive waves.

14.3 Exercise 2: Apply your understanding

- 1. GS2 Find an image of a sandy coastline that has recently been affected by destructive waves. Explain the process that has occurred. Use the terms swash and backwash in your explanation.
- 2. **GS1** What does the construction material that is deposited on a beach consist of?
- 3. **GS6** Do you think people will still feel the same way about a coastal landscape such as the Twelve Apostles when only two or three are still standing? How might the *changing* landscape affect the value or pleasure people get from visiting this *place*? Write a short paragraph to comment.
- 4. GS6 Destructive waves are bad for all coastal environments and as such, management techniques should be used to minimise their impacts. Do you agree or disagree with this statement? Justify your response.
- 5. GS6 Should we try to protect coastal landforms like the Twelve Apostles or should we simply let nature run its course?

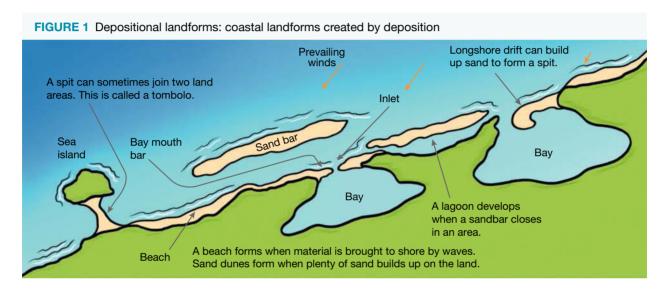
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14.4 Which coastal landforms are created by deposition?

14.4.1 How are depositional coastal landforms formed?

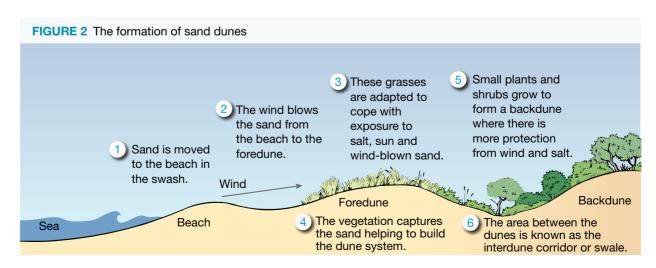
As we learned in subtopic 14.3, not all waves are destructive. Though they lack the sheer force of destructive waves, constructive waves still have an important role to play in the creation of coastal landforms. The movement of these waves towards the land is more likely to push material such as sand and shells and deposit them on the beach, building new coastal features.

A beach is a good example of a depositional coastal landform (FIGURE 1). Sand has been deposited and built up over a period of time. Constructive waves build coastal landscape features by repositioning waveborn materials to also create spits, sand dunes and lagoons.



The coastal features created by deposition can be created only when material is brought onshore by the swash of constructive waves. The construction material is in the form of sand, shells, coral and pebbles. The source of the construction material may come from eroding cliffs, from an offshore source, or from rivers which, when they enter the sea, dump any material they were transporting.

This construction material is then shaped by prevailing winds. FIGURE 2 illustrates the cross-section of a beach formed when there is plenty of sand being pushed onshore by the swash. This construction material is dried by the sun and blown inland to create dunes.



Beach material can also be shifted by waves, which get their energy from the wind. The wind influences or directs the angle that waves move towards the coast. Waves come from the direction of the **prevailing** wind. This means that waves often move towards the shore at an angle, and their swash pushes any material

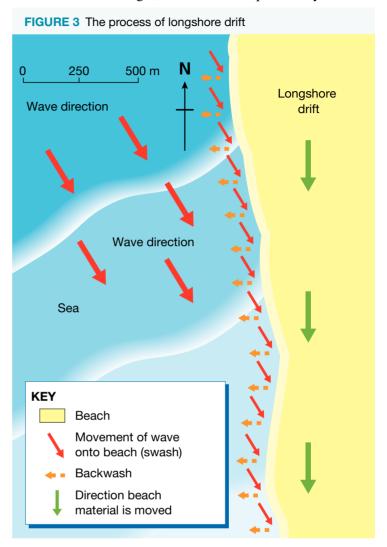
angle. As the backwash of the wave returns to the sea, its path takes the shortest possible route down the beach towards the water. This action is known as longshore drift, and it is shown in FIGURE 3.

Longshore drift moves material along the beach in a zigzag pattern that follows the direction of the prevailing wind. Longshore drift moves sand along the beach and creates spits and bars. If the prevailing wind changes direction, then so does the direction of longshore drift.

they are carrying onto the beach at an

FIGURE 4 Angel Road is a depositional landform connecting three small islands with the mainland in Japan.





14.4.2 CASE STUDY: The Murray mouth, South Australia

The Murray River is Australia's most important river and the world's sixteenth longest river.

When water for home use and irrigation in the Murray–Darling Basin is not balanced by rainfall, the amount of water that reaches the river mouth decreases. This means that the deposition of longshore drift is stronger than the trickle of water reaching the mouth. To keep water flowing out to sea at the mouth of the Murray, the area has undergone a dredging program. This involves removing excess sand from areas where longshore drift has blocked the mouth of the river. The first dredging program ran from 2002 until 2010, when it was deemed that the area was healthy enough without the assistance of dredging. During this time, over 6.5 million tonnes of sand was removed! Unfortunately, the health of the river system has worsened in recent years and dredging officially restarted in 2015.

FIGURE 5 The mouth of the Murray River, South Australia



14.4 INQUIRY ACTIVITIES

1. Draw a sketch of the tombolo shown in FIGURE 4.

- Describing and explaining
- 2. Use your atlas and the internet to locate and name places in Australia that have the following coastal landforms: a spit, a beach with dunes, a bay, a headland (point, cape or promontory) and an estuary. Find four examples of each landform and mark them on a map. You could create a Google map of your results, with links to images of each feature. Classifying, organising, constructing
- 3. Research water use in the Murray-Darling system and discuss how this may impact the water flow at the mouth of the Murray River. Evaluating, predicting, proposing

14.4 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

14.4 Exercise 1: Check your understanding

- 1. **GS1** Where does the material come from that builds beaches?
- 2. GS2 The formation of sand dunes cannot happen unless there is plenty of sand in the swash to allow them to grow. Use the information in FIGURE 2 to provide the evidence for you to agree or disagree with this statement.
- 3. **GS2** How is weather involved in the formation of sand dune **environments**?
- 4. **GS1** Describe the process of longshore drift.
- 5. **GS2** Explain two ways in which the wind can help shape beach *environments*.

14.4 Exercise 2: Apply your understanding

- 1. GS5 Study FIGURE 3.
 - (a) In which direction is sand moving on the beach?
 - (b) How will this beach *change* if the longshore drift continues in this direction?
 - (c) Redraw this diagram to show how the movement of sand along this beach would change this environment if the prevailing wind changed to come from the south-west.

- 2. **GS6** Referring to **FIGURE 2**, sketch a new diagram to show what you think would happen to these sand dunes if a fire destroyed the vegetation on the foredune.
- GS2 Describe how coastal landforms are the result of interconnections between the sea and the atmosphere.
- 4. GS6 If it was a windy day, where on the beach or dune would it be best to take shelter? Explain your answer.
- **5. GS6** Why did the Murray mouth need to be dredged and do you think this procedure will need to happen again in the future?

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14.5 Managing coasts

14.5.1 How can a coast be managed?

It is possible to reduce or slow the change to coastal landscapes if we understand the **physical processes** and human activities that cause it. While it is not possible to change the speed and direction of the wind or the number of months each year when destructive waves reach a shoreline, it is possible to redistribute or trap the sand shifted by storm waves or longshore drift. It is also possible to protect coastal houses and roads using barriers to reduce the direct impact of waves.

Coastal management techniques are commonly divided into two main categories — hard engineering strategies and soft engineering strategies. **Hard engineering** strategies typically involve using physical structures to control the effects of natural processes. Sea walls, groynes, gabions and breakwaters are all examples of hard management techniques. What is interesting about these kinds of strategies is that, over time, they can often create problems that are more severe than the ones which they were trying to solve. Let's use a seawall as an example.

Look at **FIGURE 1**. As waves hit the shore in this area, they removed sand from the beach and decreased the stability of the dune system. Concerned that the dunes would eventually be washed away completely, the local council decided to build a sea wall. Although the wall succeeded in protecting the dune, its presence inadvertently caused another management issue. As you can also see in the photograph, there is no sand in front of the sea wall. Before the wall existed, waves did indeed remove sand from the beach and dune system. However, they also replenished the sand over time in a natural cycle. The presence of the wall has interrupted this natural cycle, eventually resulting in the complete loss of beach area in front of the wall. This is just one example of how hard engineering strategies can often cause long-term issues in coastal environments.



Due to the issues that often arise from hard engineering strategies, many of the strategies we see used today involve **soft engineering** techniques. Taking a more sustainable approach to coastal management, these strategies commonly use natural processes instead of permanent physical infrastructure. Instead of building a sea wall, Bayside Council (responsible for Brighton Beach) could have revegetated the dune system to improve its stability. Dune revegetation is a common soft engineering strategy that involves planting natural grasses and shrubs. As these plants grow, their roots help bind the sand together, halting erosion.

14.5.2 CASE STUDY: Managing Adelaide's living beaches

The problem: The beautiful sandy beaches closest to Adelaide are under constant threat from erosion. FIGURE 2 identifies the problem. For the past 7000 years the beaches south of Adelaide have been eroding. and the prevailing winds from the south-west have driven this material northwards.

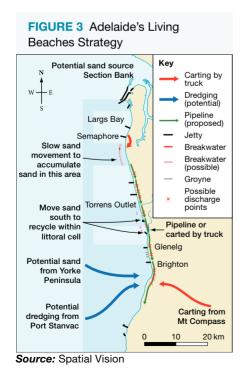
This longshore drift has removed material from the south and relocated it in North Haven, where a peninsula has grown and a large dune system has been created. For the past 30 years the beaches in the south have been replenished by adding truckloads of sand. The plan is to find a better way to manage Adelaide's beaches by reducing the cost of moving sand.

The solution: Adelaide's Living Beaches Strategy. FIGURE 3 illustrates the solution. Although sand will still need to be recycled from north to south, the plan is to use a pipeline instead

FIGURE 2 The movement of sand northwards along the Adelaide Metropolitan coastline Adelaide coastline last 7000 years Kev Natural sand BP= before present 0 years BP Outer Harbor movement Addition of sand has 2000 years BP North Haven moved the beach and peninsula northward 5000 years BP during the last 7000 150 000 m³ 6000 years BP 7000 years BP Sand supply from Major sand seagrass die-off movement ADELAIDE approximately northward 100 000 m³ per yea Sturt Flood Plain West Beach 30 000-40 000 m³ per vear Original lagoon and coastal swamp behind Original beach 40 000-60 000 m³ coastal dune barrier ridge 7000 years per year Brighton 200 000 m³ every BP Present two years by coastline dredaina 5000-10 000 m³ per year Predominant erosion during last 7000 years **GULF ST VINCENT** Port Stanyac 20 km 20 km

Source: Spatial Vision

of trucks to do most of the transportation. The pipeline will extend along the coast and will send sand back to the southern end of the beach. FIGURE 4 shows sand being discharged at the southern end of the beach. A series of structures such as breakwaters and groynes will be built in several places to trap sand at important locations. Fewer trucks will be used, and it is expected that the cost of beach restoration will be reduced.





DISCUSS

The impacts of so-called hard management techniques are far too severe to be used in coastal environments and only soft management techniques should be considered. Discuss this statement in small groups and then report back to the class.

[Critical and Creative Thinking Capability]

14.5.3 Do coastal management strategies always work?

An integrated strategy like the one designed for Adelaide's beaches has a much better chance of protecting existing coastal landscapes (particularly the beaches) and structures built nearby, because it has taken into account the prevailing wind conditions, as well as the movement of sand. If a structure like the groyne in **FIGURE 5** is built on a beach, it will certainly trap sand on the side that interrupts the direct flow of the

longshore drift. But this structure will also reduce the flow of sand to beaches further along the coast, on the other side of the groyne. Building a sea wall or breakwater may interrupt the flow of longshore drift and actually silt up the mouth of the harbour it is protecting. A sea wall can deflect the power of waves and increase erosion on an unprotected part of the nearby coast, or reduce the erosion of material from a cliff face that had been replenishing sand on the local beaches. Coastal management is quite a tricky issue. Do you manage to protect the existing coastal landscape or do you manage to allow the action of wind and waves to create a naturally evolving landscape?

FIGURE 5 A groyne and rock barrier protect a sandy beach in Wales, United Kingdom.



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Deepen your understanding of this topic with related case studies and questions

Investigate additional topics > Oceans and coasts > Managing coasts

14.5 INQUIRY ACTIVITIES

- Research another example of coastal landscape management. Identify why the management strategies were
 put in place and comment on their success. Examples of *places* that would be good to research include
 Cape Woolamai, the Gold Coast, Melbourne bayside beaches, Polder coastline of the Netherlands, Bondi,
 Cottesloe, Venice Beach or Waikiki.

 Examining, analysing, interpreting
- 2. Imagine that you own a holiday house that is built on coastal dunes within 15 metres of the beach. After a powerful storm, the beach in front of your house is eroded and your house is now only five metres from the sea. What are your options? Work out a series of strategies that you could implement which may save your house from falling into the sea. Include diagrams to illustrate your plan.
 Evaluating, predicting, proposing
- 3. Identify the strengths and weaknesses, for your house and your neighbours' houses, of the management proposal you created to answer question 2. **Evaluating, predicting, proposing**
- 4. Refer to this and the previous subtopic to make a list of all the uses that can be made of coasts. List these across the top and side of a large table to create a matrix. Now place a tick in the grid where the uses are compatible and a cross where they are not. Choose two incompatible uses from your completed table and work with a partner to develop three criteria that will decide on one use over another.

Classifying, organising, constructing

Draw a diagram to explain how groynes and sea walls help to manage or protect a coastal landscape. Refer
to FIGURE 3 in subtopic 14.4 to help with your diagram.
 Describing and explaining

14.5 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

14.5 Exercise 1: Check your understanding

- 1. GS1 How do groynes and sea walls help to manage or protect a coastal landscape?
- 2. GS1 Discuss the two main types of coastal management techniques. Ensure that you explain how they differ.
- 3. GS2 What problem do sea walls usually attempt to solve?
- 4. GS2 Describe one situation in which you would use a hard management technique instead of a soft management technique.
- 5. GS2 Describe one situation in which you would use a soft management technique instead of a hard management technique.

14.5 Exercise 2: Apply your understanding

- 1. GS2 Describe what will happen to Adelaide's southern beaches if they stop being replenished with trucks of sand.
- 2. GS2 Refer to FIGURE 2. Describe the changes that have occurred to Adelaide's coastline over the past 7000 years.
- 3. Refer to FIGURES 3 and 4. Describe the changes the Living Beaches Strategy has made to the Adelaide coastline and the reasons for these changes.
- 4. **GS2** Draw a diagram to demonstrate how a sea wall is supposed to work.
- 5. GS2 Draw a diagram to demonstrate how revegetation could be used instead of a sea wall.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

14.6 Indigenous use of coastal environments

14.6.1 How did Indigenous Australians use coastal environments?

Indigenous Australians have been using coastal environments for at least 65 000 years. During this time they learned to manage their resources and practised careful and deliberate environmental management techniques. Although the coastal environments we see in Australia today are dramatically different to those used by the first Australians, some archaeological evidence of Indigenous coastal land use does still exist.

Scattered across coastal environments throughout Australia are thousands of fascinating archaeological sites which allow us to examine Indigenous Australian land use. These sites are called shell middens and contain the remains of shellfish, bones and sometimes stone tools (see **FIGURE 1**). Shell middens can be found across Australia but are particularly common in New South Wales, Victoria and Tasmania. Shell middens are usually located in scrubland behind sand dunes or in other sheltered positions along a coastline. Aboriginal people used

FIGURE 1 Shell midden on the Tarkine coast, Tasmania

middens to both store and cook their food, as suggested by the presence of heavy amounts of ash and charcoal at these sites. We can use the carbon in these remains to establish the age of individual sites. The oldest Victorian shell midden is located at Cape Bridgewater and was used over 12 000 years ago!

While shell middens provide us with important archaeological evidence, they also play an important role in the lives of Indigenous communities today. Physical links to Indigenous heritage are rare and shell middens provide Australian Indigenous peoples with tangible connections to their past. As shell middens are usually situated in delicate and dynamic coastal environments, it is vital that we preserve the historical and cultural significance of these sites.

14.6 INQUIRY ACTIVITY

Shell middens are one example of an Indigenous archaeological site. Use the internet to find another type of Indigenous archaeological site in Australia. Identify and describe the site and explain why it is historically and culturally significant.

Describing and explaining

14.6 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

14.6 Exercise 1: Check your understanding

- 1. GS1 What is a shell midden?
- 2. GS1 Where can Victoria's oldest shell midden be found and how old is it?
- 3. GS2 Why are shell middens important to contemporary Indigenous communities?
- 4. GS2 In which locations were shell middens found?
- 5. GS5 What evidence is there in the middens that suggests Indigenous Australians cooked their food?

14.6 Exercise 2: Apply your understanding

- **1. GS2** Most shell middens are found within a few kilometres of a coastline. Why would this location make these sites vulnerable?
- 2. **GS6** Suggest a way that we could protect and preserve shell middens.
- 3. **GS6** Suggest how shell middens could be used to boost tourism in regional areas.
- **4. GS6** Develop a proposal to the local member for Cape Bridgewater that the shell midden site should be nominated as a location of cultural significance.
- 5. GS5 Some middens have been found far from current coastal areas. Suggest how this is possible.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

14.7 Comparing coastal landforms

14.7.1 How do coastal landforms differ?

Although coastal landforms can be similar in different parts of the world, they can also be very different. Some differences are climatic and some are geomorphic. Coastal landscapes are created by the

interconnections between the sculpting power of the oceans, coastal topography and the material that is available to sculpt.

Limestone stacks, such as the Twelve Apostles in Victoria (FIGURE 1, subtopic 14.2), have been shaped by the power of the Southern Ocean. Similar stacks have been formed by the erosive power of the waters off the coast of Thailand (FIGURE 1) and along the Portuguese and Welsh coasts. We can also compare two regions that feature coastal lake environments — Gippsland Lakes in south-eastern Victoria and the Icelandic Vatnajökull glacier.

The Gippsland Lakes are a network of coastal lakes and lagoons fed by six rivers but they are often cut off from the sea by a barrier of silt. The Gippsland Lakes are at the mouth of the Mitchell, Avon, Thompson, Latrobe, Nicholson and Tambo Rivers. When there is little rainfall, the rivers flow slowly and deposit sediment in the lakes. This, along with the longshore drifting of the sea current in Bass Strait, creates lakes by moving sediment to seal the lakes with offshore barriers. After heavy rainfall the level of water in the Lakes rises and the barrier breaks, allowing access of fresh water to the sea and salt water into the Lakes. This lake system had an artificial entrance cut by humans in the late 1800s to allow fishing boats into and out of the Gippsland Lakes and to reduce the chance of algal blooms.

In south-eastern Iceland the melting Vatnajökull glacier (FIGURE 2) flows into the Atlantic Ocean through a glacial lake.



FIGURE 2 Jökulsárlón Glacier Lagoon, Iceland

This glacier once flowed directly into the sea, but a warming local climate has meant that the glacier's snout is now 1.5 kilometres inland. The melting ice has created the large 18-square-kilometre glacial lake named Jökulsárlón. Since the climate is cold and the sunshine has little heat, the large chunks of ice that fall from the glacier remain as slowly melting icebergs. These icebergs float in the lake until they become small enough to roll down a channel into the sea. During winter the lake freezes and traps the icebergs until the summer thaw. Humans have created a narrow channel to link Jökulsárlón with the sea. This channel is designed to reduce the chance of summer floods and to protect the major highway that brings tourists to this beautiful place.

These two coastal lakes have formed in very different places, with different climates, but the geomorphic process of deposition has meant that human intervention has been required to allow their waters to flow into the sea.

14.7 INQUIRY ACTIVITIES

- 1. (a) Use the internet to collect at least six images of limestone stacks from different places in the world.
 - (b) Attach these images to a Google map to create a global distribution of limestone landscapes.
 - (c) Describe the similarities and differences between the images.

Comparing and contrasting

2. Look at a map of the Gippsland Lakes. Predict how they might look if part of the barrier washes away during a huge storm. Draw a sketch map to explain your answer. Evaluating, predicting, proposing

14.7 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

14.7 Exercise 1: Check your understanding

- 1. GS1 What material are the Twelve Apostles and Ko Tapu rock both made from?
- 2. GS2 How has climate changed the entrance of the Vatnajökull glacier into the sea?
- GS2 Describe the way that the geological process of deposition has changed the Gippsland Lakes and Jökulsárlón.
- 4. GS1 How was the Gippsland Lakes area formed?
- 5. GS2 What are the key similarities between the Gippsland Lakes and Jökulsárlón?

14.7 Exercise 2: Apply your understanding

- 1. **GS6** The Vatnajökull glacier is expected to have melted within 80 years. What might this *place* look like when there is no longer a glacier? Draw a sketch map to explain your answer.
- 2. **GS6** Look at a map of the Gippsland Lakes. Predict how they might look if part of the barrier washes away during a huge storm. Draw a sketch map to explain your answer.
- 3. GS5 Explain how rainfall (or the lack of rainfall) can influence the appearance of the Gippsland Lakes region.
- 4. GS2 How have humans changed the Gippsland Lakes region and Vatnajökull over time?
- **5. GS6** What are the major threats to the two regions mentioned in this subtopic? How can these regions be managed to avoid these threats?

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14.8 How do I undertake coastal fieldwork?

14.8.1 Your fieldwork task

The best way to understand the physical processes and human activities that affect a specific coastal landscape is to visit it. A fieldwork activity will allow you to put the knowledge you have gained in the classroom into practice. Your fieldwork will also allow you to enjoy the coastal landscape in magnificent 3D.

Any coastal landscape would be suitable to investigate. Once a fieldwork site has been identified, there is quite a lot of planning that you should do before you get there.

What is your fieldwork task?

Your task is to identify the landforms and dynamic nature of a coastal landscape and to recognise and assess the influence of people on it.

In class

- 1. Prepare a base map of the fieldwork site or sites. On this base map, mark in the location of the coastal landscape's natural features (such as beach, rock, dunes, water, vegetation) and **human features** (such as seawall, groyne, steps, lawn, shelter, jetty). Using Google Maps or a topographic map is an excellent way of identifying the specific details of the coastal landscape.
- 2. Looking at the aerial shot on Google Maps will also allow you to see the pattern of the waves as they move to the shore. Does it look as if longshore drift is occurring on the day this image was taken?

On your field trip

What do you need to do at the coast to collect your information?

It is good to work in groups to collect your data in the field. It is then possible for some students to take measurements and some to record. Sharing tasks means that there will be others with whom to discuss what you have recorded. On returning to class you can pool your observations. You will need recording sheets, pencils, a digital or phone camera, tape measure, compass and maybe a **clinometer**. You could also collect

information using data logging equipment, a GPS locator, weather recording equipment and notepads. Your group should decide what equipment is the most practical and relevant for collecting the data you need.

You may not be able to return to your fieldwork site, which means your data needs to be very detailed.

- Always record the location of the information on your map.
- Take photos of the coastal landscape, including the landforms and human structures.
- Measure distances and heights.
- Draw field sketches to remind you of details. Even when you have photographed something, a field sketch allows you to annotate the diagram so that you can remember important characteristics about how it was formed or the direction of longshore drift. Do not worry if you are not a gifted artist, as there are apps that allow you to convert your photos to sketches when you get back to class.

FIGURE 1 The information you need to collect at your fieldwork location Is longshore drift occurring? Is there evidence of destructive wave You can throw a tennis ball, action? Are there landforms that are attached to string, into the water Does the backwash appear to a result of ongoing erosion? and watch the path it takes as it be stronger than the swash? Photograph or sketch this, locating moves in and out. Show the and labelling it on your map. pattern on your map. Is there evidence of material that has been eroded from Who uses the beach? Find somewhere else? evidence (e.g. signs, tracks and litter). Features of a coastal landscape Note the conditions on the day: Once at your fieldwork site, wave height, wave frequency, add the extra natural and human wind and temperature. features you can now identify to your base map. Have structures worked to protect the coast? Sketches or Note the change in the height of photos can provide evidence. the tide between the time vou arrive and when you leave. Is there evidence of Are there areas where sand has Has deposition constructive wave action? What type of been built up? Measure the been influenced material is the Photograph or sketch this, width of the sand at several by human locating and labelling it on beach made of? locations. Locate on your map. features? your map.

FIGURE 2 Investigating the rocky shores of a coastal landscape



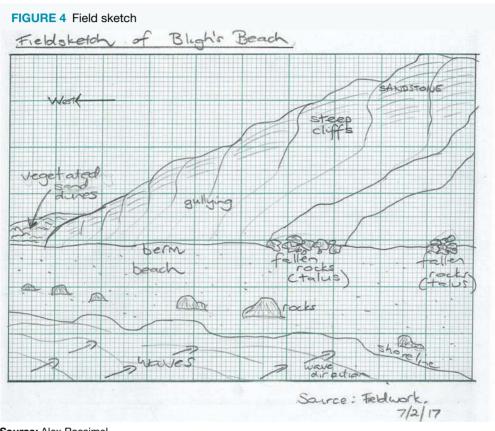
FIGURE 3 Students on a fieldwork trip. measuring the slope of a sandy beach.



Back in class

Now that you have collected your information in the field, you need to present your findings about the coastal landscape you visited.

There are many ways that you could present this information. Your fieldwork report could be presented as a poster, website, PowerPoint presentation, booklet, blog, movie, news report or podcast. Consider using Google Maps and uploading images of the sites you visited. You will need to present the data you collected and describe your findings.



Source: Alex Rossimel

14.9 SkillBuilder: Constructing a field sketch

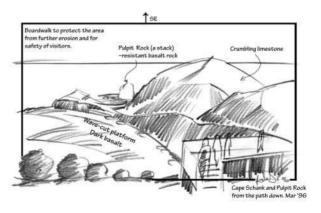
What are field sketches?

Field sketches are drawings completed during fieldwork geography outside the classroom. Field sketches allow a geographer to capture the main aspects of landscapes in order to edit the view, focusing on the important features and omitting the unnecessary information.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.



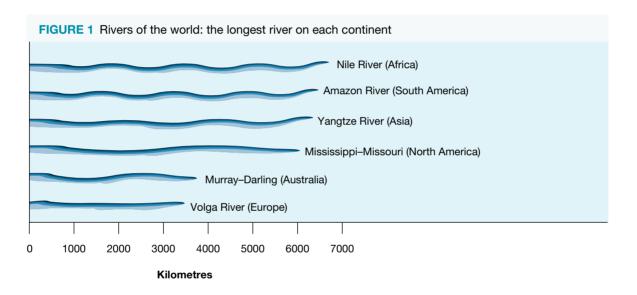


14.10 How does water form river landscapes?

14.10.1 Moving water

Erosion, transportation and deposition are the key processes through which rivers are able to sculpt landscapes. Some rivers, such as the Gordon River in Tasmania, are perennial; some, such as Coopers Creek in Queensland, are intermittent; others, such as the Colorado River in the United States, have eroded amazing landforms like the Grand Canyon.

Water is always on the move. It evaporates and becomes part of the water cycle; it rains and flows over the surface of the Earth and into streams that make their way to a sea, lake or ocean; and it soaks through the pores of rocks and soil into groundwater.

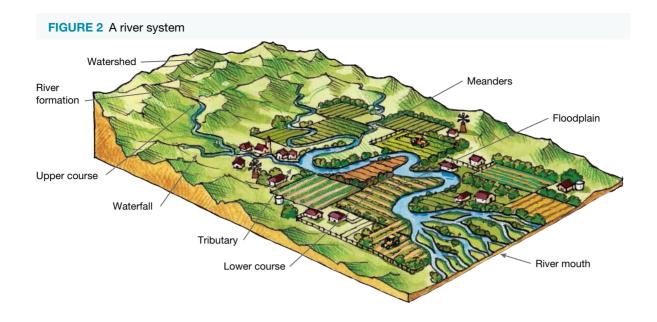


14.10.2 River systems and features

A river is a natural feature, and what we see is the result of the interaction of a range of inputs and processes. All parts of the Earth are related to the formation of river landscapes. This includes the lithosphere (rocks and soil), the hydrosphere (water), the biosphere (plants and animals) and the atmosphere (temperature and water cycle). Changes can happen quickly or over a very long period of time. Changes at one location along a river can have an effect at other locations along the river.

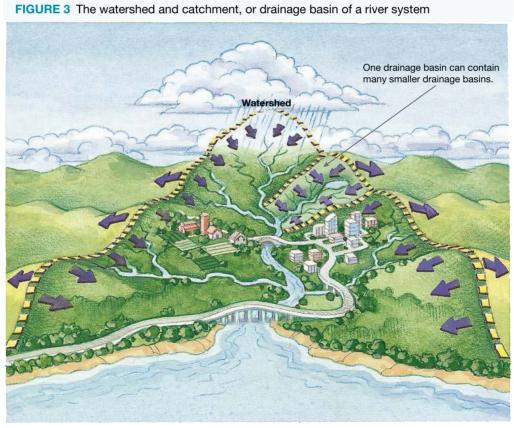
Water flows downhill, and the source (the start) of a river will be at a higher altitude than its mouth (the end). As the water moves over the Earth's surface, it erodes, transports and deposits material.

The volume of water and the speed of flow will influence the amount and type of work carried out by a river. A fast-flowing flooded river will erode enormous amounts of material and transport it **downstream**. As the speed or volume of the water decreases, much of the material it carries will be deposited. Rivers are commonly broken into three main sections - the upper, middle and lower course. Different processes and different types of landforms can be found in each section. Let's examine these sections more closely to see exactly how rivers work.



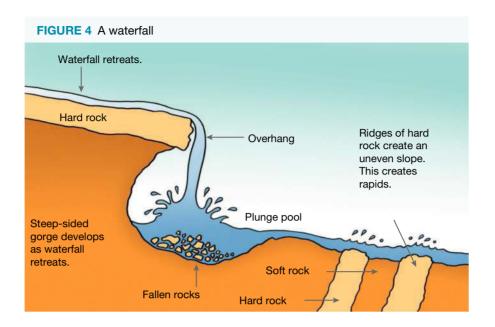
Upper course

A river gathers its water from a region known as a drainage basin or catchment (see FIGURE 3). The boundary of this region is identified by mountains, hills or any land that is higher than the surrounding area. This is often referred to as the **watershed** and it is the point that determines the direction of the river. Within this region, water collects in small depressions in the ground (rills), which eventually become larger streams. Finally, these streams (also known as tributaries) combine to form the main trunk of the river itself.



Source: Adapted from an image by RecycleWorks www.RecycleWorks.org

Water moves quickly along the upper course of a river is it makes its way from areas of higher elevation to areas of lower elevation. The faster the flow of a river, the more power it has and the more erosion it causes. It is common to see waterfalls, plunge pools and rapids along the upper course of a river.



Middle course

A river will naturally follow the topography of the surrounding area. As the land flattens out, a river will stretch into long sweeping turns known as meanders. Here, the energy of the fast-flowing river we saw in the upper course is converted and allows the river to carve a new path through the flatter landscape of the middle course. Over time, a meandering river will change the path it follows, as some bends become more obvious and others disappear. A meander that has been cut off is called an oxbow lake. In Australia we call these billabongs.

During times of high rainfall, land on either side of the middle course can become inundated as the river struggles to contain excess water. Referred to as a **floodplain**, these areas are highly suitable for agriculture. As floodwaters subside, they leave behind the nutrient-rich sediment (alluvium) that the river had been transporting since it left the upper course.

Lower course

As a river enters the lower course it slows down again, separating back into smaller streams called distributaries. The remaining sediment carried by the river is deposited in an area referred to as the delta. River deltas commonly take three main shapes: fan shaped, arrow shaped and bird-foot shaped. The shape of a delta is influenced by tides, waves and the volume of sediment and water carried by a river. Sometimes a river ends with a wide mouth where fresh water and salt water can mix. This is known as an estuary.

FIGURE 5 The formation of a meander and oxbow lake Meander Deposition Oxbow lake **Erosion** Soon-to-be oxbow lake with cut-off

DID YOU KNOW

Australia has no major river deltas as a result of the strong ocean currents surrounding the continent.

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and guestions.

Investigating Australian Curriculum topics > Year 8: Landforms and landscapes > Fjords

Resources

Interactivity River carvings (int-3104)

Roogle Earth Mississippi Delta

14.10 INQUIRY ACTIVITIES

1. After some rain, investigate an area of bare ground on a small slope near school or home. Sketch the pattern that the rills have made. Identify the watershed and catchment for each rill.

Examining, analysing, interpreting

- 2. Research and then sketch a diagram to show the course of the meandering Murray River. Mark in the course that the river used to take. Predict and label where the next oxbow lake, or billabong, might form. Show the possible future course of the river. Evaluating, predicting, proposing
- 3. Produce a flowchart or animation to explain the formation of an oxbow lake, a delta, a waterfall or rapids.

Classifying, organising, constructing

4. Using Google Earth or an atlas, find the Nile delta, the Ebro delta and the Mississippi delta. Draw a sketch and write a short description of the shape of each delta, presenting your findings in a table.

Classifying, organising, constructing

5. Research river deltas around the world. Discuss any common features between the different areas in which the deltas have formed. Comparing and contrasting

14.10 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

14.10 Exercise 1: Check your understanding

- 1. **GS3** Refer to **FIGURE 1** and compare the *scale* of Australia's longest river with the world's longest river.
- 2. GS1 What feature, other than water, has to be present for waterfalls and rapids to form? Refer to FIGURE 4.
- 3. **GS2** Explain how rivers are part of the water cycle.
- 4. GS2 Why do people settle and farm on floodplains?
- 5. **GS2** Create a table that explains the positives and negatives of living in a flood plain.

14.10 Exercise 2: Apply your understanding

- 1. GS2 Identify a river that flows through the capital city in one state or territory in Australia. Describe its source, any tributaries, and its mouth.
- 2. **GS6** What do you think will happen to deltas if sea levels rise?
- 3. **GS6** Predict the *changes* that will occur to the waterfall in **FIGURE 4**. Justify your answer.
- 4. **GS6** What *changes* will occur along a river if there is unusually high rainfall in its upper course? Think in terms of erosion and deposition.
- 5. GS6 Do you think that governments should stop people from living in flood plains? Justify your response.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

14.11 Managing river landscapes

14.11.1 Mississippi River

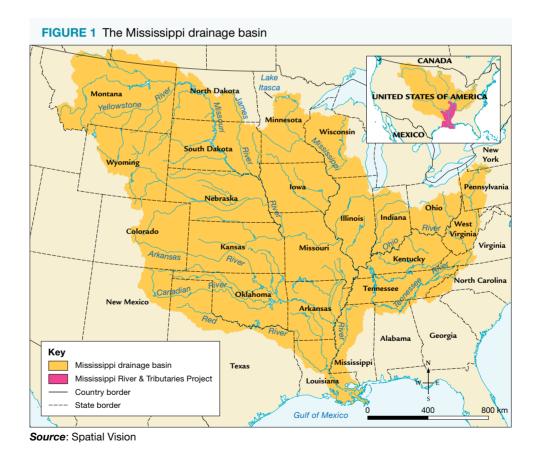
Rivers are vital. Plants and animals depend on their waters for survival. People also rely on rivers for their waters and have diverted rivers for flood control, irrigation, power generation, town water supplies, waste disposal and recreation.

The mighty Mississippi River is approximately 3700 kilometres long and is the second longest river in the United States. It flows through 10 states (see FIGURE 1). The drainage basin, or catchment, for the river covers 40 per cent of the country, and includes all or part of 31 states and two Canadian provinces. The drainage system is made up of thousands of rivers and streams, including the Missouri.

Importance of the river

The Mississippi has been a major contributor to the economic growth of the United States.

- It is important for transporting goods, such as fuel, coal, gravel, chemicals, steel, cement and farm produce. The barges on the river are able to connect to ocean shipping at Baton Rouge in Louisiana.
- It supplies water for cities and industries and irrigation for farming.
- Much of its floodplain has been cleared for farmland.
- The river basin also supports natural biodiversity. It has many species of mussels, 25 per cent of all fish species in North America, and over 300 species of birds that use the river during migration and breeding.



Floods

The river has created the geographical characteristics that have always attracted settlement. The source of the river is at an altitude of 450 metres above sea level, and the river drops in altitude very quickly. The last 1000 kilometres of the river's journey is through a wide floodplain that is the result of many floods over

hundreds of years. Under natural conditions, the river had high water levels in early spring and much lower levels by early autumn.

Floods are a major issue for businesses, homes and farms. There have been many significant floods; for instance, in 1849, 1850, 1882, 1912, 1913, 1927, 1983, 1993 and 2011. After the floods of 1927, the Mississippi River and Tributaries Project was set up with the goal of preventing destructive floods and keeping the river open for navigation.

River management

The Mississippi River and Tributaries Project uses many strategies to manage the river. The aim is to satisfy the needs of farming, towns, industry, transport and **ecosystems**. There are many dams to control water levels in the river.

FIGURE 2 Examples of management strategies Concreting banks to decrease erosion A levee bank on each side to build up the height of the natural riverbank A lock to raise or lower a boat to match the water level on the other side Dredging to scoop up Straightening mud and materials of the river from the riverbed to make

FIGURE 3 Predicted changes to the Mississippi Delta (known as a bird-foot delta), 2009 to 2100

2009

A control structure makes sure the river continues to flow through Baton Rouge and New Orleans.

Abligately Apply Continues to flow through Baton Rouge and New Orleans.

O 50 km Grand Isle

2100

New Orleans

New Orleans

Grand Isle

Less sediment is reaching

the delta: the delta is

becoming smaller.

Management issues

- The strategies are expensive.
- Continuous dredging is needed.
- Levees are being built higher some now seven metres high and it is hard work to make sure they don't leak or break.

The river water contains too many

nutrients from towns and farms.

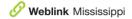
This is a concern for the fishing industry.

- Water is powerful and the river still wears away at weak points along the banks.
- If a levee breaks or if water goes over the top, flood damage can be very bad.
- The floodplain does not receive much sediment from the river.
- The river water is not as clean as it used to be.
- Natural habitats are damaged by dredging or concreting.
- The delta is decreasing in size.

DISCUSS

'Should all buildings be banned from being constructed in a flood plain?' Refer to the issues map and write all the different perspectives that can be included to answer this question. Once complete, categorise these points of [Critical and Creative Thinking Capability] view into positive and negative views.





14.11 ACTIVITIES

1. Use the Mississippi weblink in the Resources tab to watch a video about the Mississippi River. What do you notice about the scale of the watershed and the location of the Mississippi River?

Examining, analysing, interpreting

2. Do you agree or disagree with the following statement? 'A strategy implemented in one part of the river will have an impact on another part of the river.' As you find evidence from this subtopic, place it in a table, or under subheadings. Write a conclusion based on your findings. Examining, analysing, interpreting

14.11 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

14.11 Exercise 1: Check your understanding

- 1. GS2 Refer to FIGURE 1 and name key tributaries of the Mississippi River. In which general direction does the Mississippi flow from its source to its mouth?
- 2. GS4 Why is the river important to the United States? Classify each reason as one or a combination of the following: social, economic or environmental.
- 3. GS1 How long is the Mississippi River and through how many states does it flow?
- 4. GS2 Explain the main two uses of the Mississippi River.
- 5. GS1 What are the main issues that engineers face when managing flooding along the Mississippi River?
- 6. GS5 Refer to FIGURE 3. What does the formation of a bird-foot delta indicate about the type of waves in this part of the Gulf of Mexico?

14.11 Exercise 2: Apply your understanding

- 1. **GS6** How close will Baton Rouge be to the sea in 2100?
- 2. GS6 What do you think would be the main management strategies on the Mississippi River during a year of heavy rainfall? What do you think would be the main management strategies during a drought?
- 3. GS2 Explain how the geographic characteristics of the Mississippi River can lead to frequent flooding.
- 4. GS6 What kind of human activity occurs the most in the lower course of the Mississippi River? Why does this activity occur in this region?
- 5. GS6 What do you believe would be the best flood management strategy (or strategies) to use along the Mississippi River?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

14.12 Landscapes formed by ice

14.12.1 How can glaciers shape landscapes?

In cold parts of the world, such as the poles and high mountains, water falls as snow, is compacted and then moves more slowly than when it is a liquid. When ice deposits thicken, the same gravitational force that moves flowing water also moves ice, and it begins to flow. Glaciers trace a path downhill from permanent snowfields. The weight of snow and ice crush and scrape surface rocks to produce some distinctive landscapes. Fluctuations in climate cause glaciers to change in length, width and depth, and each change results in alterations to the glacial landscape.

According to the Randolph Glacier Inventory, there are approximately 198 000 glaciers in the world. Predominately found in Antarctica (91 per cent) and Greenland (8 per cent), glaciers make up 0.5 per cent of the Earth's surface (25 million square kilometres). The closest glaciers to Australia are found in the mountains of West Papua (Indonesia) and the alps of New Zealand. There are landscapes caused by glacial activity in Tasmania, although the glaciers themselves have long since disappeared.



FIGURE 1 Franz Josef Glacier in New Zealand's South Island

During the most recent ice age, up to 30 per cent of the Earth's land surface was glaciated. Glaciers have a huge impact on landscapes, and the forces of erosion and deposition they exert are responsible for dramatic changes.

Moraine is any material carried by the glacier. This eroded material may have been picked up from the valley floor or it may have been eroded from the valley wall. Moraine comes in many sizes, from fine silt to very large boulders. As the glacier melts or retreats, it dumps its load of moraine because it no longer has the energy to push it down the slope. FIGURES 2 and 3 illustrate the movement of the ice as it changes and shapes the environment.

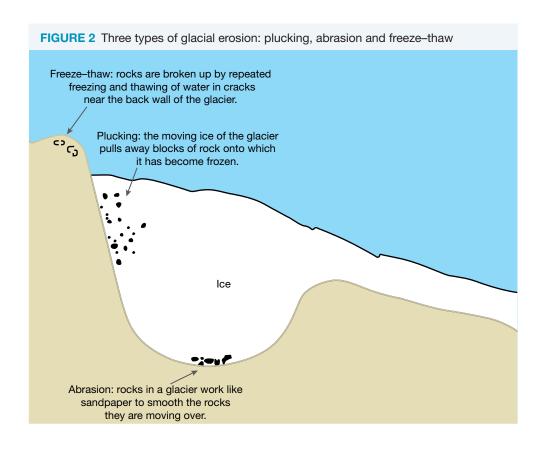
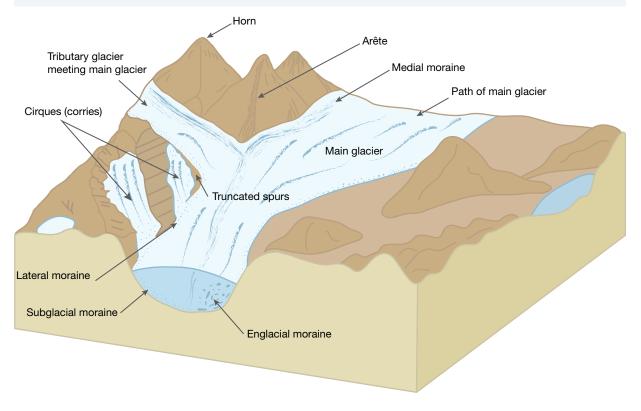


FIGURE 3 A glacier flowing from its source in a permanent ice field towards its snout, which is the point where it starts to melt



14.12.2 Why are glaciers important?

About three-quarters of the Earth's fresh water is held in ice sheets and mountain glaciers. Glaciers serve as a natural regulator of regional water supplies. During periods of warm weather, or during dry seasons or droughts, glaciers melt quite quickly. Glaciers provide a water source that feeds rivers and streams. During cold, rainy seasons, glaciers produce less meltwater. They store the rainfall as ice and reduce the chance of a **flash flood**.

The small tropical glaciers of West Papua in the Maoke Mountains of the western central highlands are predicted to disappear between 2020 and 2025. Although these small glaciers are over 30 metres deep, they are quite short and are retreating at over seven metres per year. The loss of these glaciers will result in changes to the local environment.

Melting glaciers can affect agriculture, availability of fresh water, hydroelectric power, transportation and tourism. Over the years, settlements, farming and tourism have extended towards the edges of glaciers. If glaciers melt rapidly, then **avalanches** and flash floods will increasingly threaten lives and services in high mountain landscapes.

FIGURE 4 The state of the world's continental glaciers, not including polar glaciers. If their colour on the map is blue they are losing ice; if it is dark blue, they are losing a lot.

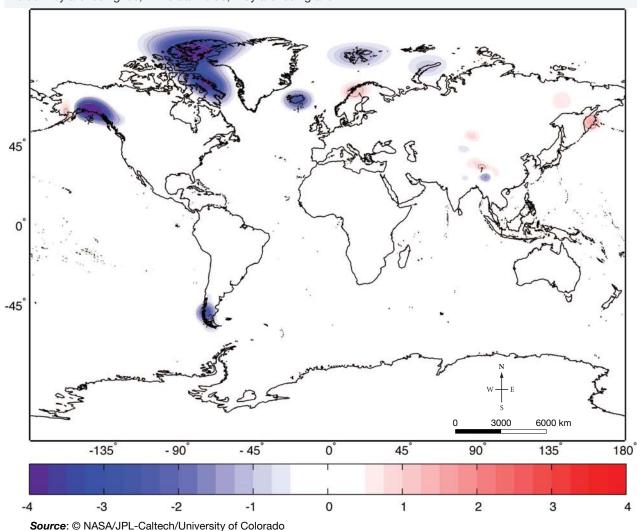


FIGURE 5 Gangotri Glacier in the Himalayas in northern India





Source: © NASA image by Jesse Allen, Earth Observatory; based on data provided by the ASTER Science Team. Glacier retreat boundaries courtesy the Land Processes Distributed Active Archive Center.





14.12 INQUIRY ACTIVITIES

- 1. Complete some internet research to discover how the polar glaciers of Greenland and Antarctica are Evaluating, predicting, proposing
- 2. Use the Glacier weblink in the Resources tab, and watch the interactivity. Describe the changes that occurred to the glacier over the seven-year period. **Describing and explaining**
- 3. With reference to the text and images within this subtopic, sketch a diagram or find a suitable image online of a glacier with at least one tributary and annotate the following features: terminal, medial and lateral moraines, arête, cirque, high mountain peaks, glacial stream, U-shaped valley. **Describing and explaining**

14.12 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

14.12 Exercise 1: Check your understanding

- 1. **GS1** What is the difference between *plucking*, *abrasion* and *freeze–thaw*?
- 2. **GS1** Why do glaciers move?
- 3. GS2 Refer to FIGURE 4.
 - (a) Describe the *places* where glaciers are retreating.
 - (b) Describe the *places* where glaciers are advancing.
- 4. **GS2** Describe one major impact of increased glacial melting.
- 5. GS2 How do we get most of our evidence to determine that glaciers are decreasing in size?

14.12 Exercise 2: Apply your understanding

- 1. GS6 Check the location of the West Papuan glaciers in your atlas. What is surprising about the place these glaciers are found? Hint: Look at the latitude.
- 2. GS6 How might the local landscape change if the glaciers of West Papua melt? How will this environment change affect the local inhabitants?
- 3. GS6 What can be done to prevent increased glacial melting?
- 4. **GS2** Describe two reasons why glaciers are important for human populations.
- 5. GS5 According to FIGURE 4, which areas of the world are losing the most glaciers?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

14.13 SkillBuilder: Reading contour lines on a map

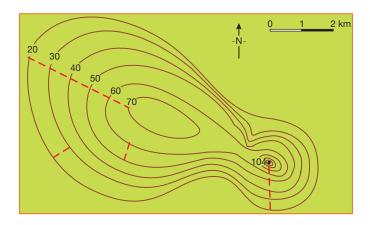


What are contour lines?

Contour lines drawn on the map join all places of the same elevation (height) above sea level. Contour maps are used to show the relief (shape) of the land and the heights of the landscape. Maps with contour lines show the relief of the land and help people to identify features.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.



Resources

Video eLesson SkillBuilder: Reading contour lines on a map (eles-1651)

Interactivity SkillBuilder: Reading contour lines on a map (int-3147)

14.14 Thinking Big research project: Coastal erosion animation

SCENARIO

Unless you are lucky enough to be watching at the exact moment that a sea-stack tumbles into the ocean, it can be difficult to catch erosion in action. In this task, you will do what few people before you have achieved — you will capture the impacts of erosion on film by creating an animation that shows how a coastal landform is created.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- resources to guide your project work
- an assessment rubric.







Resources

projectsPLUS Thinking Big research project: Coastal erosion animation (pro-0169)

14.15 Review



14.15.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

14.15.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31346)

Crossword (doc-31347)



Interactivity Landscapes formed by water crossword (int-7596)

KEY TERMS

avalanche a sudden downhill movement of material, especially snow and ice

backwash the movement of water from a broken wave as it runs down a beach returning to the ocean

barge a long flat-bottomed boat used for transporting goods

clinometer an instrument used for measuring the angle or elevation of slopes

deposition the laying down of material carried by rivers, wind, ice and ocean currents or waves

destructive wave a large powerful storm wave that has a strong backwash

downstream nearer the mouth of a river, or going in the same direction as the current

ecosystem an interconnected community of plants, animals and other organisms that depend on each other and on the non-living things in their environment

erosion the wearing away and removal of soil and rock by natural elements, such as wind and water, and by human activity

estuary the wide part of a river at the place where it joins the sea

field sketch a diagram with geographical features labelled or annotated

flash flood a flood that occurs very quickly, often without advance warning

floodplain an area of low-lying ground adjacent to a river, formed mainly of river sediments and subject to

groundwater water that seeps into soil and gaps in rocks

hard engineering a coastal management technique that involves using physical structures to control the effects of natural processes

human features structures built by people

intermittent describes a stream that does not always flow

longshore drift a process by which material is moved along a beach in the same direction as the prevailing wind meander a winding curve or bend in a river

moraine rocks of all shapes and sizes carried by a glacier

peninsula land jutting out into the sea

perennial describes a stream that flows all year

physical process continuing and naturally occurring actions such as wind and rain

prevailing wind the main direction from which the wind blows

river delta a landform created by deposition of sediment that is carried by a river as the flow leaves its mouth and enters slower-moving or stagnant water. Can take three main shapes: fan shaped, arrow shaped and bird-foot shaped.

shell middens Indigenous archaeological sites where the debris associated with eating shellfish and similar foods has accumulated over time

soft engineering a coastal management technique where the natural environment is used to help reduce coastal erosion and river flooding

swash the movement of water in a wave as it breaks onto a beach

tributary a river or stream that flows into a larger river or lake

watershed an area or ridge of land that separates waters flowing to different rivers, basins or seas

14.9 SkillBuilder: Constructing a field sketch

14.9.1 Tell me

What are field sketches?

Field sketches are drawings completed during fieldwork — Geography outside the classroom. Field sketches allow a geographer to capture the main aspects of landscapes in order to edit the view, focusing on the important features and omitting the unnecessary information. Field sketches are free-hand drawings with annotations. Colour may be added but is not a requirement. A field sketch aids our sense of observation and allows us to record and interpret environments.

Why are field sketches useful?

Field sketches capture the important information. You might think it is easier to take an image on your phone or with a camera, but you are then capturing the non-relevant data as well. By making a drawing in the field you are interpreting the environment, analysing the landscape and highlighting a geographical understanding of what you see by careful and clear labelling.

A good field sketch has:

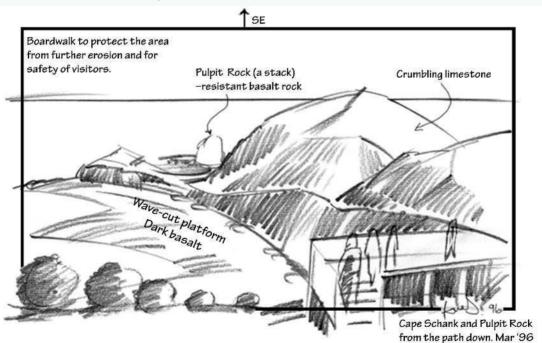
- been completed on plain paper
- been drawn in pencil
- a title
- a date
- labels of key features
- an indicator to show direction
- shading.

14.9.2 Show me

How to construct a field sketch

Model

FIGURE 1 Field sketch of Cape Schanck



Source: © Geography Teachers' Association of Victoria Inc. *Interaction*, journal of the GTAV, June 1998. Illustration redrawn by Harry Slaghekke.

You will need:

- plain paper
- · a clipboard
- a grey pencil (soft)
- a ruler
- an eraser.

Procedure

FIGURE 1 is an example of a coastal field sketch. Obviously, to complete a coastal field sketch you need to be in a coastal environment, but any environment can be sketched — natural or human-altered. You can choose an environment near you.

Step 1

Choose the field of view to be sketched; that is, 'from this tree to that bend in the stairs'. Make yourself comfortable as you'll need to stay in the one place while you complete the sketch.

Step 2

Partly close your eyes so that you are peeking at the world — all the small details will disappear and your eyes will focus on the main outlines, which are the first parts to be drawn. Practise viewing the environment.

Step 3

Attach your paper securely to the clipboard as wind plays havoc with field sketching! Using a pencil, draw a border (frame) in which you are going to sketch. Always draw in pencil and keep your eraser handy.

Step 4

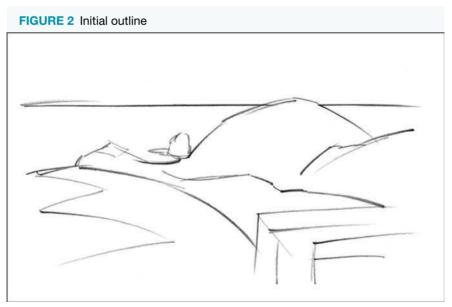
Draw in the horizon as a baseline; that is, where the land meets the sky.

Step 5

Divide your sketch horizontally into three portions: background, middle ground and foreground (closest).

Step 6

Peek at the landscape through partly closed eyes and now add the main outlines to your sketch. Start with main features in the background (most distant), then middle-ground and lastly foreground. There will be a few shapes on your page, but no detail (see **FIGURE 2**).



Source: © Geography Teachers' Association of Victoria Inc. *Interaction*, journal of the GTAV, June 1998. Illustration redrawn by Harry Slaghekke.

Step 7

Using this base you can now add details and shading. Identify those aspects that are relevant to your study. In this coastal example, there are natural features — a wave-cut platform, a stack, a headland and limestone ridges — and a human feature, the boardwalk.

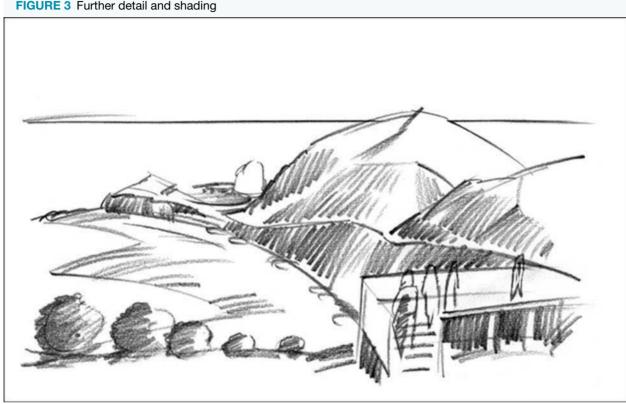


FIGURE 3 Further detail and shading

Source: @ Geography Teachers' Association of Victoria Inc. Interaction, journal of the GTAV, June 1998. Illustration redrawn by Harry Slaghekke.

Step 8

Annotate (label) your sketch to draw attention to the landscape features. Ask yourself what the connection is between the natural features and the human-altered features. Can your labelling assist in making this interconnection clear to those who view your field sketch?

Step 9

Finishing touches:

- on the border, add a direction indicator as to which way you are looking at the landscape
- title your sketch identify the place with as much detail as possible
- date your drawing.

The **FIGURE 1** model shows the completed field sketch with all features added.



14.9.3 Let me do it

Complete the following activities to practise this skill.

14.9 ACTIVITIES

- Your teacher may take the class into the school grounds and ask you to do a field sketch of an area within the school boundary, or you may be able to view an *environment* beyond the fence line.
 - At home, select a street view or a garden view and complete an annotated field sketch. Use the checklist to ensure you cover all aspects of the task.
- 2. Study your field sketch and consider the *environment* to answer the following questions.
 - (a) What natural features have been labelled in the field sketch?
 - (b) What human-altered features have been labelled in the field sketch?
 - (c) Is there any interconnectedness between the natural environment and human activities?
 - (d) How do your five senses respond to this environment?
 - (e) How might this *place change* in the future?

Checklist

I have:

- drawn a border
- · added a compass direction
- titled the sketch
- · dated the sketch
- · shaded to give depth
- clearly labelled the significant aspects.

14.13 SkillBuilder: Reading contour lines on a map

14.13.1 Tell me

What are contour lines?

Contour lines drawn on a map join all places of the same elevation (height). These lines are usually brown and have a number written on them to indicate height above sea level. Contour maps are used to show the relief (shape) of the land and the heights of the landscape. Land heights are identified from aerial photography. Natural features, such as rivers, lakes and beaches, and human features, such as towns, roads and power lines, are added to the map to complete the landscape picture. Symbols provided in a legend (or key) or labels on the map add information to complete the image of the environment.

Why are contour lines useful?

It is not possible to see an entire area when in the environment, so maps with contour lines show the relief of the land and help people to identify features. They are also useful because they tell us the actual height above sea level of particular locations on a map. Contour lines are used by many people, and for various purposes, such as:

- organising a hike
- land-use planning of roads, airports, train lines, power-line routes
- identifying slopes for building sites
- planning decisions
- leisure activities; for example, working out where the best rapids on a river might be or where to launch or land a hang-glider.

Reading contour lines on a map involves:

- identifying a contour line
- finding its number (metres above sea level)
- determining the contour interval
- checking spot heights.

14.13.2 Show me

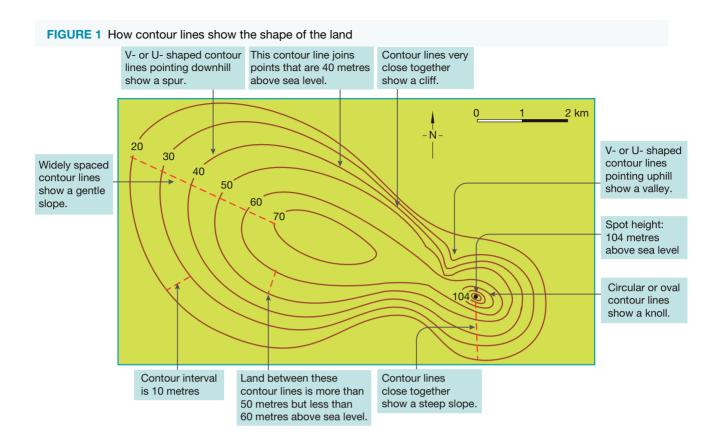
How to read contour lines

You will need:

• a contour (topographic) map.

Model

The contour lines (brown lines) on the simple topographic map shown in **FIGURE 1** join places of the same height above sea level. The contour lines are drawn at 10-metre intervals. The highest point is identified by a spot height of 104 metres. Landscape features such as steep or gentle slopes, cliffs, valleys, spurs and knolls can be identified using the contour lines on the map.



Procedure

Step 1

To find the height of a particular area of land, identify a contour line in **FIGURE 1** and follow the line to find the number that states the height above sea level (in metres).

Step 2

Spot heights are dots that indicate the exact height at the highest point of a hill or the lowest point of a depression. For example, the hill in **FIGURE 1** is exactly 104 metres above sea level at its peak. This spot is higher than the last contour line (in this case 100 m), but lower than the height at which the next contour line would be drawn (110 m).

If the contour interval shown in **FIGURE 2** is 20 metres, what height could the land be on these hilltops? **Step 3**

The contour interval of a map is the difference in metres between each of the contour lines. This interval is consistent across a map.

If the contour lines are too close and the numbers can't easily be written, then it is left to the reader to use the contour interval to calculate

FIGURE 2 A topographic map represents a three-dimensional landscape on a flat surface.



heights. The contour interval is often written in the legend as a guide. Check your understanding by considering the landscape shown in **FIGURE 2**. With a contour interval of 20 metres, what would be the height of the land at the top of the contour immediately beneath the hilltops?



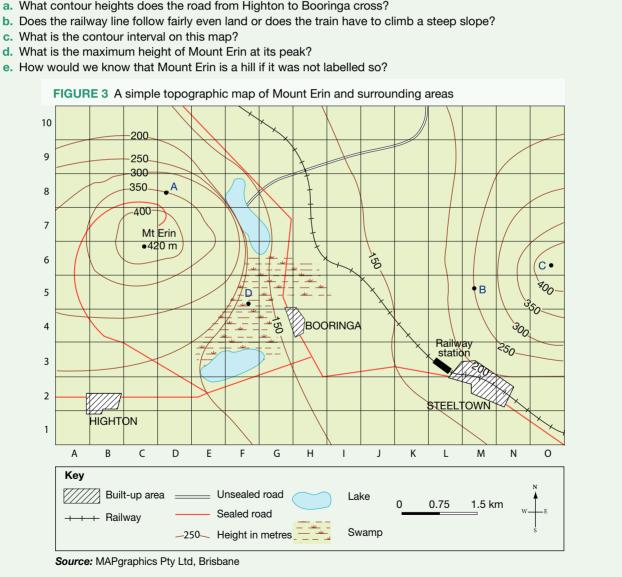
14.13.3 Let me do it

Complete the following activities to practise this skill.

14.13 ACTIVITIES

Study FIGURE 3 and apply your skills in reading contour lines to answer the following questions.

a. What contour heights does the road from Highton to Booringa cross?



Checklist

I have:

- understood contour lines
- understood contour intervals
- understood spot heights.

14.14 Thinking Big research project: Coastal erosion animation

Scenario

The erosive power of water is one of the strongest forces of nature. The continued pounding of waves upon rocks, cliffs and beaches has sculpted our coastal landscapes into the diverse environments that we see today. From towering cliffs to lonely sea stacks and deep, dark caves, all across the world, there are thousands of examples of the effect of erosion on coastal landscapes.



Task

Unless you are lucky enough to be watching at the *exact* moment that a sea stack tumbles into the ocean, it can be difficult to catch erosion in action. Although wave action is continuous, it can often take an extremely long time for us to see the effects of erosion. In this task, you will do what few people before you have achieved – you will capture the effect of erosion on film! You will complete this task by creating an animation (either hand-drawn or using a computer) that shows how a coastal landform is created. Your animation should be accompanied by written annotations that describe each step of the process.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in pairs will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Your first step is to choose a landform as the focus of your animation. You can choose from the following coastal landforms: cliff, sea stack, arch, cave, rock-cut platform, headland, tombolo, blowhole, beach or sand dunes.
- Once you have decided on your landform, make sure that you know *exactly* how it is created. Write an explanation of this process and try to break it down into different stages. This will help you plan your animation.
- Plan your animation by answering the following questions:
 - What format are you going to use hand-drawn or computer-drawn? (*Note:* Whichever format you use, you will have to draw your landform in stages in order to make your animation. For example, if you are drawing by hand, you draw the first stage of your landform, then take a photograph, repeating the process until you are finished. You'll then use a computer or handheld device to put these images together to create a moving animation).
 - If you're using computer software, do you already know how to use the program, or do you need to watch some tutorials in order to learn?

- How many separate images do you need to accurately show the creation of your landform?
- Once you have completed your drawings/diagrams, add them to an animation maker (there are lots of excellent free programs online) or you can simply add them to Google Slides or PowerPoint in order to make a simple animation.
 - The **Google Drive** weblink in the Media centre shows you how to set up 'autoplay' on Google Slides.
- Submit your animation to your teacher for assessment and feedback. Each animation could be played for the class.





ProjectsPLUS Coastal erosion animation (pro-0169)

14.15 Review

14.15.1 Key knowledge summary

14.2 Landscapes formed by water

- Through the processes of erosion and deposition, water shapes the coastal landscapes of the world.
- Coastal landscapes can change on a daily, seasonal or long-term basis.

14.3 Coastal erosion

- Continued wave action from destructive waves erodes coastal environments creating a wide range of landforms.
- Erosion can also be caused by tectonic activity and by human use of coastal environments.

14.4 Which coastal landforms are created by deposition?

- Continued wave action from constructive waves deposits sand along coastal environments, creating a wide range of landforms.
- If unmanaged, depositional landforms can present challenges for the management of coastal environments.

14.5 Managing coasts

- As human and natural impacts continue to change coastal landscapes, it is vital that these
 environments are carefully managed.
- Coastal management can include hard and soft engineering techniques.

14.6 Indigenous use of coastal environments

- Indigenous communities have been using coastal environments for at least 65 000 years.
- Shell middens can be found across Australian coastal landscapes and provide archaeological evidence of Indigenous life and land use.

14.7 Comparing coastal landforms

• The unique environmental and climatic conditions of different places in the world can create similar, vet different landforms.

14.10 How does water form river landscapes?

• Rivers contain incredible erosive potential, which is used to sculpt landforms along their upper, middle and lower courses.

14.11 Managing river landscapes

- People rely on rivers for a range of needs including agricultural, industrial, commercial, residential and recreational purposes.
- The human demand on rivers makes proper management essential.

14.12 Landscapes formed by ice

- The pressure of slow-moving glaciers can create unique and dynamic landscapes.
- The impacts of climate change are reducing the size and number of glaciers around the world.

14.15.2 Reflection

Complete the following activities to reflect on your learning.

14.12 ACTIVITIES

Revisit the inquiry question posed in the Overview:

From gentle rain to rushing rivers, how does simple water form and transform landscapes?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.





eWorkbook Reflection (doc-31346)

Crossword (doc-31347)



Interactivity Landscapes formed by water crossword (int-7596)

KEY TERMS

avalanche a sudden downhill movement of material, especially snow and ice

backwash the movement of water from a broken wave as it runs down a beach returning to the ocean

barge a long flat-bottomed boat used for transporting goods

clinometer an instrument used for measuring the angle or elevation of slopes

deposition the laying down of material carried by rivers, wind, ice and ocean currents or waves

destructive wave a large powerful storm wave that has a strong backwash

downstream nearer the mouth of a river, or going in the same direction as the current

ecosystem an interconnected community of plants, animals and other organisms that depend on each other and on the non-living things in their environment

erosion the wearing away and removal of soil and rock by natural elements, such as wind and water, and by human activity

estuary the wide part of a river at the place where it joins the sea

field sketch a diagram with geographical features labelled or annotated

flash flood a flood that occurs very quickly, often without advance warning

floodplain an area of low-lying ground adjacent to a river, formed mainly of river sediments and subject to flooding

groundwater water that seeps into soil and gaps in rocks

hard engineering a coastal management technique that involves using physical structures to control the effects of natural processes

human features structures built by people

intermittent describes a stream that does not always flow

longshore drift a process by which material is moved along a beach in the same direction as the prevailing wind meander a winding curve or bend in a river

moraine rocks of all shapes and sizes carried by a glacier

peninsula land jutting out into the sea

perennial describes a stream that flows all year

physical process continuing and naturally occurring actions such as wind and rain

prevailing wind the main direction from which the wind blows

river delta a landform created by deposition of sediment that is carried by a river as the flow leaves its mouth and enters slower-moving or stagnant water. Can take three main shapes: fan shaped, arrow shaped and bird-foot shaped.

shell middens Indigenous archaeological sites where the debris associated with eating shellfish and similar foods has accumulated over time

soft engineering a coastal management technique where the natural environment is used to help reduce coastal erosion and river flooding

swash the movement of water in a wave as it breaks onto a beach

tributary a river or stream that flows into a larger river or lake

watershed an area or ridge of land that separates waters flowing to different rivers, basins or seas

15 Desert landscapes

15.1 Overview

Hot and sandy? Cold and windy? What are the features of a landscape that make it a desert?

15.1.1 Introduction

Approximately one-third of the Earth's land surface is desert — arid land with little rainfall. These arid regions may be hot or cold. The actions of wind and, sometimes, water shape the rich variety of landscapes found there. Deserts can be very inhospitable places where conditions make it difficult for people to survive in them. Yet there are many desert locations in which people can and do live. In this topic we will learn about different types of deserts, how they form, their locations around the world, and how people use them.



Resources

Customisable worksheets for this topic

Video eLesson Desertscapes (eles-1625)

LEARNING SEQUENCE

- 15.1 Overview
- 15.2 What is a desert?
- 15.3 SkillBuilder: Using latitude and longitude
- 15.4 How the climate forms deserts
- 15.5 The processes that shape desert landforms
- 15.6 Characteristics of Australia's deserts
- 15.7 SkillBuilder: Calculating distance using scale
- 15.8 How did Lake Mungo become dry?
- **15.9** How people use deserts
- 15.10 Antarctica a cold desert
- 15.11 Thinking Big research project: Desert travel brochure
- **15.12 Review**

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To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

15.2 What is a desert?

15.2.1 Defining a desert

A desert is a hot or cold region with little or no rainfall. Around one-third of the Earth's surface is desert and is home to about 300 million people.

Although they receive little rainfall, most deserts receive some form of precipitation. When it does rain, it is usually during a few heavy storms that last a short time.

Hot deserts

Most of the world's hot deserts are located between the Tropic of Cancer and the Tropic of Capricorn (see FIGURE 3). They have very hot summers and warm winters. Temperature extremes are common, because cloud cover is rare and humidity is very low; this means there is nothing to block the heat of the sun during the day, or prevent its loss at night. Temperatures can range between around 45 °C and -15 °C in a 24-hour period.

| TABLE 1 Types of deserts | | | |
|--------------------------|---------------------|-----------------|--|
| Rainfall (mm/year) | Type of desert | Examples | |
| . 05 | I I and a second of | N I = ! I= A Is | |

| maimaii (iiiii/yeai) | Type of desert | Liamples |
|----------------------|----------------|-------------------------|
| < 25 | Hyper-arid | Namib; Arabian |
| 25–200 | Arid | Mojave |
| 200–500 | Semi-arid | Parts of Sonoran Desert |

FIGURE 1 The Sahara, an example of a hot desert

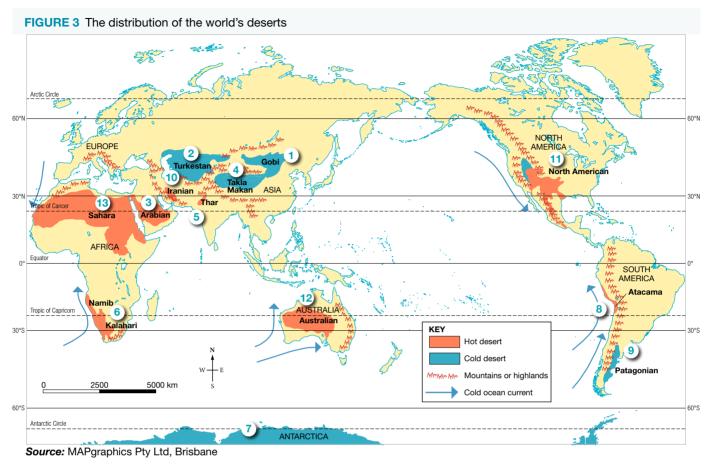


Cold deserts

Cold deserts lie on high ground generally north of the Tropic of Cancer and south of the Tropic of Capricorn (see FIGURE 3). They include the polar deserts. Any precipitation falls as snow. Winters are very cold and often windy; summers are dry and cool to mild.



15.2.2 Deserts of the world



- 1 Gobi Desert: Asia's biggest desert, the Gobi, is a cold desert. It sits some 900 metres above sea level and covers an area of some 1.2 million square kilometres. Its winters can be freezing.
- 2 Turkestan Desert: The cold Turkestan Desert covers parts of south-western Russia and the Middle East.
- **Arabian Desert:** This hot desert is as big as the deserts of Australia. Towards its south is a place called Rub al-Khali (meaning 'empty quarter'), which has the largest area of unbroken sand dunes, or erg, in the world.
- 4 Takla Makan Desert: The Takla Makan Desert is a cold desert in western China. Its name means 'place of no return'. The explorer Marco Polo crossed it some 800 years ago.
- 5 Thar Desert: The Thar Desert is a hot desert covering north-western parts of India and Pakistan. Small villages of around 20 houses dot the landscape.
- 6 Kalahari and Namib deserts: The Namib Desert extends for 1200 kilometres down the coast of Angola, Namibia and South Africa. It seldom rains there, but an early-morning fog often streams across the desert from the ocean. The dew it leaves behind provides moisture for plants and animals. It joins the Kalahari Desert, which is about 1200 metres above sea level.
- 7 Antarctic Desert: The world's biggest and driest desert, the continent of Antarctica, is another cold desert. Only snow falls there, equal to about 50 millimetres of rain per year.
- 8 Atacama Desert: The Atacama Desert is the driest hot desert in the world. Its annual average rainfall is a tiny 0.1 millimetre.
- Patagonian Desert: The summer temperature of this cold desert rarely rises above 12 °C. In winter, it is likely to be well below zero, with freezing winds and snowfalls.
- 10 Iranian Desert: Two large deserts extend over much of central Iran. The Dasht-i-Lut is covered with sand and rock, and the Dasht-i-Kavir, mainly in salt. Both have virtually no human populations.
- North American deserts: The desert region in North America is made up of the Mojave, Sonoran and Chihuahuan deserts (all hot deserts) and the Great Basin (a cold desert). The Great Basin's deepest depression, Death Valley, is the lowest point in North America.

- 12 Australian deserts: After Antarctica, Australia is the driest continent in the world. Its deserts are generally flat lands, often vibrant in colour.
- 13 Sahara Desert: The largest hot desert in the world, the Sahara stretches some nine million square kilometres across northern Africa over 12 countries. Only a small part is sandy. It is the sunniest place in the world.



Interactivity Great deserts of the world (int-3106)

15.2 INQUIRY ACTIVITIES

- 1. Use the information in this subtopic to design a quiz of 10 questions entitled 'Deserts of the world'. Test your friends and family. Classifying, organising, constructing
- 2. Draw up and complete a table like the one below to show your understanding of the locations and features of desert *environments*. Look for photos on the internet. Classifying, organising, constructing

| Name of desert | Mountain range | Continent | Ocean current | Photos |
|----------------|----------------|-----------|---------------|--------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

15.2 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

15.2 Exercise 1: Check your understanding

- 1. **GS1** What climate conditions are needed for hot and cold deserts to form?
- 2. GS1 Where is the sunniest place in the world?
- 3. **GS1** Name three deserts in the Asia–Pacific region.
- 4. GS2 Describe key differences between hot and cold deserts.
- 5. GS1 On what major line of latitude are Australian deserts located?

15.2 Exercise 2: Apply your understanding

- 1. GS5 Look carefully at the map in FIGURE 3 and read the text.
 - (a) Which continent has the largest area of hot desert?
 - (b) Which continent has the largest area of cold desert?
- 2. GS5 Look carefully at the map in FIGURE 3 and read the text.
 - (a) What is the largest hot desert in the world?
 - (b) What is the largest hot desert in the Asia-Pacific region?
- 3. GS5 Look carefully at the map in FIGURE 3 and read the text.
 - (a) Which is the driest continent in the world?
 - (b) Which continent contains the driest hot desert?
- 4. GS5 Look carefully at the map in FIGURE 3 and read the text. Which North American desert contains the lowest land on the continent?
- 5. **GS1** Name the three deserts in Africa and where they are located.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

15.3 SkillBuilder: Using latitude and longitude

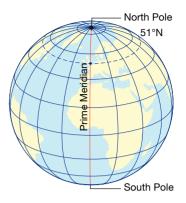
online ?

What is latitude and longitude?

Latitude and longitude are imaginary grid lines encircling the Earth. The lines that run parallel to the equator are called parallels of latitude and are measured in degrees. Lines of longitude run from north to south from the North Pole to the South Pole. These are called meridians of longitude and are also measured in degrees. Lines of latitude and longitude are drawn on maps to help us locate places.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.





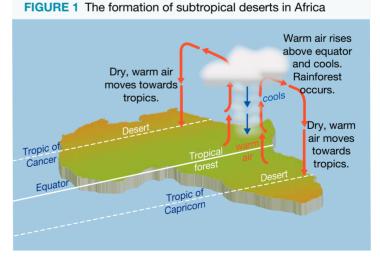
15.4 How the climate forms deserts

15.4.1 The subtropics

Deserts form in many different parts of the globe: the subtropics; continental interior areas at middle latitudes; on the leeward side of mountain ranges; along coastal areas; and in the polar regions. The only common factor is their low rainfall — but why do these areas experience low rainfall?

Most of the world's greatest deserts are found in the subtropics near the Tropics of Cancer and Capricorn.

Because of the way the Earth rotates around the sun, areas around the equator receive more direct sunlight than anywhere else on Earth. This means the air there is always very hot. Hot air can hold much more moisture than cold air, so the humidity in these areas is always very high. (If you have ever visited or live near a tropical rainforest or northern Australia, you will have experienced this hot humidity.) Hot air



also rises. As the air heads upwards into the atmosphere above the equator, it drifts away, heading north and south.

The higher the air gets, the cooler it becomes. Cool air can't hold as much moisture, so it releases it as rain. Areas around the equator and to the immediate north and south of it (the tropics) receive frequent heavy downpours (see **FIGURE 1**).

With its moisture gone, the cool, dry air continues moving north and south away from the equator until it meets zones of high air pressure around the tropics. Here, it is forced downwards. The more the dry air descends, the warmer it gets. This means it can hold more moisture and it is likely to absorb any moisture that already exists in this environment. It is like using a sponge to wipe up some water on the kitchen bench; a dry sponge will absorb more of the spill than a wet sponge. This is how the subtropical deserts form.

Temperatures in these deserts are usually high all year round. In summer the heat is extreme, with daytime temperatures often going above 38 °C and

FIGURE 2 The Sahara Desert of northern Africa is the world's largest and can experience temperatures as high as 57 °C



sometimes as high as 49 °C. At night — with no clouds to provide insulation — temperatures drop quickly to an average of 21 °C in summer and sometimes below freezing during winter.

15.4.2 Rain-shadow deserts

Rain shadows form on the leeward side of a mountain range (opposite the windward side that faces rainbearing winds). Deserts commonly form in rain shadows.

• Moist air blowing in from the ocean is forced to rise up when it hits a range of mountains. This cools it down. As cool air cannot hold as much moisture, it releases it as precipitation (see FIGURE 3).

FIGURE 3 The formation of rain-shadow deserts Rising moist air produces rain. Dry air continues over mountains. Winds become dry Trade by the time they winds are reach inland areas. forced to rise. Sea Inland Mountains Coast Desert Thousands of kilometre

- By the time the air moves over the top of the range and down the other side, it is likely to have lost most, if not all, of its moisture. It will therefore be fairly dry.
- The more the air descends on the other side of the range, the more it warms up. Hence, it can hold more moisture. So, as well as not bringing any rain to the land, the air absorbs what little moisture the land contains.
- In time, as this pattern continues, the country in the rain shadow of the mountain range is likely to become arid.

An example of this is the Great Dividing Range in Australia; cool moist air produces winds on the eastern side of these mountains and desert to the west. The Mojave Desert in the south-western United States is located on the leeward side of the Sierra Nevada mountain range (FIGURE 4).

15.4.3 Coastal deserts

Currents in the oceans are both warm and cold, and are always moving. Cold currents begin in polar and temperate waters (with moderate temperatures), and drift towards the equator. They flow in a clockwise pattern in the northern hemisphere, and in an anticlockwise pattern in the southern hemisphere. As they move, they cool the air above them (see **FIGURE 5**).

FIGURE 4 The Mojave Desert, United States



FIGURE 5 The formation of coastal deserts



If cold currents flow close to a coast, they can contribute to the creation of a desert. This occurs because cold ocean currents cause the air over the coast to become stable, which stops cloud formation. If the cool air the currents create blows in over warm land, the air warms up; it can then hold more moisture. It is therefore not likely to release any moisture it contains unless it is forced up by a mountain range. Large coastal deserts, including the Atacama Desert in Chile (**FIGURE 6**) and the Namib Desert in Namibia (**FIGURE 7**), are formed in this way. The Atacama Desert is a coastal desert in northern Chile in South America and is the driest desert in the world. It is located on the leeward side of the Chilean Coast Range. In some areas, only around one millimetre of rain falls every 5–20 years.

FIGURE 6 The Atacama Desert in Chile, South America



FIGURE 7 The coastal Namib Desert



15.4.4 Inland deserts

Some deserts form because they are so far inland that they are beyond the range of any rainfall. By the time winds reach these dry centres, they have dumped any rain they were carrying or have become so warm they cannot release any moisture they still hold. The air that enters such areas is usually extremely dry and the skies are cloudless for most of the year. Summer daytime temperatures can rise as high as those of subtropical deserts. In winter, however, temperatures are much lower. Average daily temperatures below freezing are common during winter.

Examples of inland deserts are the central deserts of Australia (see FIGURE 8), the Thar Desert in north-west India and the vast Gobi and Takla Makan deserts of Central Asia.

FIGURE 8 The Simpson Desert in central Australia

15.4.5 Polar deserts

Polar deserts are areas with a precipitation rate of less than 250 millimetres per year and an average temperature lower than 10 °C during the warmest month of the year. Polar deserts cover almost five million square kilometres of our planet and consist mostly of rock or gravel plains. Snow dunes may be present in areas where precipitation occurs. Temperatures in polar deserts often alternate between freezing and thawing, a process that can create patterned textures on the ground as much as five metres across.

FIGURE 9 Although covered in frozen water, Antarctica receives little rain and is therefore classified as a desert.



DISCUSS

Climate change is already leading to increasing areas of desertification. How important is it for Australians to consider the impact of their high carbon-producing lifestyle on the impact of such landscapes?

[Critical and Creative Thinking Capability]

15.4.6 Desert climate

Temperature

One geographical characteristic of many deserts is the high temperature, which quickly evaporates any water that might be around. The Earth's highest recorded temperature — 56.7 °C — occurred at Greenland Ranch in Death Valley, California, United States on 10 July 1913.

During the summer of 1923–24, the semi-arid town of Marble Bar in Western Australia (average rainfall 361 mm per year) experienced temperatures of more than 37.8 °C for 160 days in a row, from 31 October 1923 to 7 April 1924. However, the highest official maximum temperature recorded in Australia was 50.7 °C at Oodnadatta in South Australia on 2 January 1960.

Rainfall

Although low rainfall is a characteristic of deserts, rain does fall and violent storms can sometimes occur. A record 44 millimetres of rain once fell within three hours in the Sahara. Large Saharan storms may deliver up to one millimetre of rain per minute. Normally dry stream channels, called arroyos or wadis, can quickly fill after heavy rains, and flash floods make these channels dangerous.

Monthly data for rainfall and temperature can be used to create climographs for other desert locations such as Khormaksar in Yemen and Alice Springs in Australia (see **TABLE 1**).

FIGURE 10 Yuma, Arizona climograph

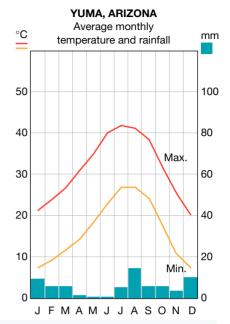


TABLE 1 Climate data for (a) Khormaksar, Yemen, and (b) Alice Springs, Australia

(a) Khormaksar, Yemen

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Average temperature (°C) | 25.0 | 25.5 | 27.0 | 28.5 | 30.5 | 33.0 | 32.0 | 32.0 | 32.0 | 28.5 | 26.5 | 25.5 | |
| Average rainfall (mm) | 5.0 | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 5.0 | 3.0 | 0.0 | 0.0 | 0.0 | 5.0 | 23.0 |

(b) Alice Springs, Australia

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Average temperature (°C) | 28.5 | 27.7 | 24.8 | 20.0 | 15.4 | 12.4 | 11.5 | 14.3 | 18.3 | 22.8 | 25.8 | 27.7 | |
| Average rainfall (mm) | 40.5 | 41.5 | 34.7 | 16.6 | 17.0 | 16.7 | 12.1 | 10.0 | 9.0 | 20.0 | 25.3 | 37.2 | 280.6 |



Interactivity How to make a desert (int-3107)

Weblink Desert rain
Google Earth Alice Springs
Yemen

15.4 INQUIRY ACTIVITY

Use the **Desert rain** weblink in the Resources tab, and then answer the following questions.

- a. What is a flash flood?
- b. What happens to water as it flows over sand? Think of what happens to water at the beach.

- c. How do animals and plants respond to these rare water events?
- d. Describe how the landscape quickly *changes* once there is water in the desert.

Describing and explaining

15.4 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting,

15.4 Exercise 1: Check your understanding

- 1. GS1 Decide whether the following statements are true or false. Rewrite the false statements to make
 - (a) The cooler the air, the more moisture it can hold.
 - (b) Rain shadows often contain dry areas of land.
 - (c) Cold ocean currents cool the air above them.
 - (d) Deserts do not form along coastlines.
- 2. GS2 Use FIGURE 1 to explain why deserts form around areas near the tropics but not at the equator. Alternatively, form small groups and create a short drama performance to explain the process.
- 3. GS2 Use FIGURE 3 and any other information in this subtopic to write a paragraph explaining why deserts tend to form in rain shadows. Alternatively, form small groups and create a short drama performance to
- 4. GS1 Why do temperatures in deserts drop so much at night after being so high during the day?
- 5. GS1 What are the extremes of temperatures that have been recorded in hot deserts?

15.4 Exercise 2: Apply your understanding

- 1. GS2 Draw a diagram to explain how cold ocean currents influence the formation of a desert environment along the Western Australian coastline.
- 2. GS4 Use TABLES 1a and 1b to draw climate graphs for Khormaksar, Yemen, and Alice Springs, Australia.
- 3. GS1 What are the characteristics of polar deserts?
- 4. **GS1** Give four examples of inland deserts.
- 5. **GS2** Describe how inland deserts form.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

15.5 The processes that shape desert landforms

15.5.1 Shaping the desert

Although most people imagine a sea of sand when they think of deserts, sand covers only about 20 per cent of the world's deserts. Sand is the end product of millions of years of erosion of other landforms such as rock and plateaus that, over time, are worn away by extremes of temperature, wind and water.

The landforms and patterns of a desert are created by a number of natural processes. The unprotected land surfaces are prone to erosion. After heavy rain, often a long distance from the desert flood plains, erosion of ancient river channels can be major. Extreme temperatures, along with strong winds and the rushing water that can follow a desert rainstorm, cause rocks to crack and break down into smaller fragments. This process is called weathering.

Erosional landforms

The process of erosion removes material such as weathered rock. Most erosion in deserts is caused by wind and, at times, running water. During heavy rainfall, water carves channels in the ground. Fast-flowing water can carry rocks and sand, which help to scour the sides of the channel. As vegetation is usually sparse or non-existent, there are few roots to hold the soil together. Eventually, deep gullies called wadis can form.

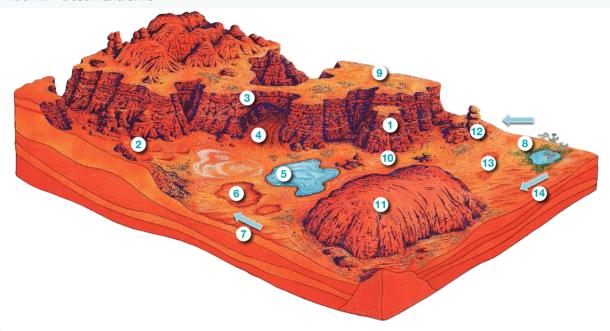
Erosion can also result from the action of wind and from chemical reactions. Some rock types, such as limestone, contain compounds that react with rainwater and then dissolve in it. Wind is a very important agent of transport and deposition, and can change the shape of land by abrasion — the wearing down of surfaces by the grinding and sandblasting action of windborne particles.

Depositional landforms

Materials carried along by rushing water and wind must eventually be put down. Over time these materials build up, forming different shapes and patterns in the desert. This process is called deposition.

Depositional landforms in deserts include alluvial fans, playas, saltpans and various types of sand dunes (see **FIGURE 1**).

FIGURE 1 Desert landforms

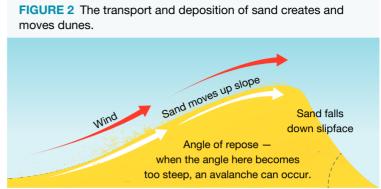


- A butte is the remaining solid core of what was once a mesa. It often is shaped like a castle or a tower.
- 2 Crescent-shaped barchan dunes are produced when sand cover is fairly light.
- 3 An arch, or window, is an opening in a rocky wall that has been carved out over millions of years by erosion.
- 4 An alluvial fan is the semicircular build-up of material that collects at the base of slopes and at the end of wadis after being deposited there by water and wind.
- 5 A playa lake may cover a wide area, but it is never deep. Most water in it evaporates, leaving a layer of salt on the surface. These salt-covered stretches are called saltpans.
- 6 Clay pans are low-lying sections of ground that may remain wet and muddy for some time.
- 7 The rippled surface on transverse dunes is the result of a gentle breeze blowing in the one direction.
- 8 An oasis is a fertile spot in a desert. It receives water from underground supplies.
- 9 A mesa is a plateau-like section of higher land with a flat top and steep sides. The flat surface was once the ground level, before weathering and erosion took their toll.
- Sand dunes often start as small mounds of sand that collect around an object such as a rock. As they grow larger, they are moved and shaped by wind.
- An inselberg is a solid rock formation that was once below ground level. As the softer land around it erodes, it becomes more and more prominent. Uluru is an inselberg.
- 12 A chimney rock is the pillar-like remains of a butte.
- 13 Star dunes are produced by wind gusts that swirl in from all directions.
- 14 Strong winds blowing in one direction form longitudinal dunes.

15.5.2 Sand dunes = depositional landforms

Different dune shapes are created by the action of the wind (see FIGURE 2). These include crescent, linear, star, dome and parabolic. The most common are the crescent-shaped dunes that are formed when the wind blows in one direction (FIGURE 3). They are usually wider than they are long and can move very quickly across desert landscapes.

Linear dunes are a series of dunes running parallel to each other. They



can vary in length from a few metres to over 100 kilometres. It appears that winds blowing in opposite directions help create these dunes. The Simpson Desert in central Australia has linear dunes (FIGURE 4).

FIGURE 3 A series of crescent dunes in Egypt



FIGURE 4 Linear sand dunes in the Simpson Desert, Australia



Star dunes have 'arms' that radiate from a high central pyramid-shaped mound (FIGURE 5). They form in regions that have winds blowing in many different directions and can become very tall rather than wide — some are up to 500 metres high.

Dome dunes are made up of fine sand without a steep side. These rounded structures tend to be only one or two metres high and are very rare (FIGURE 6).

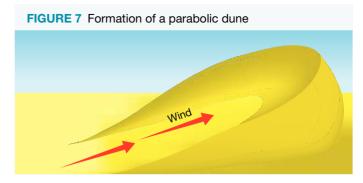
FIGURE 5 Star dunes are found in many deserts including the Namib, the Grand Erg Oriental of the Sahara, and the south-east Badain Jaran Desert of China.



FIGURE 6 A dome dune in the Chihuahuan Desert, North America



Parabolic dunes have a U shape and do not get very high (FIGURE 7). They often occur in coastal deserts. The longer section follows the 'head' of the dune (the opposite process to the formation of crescent dunes) because vegetation has anchored them in place. The arms can be long — in one case, measured at 12 kilometres.



15.5.3 Playas and pans = another depositional landform

A desert basin may fill with water after heavy rains to form a shallow lake, but for the majority of the time the often salt-encrusted surface is hard and dry. Such expanses of land are known as playas, saltpans or hardpans. The flat terrains of pans and playas make them excellent race tracks and natural runways for aeroplanes and spacecraft. Ground-vehicle speed records are commonly established on Bonneville Speedway, a race track on the Great Salt Lake hardpan (FIGURE 8). Space shuttles land on Rogers Lake playa at Edwards Air Force Base in California in the western United States.

FIGURE 8 A driver lying in a streamlined racing car, Bonneville Salt Flats, Utah, the United States



15.5 INQUIRY ACTIVITIES

- Locate all the desert *places* named in this subtopic. Use Google Maps to create your own map of these locations, and add some interesting facts and images of each location. Email a link to your completed map to your teacher.
 Classifying, organising, constructing
- 2. Draw up a table like the one below.

| Name of land form | Picture of land form | Location | Type of erosion (wind or water) | Type of deposition (wind or water) |
|-------------------|----------------------|----------|---------------------------------|------------------------------------|
| Butte | | | | |
| Mesa | | | | |
| Inselberg | | | | |

Continue to add the landforms shown in **FIGURE 1** to your table. Add examples of other desert landforms that you have found when researching this topic. **Classifying, organising, constructing**

Work in small groups to create a model of a desert (using plasticine or playdoh, for example) that contains a number of desert forms and patterns. Use FIGURE 1 as a guide. Show your completed model to the other groups, then provide and respond to constructive feedback.
 Classifying, organising, constructing

15.5 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

15.5 Exercise 1: Check your understanding

- 1. GS1 List the agents of erosion and weathering in a desert. How does each process cause *change* in a desert?
- 2. **GS1** Name two erosional and two depositional landforms in a desert.
- 3. **GS1** Name the most common dune shapes that are formed in deserts.
- 4. **GS2** Explain the difference between a mesa and a butte.
- 5. **GS2** How does vegetation help to prevent erosion in a desert?
- 6. GS1 What wind conditions are needed to create a:
 - (a) star dune
 - (b) longitudinal dune
 - (c) parallel dune?

15.5 Exercise 2: Apply your understanding

- 1. **GS2** Why do you think oases are such fertile *places*?
- 2. GS3 What do chimney rocks and arches have in common?
- 3. GS3 What do playa lakes and saltpans have in common?
- 4. GS6 Study the landforms labelled 1, 3 and 9 in FIGURE 1. Sketch what each of these may look like in the future as erosion and weathering continue to occur.
- 5. **GS1** Which desert in Australia contains many linear dunes?
- 6. GS1 On which landforms are land-speed records often held and why?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

15.6 Characteristics of Australia's deserts

15.6.1 The location of Australia's deserts

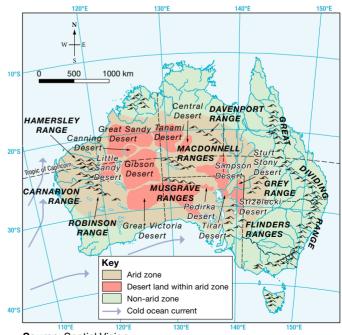
Australia is the world's driest inhabited continent. Over 70 per cent of the country receives between 100 and 350 millimetres of rainfall annually, which makes most of Australia arid or semi-arid.

Australia's deserts are subtropical and are located mainly in central and western Australia, making up about 18 per cent of the country (see **FIGURE 1**). They are hot deserts, which means they are areas of little rainfall and extreme temperatures — rainfall can be less than 250 millimetres per year and temperatures can rise to over 50 °C. The average humidity is between 10 and 20 per cent. The desert terrain is very diverse and can range from red sand dunes to the polished stones of the gibber plains — the term gibber comes from an Aboriginal language word for stone.

Great Victoria Desert

The Great Victoria Desert, Australia's largest, covers 424 400 square kilometres. It is not a

FIGURE 1 The location and distribution of Australia's deserts



Source: Spatial Vision

desert of dunes, but has some desert-adapted plants including marble gums, mulga and spinifex grass. Part of this desert has been named a Biosphere Reserve by UNESCO and is one of the largest arid zone biospheres in the world.

Great Sandy Desert

The Great Sandy Desert makes up 3.5 per cent of Australia. The red sands of this desert reach almost to the Western Australia coast, where they join with the white sand of Eighty Mile Beach south of Broome.

Simpson Desert

The Simpson Desert is in one of the driest areas of Australia, with rainfall of less than 125 millimetres per year. It is located near the geographical centre of Australia. Dunes (see FIGURE 2) make up nearly three-quarters of the desert. Long parallel dunes (see FIGURE 4 in subtopic 15.5) form in a north–north-west/south–south-east direction; some can be straight and unbroken for up to 300 kilometres and can be 40 metres high. The space between the dunes can vary from 100 metres to 1000 metres.



Strzelecki Desert

This desert is located within three states — far northern South Australia, south-west Queensland and western New South Wales. The dunes support vegetation such as sandhill wattle, needlebush and hard spinifex.

Tanami Desert

Located to the east of the Great Sandy Desert, this desert is mostly characterised by red sand plains with hills and ranges.

Little Sandy Desert

The Little Sandy Desert is located in Western Australia and borders three other deserts. Its landforms are similar to those in the Great Sandy Desert. It includes a vast salt lake called Lake Disappointment.

Sturt Stony Desert

The Sturt Stony Desert, located in north-eastern South Australia, is a harsh gibber desert covered in closely spaced glazed stones (FIGURE 3). These are left behind when the wind blows away the loose sand between the dense covering of pebbles. The desert also contains some dunes and hills that are resistant to weathering.



Tirari Desert

This small desert covers almost 1600 square kilometres and is located in far northern South Australia, east of Lake Evre. It contains many linear (parallel) dunes and salt lakes. Cooper Creek runs through the centre of the desert, as do many other intermittent creeks. Where there is enough water — usually in waterholes - river red gums and coolabah gums will grow. Tall, open shrubland also occurs in some areas.

Gibson Desert

The fifth largest in Australia, the Gibson Desert is located in Western Australia and borders three other deserts. It consists of sand plains and dunes plus some low, rocky ridges. Some small salt-water lakes are also present in the south-western part of the desert.

FIGURE 4 Desert between Oodnadatta and William Creek. South Australia



Pedirka Desert

The Pedirka Desert in South Australia is Australia's smallest desert, located north-east of Oodnadatta. The lines of parallel red dunes run north-east to south-west, and the space between the dunes can be up to one kilometre. Hamilton Creek is located in this desert and its banks are home to river red gums, coolabah, mulga and prickly wattle. Other vegetation includes satiny bluebush, weeping emubush and spiny saltbush. Common grasses include woollybutt, broad-leaf wanderrie, mulga grass and bandicoot grass.



Resources



Weblink Meteorology

15.6 INQUIRY ACTIVITIES

- 1. Research the characteristics of the Biosphere Reserve declared by UNESCO that is located in the Great Examining, analysing, interpreting
- 2. Use an atlas to find the locations of Brisbane, Geraldton and Exmouth. These places are located at the same latitude as many of Australia's deserts. Use the Meteorology weblink in the Resources tab to find the average temperature, rainfall and humidity of these places.
 - (a) How do these characteristics compare with the temperature, rainfall and humidity in Australia's deserts? (b) How can you account for the differences? Comparing and contrasting
- 3. Several plants are listed in the descriptions in this subtopic on Australia's deserts. Choose two different plant types (for example, a grass and a tree) and research how they are adapted to desert conditions.

Examining, analysing, interpreting

15.6 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

15.6 Exercise 1: Check your understanding

- 1. GS1 Name the deserts bordered by:
 - (a) the Gibson Desert
 - (b) the Little Sandy Desert.

- 2. GS1 What is a gibber desert?
- 3. GS1 What percentage of Australia is arid or semi-arid?
- 4. GS1 Where is the Great Victoria desert located?
- 5. **GS1** Name Australia's smallest desert. Where is it located?

15.6 Exercise 2: Apply your understanding

- 1. **GS2** Look at **FIGURE 1** showing the distribution of Australia's deserts. Where are they located in terms of the tropics?
- 2. GS1 List the types of vegetation that can be found in the Strzelecki Desert.
- 3. **GS1** Which desert is Australia's driest and what are its characteristics?
- 4. GS1 What is an intermittent creek?
- 5. GS1 Which desert contains a UNESCO Biosphere Reserve?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

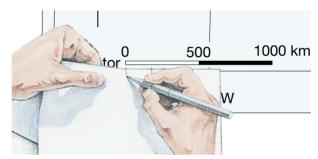
15.7 SkillBuilder: Calculating distance using scale

What does it mean to calculate distance using scale?

Calculating distance using scale involves working out the actual distance from one place to another using a map. The scale on a map allows you to convert distance on a map or photograph to distance in the real world. A linear scale is the easiest to use.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





Video eLesson SkillBuilder: Using latitude and longitude (eles-1652)

Interactivity SkillBuilder: Using latitude and longitude (int-3148)

15.8 How did Lake Mungo become dry?

15.8.1 Where are Lake Mungo and the Willandra Lakes located?

Lake Mungo, in Mungo National Park, is just one of 13 ancient dry lake beds in a section of the Willandra Lakes Region World Heritage area in semi-arid New South Wales. There is no water there now, yet the lakes were once full of water and teeming with life, supporting Aboriginal peoples since the beginning of the Dreamings (more than 47 000 years by European estimates) — archaeological records show this continuous human presence. What happened to change this environment into the semi-arid landscape it is today?

The Willandra Lakes are located in far southwestern New South Wales and the region is part of the Murray-Darling River Basin. Lake Mungo is 110 kilometres north-east of Mildura, Victoria. The lakes were originally fed by water from Willandra Creek (see FIGURE 1), which was a branch of the Lachlan River. The average rainfall in this area is 325 millimetres per year, making it a semi-arid desert region.

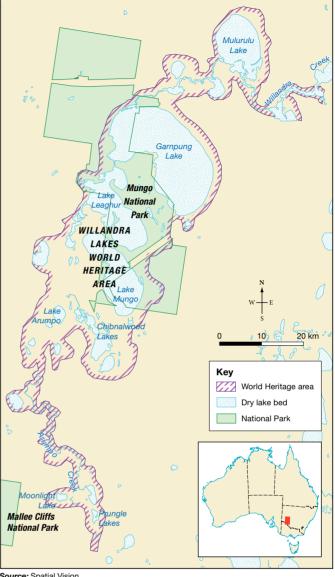
15.8.2 How has Lake Mungo changed over time?

40 000 years ago

During the last ice age, huge amounts of water filled the shallow lake. At its fullest, Lake Mungo was 6-8 metres deep and covered 130 square kilometres (more than twice the area of Sydney Harbour). The lakes were rich with life, including water birds, freshwater mussels, vabbies and fish such as golden perch and Murray cod. Giant kangaroos, giant wombats, large emus and the buffalo-sized Zygomaturus — all now extinct — grazed around the water's edge. Remains of more than 55 species have been found in the area and identified — 40 of these are no longer found in the region, and 11 are extinct.

Aboriginal peoples lived here in large numbers — evidence for this has been found in more than 150 human fossils, including 'Mungo Lady' discovered in 1968 and 'Mungo Man' in 1974, both believed to be over 40 000 years old. The youngest fossil is 150 years old.

FIGURE 1 Location of Willandra Lakes, including Lake Mungo



Source: Spatial Vision

FIGURE 2 Traditional owners clean fossilised footprints at Lake Mungo.



DISCUSS

'It is right for Lake Mungo to be protected under a World Heritage listing because of its significant cultural characteristics.' How does this type of protection reflect the cultural values of a society?

[Intercultural Capability]

30 000-19 000 years ago

A west wind blows across this landscape. During low-water years, red dust and clay were blown across the plains to the eastern side of the lake and they mixed with the sand dunes on the edge of the lake (formed when the lake was full). This began the formation of lunettes (crescent-shaped dunes) on the east side — called 'the Walls of China' in Lake Mungo. Vegetation covered the dunes, protecting them.

FIGURE 3 The 'Walls of China' at Lake Mungo. The dry lake bed is covered by low bushes and grasses.

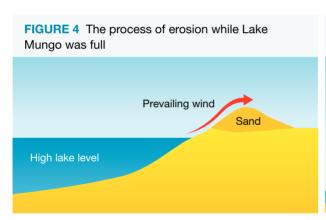


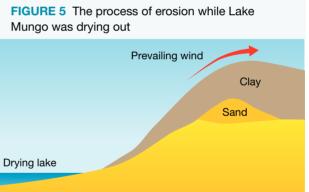
19 000 years ago

The lakes were full of deep, relatively fresh water for a period of 30 000 years — with cycles of wet and dry occurring — which came to an end 19 000 years ago when the climate became drier and warmer. Eventually, the water stopped flowing into the lake system and it dried out.

Present day

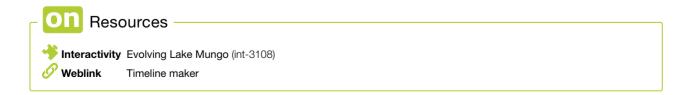
Today, the lake beds are flat plains covered by low saltbush and bluebush as well as grasses. Grazing cattle and sheep (now no longer allowed in the national park) and rabbits have caused erosion of the lunettes and sand dunes, exposing the human and animal fossils that have since been discovered.





15.8.3 World Heritage listing

The Willandra Lakes Region, which includes Lake Mungo, is listed as a World Heritage Area. This region is important because of its archaeology (human skeletons, tools, shell middens and animal bones make up the oldest evidence of burial places in the world) and geomorphology (ancient and undisturbed landforms and sediments).



15.8 INQUIRY ACTIVITIES

- 1. Work in small groups to create an identification brochure with pictures and facts about these three extinct animals that once lived at Lake Mungo.
 - Genyornis newtoni (giant emu)
 - Protemnodon goliah (giant short-faced kangaroo)
 - Zygomaturus trilobus (Zygomaturus)

Classifying, organising, constructing

- 2. Use the Timeline maker weblink in the Resources tab, the information in this subtopic and images you find through online research to create your own colourful electronic timeline of these changes that occurred at Lake Mungo. Classifying, organising, constructing
- 3. Research what a World Heritage listing means in terms of protecting this place. Why is this place culturally important to Aboriginal and Torres Strait Islander peoples? Examining, analysing, interpreting

15.8 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

15.8 Exercise 1: Check your understanding

- 1. GS1 What makes Lake Mungo and the Willandra Lakes region a semi-desert?
- 2. **GS1** When did Lake Mungo dry up?
- 3. **GS1** What is a lunette?
- 4. GS2 Describe how the lunettes formed over time.
- 5. GS1 Why did Lake Mungo receive World Heritage listing?

15.8 Exercise 2: Apply your understanding

- 1. GS2 Outline the evidence that shows that many Aboriginal peoples lived in this area.
- 2. GS2 What human activity caused the lunettes to erode? What did the erosion unearth?
- 3. GS2 Use FIGURE 1 to describe where Lake Mungo is located.
- 4. GS5 Use the scale in FIGURE 1 to measure the north-south extent of Mungo National Park.
- 5. GS2 Explain why Lake Mungo dried out.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

15.9 How people use deserts

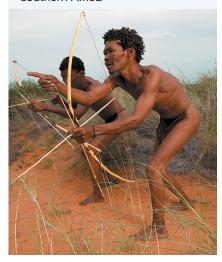
15.9.1 Traditional livelihoods

Although not many people live in deserts, these environments have been important to traditional communities for many years. People either adapt to living in deserts or transform deserts to suit their needs. People are also attracted to desert regions to mine resources.

There are many communities who live in deserts including Indigenous Australian peoples; the Bedouin people of the Middle East and Sahara; the Tuareg people of the Sahara in North Africa; the Topnaar people in the Namib Desert; the San people in South Africa; the Timbisha Shoshone of the Mojave Desert in the United States; and the communities from the Atacama Desert in South America.

Many of these communities are **nomadic**, moving with the seasons and obtaining all their needs from the land or herding animals and trading with people in settlements. It is important to understand that not all desert peoples are desert-dwellers. For example, many Indigenous Australian people do not live in deserts.

FIGURE 1 The San people in southern Africa



15.9.2 Desert resources

Many of the changes in deserts have been brought about by developments in technology. These changes have resulted in water being extracted and used to grow crops, and minerals being mined and used in many ways.

Water in the desert

Drilling equipment and pumps have allowed deep bores to tap into groundwater in aquifers deep below the desert surface. This has transformed some deserts in northern Africa and the Middle East into a series of circular irrigation fields — some of these can be up to three kilometres in diameter. In Australia, groundwater from the Great Artesian Basin has enabled desert communities to exist and grazing to take place. Unfortunately, the groundwater in many areas is being pumped out far more quickly than it is being replaced and may be in danger of running out.

Desalination plants have also provided water to desert communities in many areas, especially the Middle East, including large cities such as Dubai.





Mining in deserts

Many deserts contain valuable mineral deposits that were formed in the arid environment or have been exposed by erosion. Desert mining has created a lot of wealth for some people and companies, but usually not for the traditional desert people. Examples of mining resources include:

- 1. iron and lead-zinc ore mined in Australian deserts
- 2. phosphorus (used to make fertilisers) mined in the Sahara region
- 3. borates (used to manufacture glass, ceramics, enamels and agricultural chemicals) mined in the deserts of California, United States
- 4. copper, iron ore and nitrates mined in Chile's Atacama Desert
- precious metals such as gold, silver and platinum
 — mined in the deserts of Australia, the United States and central Asia
- 6. uranium mined in Australia and the United States
- 7. diamonds mined in the Kalahari and Namib deserts of south-western Africa
- 8. oil more than 65 per cent of the world's oil is found in the desert regions of the Middle East, mainly in Kuwait, Iraq, Iran and Saudi Arabia.

FIGURE 3 A uranium mine next to the Colorado River in the United States



DISCUSS

Mining companies generally receive the wealth from mining. Why do you think that the traditional desert communities miss out? Should they receive some of the benefits of mining? How could the profits be distributed more evenly? [Ethical Capability]

15.9 INQUIRY ACTIVITY

Investigate one of the desert communities mentioned in this subtopic. Conduct research to identify where these communities generally live, and find examples of their traditional ways of life, including living conditions and shelter. Present your information in an interesting way, such as a Prezi, Keynote or PowerPoint presentation, and use images and maps where possible. Classifying, organising, constructing

15.9 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

15.9 Exercise 1: Check your understanding

- 1. **GS1** List the sources of water in a desert that can be used to grow crops and provide water for people.
- 2. GS2 How has technology enabled water to be used in deserts?
- 3. GS2 Do you think most desert people adapt to live in the desert environment, or adapt the environment to live in the desert? Give two examples to support your reasoning.
- 4. GS2 Why is it important to use groundwater sustainably?
- 5. GS1 Where do the following indigenous peoples live: Bedouin, Tuareg, Topnaar, San and Timbisha?

15.9 Exercise 2: Apply your understanding

- 1. GS5 Study FIGURE 2a.
 - (a) Where is Libya located? Use an atlas or Google Earth and write a description.
 - (b) Identify the small red circles in the image.
- 2. GS6 Study FIGURE 3.
 - (a) Make a sketch of FIGURE 3. Label your sketch to include the river, the mine site and the buildings.
 - (b) How has mining changed this environment?
 - (c) What issues could arise due to the location of this mine?
 - (d) Predict what might happen to this area when mining stops.
- 3. GS6 What is meant by the term 'nomadic'? Why might a desert environment suit the needs of nomadic peoples?
- 4. GS1 Where is the Great Artesian Basin located and why is it important?
- 5. **GS6** Suggest specific ways that desert mining might affect desert-dwelling people.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

15.10 Antarctica — a cold desert

15.10.1 Some facts about Antarctica

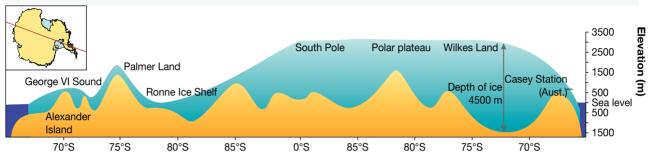
Like hot deserts, polar deserts are areas with annual precipitation of less than 250 millimetres, but they have a mean temperature during the warmest month of less than 10 °C. Polar deserts are found in both the Arctic and Antarctic regions of the world. Not only is Antarctica a desert — it is also the driest, coldest and windiest continent on Earth.

Australia is the driest inhabited continent on Earth. However, Antarctica is even drier. Much of Australia's interior receives less than 250 millimetres of precipitation per year. The interior of Antarctica receives less than 50 millimetres. The coastal areas receive the highest levels of precipitation, but this is still only about 200 millimetres.

Most of Antarctica is too cold for rainfall; the majority of the precipitation falls as snow. Some valleys in Antarctica have received no rain for two million years. It also snows very little in Antarctica, particularly in the interior.

In places, the ice sheet in Antarctica is 4.8 kilometres deep (see **FIGURE 1**). Most of the ice that covers the continent has been there for thousands of years. In winter, as the surrounding oceans freeze, the area of Antarctica is almost double that in summer.

FIGURE 1 This cross-section, which shows the mountains below the ice, passes through some of the thickest parts of the Antarctic ice sheet.



How dry is dry?

Covered in ice, Antarctica may seem like the wettest place in the world, but it's actually drier than the Sahara Desert. Despite this, Antarctica's ice holds 70 per cent of the world's fresh water supply.

Most places in Antarctica receive no rain or snow at all. Very cold air does not have the capacity to hold enough water to create rain or snow. This means that Antarctica is the world's biggest desert. All drinking water in Antarctica is obtained by melting the ice. Unlike in hot deserts, there is little evaporation from Antarctica, so the relatively small amount of snow that does fall doesn't disappear. Instead it builds up over hundreds and thousands of years into enormously thick ice sheets.

How cold is cold?

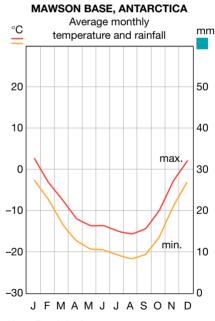
During the winter of 2018, NASA scientists used satellites to record a temperature of -98.7 °C, the coldest ever recorded on Earth. The measurements were taken in a depression on one of the highest points of the dome-shaped ice sheet. During the coldest months (July to August), the average temperature at the South Pole is -60 °C. During the warmest months (December to January), it rises to -28 °C.

Why is Antarctica so cold?

There are three main reasons:

- 1. Antarctica's position on the globe means that the sun's rays strike the Earth's surface at a low angle, and therefore have a much larger area to heat than at other places on the planet.
- 2. Most of the sun's heat that does reach Antarctica is reflected back into space by the white ice that covers the continent. This also explains why you must always wear sunglasses or goggles in Antarctica.
- 3. Antarctica is surrounded by the cold waters of the Southern Ocean.

FIGURE 2 A climograph for Mawson Base, Antarctica



Note: Precipitation = zero

How windy is windy?

Australia's greatest polar explorer, Douglas Mawson, called Antarctica 'the home of the blizzard'. He should know. He lived in a wooden hut for two complete Antarctic winters, in the strongest winds ever recorded. Mawson's measurements revealed an average wind speed of over 70 kilometres per hour and gusts of over 300 kilometres per hour! The men in his expedition team always carried an ice axe with them to avoid being blown into the sea.

Why is Antarctica so windy?

As the air over the polar plateau becomes colder, it becomes more dense. Finally gravity pulls it down off the plateau towards the Antarctic coast. This creates very strong winds, called katabatic winds, which can blow continually for weeks on end and carry small pellets of ice. These winds combined with the severe cold can be fatal; at -20 °C, exposed human flesh begins to freeze when the wind reaches only 14 kilometres per hour.

Katabatic winds also cause blizzards, which sweep up loose snow and blow it about ferociously. Such blizzards were the cause of death among many early Antarctic explorers.

The winds also shape the landscape, carving it into irregular shapes called sastrugi (see FIGURE 3). These shapes range in height from 150 millimetres to two metres. Travelling across sastrugi is extremely difficult.

FIGURE 3 Sastrugi lie in the direction of the prevailing wind. They are as hard as rock.



15.10.2 How do people use Antarctica?

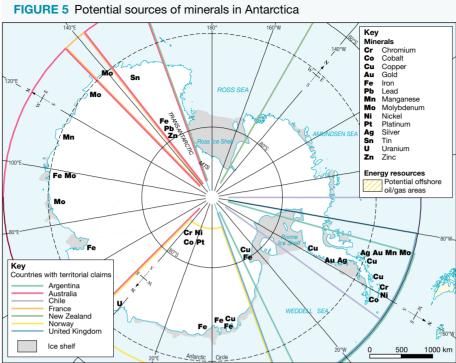
Antarctica and the seas that surround it contain valuable resources. Antarctica is also the temporary home of more than 4000 people in summer and 1000 in winter. Most are scientists and support staff. These people work in more than 66 research stations representing 30 different nations.

Mining

There are great difficulties in looking for mineral deposits in rocks that lie beneath thousands of metres of ice. Therefore, most exploration has taken place in the ice-free areas of Antarctica. Scientists now believe there are deposits of many valuable minerals in Antarctica, including coal, iron ore, copper, lead and uranium, and traces of minerals such as gold and zinc. There are also mineral beds lying under the continent's Transantarctic Mountains, and large areas that may contain deposits of oil and gas (see FIGURE 5).

FIGURE 4 Esperanza, a permanent, all-year round Argentinian research base, Graham Land, Antarctica





Source: © Geography Teachers' Association of Victoria, Inc.

Despite the presence of these valuable minerals, there are no operating mines in Antarctica. Given the conditions — the extreme cold, the rough seas and the wind — mining operations would be very difficult and potentially dangerous to the environment. Mining (other than for scientific purposes) is banned under the Antarctic Treaty. This is to prevent the possibility of polluting the environment (for example, through an oil spill or by digging a quarry).

The Antarctic Treaty

By the mid-1950s, Australia, New Zealand, the United Kingdom, France and Argentina were actively exploring Antarctica. These countries declared territorial claims over parts of Antarctica while others were fishing, whaling and conducting scientific research and mineral exploration in the region.

People began to realise that this unique wilderness needed to be protected. In 1958, 12 countries agreed to preserve Antarctica. This led to an international agreement called the Antarctic Treaty, which came into force in 1961. The **treaty** covers the area south of 60 °S latitude. It has been signed by more than 52 countries who meet regularly to discuss issues affecting Antarctica. The treaty:

- prohibits military activity
- protects the Antarctic environment
- fosters scientific research
- recognises the need to protect Antarctica from uncontrolled destruction and interference by people.

15.10.3 Tourism

The number of tourists to Antarctica has increased significantly since the mid-1990s, with a peak of over 51 700 in 2017–18. However, more people will attend one game of AFL football in Melbourne than will visit Antarctica in one year. Given the scale (size) of Antarctica, tourist numbers are therefore still small but continue to increase each year.

Most tourists go to Antarctica on board cruise ships. There are opportunities for people to land on the ice. This often requires use of a Zodiac inflatable boat between ship and shore. There are no tourist facilities on Antarctica — people must return to the ships, for example, to sleep, eat and shower.

Sightseeing is the main activity for tourists. Other activities include kayaking, visiting research stations, walking and snowboarding. Other types of tourism include flights over the continent and flights that include landing on the ice.

Tourism can create problems, such as pollution from oil spills and disturbance to animal colonies. Therefore, the International Association of Antarctica Tour Operators has set up rules to control tourism. For example, no more than 100 passengers from a cruise ship may be landed at a location in Antarctica at any one time.

TABLE 1 Tourists to Antarctica

| Year | Tourist numbers | Year | Tourist numbers |
|-----------|-----------------|---------|-----------------|
| 1996–97 | 7330 | 2007–08 | 46 069 |
| 1997–98 | 9604 | 2008–09 | 37 858 |
| 1998–99 | 10 013 | 2009–10 | 36 975 |
| 1999–2000 | 14 762 | 2010–11 | 33 824 |
| 2000–01 | 12 248 | 2011–12 | 26 509 |
| 2001–02 | 11 588 | 2012–13 | 34 354 |
| 2002–03 | 13 571 | 2013–14 | 37 405 |
| 2003–04 | 27 537 | 2014–15 | 36 702 |
| 2004–05 | 27 950 | 2015–16 | 38 478 |
| 2005–06 | 29 823 | 2016–17 | 44 367 |
| 2006–07 | 29 823 | 2017–18 | 51 707 |

Source: International Association of Antarctica Tour Operators

Bases on ice

Most of Antarctica's scientific bases are located on the coast so people and supplies can be brought in by boat or air (see FIGURE 6). They are also situated on the two per cent of Antarctica not covered in ice, as bases built on ice tend to sink under their own weight. This is because the heat they generate can melt ice around and beneath them.

Some bases are inland. There is even a permanent scientific base at the South Pole: the American Amundsen-Scott Base. Australia operates three permanent bases in Antarctica — Casey, Mawson and Davis stations — plus one on Macquarie Island and five temporary summer bases.

In January 2008 an air link between

FIGURE 6 Davis is the most southerly Australian Antarctic station.



Source: Australian Antarctic Division

Australia and Antarctica was officially opened. The Wilkins runway is a four-kilometre-long airstrip about 70 kilometres from Casey Station. Scientists can now get to Antarctica in a few hours from Australia rather than a few weeks on a ship. They can study the world's weather, climate, marine and land biology, glaciers, magnetics, geology and the ozone layer, as well as human physiology. Ice cores can provide a record of climate change over a long period of time.

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

• Exploring places > Antarctica > Antarctica: human features

Resources

Weblinks Antarctic weather

Meteorology

Life in Antarctica

Antarctic

Biosecurity fears

15.10 INQUIRY ACTIVITIES

1. Use the Antarctic weather and Meteorology weblinks in the Resources tab to describe the weather conditions now at the South Pole. Compare these to the conditions where you live.

Comparing and contrasting

- 2. Use an atlas to measure the distance from Antarctica (coastline) to South America, Australia and South Examining, analysing, interpreting
- 3. Use the information in TABLE 2 below to draw a climograph of McMurdo Station. How does it compare to Mawson Base (see FIGURE 2)? Find climate data for the place where you live and draw another climograph for that location. Compare this to the two Antarctic climographs. Outline the similarities and differences and provide reasons for these. Comparing and contrasting

TABLE 2 Climate data for the American McMurdo station in Antarctica: latitude 77.88°S, longitude 166.73°E

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|----------------|
| Average daily temperature (°C) | -2.9 | -9.5 | -18.2 | -20.7 | -21.7 | -23.0 | -25.7 | -26.1 | -24.6 | -18.9 | -9.7 | -3.4 | Mean -16.9 |
| Mean monthly rainfall (mm) | 15 | 21.2 | 24.1 | 18.4 | 23.7 | 24.9 | 15.6 | 11.3 | 11.8 | 9.7 | 9.5 | 15.7 | Total 202.5 |

- 4. Working in groups of four, use the Life in Antarctica weblink in the Resources tab to investigate life at the Australian Antarctic stations. Choose one station.
 - (a) What facilities are there at the station?
 - (b) Describe the work activities that take place.
 - (c) What do you think it is like to live there?

Describing and explaining

5. Use a spreadsheet program to draw a line graph using the tourism data in TABLE 1. Describe how the numbers have *changed* over time and provide possible explanations for these *changes*.

Describing and explaining

6. Use the Antarctic and Biosecurity fears weblinks in the Resources tab to find out more about how foreign seeds are invading Antarctica. Write a list of rules for a company that would remove this risk.

Evaluating, predicting, proposing

- 7. Do you think countries should be able to own pieces of Antarctica? Write a two-minute speech outlining the reasons for your point of view. Debate this topic as a class. Evaluating, predicting, proposing
- 8. Would you like to visit Antarctica? Why? Discuss as a class, listening carefully to the opinions of others.

Evaluating, predicting, proposing

15.10 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposina

15.10 Exercise 1: Check your understanding

- 1. **GS1** List three facts about Antarctica that you found the most surprising.
- 2. GS1 Why does Antarctica double in area every winter?
- 3. GS1 What is the coldest temperature ever recorded in Antarctica, and in which year was the temperature
- 4. GS2 Antarctica is sometimes described as the world's biggest desert. Why?
- 5. **GS2** Describe and explain why Antarctica is so dry, cold and windy.
- 6. GS2 Examine the photograph in FIGURE 3 and describe how this landscape has been formed. How does this environment pose a risk to people?

15.10 Exercise 2: Apply your understanding

- 1. GS6 What might happen to Antarctica if the ice shelves on top of the mountains were to melt? What changes might happen to sea levels around the world? Construct a concept map to record all your ideas.
- 2. GS2 List three ways in which the stations might have an impact on the Antarctic environment.
- 3. GS2 Why is there no mining in Antarctica? What problems would there be in extracting and transporting minerals from Antarctica?
- 4. **GS6** Suggest the ideal location for a scientific base in Antarctica.
- 5. **GS2** Why don't tourists visit Antarctica during winter?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

15.11 Thinking Big research project: Desert travel brochure

SCENARIO

Your graphic design business is applying for a rewarding contract to design travel brochures to amazing locations. The brief you have been given for the job interview is to create a brochure enticing people to visit one of the world's deserts.

Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.



on line 🗐



Resources

projectsPLUS Thinking Big research project: Desert travel brochure (pro-0170)



15.12 Review



15.12.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

15.12.2 Reflection

Reflect on your learning using the activities and resources provided.



KEY TERMS

blizzard a strong and very cold wind containing particles of ice and snow that have been whipped up from the ground

humidity the amount of water vapour in the atmosphere

intermittent creek a creek that flows for only part of the year following rainfall

katabatic wind very strong winds that blow downhill

nomadic describes a group that moves from place to place depending on the food supply, or pastures for animals

rain shadow the drier side of a mountain range, cut off from rain-bearing winds

sastrugi parallel wave-like ridges caused by winds on the surface of hard snow, especially in polar regions **treaty** a formal agreement between two or more countries

15.3 SkillBuilder: Using latitude and longitude

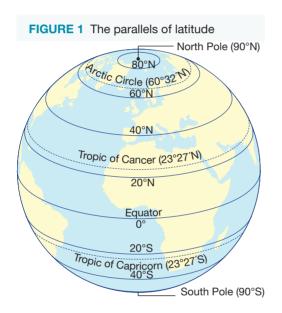
15.3.1 Tell me

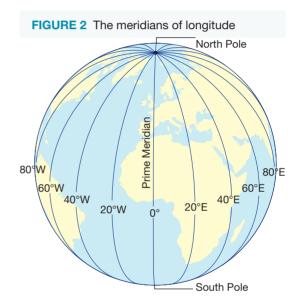
What are latitude and longitude?

Latitude and longitude are imaginary grid lines encircling the Earth. They can be drawn over a map to help us locate a place.

The lines that run parallel to the equator are called parallels of latitude. Each line is measured in degrees north (N) and south (S) of the equator (0°) . The equator divides the Earth into two parts — the northern hemisphere and the southern hemisphere. The latitude at the North Pole is 90° N, and the latitude at the South Pole is 90° S. All places have a latitude reading somewhere between 0° and 90° N, or 0° and 90° S.

Lines of longitude run from north to south from the North Pole to the South Pole. These are called meridians of longitude and are also measured in degrees. The Prime (or Greenwich) Meridian (0°) runs through Greenwich Observatory near London, England. Places are either east (E) or west (W) of this line. All places have a longitude reading somewhere between 0° and 180°E, or 0° and 180°W.





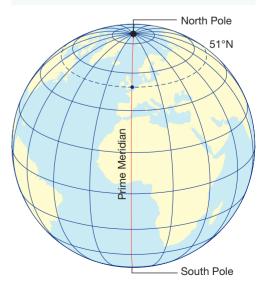
How are latitude and longitude useful?

Latitude and longitude are used to give the precise location of a place in an atlas, on a globe, or on a map showing a large region. Lines of latitude and longitude form a grid pattern on a map and this makes identifying the location of a place easy. A gazetteer index lists latitude and longitude readings of all places featured in an atlas.

Latitude and longitude are useful for identifying exact locations when, for example:

- sailing on the open ocean
- flying across vast expanses
- gaining a GPS reading
- viewing Google Earth
- studying maps to plan a touring holiday.

FIGURE 3 Latitude and longitude lines form a grid pattern



Using latitude and longitude accurately involves:

- identifying the precise location of a place
- accurately reading parallels of latitude
- accurately reading meridians of longitude
- writing the reading correctly.

15.3.2 Show me

How to use latitude and longitude

You will need:

- a map with a latitude and longitude grid
- a ruler.

Model

Philadelphia in the United States is located at $40^{\circ}00' \text{N}\ 75^{\circ}10' \text{W}$. Further east, on the coast, is Boston at $42^{\circ}20' \text{N}\ 71^{\circ}05' \text{W}$. Dallas in the central south of the country is at $32^{\circ}47' \text{N}\ 96^{\circ}48' \text{W}$. On the west coast, Los Angeles is at $34^{\circ}00' \text{N}\ 118^{\circ}15' \text{W}$ and San Francisco is at $37^{\circ}45' \text{N}\ 122^{\circ}27' \text{W}$.

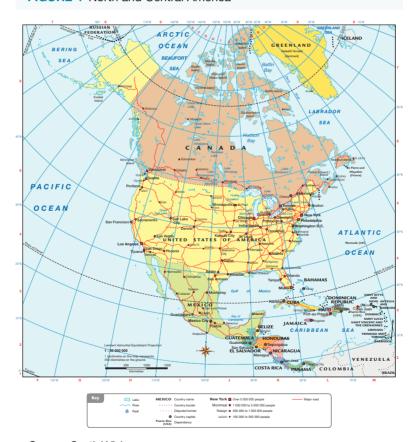


FIGURE 4 North and Central America

Source: Spatial Vision

Procedure

Step 1

Determine the place for which you want to give a latitude and longitude reading.

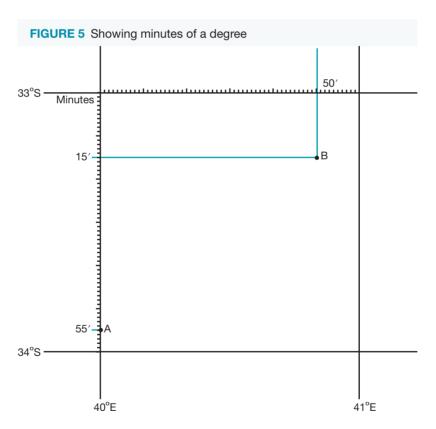
Step 2

Begin with the parallels of latitude. Determine the degrees on the line closest to the location. For example, in **FIGURE 4** Philadelphia is at $40^{\circ}N$ — it is exactly on the line of latitude and north of the equator. The equator (0°) is shown in the bottom left corner of **FIGURE 4** but due to the Earth's curve, it cannot be seen across the entire map as it dips below the area shown. Not all parallels of latitude are drawn on a map and so you will often have to work out what the closest line of latitude is. For example, in **FIGURE 4**, we can see that Dallas is located at $33^{\circ}N$.

You may have noticed in **FIGURE 4** that an additional parallel of latitude has been drawn and labelled the Tropic of Cancer. This line is at 23.5°N. A similar line is found at 23.5°S and is known as the Tropic of Capricorn. It passes through northern Australia just near Rockhampton. It is between these two lines that the sun moves and determines our seasons.

Step 3

Each degree on the grid is made up of 60 minutes (see **FIGURE 5**). It is likely that a place is not situated exactly on the degree line, so you will need to determine a minute reading as well. This becomes especially evident in smaller-scaled maps. Calculate the minutes for the place you are identifying. It is often a good idea to place a ruler on the map or use a finger to follow a line so that your eyes don't inadvertently cross to another grid square.



Step 4

Combine the readings to obtain a precise latitude for place. Place A in **FIGURE 5** is at 33°55'S. (The 'S' indicates that this place is south of the equator.)

Step 5

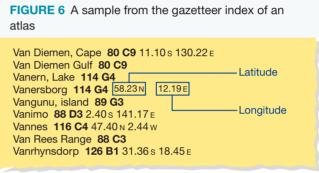
Longitude is determined in a similar manner. Find the north–south line (meridian) closest to the place. Take the line reading and then the degrees reading. For example, in **FIGURE 4** Philadelphia is at 75°W. The 'W' indicates it is west of the Prime Meridian. The Prime Meridian is not shown on **FIGURE 4** but the numbering on the meridians at both the top of the map and the bottom of the map indicate that the Prime Meridian is off the map to the right. On a more detailed map, a minute reading could also be obtained.

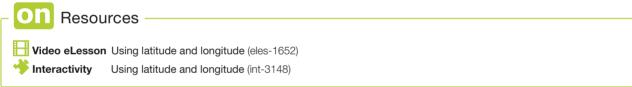
Step 6

When combining the grid readings, latitude always comes first. A useful tip is to remember that 'latitude' comes before 'longitude' alphabetically. In **FIGURE 4**, Philadelphia is at 40°N 75°W. In **FIGURE 5**, place B is at 33°15'S 40°50'E. Check that you can find these two places.

Step 7

In the gazetteer index of an atlas, the reading for Philadelphia is listed as 40°00'N 75°10'W. Have a look in an atlas gazetteer index (usually in the back of the atlas) as the places are all identified by latitude and longitude. With a partner, test each other by naming and looking up locations on a map and practising giving their latitude and longitude.





15.3.3 Let me do it

Complete the following activities to practise this skill.

15.3 ACTIVITIES

1. Using FIGURE 1 in subtopic 15.6, give the latitude and longitude readings at the centre of the listed deserts to complete the table below.

| Desert | Latitude and longitude reading |
|-------------|--------------------------------|
| Gibson | |
| Tanami | |
| Simpson | |
| Great Sandy | |

- 2. Apply your skills in using latitude and longitude to answer the following questions.
 - (a) Which desert can be found at 22°S 133°E?
 - (b) This South Australian desert can be found at 29°S 141°E. What is its name?

- (c) Give a latitude and longitude reading such that a person would find themselves at Davenport Range.
- (d) If you were to travel the full length of the Great Dividing Range, at what latitude and longitude would you begin and finish?
- (e) Which range extends furthest east Hammersley, Carnarvon or Robinson? Give the latitude and longitude reading at its most easterly point.
- (f) Use the checklist to assess your development of this skill. Can you tick all the items? If not, with a partner, continue your practice of looking up or providing readings for locations in your atlas until you feel confident in your skills.

Checklist

I have:

- identified the precise location of a place
- accurately read parallels of latitude
- · accurately read meridians of longitude
- written the readings correctly.

15.7 SkillBuilder: Calculating distance using scale

15.7.1 Tell me

What does it mean to calculate distance using scale?

Calculating distance using scale involves working out the actual distance from one place to another using a map. The scale on a map allows you to convert distance on a map or photograph to distance in the real world — what it represents on Earth's surface. A linear scale is the easiest to use. Sometimes the distance being measured between places is not straight.

Why is calculating distance by using scale useful?

Calculating distance by using scale provides a spatial understanding of an area. If you go to an unfamiliar place for a holiday and the tourist information map does not have a scale, it is very difficult for you to know how far it is between places on the map and therefore how long it might take to walk or drive between them. Maps and photographs often show large areas of the Earth on a page. Many people use maps or photographs to gather information and need to understand the distances between places. Examples of people who calculate distance by using scale include:

- architects
- town planners
- engineers
- pilots
- farmers
- · tourists.

A good calculation of distance using scale involves:

• accurately converting a ruler measured distance on a map to an actual distance by using a linear scale.

15.7.2 Show me

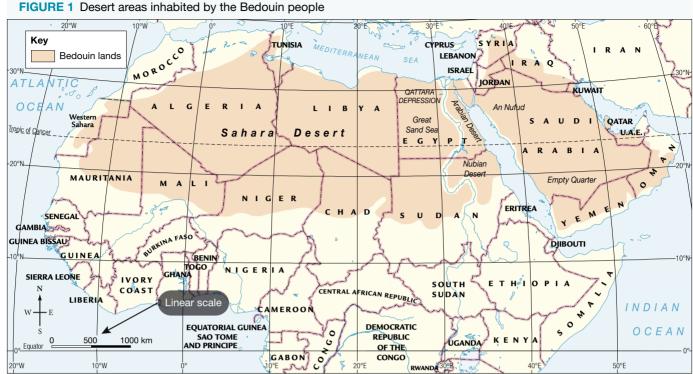
How to calculate distance using scale

You will need:

- a map or photograph with a linear scale
- a piece of paper with a straight side for marking places
- a light grey pencil
- a piece of string
- a pencil.

Model

The linear scale of the **FIGURE 1** map is shown in the lower left corner. The shaded Bedouin lands are seen in the key/legend. The Sahara Desert, where the Bedouin people live, is approximately 5250 kilometres from west to east and on average 1900 kilometres from north to south.



Source: MAPgraphics Pty Ltd, Brisbane

Procedure

To calculate the distance between places or around places, it is easiest if you have a map or photograph that has a linear scale as shown in **FIGURE 1**.

Step 1

Determine the two places between which you want to know the distance. If it is a straight-line distance between the two places — the distance 'as the crow flies' — then your paper edge must be long enough to go between these points. If not, and the distance is winding, then you will need to learn to bend your paper (jump to step 4) or use a piece of string (jump to step 8).

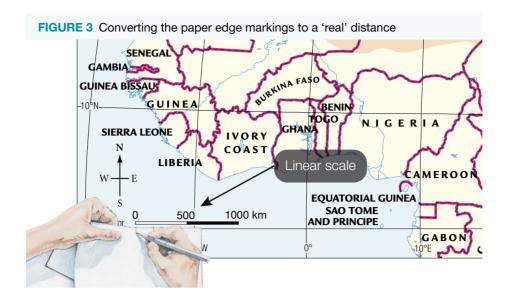
Step 2

Place the straight edge of the piece of paper between the two places. Mark the two extremities of the distance on the edge. Label the place names at each end if working from a map.

Step 3

Place this marked edge of paper onto the linear scale drawn on the map. One end of the markings must be at 0. Read off the distance on the scale. If the distance is longer than the scale bar on the map, mark your paper edge where the scale bar ends and move this new mark to 0, repeating as often as required. If you have to do this then you will need to add the distances together to find the total distance between the named places. Don't forget to add the unit of measurement (for example, metres or kilometres).

FIGURE 2 Measuring straight distances with a scale



Step 4

If the distance is winding rather than straight — perhaps you are following a road through hills, or a river winding its way downstream, or a hiking track across a ridge — begin by placing the edge of the paper against the starting point, marking the edge with the place name.

Step 5

Move the paper carefully so the edge follows the curve on the map. Use your pencil to apply light pressure while you adjust the paper edge to the curve.

Step 6

Mark and label the end point on your paper.

Step 7

Place the paper along the linear scale and read off the distance between your two places as you did in step 3. Don't forget to add the unit of measurement (for example, metres or kilometres).

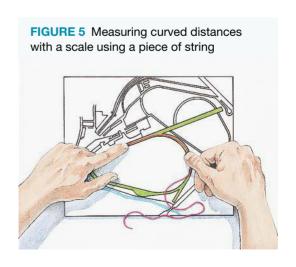
Step 8

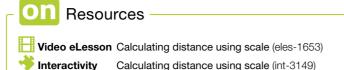
The technique using a piece of string is risky — if you let go of the piece of string, you'll have to start again! Place one end of the string at your starting point, and bend the string around the winding distance.

Mark the total distance carefully and place the string against the linear scale to calculate the total distance between the two places. One end of the string must be at 0. Read off the distance on the scale. If the distance is longer than the scale bar on the map, mark the string or hold it carefully where the scale bar ends and move this new mark to 0, repeating as often as required. If you have to do this, you will need to add the distances together to find the total distance between the named places. Don't forget to add the unit of measurement (for example, metres or kilometres).

Newtown

Use the tip of your pencil or a pin to keep the paper on the curve. You can then pivot the paper around without losing your place.





15.7.3 Let me do it

Complete the following activity to practise this skill.

15.7 ACTIVITY

Using **FIGURE 1** in subtopic 15.6, complete the following. Tick off the checklist when you feel confident in your development of this skill.

- a. How far is it from the west to the east of the Great Victoria Desert?
- b. How far is it between the Central Desert and the Simpson Desert?
- c. Calculate the distance around the Tanami Desert.
- d. What is the distance around the area designated as 'arid zone'?
- e. What length of 'arid zone' boundary is also on the coast of Australia?

Checklist

I have:

 accurately converted a distance measured with a ruler on a map to an actual distance by using a linear scale.

15.11 Thinking Big research project: Desert travel brochure

Scenario

Your graphic design business is applying for a rewarding contract to design travel brochures to amazing locations. The brief you have been given for the job interview is to create a brochure enticing people to visit one of the world's deserts.



Task

Your team must create a trifold tourist brochure featuring one desert. The specific information that must be included in your brochure includes:

- the name and location of the desert (including world and regional maps)
- geographic features of the desert (dunes, cliffs, mesas etc.)
- examples of animals and plants in the desert
- interesting facts for example, rainfall and temperature to be expected at different times of the year
- examples of the people and culture that can be experienced
- photos to accompany these facts.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in groups of two or three will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Select a desert to feature in your brochure. The desert can be chosen from the topic; for example, from the Deserts of the world map. Your teacher will make sure that different deserts are chosen by different groups.
- Your group will need to research the information listed in the task divide the tasks amongst you.
- When you have gathered all your information, you can begin planning and designing your brochure. Download the trifold brochure template from the Media centre to use for your notes and planning.
- Weblinks containing instructions to create a brochure are also provided for you in the Media centre.
- Find images to make your brochure colourful and exciting and to help travellers understand what they might experience. Design a pleasing layout.
- Submit your brochure to your teacher for assessment and feedback.





15.12 Review

15.12.1 Key knowledge summary

15.2 What is a desert?

- Deserts can be hot or cold and are defined by the amount of rainfall they receive.
- Deserts are located on every continent except Europe.

15.4 How the climate forms deserts

- Different climate types are responsible for the formation of deserts in a variety of places in the world.
- Latitude and longitude, mountain ranges, ocean currents, hot interiors and polar locations can all contribute to desert formation.
- Climographs can show the distribution of rainfall and temperature in particular places and help define desert locations.

15.5 The processes that shape desert landforms

- There are many different landscapes in deserts sand dunes, cliffs, claypans, alluvial fans and mesas are examples.
- Desert landscapes are formed by a combination of erosion (wind and water and temperature extremes) and deposition.

15.6 Characteristics of Australia's deserts

- Australia is the world's driest inhabited continent and over 70 per cent is arid or semi-arid.
- Most of Australia's deserts are located in central and western Australia.
- The deserts in Australia are hot deserts with low rainfall and high temperatures.
- Australian deserts vary a lot some are sandy, others are stony and many have shrubs, trees and intermittent streams.

15.8 How did Lake Mungo become dry?

- Lake Mungo in New South Wales is semi-arid.
- Over 40 000 years ago Lake Mungo was a shallow lake teeming with fish and birds and supported large numbers of Indigenous people.
- As a result of a drying climate over thousands of years, Lake Mungo became dry and is now protected for its cultural and landscape importance.

15.9 How people use deserts

- There are many indigenous communities around the world who live in deserts.
- Many important minerals are found in deserts, creating important industries in some countries.

15.10 Antarctica - a cold desert

- Antarctica is a polar desert where the coldest temperature on Earth was recorded in 2018.
- Antarctica receives so little precipitation that it is drier than the Sahara Desert.
- The Antarctic Treaty was formulated by many countries to protect Antarctica.
- Tourism and scientific research are the main activities in Antarctica.

15.12.2 Reflection

Complete the following to reflect on your learning.

15.12 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Hot and sandy? Cold and windy? What are the features of a landscape that make it a desert?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



eWorkbook Reflection (doc-31348)

Crossword (doc-31349)

Interactivity Desert landscapes crossword (int-7597)

KEY TERMS

blizzard a strong and very cold wind containing particles of ice and snow that have been whipped up from the ground

humidity the amount of water vapour in the atmosphere

intermittent creek a creek that flows for only part of the year following rainfall

katabatic wind very strong winds that blow downhill

nomadic describes a group that moves from place to place depending on the food supply, or pastures for animals

rain shadow the drier side of a mountain range, cut off from rain-bearing winds

sastrugi parallel wave-like ridges caused by winds on the surface of hard snow, especially in polar regions treaty a formal agreement between two or more countries

16 Mountain landscapes

16.1 Overview

Magma, water and tectonic plates - can they really move mountains?

16.1.1 Introduction

Mountains occupy 24 per cent of the Earth's landscape, and are characterised by many different landforms. The forces that form and shape mountains come from deep within the Earth, and have been shaping landscapes for millions of years. The Earth is a very active planet — every day, many volcanoes are erupting somewhere on the planet, and even more tremors are occurring. In this topic we will explore the mountains of the world, how they are formed and the ways that people use them. We will also look at earthquakes, tsunamis and volcanoes, and the effects they have on people and places.



Resources

Customisable worksheets for this topic

Video eLesson Majestic mountains (eles-1626)

LEARNING SEQUENCE

- 16.1 Overview
- 16.2 How mountains are formed
- 16.3 The world's mountains and ranges
- 16.4 SkillBuilder: Drawing simple cross-sections
- 16.5 How people use mountains
- 16.6 Earthquakes and tsunamis
- 16.7 Volcanic mountains
- 16.8 SkillBuilder: Interpreting an aerial photo
- 16.9 How do volcanic eruptions affect people?
- 16.10 Thinking Big research project: Earthquakes feature article
- 16.11 Review

on line है

online ?

on line on line ?

To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

16.2 How mountains are formed

16.2.1 What are the forces that form mountains?

A mountain is a landform that rises high above the surrounding land. Most mountains have certain characteristics in common, although not all mountains have all these features. Many have steep sides and form a peak at the top, called a summit. Some mountains located close together have steep valleys between them known as gorges.

Mountains and mountain ranges have formed over billions of years from tectonic activity; that is, movement in the Earth's crust. The Earth's surface is always changing — sometimes very slowly and sometimes dramatically.

Continental plates

The Earth's crust is cracked and is made up of many individual moving pieces called continental plates, which fit together like a jigsaw puzzle. These plates float on the semi-molten rocks, or magma, of the Earth's mantle. Enormous heat from the Earth's core, combined with the cooler surface temperature, creates **convection currents** in the magma. These currents can move the plates by up to 15 centimetres per year. Plates beneath the oceans move more quickly than plates beneath the continents.

Continental drift

Scientific evidence shows that about 225 million years ago all the continents were joined.

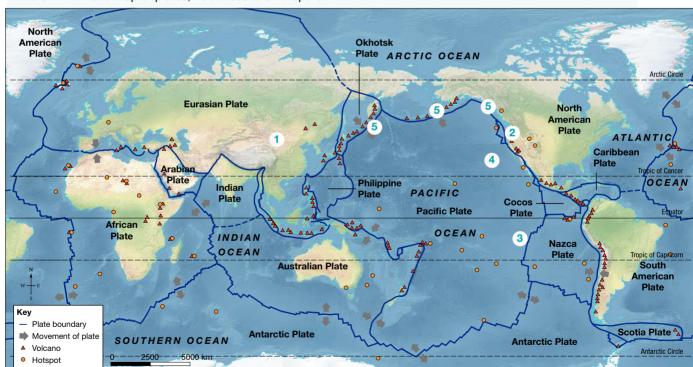


FIGURE 1 World map of plates, volcanoes and hotspots

Source: Map drawn by Spatial Vision

Convergent plates

When two continental plates of similar density collide, the pressure of the **converging plates** can push up land to form mountains. The Himalayas were formed by the collision of the Indian subcontinent and Asia. The European Alps were formed by the collision of Africa and Europe.

When an oceanic and a continental plate collide, they are different densities, and the thinner oceanic plate is subducted, meaning it is forced down into the mantle. Heat melts the plate and pressure forces the

molten material back to the surface. This can produce volcanoes and mountain ranges. The Andes in South America were formed this way.

Subduction can also occur when two oceanic plates collide. This forms a line of volcanic islands in the ocean about 70–100 kilometres past the subduction line. The islands of Japan have been formed in this way. Deep oceanic trenches are also formed when this occurs. The Mariana Trench in the Pacific Ocean is 2519 kilometres long and 71 kilometres wide, and is the deepest point on Earth — 10.911 kilometres deep. If you could put Mount Everest on the ocean floor in the Mariana Trench, its summit would lie 1.6 kilometres below the ocean surface.

2 Lateral plate slippage

Convection currents can sometimes cause plates to slide, or slip, past one another, forming fault lines. The San Andreas Fault, in California in the western United States, is an example of this.

3 Divergent plates

In some areas, plates are moving apart, or diverging, from each other (for example, the Pacific Plate and Nazca Plate). As the divergent plates separate, magma can rise up into the opening, forming new land. Underwater volcanoes and islands are formed in this way.

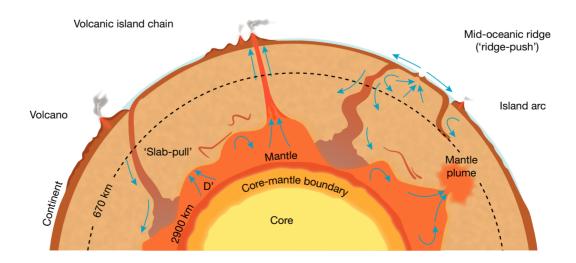
4 Hotspots

There are places where volcanic eruptions occur away from plate boundaries. This occurs when there is a weakness in the oceanic plate, allowing magma to be forced to the surface, forming a volcano. As the plate drifts over the **hotspot**, a line of volcanoes is formed.

5 The Pacific Ring of Fire

The most active region in the world is the Pacific Ring of Fire. It is located on the edges of the Pacific Ocean and is shaped like a horseshoe. The Ring of Fire is a result of the movement of tectonic plates. For example, the Nazca and Cocos plates are being subducted beneath the South American Plate, while the Pacific and Juan de Fuca plates are being subducted beneath the North American Plate. The Pacific Plate is being subducted under the North American Plate on its east and north sides, and under the Philippine and Australian plates on its west side. The Ring of Fire is an almost continuous line of volcanoes and earthquakes. Most of the world's earthquakes occur here, and 75 per cent of the world's volcanoes are located along the edge of the Pacific Plate.

FIGURE 2 The Earth's core is very hot, while its surface is quite cool. This causes hot material within the Earth to rise until it reaches the surface, where it moves sideways, cools, and then sinks.



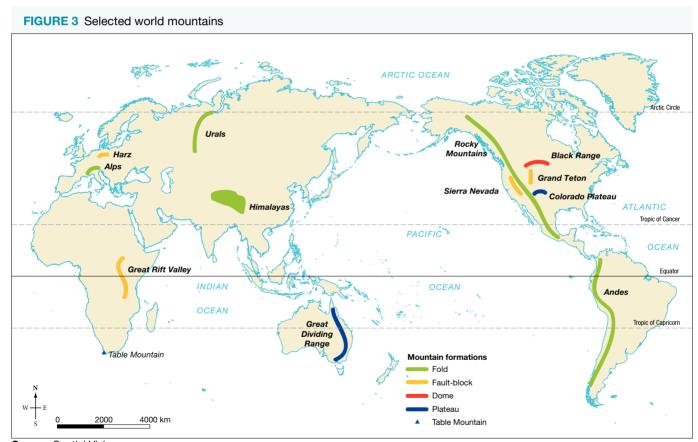
Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and guestions.

Investigate additional topics > Earthquakes and volcanoes > Active Earth

16.2.2 How do different types of mountains form?

The different movements and interactions of the **lithosphere** plates result in many different mountain landforms. Mountains can be classified into five different types, based on what they look like and how they were formed. These are fold, fault-block, dome, plateau and volcanic mountains. (Volcanic mountains are discussed in subtopic 16.7.)

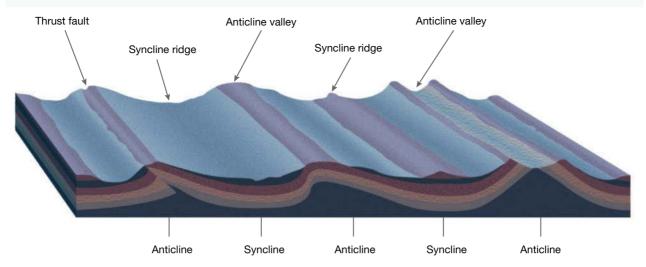


Source: Spatial Vision

Fold mountains

The most common type of mountain, and the world's largest mountain ranges, are fold mountains. The process of folding occurs when two continental plates collide, and rocks in the Earth's crust buckle, fold and lift up. The upturned folds are called anticlines, and the downturned folds are synclines (see **FIGURE 4**). These mountains usually have pointed peaks.

FIGURE 4 The formation of fold mountains



Examples of fold mountains include:

- the Himalayas in Asia
- the Alps in Europe
- the Andes in South America
- the Rocky Mountains in North America
- the Urals in Russia.



Fault-block mountains

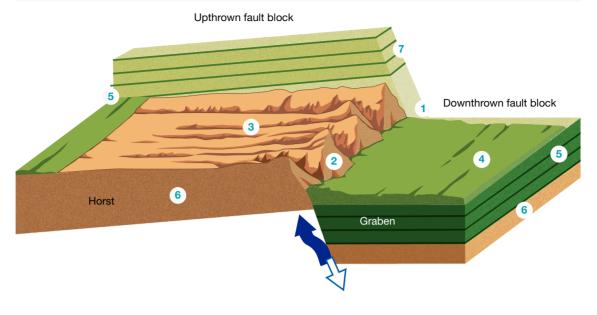
Fault-block mountains form when faults (or cracks) in the Earth's crust force some parts of rock up and other parts to collapse down. Instead of folding, the crust fractures (pulls apart) and breaks into blocks. The exposed parts then begin to erode and shape mountains and valleys (see FIGURE 6).

Fault-block mountains usually have a steep front side and then a sloping back. The Sierra Nevada and Grand Tetons in North America, the Great Rift Valley in Africa, and the Harz Mountains in Germany are examples of fault-block mountains. Another name for the uplifted (upthrown) blocks is horst, and the collapsed (downthrown) blocks are graben.

FIGURE 5 A cliff overlooking the Great Rift Valley in northern Tanzania, Africa. These are examples of fault-block mountains.



FIGURE 6 The formation of fault-block mountains



- 1 Fault zone
- 2 Steep eastern face
- 3 Gentle western slope
- Valley floors filled with sediments of cobbles, gravel and sand
- 5 Sedimentary rock layers
- 6 Bedrock
- 7 Sedimentary rock layers (5) now worn away.

Dome mountains

Dome mountains are named after their shape, and are formed when molten magma in the Earth's crust pushes its way towards the surface. The magma cools before it can erupt, and it then becomes very hard. The rock layers over the hardened magma are warped upwards to form the dome. Over time, these erode, leaving behind the hard granite rock underneath (see **FIGURE 7**).

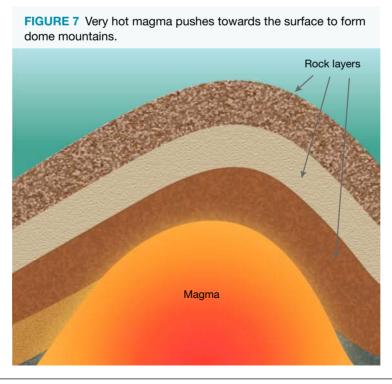


FIGURE 8 Ben Nevis in Scotland is an example of a dome mountain.





Roogle Earth Great Rift Valley Ben Nevis

Plateau mountains

Plateaus are high areas of land that are large and flat. They have been pushed above sea level by tectonic forces or have been formed by layers of lava. Over billions of years, streams and rivers cause erosion, leaving mountains standing between valleys. Plateau mountains are sometimes known as erosion mountains.

Examples of plateau mountains include Table Mountain in South Africa (see FIGURE 9), the Colorado Plateau (see FIGURE 10) in the United States and parts of the Great Dividing Range in Australia.

FIGURE 9 The plateau of Table Mountain towers over the city of Cape Town in South Africa.



FIGURE 10 The Colorado Plateau in the United States was raised as a single block by tectonic forces. As it was uplifted, streams and rivers cut deep channels into the rock, forming the features of the Grand Canyon.



16.2.3 CASE STUDY: How were the Himalayas formed?

Before the theory of tectonic plate movement, scientists were puzzled by findings of fossilised remains of ancient sea creatures near the Himalayan peaks. Surely these huge mountains could not once have been under water?

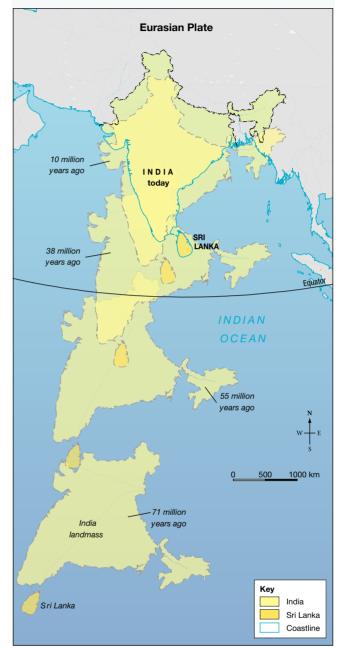
Since understanding plate movements, the mystery has been solved. About 220 million years ago, India was part of the ancient supercontinent we call **Pangaea**. When Pangaea broke apart, India began to move northwards at a rate of about 15 centimetres per year. About 200 million years ago, India was an island separated from the Asian continent by a huge ocean.

When the plate carrying India collided with Asia 40 to 50 million years ago, the oceanic crust (carrying fossilised sea creatures) slowly crumpled and was uplifted, forming the high mountains we know today. It also caused the uplift of the Tibetan Plateau to its current position. The Bay of Bengal was also formed at this time.

The Himalayas were therefore formed when India crashed into Asia and pushed up the tallest mountain range on the continents.

The Himalayas are known as young mountains, because they are still forming. The Indian and Australian plates are still moving northwards at about 45 millimetres each year, making this boundary very active. It is predicted that over the next 10 million years it will travel more than 180 kilometres into Tibet and that the Himalayan mountains will increase in height by about five millimetres each year. Old mountains are those that have stopped growing and are being worn down by the process of erosion.

FIGURE 11 The movement of the Indian landmass to its current location



Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

16.2.4 CASE STUDY: Formation of the Sierra Nevada Range, United States

The Sierra Nevada Range began to rise about five million years ago. As the western part of the block tilted up, the eastern part dropped down. As a result there is a long, gentle slope towards the west and a steep slope to the east.

FIGURE 12 The Sierra Nevada Range was formed by fault-block tilting.



FIGURE 13 Yosemite Valley in the Sierra Nevada mountains



Resources

Interactivity Grand peaks (int-3110)

Weblink Fold mountains

Google Earth Sierra Nevada mountains

> Table Mountain Grand Canyon

16.2 INQUIRY ACTIVITIES

- 1. Use different coloured strips of plasticine to make models showing how a collision of continental and oceanic plates differs from a collision of two continental plates. Have a go at explaining this to a member of Classifying, organising, constructing your family.
- 2. Use the Fold mountains weblink in the Resources tab to explain the formation of fold mountains and fault-block mountains. **Describing and explaining**
- 3. Sketch FIGURE 5 and annotate it to show where erosion has taken place. Label places that have hard and weak rocks. **Describing and explaining**
- 4. Draw a sketch of FIGURE 13, noting the plateau and areas of erosion and weathering.

Describing and explaining

Use an atlas to locate the Sierra Nevada Range. Describe where it is. Name two national parks in this
mountain range. Choose one, and investigate some of its geographical characteristics. Present this as a
PowerPoint, Keynote or Prezi presentation.
 Classifying, organising, constructing

16.2 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

16.2 Exercise 1: Check your understanding

- 1. GS1 Are the following statements true or false?
 - (a) The world's volcanoes are randomly scattered over the Earth's surface.
 - (b) Most of the world's volcanoes are concentrated along the edges of certain continents.
 - (c) Island chains are closely linked with the location of volcanoes.
 - (d) There is a weak link between the distribution of volcanoes and the location of continental plates.
 - (e) Use the statements from parts a-d to write a summary paragraph, remembering to rewrite the false statements to make them true.
- 2. GS2 Explain, in your own words, the meaning of subduction when referring to plate movements.
- **3. GS2** Name two locations where plates are moving apart. What is happening to the sea floor in these *places*?
- 4. GS1 List one example of fold, fault, dome and plateau mountains. Where is each located?
- 5. **GS1** State whether the following statements are true or false.
 - (a) Fold mountains are the most common type of mountain in the world.
 - (b) The Sierra Nevada Range was formed by the eastern part of a fault-block tilting up.
- **6. GS2** How does the shape of each of the mountains shown in this subtopic provide clues as to how they were formed? How have the effects of erosion *changed* these mountains?

16.2 Exercise 2: Apply your understanding

- 1. **GS5** Describe the distribution of volcanoes shown in **FIGURE 1**. What does this distribution have in common with the location of plate boundaries?
- 2. GS5 Look at FIGURE 2. How do convection currents help explain plate tectonics?
- **3. GS5** Refer to **FIGURE 1**. Name three **places** where plates are converging. What mountain ranges, if any, are located in these **places**?
- 4. GS6 Draw a sketch to show what you think the world's continents will look like millions of years into the future based on the way continents move and change. Justify your decisions.
- 5. GS2 Use FIGURES 7 and 8 to explain the formation of dome mountains.
- 6. GS6 Refer to the case study in section 16.2.3, which describes the formation of the Himalayas.
 - (a) Provide an explanation for why scientists found ancient sea fossils on top of the Himalayas.
 - (b) Describe how the Himalayas were formed. How long did it take for the plate carrying India to crash into Asia? Explain why these mountains are described as 'young' mountains.
 - (c) Based on the movements occurring, predict what might happen to the Himalayas in the future.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

16.3 The world's mountains and ranges

16.3.1 Where are the world's mountains?

Mountains make up a quarter of the world's landscape. They are found on every continent and in three-quarters of all the world's countries. Only 46 countries have no mountains or high plateaus, and most of these are small island nations.

Some of the highest mountains are found beneath the sea. Some islands are actually mountain peaks emerging out of the water. Even though the world's highest peak (from sea level) is Mount Everest in the Himalayas (8850 metres high), Mauna Loa in Hawaii is actually higher when measured from its base on the ocean floor. Long chains or groups of mountains located close together are called a mountain range.

Chogori/ Godwin Austen 5165 m 8611 m Mt Everesi Namcha Ba 7782 m <mark>Kanchenjunga 8598</mark> m 5452 m Margherita Peak Mt Chimborazo Mt Kilimaniaro 6267 m Ojos del Salado Major mountain ranges Atlas Carpathians Himalavas Great Dividing Range Balkans Rocky Mountains Caucasus Zagros Appalachians 4000 kr Hindu Kush Andae 2000 Vinson Massit

FIGURE 1 The world's main mountains and mountain ranges

Source: Map drawn by Spatial Vision

1 The Himalayas

Located in Asia, the Himalayas are the highest mountain range in the world. They extend from Bhutan and southern China in the east, through northern India, Nepal and Pakistan, and to Afghanistan in the west. The Himalayas is one of the youngest mountain ranges in the world and the name translates as 'land of snow'. The fourteen highest mountains in the world — all over 8000 metres above sea level — are all in the Himalayas.

² The Alps

The Alps, located in south central Europe, are one of the largest and highest mountain ranges in the world. They extend 1200 kilometres from Austria and Slovenia in the east, through Italy, Switzerland, Liechtenstein and Germany, to France in the west.

3 The Andes

The Andes are located in South America, extending north to south along the western coast of the continent. The Andes is the second highest mountain range in the world, with many mountains over 6000 metres. At 7200 kilometres long, it is also the longest mountain range in the world.

4 The Rocky Mountains

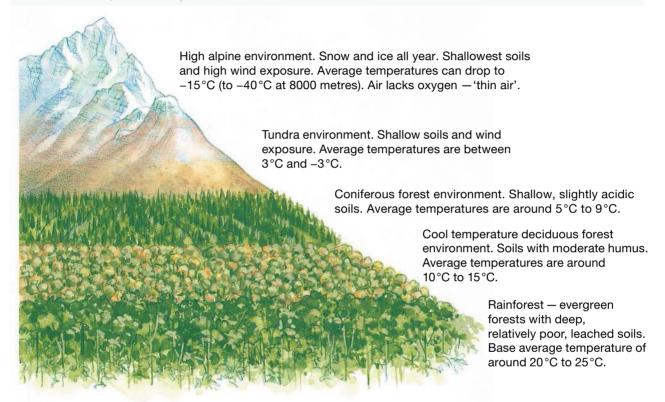
The Rocky Mountains in western North America extend north-south from Canada to New Mexico, a distance of around 4800 kilometres. The highest peak is Mount Elbert, in Colorado, which is 4401 metres above sea level. The other large mountain range in North America is the Appalachian Mountains, which extends 2400 kilometres from Alabama in the south to Canada in the north.



16.3.2 Mountain climate and weather

It is usually colder at the top of a mountain than at the bottom, because air gets colder with **altitude**. Air becomes thinner and is less able to hold heat. For every 1000 metres you climb, the temperature drops by $6\,^{\circ}\text{C}$.

FIGURE 2 Ecosystems change with altitude on mountains.



16.3 INQUIRY ACTIVITY

Work in groups of 4 to 6 to investigate some of the following mountain ranges.

- Antarctica Antarctic Peninsula, Transantarctic Mountains
- Africa Atlas Mountains, Eastern African Highlands, Ethiopian Highlands
- Asia Hindu Kush, Himalayas, Taurus, Elburz, Japanese Mountains
- Australia MacDonnell Ranges, Great Dividing Range
- Europe Pyrenees, Alps, Carpathians, Apennines, Urals, Balkan Mountains
- North America Appalachians, Sierra Nevada, Rocky Mountains, Laurentians
- South America Andes, Brazilian Highlands

Each student should choose a different range, and complete the following.

- a. Map the location of the range in its region.
- **b.** Describe the climate experienced throughout the range.
- **c.** Name and provide images of a selection of plants and animals found in the range. Present your information in Google Maps.

Classifying, organising, constructing

16.3 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

16.3 Exercise 1: Check your understanding

- 1. **GS1** What percentage of the Earth's surface is covered by mountains?
- 2. GS1 Name the:
 - (a) highest mountain range in the world
 - (b) longest mountain range in the world
 - (c) highest mountain in Western Europe
 - (d) second-highest mountain range in North America.
- 3. GS1 What name is given to long chains or groups of mountains located close together?
- **4. GS1** Describe the features of a high alpine environment.
- 5. **GS1** What happens to oxygen in the atmosphere in high alpine environments?

16.3 Exercise 2: Apply your understanding

- 1. GS5 Refer to FIGURE 2. How does vegetation change on a mountain?
- 2. GS2 Refer to FIGURE 1. Describe how the scale of the world's mountains varies across the continents.
- 3. **GS6** Imagine you are a mountaineer, climbing to the top of Mont Blanc.
 - (a) Suggest the type of clothing you need to wear for such a climb.
 - (b) When you begin your climb at 1500 metres, the weather is perfect; it is sunny and clear and the temperature is 8 °C. You climb 2200 metres before you set up camp. What is the elevation? What is the temperature at this elevation? The next day the weather holds, and you climb to the summit. How far did you climb to reach the top of the mountain? What is the temperature?
- 4. **GS1** List the countries in which the European Alps extend.
- 5. **GS1** Where are the Appalachian Mountains located?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

16.4 SkillBuilder: Drawing simple cross-sections

Height above sea level (metres)

1700

1600

1500

1400

1300

Start

1700

1600

1500

1400

1300

Cross-section of the route of Merritt's chairlift

Smooth curve

What are cross-sections?

A cross-section is a side-on, or cut-away view of the land, as if it had been sliced through by a knife. Cross-sections provide us with an idea of the shape of the land. We can use contour lines on topographic maps to draw a cross-section between any two points.

Select your learnON format to access:

- · an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- · an activity and interactivity for you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.



Resources

Video eLesson SkillBuilder: Drawing simple cross-sections (eles-1655)

Interactivity

SkillBuilder: Drawing simple cross-sections (int-3151)

River

16.5 How people use mountains

16.5.1 Mountain people and cultures

People have moved through and lived in mountain areas for centuries. But few people live in the world's highest mountain ranges, where it can be very cold and difficult to grow food and make a living. Thousands of people visit mountains, often in remote areas, for recreation and to see the spectacular scenery, plants and animals, historic and spiritual sites, and different cultures. Mountains are also vital for global water supply.

Around 12 per cent of the world's people live in mountain regions. About half of those live in the Andes, the Himalayas and the various African mountains.

Usually, population density is very low in these areas. One reason for this is that mountains are very difficult to cross, as they are often rugged and covered with forests and wild animals. They can also be hard to climb and may have ice, snow or glaciers that make travel dangerous.

As a result of these difficulties, mountains have long provided a safe place for **indigenous peoples** and **ethnic minorities**. People live as nomads, hunters, foragers, traders, small farmers, herders, loggers and miners.

FIGURE 1 The Longshen rice terraces in China show how a mountainside can be changed to grow food



16.5.2 Mountain landscapes in the Dreamings

There are many Aboriginal and Torres Strait Islander Dreaming Stories that are linked to mountain landscapes. These teachings from the Dreamings help explain the formation and importance of each landscape and landform.

Indigenous Australian peoples are guided by Elders who know the local Dreaming Stories and customs. Dreaming Stories are passed on through the generations and explain the origin of the world around them.

The Three Sisters in the Blue Mountains

There is a story, thought to be an Indigenous Creation Story, about the formation of the Three Sisters in the Blue Mountains in New South Wales (see FIGURE 2). It tells of three sisters, Meehni, Wimlah and Gunnedoo, who lived in the Jamison Valley as members of the Gundungurra nations. These young women had fallen in love with three brothers from the Dharruk nation, yet tribal law forbade them to marry. The brothers were not happy with this law and so decided to use force to capture the three sisters, which caused a major battle.

As the lives of the three sisters were seriously in danger, a clever man from the Kedoombar



took it upon himself to turn the three sisters into stone to protect them from any harm. He intended to reverse the spell when the battle was over, but the clever man himself was killed. As only he could reverse the spell and bring the sisters back to life, they remain in their rock formation.

The Glasshouse Mountains

The Glasshouse Mountains located in south-east Queensland are of great historical, cultural and geological significance (see FIGURE 3). Their names — Beerwah, Tibrogargan, Coonowrin, Tunbubudla, Beerburrum, Ngungun, Tibberoowuccum and Coochin — reflect the culture of the Gubbi Gubbi people.

The story of these mountains goes something like this:

Tibrogargan was the father of all the nations. He and his wife, Beerwah, had

many children, including Coonowrin, Tunbubudla, Miketeebumulgrai, Elimbah, Ngungun, Beerburrum and Coochin.

One day, Tibrogargan was looking out to sea when he saw the sea rising in a great swell. He became worried for Beerwah, who was pregnant. He quickly told his eldest child, Coonowrin, to take his mother to the mountains. 'I'll get the other children together and will meet you there.'

But when Tibrogargan checked to see if Coonowrin had done as he had asked, he was angered to see that he was running off alone, like a coward, and had not fetched his mother. This made Tibrogargan angry. He chased Coonowrin and hit him so hard on the head with his nulla (war club) that he dislocated his neck. It has been crooked ever since.

When the flood receded, the family went back to their lands. But when the others saw Coonowrin, they teased him about his crooked neck and how he came by it, making him ashamed of his cowardice. He asked his father to forgive him, but the law would not allow this. Tibrogargan cried many tears for the shame Coonowrin had brought upon them, and his tears formed a stream that went all the way to the sea. Beerwah and all Coonowrin's brothers and sisters cried too.

Coonowrin tried to explain that he had left his mother to fend for herself because she was so big. He did not know his mother was pregnant. Tibrogargan swore he would never look at his son again, and to this day he looks at the sea and not at Coonowrin, whose head is bowed and whose tears flow into the sea. As for Beerwah — she is still pregnant.

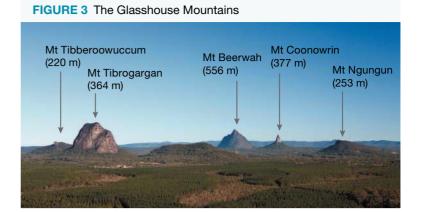
16.5.3 Sacred and special places

Mountain landscapes often have special meaning to certain groups of people. This might be because the location includes sacred sites or religious symbols; it might also be because people want to be close to nature or to feel spiritually inspired or renewed.

Mountaineers who take great risks, climbing alone or in small groups, often find a special meaning in mountain environments. They may hold deep spiritual, cultural and aesthetic (relating to beauty) values and ideas, and these will often inspire such people to care for and protect mountain environments.

The following list gives examples of mountains that are connected to various beliefs and religions.

- Hindus and Buddhists have beliefs about Mount Kailash in the Himalayas.
- Hindus in Bali, Indonesia, have a special connection with Mount Gunung Agung.
- Tibetan Buddhists revere Chomolungma (Mount Everest).
- The landscape of Demojong in the Himalayas is sacred to Tibetan Buddhists.
- Nanda Devi in the Himalayas is a sacred site for both Sikh and Hindu communities, and is a UNESCO World Heritage site.
- Mount Fuji, in Japan, is a place of spiritual and cultural symbolism to Japanese people.
- Saint Katherine Protectorate in South Sinai, Egypt, is in an area holy to Jews, Christians and Muslims.
- Jabal La'lam is a mountain that is sacred to the people of northern Morocco.



For the indigenous groups of the north-eastern American plains, the Sioux, or Dakota as they are sometimes referred to, and the indigenous Scandinavian people, the Sami, nature was recognized as sacred. The sacred places were not man-made temples or churches, but particularly spectacular or prominent features of the natural landscape. For the Sami, these sacred places tended to be large rocks (called sieidi), the sides of lakes, rocky crevasses or caverns or mountaintops. These sacred mountains were somewhat isolated and had a jutting tall peak. A sacred mountain named Haldi, which rests among a group of mountains near Alta, and an 814-metre-tall conical sacred hill named Tunnsjøguden in central Norway are examples. In general, the word saivu is applied to sacred mountains in the south while the terms bassi, ailigas and haldi are used for sacred mountains by northern Sami. Similarly, mountaintops were also of spiritual importance to Sioux groups who lived in their regions; for instance, the sacred mountain Harney Peak in modern-day South Dakota.

Source: www.utexas.edu/courses/sami/diehtu/siida/religion/paralellism.htm

16.5.4 Skills to survive

It can be hard to make a living in mountain regions. People living in small, isolated mountain communities have learned to use the land and resources sustainably. Many practise shifting cultivation, migrate with grazing herds, and have terraced fields.

Some of the world's oldest rice terraces (see FIGURE 1) are over 2000 years old. Rice and vegetables could be grown quite densely on the terraces. This enabled people to survive in a region with very steep slopes and high altitude.

On very high ranges, below the snowline is a treeless zone of alpine pastures that can be used in summer to graze animals. Elsewhere, in the valleys and foothills, agriculture often occurs, with fruit orchards and even vineyards on some sunny slopes.

Mountains supply 60 to 80 per cent of the world's fresh water. This is due to orographic rainfall (caused by warm, moist air rising and cooling when passing over high ground, such as a mountain; as the air cools, the water vapour condenses and falls as rain). Where precipitation falls as snow, water is stored in snowfields and glaciers. When these melt, they provide water to people when they need it most.





Dreaming stories 1

Dreaming stories 2

Climate change and water shortage

Roogle Earth Glasshouse Mountains

16.5 INQUIRY ACTIVITIES

1. Use the **Dreaming stories 1** and the **Dreaming stories 2** weblinks in the Resources tab to read two Dreaming Stories. How are each of these connected to mountain landscapes?

Examining, analysing, interpreting

2. From this subtopic, choose one of the mountains linked to Hindu or Buddhist beliefs. Use the internet to find out details of this connection. Present your information as a print or electronic brochure.

Classifying, organising, constructing

- 3. Research where your water supply comes from. Which mountains, if any, are located near your water supply? **Describing and explaining**
- 4. Draw a consequence chart to show how and why mountains are important for water supply. Now add information to your chart about what might happen if this was reduced for some reason; for example, through climate change. Use the Climate change and water shortage weblink in the Resources tab to help you with this task. Evaluating, predicting, proposing

16.5 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

16.5 Exercise 1: Check your understanding

- 1. **GS1** List the geographical characteristics of mountains that limit the number of people who live there.
- 2. GS2 What type of work and recreation can people undertake in mountain regions? Present this information in words or in a diagram.
- 3. GS2 Explain why mountains are vital for global water supply.
- 4. **GS2** Describe how different groups of people value mountainous *places*.
- 5. **GS2** Use the internet to locate the Jamison Valley in the Blue Mountains. Describe its location.

16.5 Exercise 2: Apply your understanding

- 1. **GS4** How has the natural mountain *environment* in **FIGURE 1** been *changed* by people? Sketch the photo and make notes to show the changes.
- 2. GS6 Imagine you work as a park ranger in the Blue Mountains or Glasshouse Mountains. How can the Dreaming legends of the region help other people understand this *environment*?
- 3. GS2 How does the Three Sisters legend help explain the formation of the Blue Mountains?
- 4. GS1 Why is population density in mountain environments usually low?
- 5. GS2 Think of a mountain you have visited or seen. Do you feel inspired by mountain environments? How can spiritual or religious beliefs linked to mountain landscapes help in protecting them?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

16.6 Earthquakes and tsunamis

16.6.1 How do earthquakes and tsunamis occur?

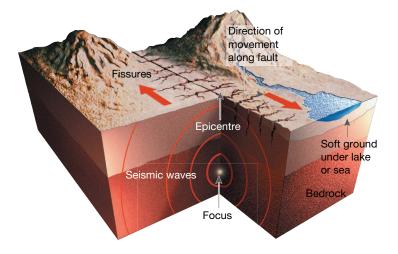
Earthquakes and tsunamis are frightening events and they often strike with little or no warning. An earthquake can shake the ground so violently that buildings and other structures collapse, crushing people to death. If an earthquake occurs at sea, it may cause a tsunami, which produces waves of water that move to the coast and further inland, sometimes with devastating effects.

16.6.2 Earthquakes

Earthquakes occur every day somewhere on the planet, usually on or near the boundaries of tectonic plates. The map in **FIGURE 1** of subtopic 16.2 shows a strong relationship between the location of plate boundaries and the occurrence of earthquakes. Weaknesses and cracks in the Earth's crust near these plate boundaries are called faults. An earthquake is usually a sudden movement of the layers of rock at these faults.

The point where this earthquake movement begins is called the **focus** (see FIGURE 1). Earthquakes can occur near the surface or up to 700 kilometres below. The shallower the focus, the more

FIGURE 1 What happens in an earthquake?



powerful the earthquake will be. Energy travels quickly from the focus point in powerful **seismic waves**, radiating out like ripples in a pond. The seismic waves decrease in strength as they travel away from the **epicentre**. The strength of an earthquake is measured on the Richter scale.

The energy released at the focus can be immense, and it travels in seismic waves through the mantle and crust of the Earth. Primary waves, or P-waves, are the first waves to arrive, and are felt as a sudden jolt. Depending on the type of rock or water in which they are moving, these waves travel at speeds of up to 30 000 kilometres an hour.

Secondary waves, or S-waves, arrive a few seconds later and travel at about half the speed of P-waves. These waves cause more sustained up-and-down movement.

Surface waves radiate out from the epicentre and arrive after the main P-waves and S-waves. These move the ground either from side-to-side, like a snake moving, or in a circular movement.

Even very strong buildings can collapse with these stresses. The energy that travels in waves across the Earth's surface can destroy buildings many kilometres away from the epicentre.

Measuring earthquakes

Earthquakes are measured according to their magnitude (size) and intensity. Magnitude is measured on the Richter scale, which shows the amount of energy released by an earthquake. The scale is open-ended as there is no upper limit to the amount of energy an earthquake might release. An increase of one in the scale is 10 times greater than the previous level. For example, energy released at the magnitude of 7.0 is 10 times greater than the energy released at 6.0.

Earthquake intensity is measured on the Modified Mercalli scale, and indicates the amount of damage caused. Intensity depends on the nature of buildings, time of day and other factors.

DISCUSS

'The strongest earthquakes result in the worst disasters.' Work in pairs or groups of three to agree, partially agree, or disagree with this statement. Use the data in this subtopic and particular examples in your response.

[Critical and Creative Thinking Capability]

16.6.3 CASE STUDY: What caused the 2015 Nepal earthquake?

On 25 April 2015, a 7.8-magnitude earthquake struck Nepal at around midday. The epicentre of this earthquake was quite shallow — only 15 kilometres below the Earth's surface. It occurred approximately 80 kilometres to the north-west of Kathmandu, Nepal's capital.

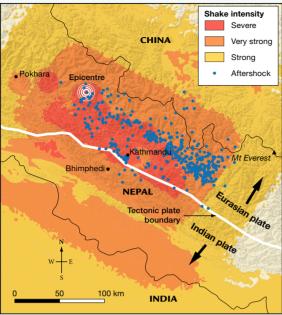
At this location, the Indian Plate to the south is subducting under the Eurasian Plate to the north (see **FIGURE 1** in subtopic 16.2). This is occurring at a rate of approximately 45 millimetres per year and is causing the uplift of the Himalayas (see the case study in section 16.2.3).

During the Nepal earthquake event, nearly 9000 people were killed and nearly 18 000 were injured (see the case study in section 16.6.8).

FIGURE 3 shows that the earthquake released a large amount of energy and caused large slips of up to four metres of the Earth's surface. There were severe aftershocks immediately after the main earthquake and the aftershocks continued for many weeks — up to 100 in total. The shaking from this earthquake was felt in China, India, Bhutan and much of western Bangladesh.

On 12 May 2015, a huge aftershock with a magnitude of 7.3 occurred near the Chinese border with Nepal (between Kathmandu and Mount Everest). More than 160 people died and more than 2500 were injured as a result of this aftershock.

FIGURE 2 The shake intensity and the tectonic plate boundary involved in the Nepal earthquake



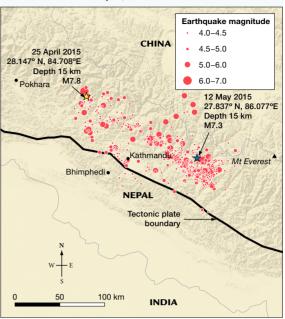
Source: USGS

16.6.4 CASE STUDY: What caused the 2011 Christchurch. New Zealand earthquake?

A 6.3-magnitude earthquake struck Christchurch, New Zealand, on 22 February 2011. The city was badly damaged, 185 people were killed and several thousand were injured. The earthquake epicentre was 10 kilometres south-east of Christchurch's central business district, and was quite shallow — only five kilometres deep, which meant the shaking was particularly destructive. The earthquake is considered to be an aftershock of an earthquake that occurred five months earlier in September 2010. Many buildings in the city had already suffered damage in the 2010 earthquake and either collapsed in the 2011 earthquake or had to be demolished afterwards.

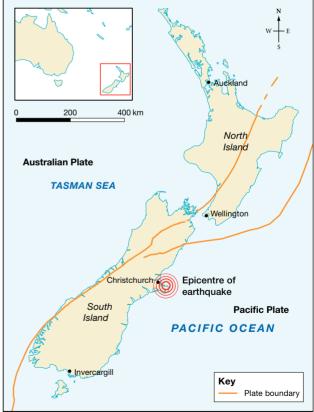
New Zealand is located between two huge moving plates — the Australian Plate and the Pacific Plate — and it experiences thousands of earthquakes every year. Most are very small, but some have caused a lot of damage. These movements continue to shape and form New Zealand and its dramatic mountain landscapes.

FIGURE 3 Magnitudes of earthquake and aftershocks in Nepal, 2015



Source: USGS

FIGURE 4 Location of the Christchurch earthquake in New Zealand



Source: Map drawn by Spatial Vision

FIGURE 5 Earthquake damage in Christchurch



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- Investigate additional topics > Earthquakes and volcanoes > Haiti earthquake
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Weblinks

Nepal earthquake: before and after photos

Earthquake-vulnerable cities

Roogle Earth Christchurch, New Zealand

16.6.5 Tsunamis

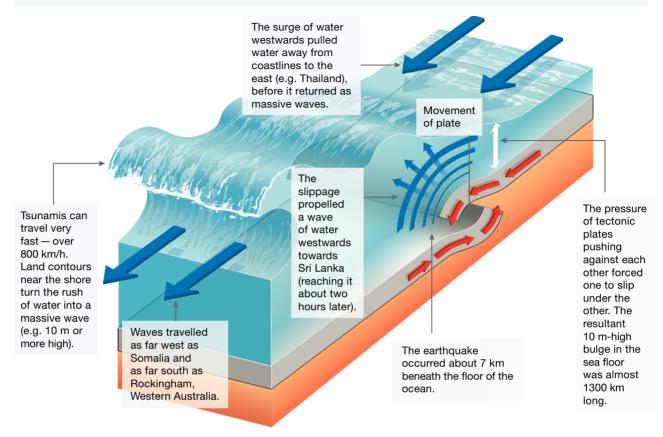
A tsunami is a large ocean wave that is caused by sudden motion on the ocean floor. The sudden motion could be caused by an earthquake, a volcanic eruption or an underwater landslide. About 90 per cent of tsunamis occur in the Pacific Ocean, and most are caused by earthquakes that are over 6.0 on the Richter scale (see FIGURE 7).

A tsunami at sea will be almost undetectable to ships or boats. The reasons for this are that the waves travel extremely fast in the deep ocean (about 970 kilometres per hour — as fast as a large jet) and the wavelength is about 30 kilometres, yet the wave height is only one metre.

When tsunamis reach the continental slope, several things happen. The wave slows down and, as it does, the wave height increases and the wavelength decreases; in other words, the waves get higher and closer together. Sometimes, the sea may recede quickly, very far from shore, as though the tide has suddenly gone out. If this happens, the best course of action is to head to higher ground as quickly as possible.

A tsunami is not a single wave. There may be between five and 20 waves altogether. Sometimes the first waves are small and they become larger; at other times there is no apparent pattern. Tsunami waves will arrive at fixed periods between 10 minutes and two hours.

FIGURE 6 An earthquake and subsequent tsunami in the Indian Ocean in 2004 occurred along the boundary between tectonic plates.



16.6.6 CASE STUDY: The Japanese tsunami, 2011

The region of Japan is seismically active because four plates meet there: the Eurasian, Philippine, Pacific and Okhotsk. Many landforms in this region are influenced by the collision of oceanic plates. Chains of volcanic islands called island arcs are formed, and an ocean trench is located parallel to the island arc (see FIGURE 1 in subtopic 16.2).

On 11 March 2011, an 8.9-magnitude earthquake struck near the coast of Japan. The earthquake was caused by movement between the Pacific Plate and the North American Plate. It occurred about 27 kilometres below the Earth's surface along the Japan Trench, where the Pacific Plate moves westwards at about eight centimetres each year. The sudden upward movement released an enormous amount of energy and caused huge displacement of the sea water, causing the tsunami. When the tsunami reached the Japanese coast, waves more than six metres high moved huge amounts of water inland. Strong aftershocks were felt for a number of days. Nearly 16 500 people were killed and 4800 were reported missing.

FIGURE 7 The location and magnitude of the earthquake that caused the Japanese tsunami

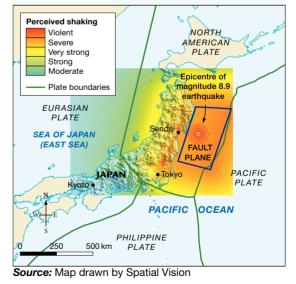
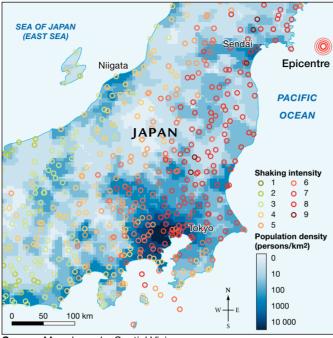


FIGURE 8 This map shows the ground motion and shaking intensity from the earthquake across Japan.



Source: Map drawn by Spatial Vision

FIGURE 9 The tsunami caused by the 8.9-magnitude earthquake in March 2011 swept over the coastline at Sukuiso and inland, carrying debris with it.



16.6.7 What are the impacts of earthquakes and tsunamis?

Earthquakes and tsunamis can have an enormous impact. The degree of impact can be affected by several factors: the size of the quake; its location; the density of the population near the epicentre; and whether there are any densely populated areas nearby. Poverty also plays a role, because it can increase a country's or region's vulnerability to such disasters. Measuring the event by the impact can be difficult. Should it be measured by the number of people killed and made homeless (social impact); the cost of recovery (economic impact); or the effect on the surroundings (environmental impact)?

Impact on people

The data in the map in FIGURE 11 show some of the worst earthquake and tsunami disasters that have occurred. The amount of damage and death they cause does not always relate to the magnitude of the earthquake. Some smaller magnitude earthquakes can have a devastating impact. Likewise, to measure the impact of a tsunami, we have to look at its effect on people, not at the magnitude of the earthquake (or volcano) that caused it, and not at the size of the waves, which are difficult to measure.

Less developed countries often do not have the resources to prepare adequately for an earthquake. Often, many people are housed in badly constructed buildings in densely populated areas on poor land. When a disaster strikes, poorer countries often do not have the resources to act quickly and get help for relief efforts. Developed countries have strict building codes and better infrastructure to withstand disasters. They have warning systems and better communication. Usually, help is quick to arrive, with army and police personnel sent in to help with rescue efforts.

Analysis of EM-DAT (The International Disaster Database) data also shows how income levels have an impact on disaster death tolls. On average, more than three times as many people died per disaster in low-income countries (332 deaths) than in highincome nations (105 deaths). A similar pattern is evident when low- and lower-middle-income countries are grouped together and compared to high- and upper-middle-income countries. Taken together, higher-income countries experienced 56% of disasters but lost 32% of lives, while lowerincome countries experienced 44% of disasters but suffered 68% of deaths. This demonstrates that levels of economic development, rather than exposure to hazards per se, are major determinants of mortality.

Impact on the environment

The impact of an earthquake or tsunami on a human environment can be catastrophic. It can damage and destroy entire settlements. Landslides can be triggered by earthquakes, permanently changing the landscape.

FIGURE 10 This landslide was caused by an earthquake in June 2008 in Honshu, Japan.



Kamchatka, Russia 4 November 1952 Tohoku, Japan ARCTIC OCEAN 11 March 2011 9.0 magnitude 9.0 magnitude Prince William Sound, Alaska 28 March 1964 9.2 magnitude Lisbon, Portugal 1 November 1755 Ryuku Islands, Japan 24 April 1771 Rat Islands, Alaska 2 April 1965 Sanriku, Japan - 15 June 1896 15 August 1950 8.6 magnitude Tohoku, Japan - 11 March 2011 ATLANTIC Ise Bay, Japan - 18 January 1586 Tropic of Cancer Sumatra, Indonesia Enshunada Sea, Japan – 20 September 1498 28 March 2005 9.1 magnitude OCEAN Nankaido, Japan - 28 October 1707 PACIFIC Equator Sumatra, Indonesia 26 December 2004 Off the coast of Ecuador 31 January 1906 Krakatau, Indonesia 8.8 magnitude 27 August 1883 of Capricorn Northern Chile Sumatra, Indonesia 28 March 2005 Top 10 most destructive sunamis 13 August 1868 OCEAN Tsunami 8.6 magnitude 3 Ranking Bio-Bio, Chile 27 February 2010 8.8 magnitude Top 10 largest earthquakes Valdivia, Chile 22 May 1960 2000 4000 km Earthquake 9.5 magnitude Ranking kilometres

FIGURE 11 The 10 largest earthquakes and 10 most destructive tsunamis in recorded history

Source: Map drawn by Spatial Vision

| TABLE 1 | Tsunamis |
|----------------|----------|
|----------------|----------|

| No. on map and cause | | Description and impact | |
|----------------------|-------------------|---|--|
| 1 | 9.1 earthquake | Tsunami 50 metres high, reaching 5 km inland near Meubolah. 230 000 people died. Estimated damages of US\$10 billion. | |
| 2 | 9.0 earthquake | Tsunami waves of 10 metres swept over the east coast of Japan. 19 000 people died. Caused nuclear emergency at Fukushima Daiichi nuclear power plant. \$235 billion in damage. | |
| 3 | 8.5 earthquake | Waves up to 30 metres high struck towns along western Portugal and southern Spain. Earthquake and tsunami killed 60 000 in Portugal, Morocco and Spain. | |
| 4 | Volcano | Tsunami linked to the explosion of the Krakatau volcano. Waves as high as 37 metres demolished the towns of Anjer and Merak. Killed 40 000 people, with 2000 deaths caused by the volcanic eruptions rather than the tsunami. | |
| 5 | 8.3 earthquake | Homes were flooded and swept away; 31 000 people killed. | |
| 6 | 8.4 earthquake | Waves up to 25 metres high struck the Pacific coasts of Kyushyu, Shikoku and Honshin. Nearly 30 000 buildings were damaged in the affected regions and about 30 000 people were killed. | |

(continued)

TABLE 1 Tsunamis (continued)

| No. | on map and se | Description and impact |
|-----|----------------------------------|--|
| 7 | 7.6 earthquake (estimated) | Tsunami was reported to have reached a height of 38.2 metres, causing damage to more than 11 000 homes and killing around 22 000 people. Reports were also found of a corresponding tsunami hitting the east coast of China, killing around 4000 people and doing extensive damage to local crops. |
| 8 | Two 8.5 earthquakes | Waves up to 21 metres high affected the entire Pacific Rim for two or three days. Tsunami registered by six tide gauges as far away as Sydney, Australia. 25 000 deaths and estimated damages of US\$300 million were caused along the Peru-Chile coast. |
| 9 | 7.4 earthquake | Tsunami waves around 11–15 metres high destroyed 3137 homes, killing nearly 12 000 people in total. |
| 10 | 8.2 earthquake (estimated) | Waves of 6 metres caused more than 8000 deaths and a large amount of damage to a number of towns. |

TABLE 2 Earthquakes

| | IABLE 2 Earthquakes | | |
|--|---------------------|---|--|
| No. on map and magnitude of earthquake | | Description and impact | |
| 1 | 9.5 | Killed 1655 people, injured 3000 and displaced two million. Caused US\$550 million in damage. Two days later, Puyehue volcano erupted, sending ash and steam into the atmosphere for several weeks. | |
| 2 | 9.2 | Resulting tsunami killed 128 people and caused US\$311 million in damage. | |
| 3 | 9.1 | Killed 227 900 people, displaced 1.7 million in South Asia and East Africa. On 28 December, a mud volcano began erupting near Baratang, Andamar Islands. | |
| 4 | 9.0 | Earthquake caused tsunami that killed 19 000 people and injured 6000. Caused US\$ tens of billions in damage. Economic impacts huge, especially with the shutting down of a nuclear reactor. | |
| 5 | 9.0 | Generated a tsunami that caused damage of US\$1 million in Hawaiian Islands. Some waves over 9 metres high at Kaena Point, Oahu. None killed. | |
| 6 | 8.8 | Killed at least 521 people, with 56 missing and 12 000 injured. More than 800 000 people displaced, with a total of 1.8 million people affected across Chile, where damage was estimated at US\$30 billion. | |
| 7 | 8.8 | Earthquake caused tsunami that was reported to have killed between 500 and 1500 people in Ecuador and Colombia. | |
| 8 | 8.7 | Generated a tsunami about 10 metres high that caused damage on Shemya Island, plus US\$10 000 in property damage from flooding on Amchitka Island. No deaths or injuries reported. | |
| 9 | 8.6 | Killed 1313 people, with more than 400 people as far away as Sri Lanka injured by the tsunami. | |
| 10 | 8.6 | This inland earthquake caused widespread damage to buildings as well as large landslides. 780 people were killed in eastern Tibet. | |

Liquefaction

Liquefaction occurs when soil suddenly loses strength and, mixed with groundwater, behaves like a liquid. This usually occurs as a result of ground shaking during a large earthquake. The types of soils that can liquefy include loose sands and silts that are below the water table, so all the space between the grains is filled with water. Dry soils above the water table will not liquefy.

Once a soil liquefies, it cannot support the weight of the dry soil, roads, concrete floors and buildings above it. The liquefied soil comes to the surface through cracks, and widens them.



FIGURE 12 Cars swallowed by liquefied soil on a road in Christchurch, New Zealand, 2011

Source: © Photography by Mark Lincoln

16.6.8 CASE STUDY: Impact of the Nepal earthquake, 2015

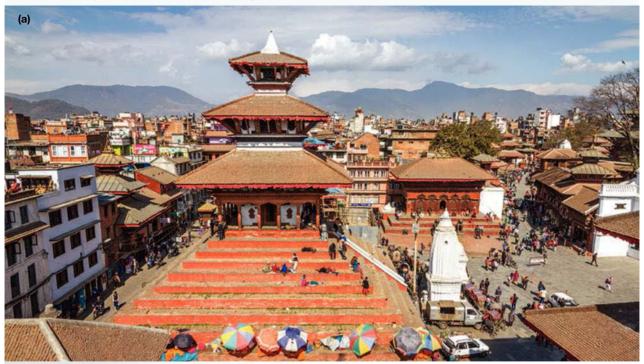
Nearly 9000 people were killed during the 25 April and 12 May earthquakes in Nepal with more than 17 800 injured. Nearly 400 people are still missing. In addition, more than 500 000 houses were destroyed and nearly 270 000 were damaged. Nepal's historic Dharahara Tower collapsed, killing 180 people, and an avalanche at the Mount Everest Base Camp killed 21 people and injured 120. A huge avalanche also occurred in the Langtang Valley, where all the homes were destroyed and 250 people were reported missing. Hundreds of thousands of people were made homeless after buildings were destroyed or had become dangerous as a result of damage.

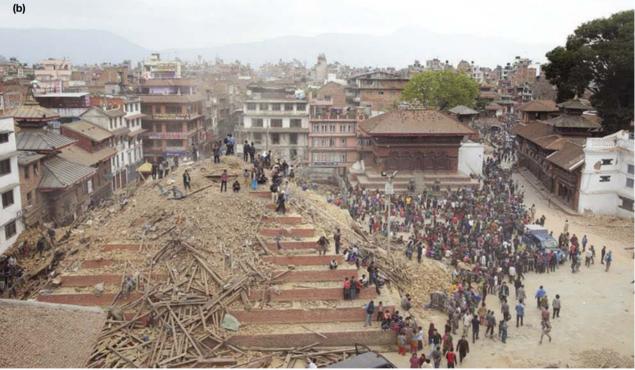
A further 78 people were killed and more than 500 injured in India. In China 25 people were killed and more than 380 people injured, along with 2500 homes destroyed and 24 700 damaged. The earthquake occurred during working hours so many people were outdoors. Had it occurred at night, with more people at home, the number of dead and injured would have been higher.

The economic costs are also huge — it is estimated that damage costs are between US\$4–5 billion as a result of the earthquake and aftershocks. This is disastrous for a very poor country like Nepal.

For some time now, the region around Kathmandu has been known as one of the most dangerous places in the world, in terms of earthquake risk. Apart from earthquakes, other geophysical hazards that occur in Nepal include landslides, avalanches and flash flooding. In addition to its location, Nepal is extremely vulnerable because of its poverty. This means Nepal has poor building standards (many of the buildings were quickly reduced to rubble and dust) and inadequate public health and community systems to support its people in times of crisis. Without this support, clean water, safe food and effective disposal of sewerage cannot be guaranteed. There is also no adequate hospital and first aid response when disasters strike.

FIGURE 13 (a) and (b) Before and after images of Dunbar Square





DISCUSS

Earthquake engineers often say earthquakes don't kill people, collapsing buildings do. Discuss this statement in relation to poor and rich countries. What role should people in rich countries play in helping those in poor countries at risk of these events? [Ethical Capability]

FIGURE 14 Compared to some richer countries, such as Japan and the United States, very few buildings in Nepal are earthquake-proof.





Interactivity Anatomy of a tsunami (int-3111)

Weblinks P- and S-waves

World's biggest tsunami

Liquefaction Sendai tsunami

16.6 INQUIRY ACTIVITIES

- 1. Use the **P- and S-waves** weblink in the Resources tab. What is the difference between the waves? How fast do they travel? How is damage caused by the waves?

 Describing and explaining
- 2. Use an atlas or Google Earth to find the location of Lituya Bay. Draw a map to show the location. Use the World's biggest tsunami weblink in the Resources tab to listen to eyewitness accounts of the event. How does this help give you a sense of the scale of this event?
 Examining, analysing, interpreting
- Use the Liquefaction weblink in the Resources tab to view a video of liquefaction occurring. Then, write a
 paragraph describing what liquefaction is and why it occurs.
 Describing and explaining
- 4. Use the Sendai tsunami weblink in your Resources tab to look at satellite images showing areas before and after the 2011 Japanese tsunami. Choose two locations to draw sketches of before and after, and annotate your sketches to record the changes that have taken place.
 Comparing and contrasting
- Use the Nepal earthquake: before and after photos weblink in the Resources panel and look at more before and after images. Choose one of the before/after images and sketch the after image, providing annotations which show the impact on people and/or the environment.
 Comparing and contrasting

6. Use the Earthquake-vulnerable cities weblink in the Resources tab to read more about cities that are most at risk from earthquakes. Use an atlas to locate these cities. Where are they located in relation to plate boundaries and, in particular, to the Pacific Ring of Fire? Examining, analysing, interpreting

16.6 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

16.6 Exercise 1: Check your understanding

- 1. **GS1** What are the focus and epicentre of an earthquake?
- 2. **GS1** How does an earthquake occur?
- 3. GS1 What does the Richter scale measure? How much more powerful is the magnitude of an earthquake at 7.0 than at 5.0?
- 4. **GS1** List the factors that combine to cause an earthquake or tsunami to turn into a disaster.
- 5. **GS1** List the different impacts that earthquakes and tsunamis can have.
- 6. GS2 Geophysicists and other experts have warned for decades that Nepal was vulnerable to a deadly earthquake. Why was Nepal not better prepared for this event?
- 7. GS2 How does poverty in Nepal increase vulnerability to disasters?
- 8. GS5 What is the relationship between income and disaster risk? Why is the risk of earthquakes and tsunamis higher in poor countries?

16.6 Exercise 2: Apply your understanding

- 1. GS5 Conduct some research to see how Japan has recovered from the 2011 tsunami and then how Nepal has recovered from the 2015 earthquake. How can you account for any differences in the recovery process?
- 2. **GS6** Study **FIGURE 11** in this subtopic and **FIGURE 1** in subtopic 16.2.
 - (a) Describe the *interconnection* between the distribution of earthquakes and tsunamis and the distribution of tectonic plates.
 - (b) Why might Japan experience so many destructive earthquakes and tsunamis?
- 3. **GS2** Study **FIGURE** 6. Use your own words to explain how a tsunami occurs.
- 4. GS2 Study FIGURE 2.
 - (a) In which direction is the Indian Plate moving? Is it moving under or over the Eurasian Plate?
 - (b) Describe the location of the highest intensity shaking. How close was it to the epicentre? To the tectonic plate boundary?
- 5. GS1 Study FIGURE 3. Are the following statements true or false? If they are false, rewrite them to make them true.
 - (a) The earthquake and aftershocks were between 4.0 and 6.0 in magnitude.
 - (b) The furthest earthquake and aftershocks were 100 kilometres apart.
 - (c) The earthquake on 12 May was the same intensity as the earthquake on 25 April.
 - (d) Most of the aftershocks were felt to the east of the main earthquake on 25 April.
- 6. GS5 How does the earthquake event in Nepal support the idea that the Himalayas are a young mountain range that is still forming?
- 7. GS2 Study FIGURE 7. Describe where the most violent shaking occurred as a result of the earthquake. How many plates meet in this region? What impact does this have?
- 8. GS5 Study FIGURE 8.
 - (a) Where in Japan was the greatest intensity felt?
 - (b) What is the population density for Sendai, Tokyo and Niigata? How would this increase the impact of the earthquake?
- 9. **GS6** Study the photo of the Japanese tsunami in **FIGURE 9**.
 - (a) Imagine you are a radio news reporter. Describe what you see and what might be happening to people in the area.
 - (b) Imagine you were a Sendai resident. Describe what you would have done to take care of yourself.
- 10. GS6 Why would most Australians not know what to do if an earthquake occurred?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

16.7 Volcanic mountains

16.7.1 How are volcanoes formed?

A volcano is a cone-shaped hill or mountain formed when molten magma in the Earth's mantle is forced through an opening or vent in the lithosphere. Almost all active volcanoes occur at or near plate boundaries. Some occur where two plates converge, and others occur where the plates are pulling apart, or diverging (see FIGURE 1). There is another group of volcanoes that are formed when plates move over hotspots.

Subduction zones

Some volcanoes are formed when an oceanic plate is pulled underneath a continental plate (see subtopic 16.2). As the crust is forced down, it heats up and becomes magma. It can then rise to the Earth's surface through a magma chamber.

FIGURE 1 Landforms of North, Central and South America (not to scale) Height in metres Alaska Penneue ARCTIC OCEAN 4000 2000 Mt Ranier 4392 m 1000 Mt St Helens 2549 m 500 Juan de Fuca 200 Plate OCEAN Pacific Plate Gulf of California Popocatepel 5452 m Cocs Plate Aconcagua 6960 m Nazca Plate Aconcagua 6960 m Nazca Plate Aconcagua 6960 m Antarctic Antarctic

Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

ATI ANTIC

OCEAN

Volcanoes in rift zones

The longest mountain range in the world is underwater between the African and American continents, and is 56 000 kilometres long. It is called the Mid-Atlantic Ridge, and it is made up of many volcanic mountains. The volcanoes are formed where two plates move away from each other in **rift zones**. The molten lava rises to the surface in the space between the plates, and the largest volcanoes appear above the water as islands. Examples of rift islands are Iceland, the Azores, Ascension Island, Gough Island and Bouvet Island. The rifting, or spreading apart, can occur on land or on the seabed.

The rifting of Iceland

The Mid-Atlantic Ridge passes through Iceland, where the island is splitting in two different areas (see FIGURE 2). This can be seen where Iceland's volcanoes are located, at the point where the North American Plate is drifting to the west and the Eurasian Plate is drifting to the east (see FIGURE 3). New crust is being formed in a rift below the sea, and eventually water from the Atlantic Ocean will fill the widening and deepening gaps between the separated parcels of land.

The Great Rift Valley, Africa

The Great Rift Valley is in Africa (**FIGURE 4**). It is about 5000 kilometres long, and stretches from Syria in the north to Mozambique in the south. The valley varies in width from 30 kilometres at its narrowest point to 100 kilometres at its widest. In some places it is a few hundred metres deep; in others it can be a few thousand metres deep.



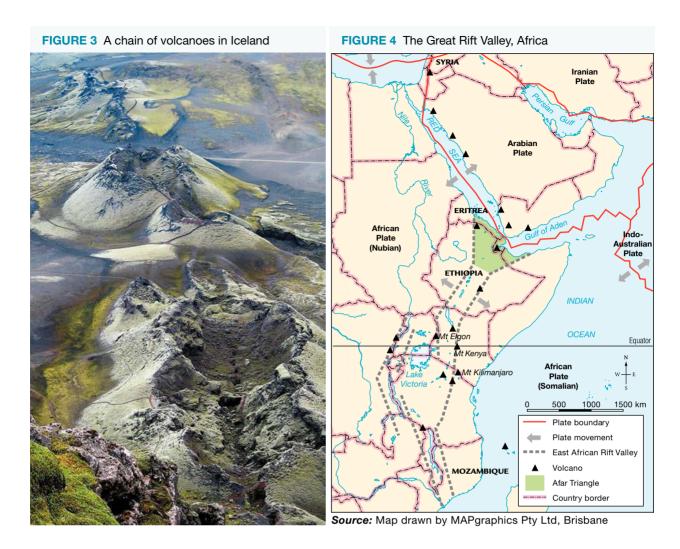
Diverging plate boundary

Movement of plate

Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

The Great Rift Valley was created through separation that began 35 million years ago, when the African and Arabian plates began pulling apart in the northern region. About 15 million years ago, East Africa began to separate from the rest of Africa along the East African Rift. The volcanic activity in this region has produced many volcanic mountains, such as Mount Kilimanjaro, Mount Kenya and Mount Elgon.

As these rifts continue to grow, new ocean waters will flow into the valleys, separating the landmasses.



16.7.2 Volcano hotspots

Although most volcanoes are formed on plate boundaries, some are located in the middle of plates, a long way from plate boundaries. These volcanoes have formed above a hotspot — a single plume of rising mantle. Volcanoes form as the plates slowly move over the hotspot and, over time, a chain of volcanoes can form. Hotspots are found in the ocean and on continents. Examples include the Hawaiian Islands and many of Australia's extinct volcanoes. In Hawaii, the location of the volcanoes gives a clue to the direction and speed of the plate movement.



-Explore more with my**World**Atlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Earthquakes and volcanoes > Hawaii's hot spot

16.7.3 Mount Taranaki, New Zealand

New Zealand's Mount Taranaki is named after the Māori terms tara meaning 'mountain peak' and ngaki meaning 'shining' (because the mountain is covered with snow in winter).

Mount Taranaki is 2518 metres high and is the largest volcano on New Zealand's mainland. It is located in the south-west of the North Island (see FIGURE 5).

Mount Taranaki was formed 135 000 years ago by subduction of the Pacific Plate below the Australian Plate. It is a stratovolcano — a conical volcano consisting of layers of pumice, lava, ash and tephra. Mount Taranaki is symmetrical, looking the same on both sides of a central point. It is the only active volcano in a chain in this region. The other volcanoes were once very large but have been eroded over time.

The summit of Mount Taranaki is a lava dome in the middle of a crater that is filled with ice and snow. The mountain is considered likely to erupt again. There are significant potential hazards from lahars, avalanches and floods. A circular plain of volcanic material surrounding the mountain was formed from lahars (see FIGURE 9) and landslides. Some of these flows reached the coast in the past. The volcano's lower flanks are covered in forest, and are part of the national park. There is a clear line between the park boundary and surrounding farmland.

FIGURE 5 Location of Mount Taranaki on the North Island of New Zealand



Source: Map drawn by Spatial Vision

FIGURE 6 Mount Taranaki has a near-perfect conical shape.



FIGURE 7 Aerial photo of Mount Taranaki



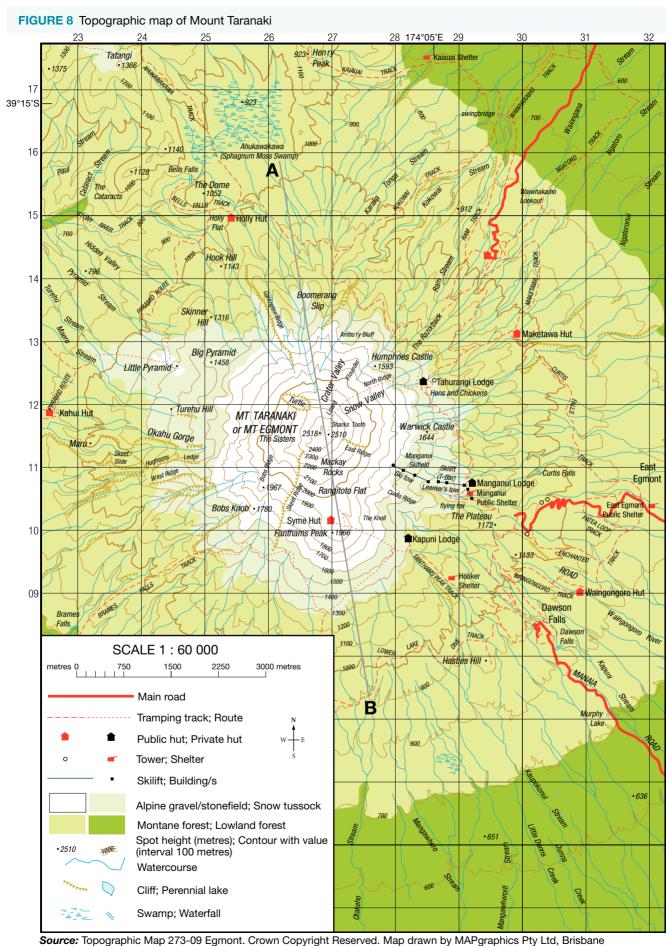




Mt Taranaki Live



Digital document Topographic map of Mount Taranaki (doc-32264)

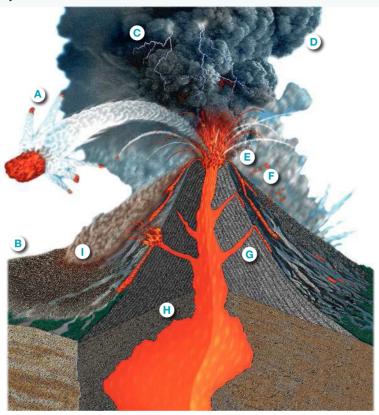


16.7.4 Volcanic eruptions

Volcanic mountains are formed when magma pushes its way to the Earth's surface and then erupts as lava, ash, rocks and volcanic gases. These erupting materials build up around the vent through which they erupted.

A volcanic eruption can be slow or spectacular, and can result in a number of different displays (see **FIGURE 9**).

FIGURE 9 The anatomy of a volcano



- A fragment of lava greater than 64 millimetres in diameter is called a volcanic bomb. They are often solid pieces of lava from past eruptions that formed part of the cone.
- B A pyroclastic flow is a superheated avalanche of rock, ash and lava that rushes down the mountain with devastating effects. The flow can travel at up to 240 kilometres per hour and reach temperatures of 800 °C. When Mount Pelée erupted in 1902, on the island of Martinique in the Caribbean, a pyroclastic flow covered the town of Saint-Pierre, killing all but two of the town's 30 000 inhabitants.
- c Lightning is often generated by the friction of swirling ash particles.
- As rock is pulverised by the force of the eruption, it becomes very fine ash, and is carried by wind away from the crater as an ash cloud. Volcanic ash may blanket the ground to a depth of many metres. In the eruption of Mount Vesuvius in 79 CE, volcanic ash completely covered two large towns: Pompeii and Herculaneum.
- A volcanic cone is made up of layers of ash and lava from previous eruptions. If the volcano has not erupted for thousands of years (i.e. is dormant), these layers will be eroded away.
- F Lava may be either runny or viscous, and can flow for many kilometres before it solidifies, thereby building up the Earth's surface.
- G Pressure may force magma through a branch pipe or side vent. In the eruption of Mount St Helens, United States, in the 1980s, the side of the mountain collapsed and the side vent became the main vent.
- (H) Where two plates move apart, molten rock from the mantle flows upward into a magma chamber. More rock is melted and erupts violently upwards. Magma is generally within the temperature range of 700 °C to 1300 °C.
- When pyroclastic flows melt snow and ice, and mix with rocks and stones, a very wet mixture called a lahar can form. Lahars can flow quickly down the sides of volcanoes and cause much damage. One lahar that formed in 1985 on Nevado del Ruiz volcano in Colombia, travelled at up to 50 kilometres per hour and was up to 40 metres high in some places. A wall of mud, water and debris travelled 73 kilometres to the town of Armero, devastating it. More than 23 000 people died that night and 5000 homes were destroyed.

16.7.5 Volcanic shapes

Volcanoes come in a variety of shapes and sizes, forming different landforms. There are four main types and each depends on:

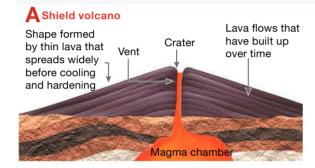
- the type of lava that erupts
- the amount and type of ash that erupts
- the combination of lava and ash.

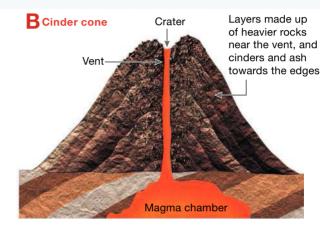
Lava that is rich in silica (a mineral present in sand and quartz) is highly viscous and is thick and slow moving. If the lava is low in silica, it tends to be very runny and may flow for many kilometres before it cools and hardens to become rock. Volcanoes that erupt runny lava tend to have broad, flat sides (shield volcanoes). Those that erupt thick, treacle-like lava tend to have much steeper sides (dome volcanoes).

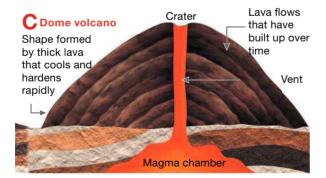
Heavy ash material, like volcanic bombs, settles close to the crater while lighter ash is carried further away. Volcanoes that are built up through falls of ash are steep-sided cinder cones.

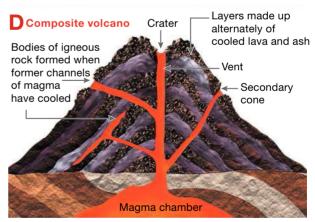
The most common type of volcano is one built up of both ash and lava; this is called a composite volcano.

FIGURE 10 Four volcanic landforms









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Deepen your understanding of this topic with related case studies and questions.

• Investigating Australian Curriculum topics > Year 8: Landforms and landscapes > Lahars

16.7 INQUIRY ACTIVITIES

1. Go to the **Hawaii's hotspot** weblink in the Resources tab and explain how hotspot volcanoes form.

Describing and explaining

2. Use an atlas to find the Cotopaxi volcano. In which country is it located? How high is it?

Describing and explaining

- 3. Use an atlas or Google Earth to locate the islands on the Mid-Atlantic Ridge. Give the latitude and longitude for three locations. Describe the *interconnection* between the location of the ridge and the location of islands and volcanoes.

 Describing and explaining
- 4. Use the Mt Taranaki Live weblink in the Resources tab to view Mount Taranaki.

Examining, analysing, interpreting

5. Use the internet to find pictures of volcanic landforms and materials. These include crater lakes, geysers, calderas, fields of ash deposits, volcanic plugs, lava tubes, hummocks and pumice. You could also find pictures of the two types of lava: a'a and pahoehoe. Use your pictures to put together a field guide to volcanic landforms. Each page should contain a picture of the landform, a brief description and a *place* where it could be found — sometimes they are tourist attractions.

Classifying, organising, constructing

16.7 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

16.7 Exercise 1: Check your understanding

- 1. **GS2** Refer to an atlas map of Africa and look at the shape of the island of Madagascar. Try to imagine fitting this island back into the mainland. Using plate tectonic terms, write a paragraph to describe how Madagascar's location has **changed** over time.
- 2. **GS2** Describe the *changes* occurring that are causing volcanoes to form in:
 - (a) the Great Rift Valley
 - (b) Iceland.
- 3. GS2 How is the scale of the changes happening in Iceland different from the scale of change happening in the Great Rift Valley?
- 4. GS2 Explain how the different shapes of volcanoes shown in FIGURE 10 are the results of different materials being ejected.
- 5. **GS1** Where is Mount Taranaki located?
- 6. **GS1** What is a stratovolcano?
- **7. GS2** Mount Taranaki receives between 3200 millimetres and 6400 millimetres of rainfall each year. How would this contribute to the shape of this landform?

16.7 Exercise 2: Apply your understanding

- 1. **GS2** Refer to **FIGURES 2** and **3**. Explain why a chain of volcanoes, like the one in the photograph, forms in Iceland. What is happening to the plates?
- 2. **GS6** Draw what you imagine Iceland will look like many thousands of years in the future after further rifting. Provide new names for each of the smaller islands. In which direction, and towards which continent, will each island drift? Describe key *changes*.
- 3. **GS6** Draw a series of sketches to show what you predict will happen to the African landmass as the Great Rift Valley continues to rift. Include a map of Africa showing the *change* in shape that might occur. You need to annotate your sketches to justify the predictions you have made.
- 4. GS5 Refer to FIGURE 8.
 - (a) What is the grid reference for the spot height of Mount Taranaki?
 - (b) Calculate the number of private huts and public huts.
 - (c) Name the ski field.
 - (d) How many ski tows and lifts are there at the ski field? Calculate the length of each.
 - (e) Name and give the grid reference of a lodge in which skiers could stay.
 - (f) Name the other two lodges on the map.
 - (g) Bushwalking is a popular activity. How many huts are on the map?

- 5. GS2 Describe evidence from the aerial photo in FIGURE 7 that the national park has protected forests around the volcano. (See the 'Interpreting an aerial photo' SkillBuilder in subtopic 16.8.)
- 6. GS6 Use FIGURES 6, 7 and 8 to describe where you think lava would flow if Mount Taranaki erupted. Describe the potential *changes* to the human and natural *environment*.
- 7. GS6 Refer to FIGURE 9.
 - (a) Describe, in detail, the *changes* to the *environment* that volcanic eruptions can cause.
 - (b) Which changes would impact on a small scale and which would impact on a larger scale?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

16.8 SkillBuilder: Interpreting an aerial photo

What are aerial photos?

Aerial photographs are those that are taken from above the Earth from an aircraft. **Oblique aerial photos** are those taken from an angle from an aircraft.

Vertical aerial photos are taken from directly above; that is, looking straight down onto objects.

Aerial photos can reveal details that are not recorded on maps. It is easy to see landforms with distinct shapes, different landscapes, land uses, specific places and spatial patterns of the environment.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





Video eLesson SkillBuilder: Interpreting an aerial photo (eles-1654)

Interactivity SkillBuilder: Interpreting an aerial photo (int-3150)

16.9 How do volcanic eruptions affect people?

16.9.1 The worst volcanic eruptions

Volcanic eruptions both create and destroy landscapes. Most volcanic eruptions do not strike randomly but occur in specific areas, such as along plate boundaries. In some places there are high concentrations of people living near volcanoes.

Most of the world's active above-sea volcanoes are located near convergent plate boundaries where subduction is occurring, particularly around the Pacific basin. This is also the location of settlements across many countries. Over many years, volcanic eruptions have caused deaths and great damage.

How can the worst volcanoes be measured? Should it be based on the number of people killed or the cost of the damage and destruction? Or should it be the size of the explosion?

TABLE 1 The worst volcanoes based on number of deaths

| Volcano | Location | Date | Number of deaths |
|----------------------|-------------|------------------------------|------------------|
| Mt Tambora | Indonesia | 5–10 April 1815 | 71 000+ |
| Mt Pelee | West Indies | 25 April-8 May 1902 | 30 000 |
| Mt Krakatoa | Indonesia | 26–28 August 1883 | 36 000+ |
| Nevado del Ruiz | Colombia | 13 November 1985 | 23 000 |
| Mt Unzen | Japan | 1792 | 12 000–15 000 |
| Mt Vesuvius | Italy | AD 24 April 79 | 13000+ |
| Laki Volcanic System | Iceland | 8 June 1783–February 1784 | 9350 |
| Mt Kelud | Indonesia | 1586 | 10 000 |
| Mt Kelud | Indonesia | 19 May 1919 | 5110 |

TABLE 2 The worst volcanoes based on economic impact

| Volcano | Location | Date | Estimated loss (million US\$) |
|-----------------------|------------------|------|----------------------------------|
| Nevado del Ruiz | Colombia | 1985 | 1000 |
| Mount St Helens | USA | 1980 | 860 |
| Calbuco | Chile | 2015 | 600 |
| Mount Pinatubo | Philippines | 1991 | 211 |
| Galunggung | Indonesia | 1982 | 160 |
| Tungurahua | Ecuador | 2006 | 150 |
| Gamalama | Indonesia | 1983 | 149 |
| El Chichon | Mexico | 1982 | 117 |
| Rabaul | Papua New Guinea | 1994 | 110 |
| Puyehue-Cordon Caulle | Chile | 2011 | 104 |

Source: EM-DAT International Disaster Database, January 2016 data

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Deepen your understanding of this topic with related case studies and questions.

• Investigate additional topics > Earthquakes and volcanoes > Mount Vesuvius

16.9.2 Why do people live near volcanoes?

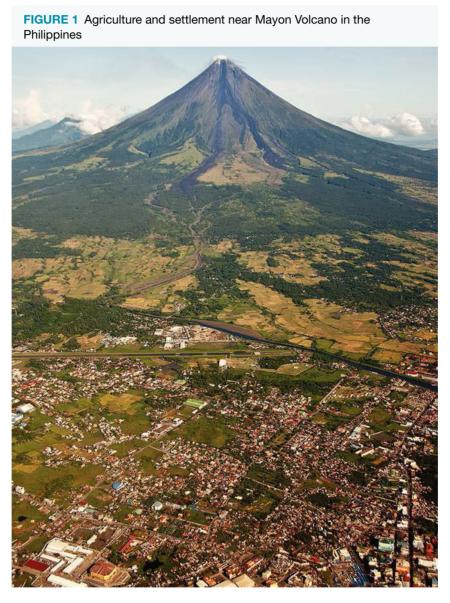
Geoscience Australia (a national organisation that provides geographic information to government) estimates that 180 million people in the Asia–Pacific region live within 50 kilometres of a dangerous volcano. There is also a strong relationship between the location of volcanoes and resources such as fertile soils, ore deposits and **geothermal energy**.

Fertile soils

Some of the most fertile soils on Earth have come from volcanic deposits of ash that is rich in nutrients, and from the physical breakdown of volcanic rocks over thousands to millions of years.

Fertile volcanic soils have been very important for rice growing in Japan and large areas of the Indonesian archipelago, especially on the islands of Java and Bali. There is also prime agriculture located in regions of rich soil; for example, around Naples, southern Italy, which generally has poor soils.

Another region of fertile volcanic soil is the agricultural area of the North Island of New Zealand. Volcanic loam in this area helps produce crops and pasture. Other regions include the western plains of the United States and the Hawaiian Islands. There is a small percentage of rich basalt soils in Australia, including the volcanic plains in Victoria, the north coast of New South Wales, the Scenic Rim of south-east Queensland, parts of Tasmania, and the Atherton Tablelands in north Queensland.



Geothermal energy

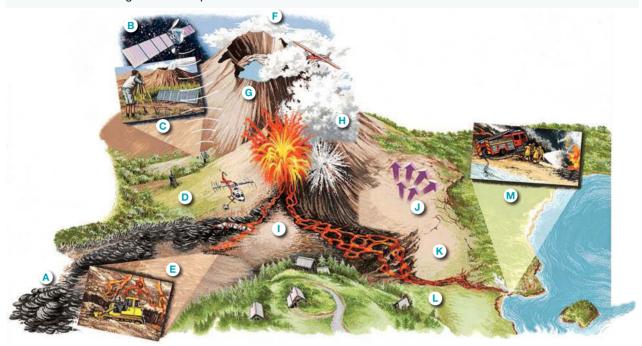
Geothermal energy can be used in locations where there are active or dormant volcanoes still producing heat deep under the Earth's surface. High-temperature hot springs and geysers produce steam, which can be used to drive turbines and generate electricity. At lower temperatures, the hot water can be used for home heating or to develop hot or warm springs at resort spas. Over one quarter of Iceland's electricity is generated from geothermal heat, and it provides heating for more than 85 per cent of its homes. The other main countries that make use of geothermal heat are the United States (in California), Italy, New Zealand and Japan.

16.9.3 How to prepare for volcanic eruption

Can volcanic eruptions be predicted? What are the warning signs? How can the risk of death, injury and damage be reduced?

With about 500 million people living close to active volcanoes, it is important to watch for changes and try to predict an eruption, hopefully giving nearby residents time to evacuate.

FIGURE 2 Predicting volcanic eruptions



- A Geologists study records of past eruptions by examining flow patterns of mud, lava and ash. From these patterns they can draw danger maps that pinpoint dangerous areas.
- B Satellites monitor changes in gas emissions and in the shape of the volcano. Specialised equipment can also measure heat increases.
- © Seismographs can detect the small earthquakes caused by rising magma. These are linked by transmitters to computers so that scientists can quickly detect changes.
- Sound-measuring equipment was used to accurately predict an eruption in Mexico in 2000.
- In 1983, an attempt was made to divert a lava flow away from the towns of Rocco and Rogalna on Mount Eina. A channel was dug and barriers erected. The lava slowed and solidified before reaching the towns.
- F Samples of gas can be collected and analysed. An increase in the amount of sulfur dioxide (SO₂) may indicate that magma is moving upwards.
- G A rise in the temperature of a crater lake often precedes an eruption.
- (H) It has been suggested that explosives could be used to breach crater walls, sending lava away from towns. This was first tried in Hawaii in 1935.
- Helicopters have been used to drop concrete blocks in front of flowing lava.
- As magma rises and collects in the magma chambers, the cone may bulge outwards, warning of possible eruptions. Sensitive tiltmeters on the ground and on satellites can detect this bulging.
- K Any bulging can also cause tiny cracks to appear.
- Buildings in areas prone to ash eruptions should have steeply sloping roofs so ash does not accumulate.
- M In 1973, sea water was sprayed onto lava that was threatening a town in Iceland. The lava cooled quickly and solidified.



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Deepen your understanding of this topic with related case studies and guestions.

Investigate additional topics > Earthquakes and volcanoes > Mount Vesuvius

16.9 INQUIRY ACTIVITIES

1. (a) Use the **Timeline** weblink in the Resources tab to create a timeline of the worst volcanic eruptions, based on the information in TABLES 1 and 2. Include images from the internet.

Classifying, organising, constructing

- (b) Study TABLES 1 and 2. Are there any interconnections (relationships) between the data (deaths and economic losses) and how rich or poor a country is? You may like to complete this as a class or group activity. Examining, analysing, interpreting
- 2. Watch the video about **Mount Vesuvius** and look at the information on this volcano in *myWorld Atlas*.
 - (a) Where is Mount Vesuvius located? Which towns were destroyed by the volcano in AD 79?
 - (b) How many people live in this volcano's immediate region?
 - (c) Will all the monitors provide enough warning of an eruption for the people of Naples? Explain.
 - (d) What do the scientists in this video predict for a future eruption?
 - (e) What is the red zone? How large do the scientists think it should be?

Examining, analysing, interpreting

16.9 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

16.9 Exercise 1: Check your understanding

- 1. **GS1** Make a list of the advantages and disadvantages of living near a volcano.
- 2. GS2 Is geothermal energy a renewable energy? Explain. How is this energy related to volcanic activity?
- 3. GS3 Refer to an atlas map showing world population density, settlements and the location of volcanoes. Write two statements that describe the relationship between population density, settlements and volcano locations. How does this relate to people's risk?
- 4. **GS1** What data is collected to decide which volcanic events are the worst?
- 5. GS1 What is volcanic loam and where is it found?

16.9 Exercise 2: Apply your understanding

1. GS4 Draw a table like the one below, summarising the measures required for living with volcanoes.

| Predicting eruptions | Preparing for eruptions | Lessening the effects of eruptions |
|----------------------|-------------------------|------------------------------------|
| | | |
| | | |

- (a) Use it to help you classify the information in FIGURE 2.
- (b) Which of these measures do you think are most effective? Give three reasons for your answer.
- 2. GS4 Draw a photo sketch of FIGURE 1 and label the following: volcano; volcanic plain; lava flows; farmland; settlement.
- 3. GS6 What is geothermal energy? What do you think could be some of the benefits of using this type of energy?
- 4. GS2 How can seismographs be used to warn of a possible volcanic eruption?
- 5. GS5 Study FIGURE 2. List the different techniques that have been used to try to stop the flow of lava. Which technique do you think is the most effective and why?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

16.10 Thinking Big research project: Earthquakes feature article



SCENARIO

Congratulations! You have been promoted to feature writer of the Weekly Rattle, a leading geographical magazine. Your first brief is to write a feature about the strongest earthquakes that occur in the world over a one-week period.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources



projectsPLUS Thinking Big research project: Earthquakes feature article (pro-0171)

16.11 Review



16.11.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

16.11.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31350)

Crossword (doc-31351)



Interactivity Mountain landscapes crossword (int-7598)

KEY TERMS

altitude height above sea level

convection current a current created when a fluid is heated, making it less dense, and causing it to rise through surrounding fluid and to sink if it is cooled; a steady source of heat can start a continuous current flow converging plates a tectonic boundary where two plates are moving towards each other cultural relating to the ideas, customs and social behaviour of a society

divergent plates a tectonic boundary where two plates are moving away from each other and new continental crust is forming from magma that rises to the Earth's surface between the two

epicentre the point on the Earth's surface directly above the focus of an earthquake

ethnic minority a group that has different national or cultural traditions from the main population

fault an area on the Earth's surface that has a fracture, along which the rocks have been displaced

focus the point where the sudden movement of an earthquake begins

geothermal energy energy derived from the heat in the Earth's interior

hotspot an area on the Earth's surface where the crust is quite thin, and volcanic activity can sometimes occur, even though it is not at a plate margin

indigenous peoples the descendants of those who inhabited a country or region before people of different cultures or ethnic origins colonised the area

landslide a rapid movement of rocks, soil and vegetation down a slope, sometimes caused by an earthquake or by excessive rain

liquefaction transformation of soil into a fluid, which occurs when vibrations created by an earthquake, or water pressure in a soil mass, cause the soil particles to lose contact with one another and become unstable; for this to happen, the spaces between soil particles must be saturated or near saturated **lithosphere** the crust and upper mantle of the Earth

Pangaea the name given to all the landmass of the Earth before it split into Laurasia and Gondwana rift zone a large area of the Earth in which plates of the Earth's crust are moving away from each other, forming an extensive system of fractures and faults

seismic waves waves of energy that travel through the Earth as a result of an earthquake, explosion or volcanic eruption

volcanic loam a volcanic soil composed mostly of basalt, which has developed a crumbly mixture

16.4 SkillBuilder: Drawing simple cross-sections

16.4.1 Tell me

What are cross-sections?

A cross-section is a side-on, or cut-away, view of the land as if it had been sliced through by a knife. It is like taking a vertical slice of the landscape and looking at it side-on. Cross-sections provide us with an idea of the shape of the land. We can use contour lines on topographic maps to draw a cross-section between any two points. Cross-sections also indicate heights at a range of points.

Why are cross-sections useful?

Cross-sections help us visualise the shape of the land between any two points. They are useful as sometimes it is difficult to visualise what topography (shape of the land) is like when looking at a topographic map. Also, they help us determine if a landform will block the view of other landforms; for example, if a high hill obscures the view of the valley beyond and the lower range of hills. Cross-sections are also useful for:

- showing the changing shape of the land
- planning a walk or hike in a mountainous area
- planning constructions, such as houses, on sloping blocks.

Area that cannot be seen by the observer

Observer

A good cross-section has:

- been drawn in pencil
- ruled axes
- labelled axes
- used small dots

- · created a smooth curve
- labelled features, if necessary
- a title.

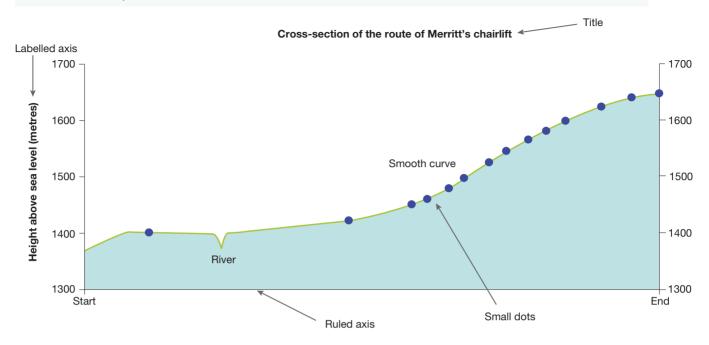
16.4.2 Show me

How to complete a cross-section

You will need:

- a topographic map of the region being considered
- a piece of paper with a straight side for marking the contours
- another sheet of paper, or graph paper, to draw the cross-section on
- a light grey pencil
- a ruler
- an eraser.

FIGURE 2 A completed cross-section of Merritt's chairlift route



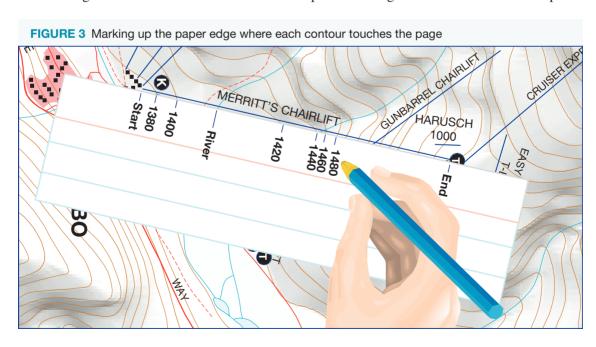
Procedure

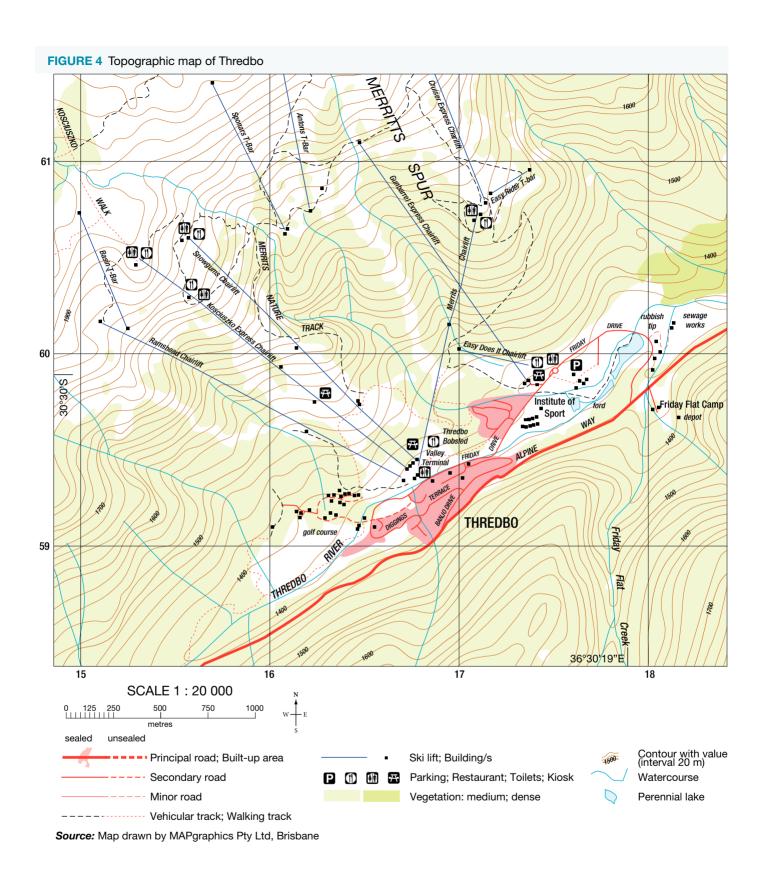
Step 1

Determine the two points between which you want to create a cross-section. Your paper edge must be long enough to go between these points.

Step 2

Place the straight edge of a piece of paper between the two points. Mark the two extremities of your cross-section on the edge. Label these 'start' and 'end' or use place names/grid references from the map.





Step 3

Mark where each contour line touches the edge and write beside the mark on the paper the height of the contour line. It may be necessary to lift the page edge or follow the contour line to find a number. Hold your page firmly and lift the edges to prevent moving your page off the line of the cross-section. When you have completed all the contour markings you can lift the page away from the map.

Step 4

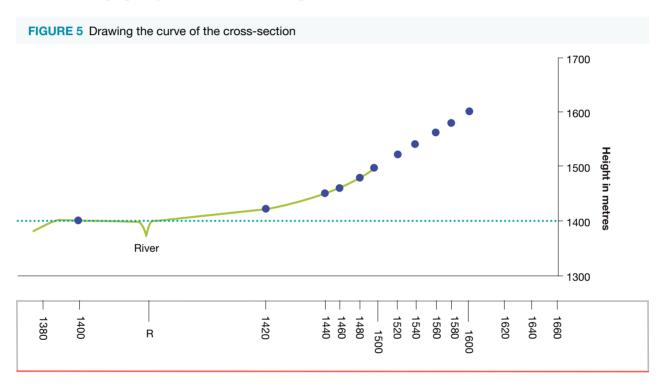
On another sheet of paper, use your ruler to draw an axis onto which to transfer your markings. The horizontal (base) line should be as long as your cross-section from 'start' to 'end'. The vertical scale needs to give a realistic impression of the slopes and landforms. For this exercise, use one centimetre to represent 100 metres.

Step 5

Place the marked edge of the paper along the base axis. At each contour marking, find the appropriate height according to the vertical scale and put a small dot directly above the contour marked on the edge of the paper.

Step 6

Join the dots with a smooth line to show the slope of the land. Notice that a notch has been used to show where a river is located on the cross-section, and the river has been labelled. Other features can be marked similarly when preparing the cross-section, if required.



Step 7

Complete the cross-section with the geographic conventions of a title and labelling of the axis. Shade the area below the line of your cross-section.



16.4.3 Let me do it

Complete the following activities to practise this skill.

16.4 ACTIVITIES

- 1. Using the 'Topographic map of Mt Taranaki' resource (**FIGURE 8** in subtopic 16.7), complete a cross-section along the line A–B. Use the checklist to ensure you have correctly completed all aspects of the task.
- 2. Use your cross-section to answer the following questions.
 - (a) On your cross-section, which side of Mount Taranaki would be the easiest to walk up? Why?
 - (b) How high is Mount Taranaki at its peak?
 - (c) How many watercourses are shown on the cross-section?
 - (d) Describe the vegetation cover of Mount Taranaki along the cross-section.
 - (e) What type of land feature is Mount Taranaki?

Checklist

I have:

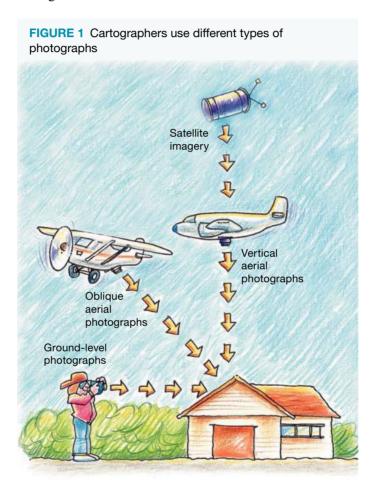
- used a pencil
- ruled the axis
- used small dots
- created a smooth curve
- labelled the axis
- included a title.

16.8 SkillBuilder: Interpreting an aerial photo

16.8.1 Tell me

What are aerial photos?

Aerial photographs are those that are taken from above the Earth from an aircraft. Aerial photos, either oblique or vertical, record how a place looks at a particular moment in time. Greater detail of a place can be captured than in a photo taken from ground level. Some aerial photos are also satellite compilations; that is, created by a number of images transmitted from the satellite.



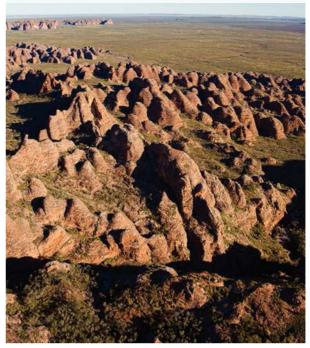
Vertical aerial photos are taken from directly above; that is, looking straight down on objects. Specially equipped aircraft take these photos. These photos are often referred to as a 'bird's eye' view. This is the view from which maps are drawn. When you look at one of these photos, there is a similarity to a plan drawing. For example, Katherine Gorge in **FIGURE 2** is so deep and narrow that it appears as a thin line 'snaking' through the rock formation.

Oblique aerial photos are those taken from an angle from an aircraft. These photos show the height and shape of objects better, but some of the objects in the background can be hidden. Objects in the foreground appear larger than those in the background. For example, in the oblique aerial photograph in **FIGURE 3** showing rock formations in Purnululu National Park in the Kimberley region of Western Australia, the sandstone domes appear larger in the foreground than in the background.

FIGURE 2 Vertical aerial photograph of Katherine Gorge



FIGURE 3 Oblique aerial photo of rock formations in Purnululu National Park



Source: © MAPgraphics Pty Ltd, Brisbane

Why are aerial photos useful?

Aerial photos can reveal details that are not recorded on maps. They make it easier to see landforms with distinct shapes, different landscapes, land uses, specific places and spatial patterns of the environment. Aerial photos from different time periods can show how a place has changed over time (see **FIGURE 4**).

FIGURE 4 Satellite images of Banda Aceh, Indonesia (a) before, (b) two days after and (c) four years after the tsunami on 28 December 2004







Source: Geoimage Pty Ltd © DigitalGlobe 2009

Interpretation of aerial photos provides a rich source of data for understanding the environment. We can obtain much information about a place by carefully analysing and interpreting an aerial photograph. We also need to be able to describe aerial photo to others. Some groups that use aerial photos are:

- urban developers
- firefighters
- search and rescue organisations

- transport authorities
- agronomists (people who manage land and crops).

Interpreting an aerial photograph involves:

- identifying key features by recognising elements such as shapes, colours, patterns and textures
- describing the main aspects in detail.

16.8.2 Show me

How to interpret a vertical aerial photo

You will need:

• a vertical aerial photo.

Model

The small Australian country town shown in **FIGURE 5** is predominantly of a rectangular shape with a grid road system. A major road becomes a divided road as it passes through the town centre. Beside this road is found the main shopping strip. The houses are on quite large blocks of land and most gardens have trees. Backyard swimming pools are scarce. The local bowling club can be found in the south-east of town. There appears to be some expansion of the town toward the west. This aerial photograph was taken either in summer when the land is dry or the town is in a low rainfall environment.

FIGURE 5 Vertical aerial photograph



Source: © Aerial Impressions

Procedure

To identify features on an aerial photograph, such as that in **FIGURE 5**, you need to apply the elements of interpreting an aerial photograph — shapes, size, tone, patterns and texture.

Step 1

Firstly, let's consider 'shape' and 'size'. Objects from a vertical viewpoint have obvious shapes. Buildings appear as blocks (you are looking at the roof only). Small blocks are houses; larger blocks are factories if a number are grouped together; single, larger blocks are generally public buildings such as schools, halls and shopping centres. Oval or round shapes are sporting grounds/tracks. Can you imagine a golf course from above? Its size is large; its shape indicates green grass and rows of trees dividing the fairways. Look around the aerial photograph in **FIGURE 5** and identify the trees in the median strip of the major road.

Step 2

'Texture' and 'tone' are gained from the objects themselves in the course of the photography. Texture indicates whether the object has a degree of smoothness or whether it is rough. A mown oval will appear as 'smooth and green'; a forest will appear as 'lumpy and various greens' according to the size and species of trees in the forest; farmland sown to different crops and with some land ploughed will appear as a mosaic of colours.

Tone is the reflection of light from objects to the camera.

- Water glistens when clear, but appears brown when in flood.
- The deeper the water, the darker the colour.
- Sealed highways reflect light in comparison to the dirt of rural tracks. **FIGURE 5** shows a range of different sized and surfaced roads.
- Sandy beaches glow a cream colour compared to the dark colour of bare soil.

Step 3

'Pattern' is what a geographer delights in observing, as they try to understand the world around them. This involves discovering key patterns in the aerial photograph. Towns generally have a series of roads on a grid pattern. Rivers, as a natural feature, wind their way through an environment. Irrigation channels and railway lines built by humans appear as straight lines. **FIGURE 5** shows how readily the boundary can be identified in this rural environment.



16.8.3 Let me do it

Complete the following activities to practise this skill.

16.8 ACTIVITIES

- 1. Study the vertical aerial photo of Villarrica volcano, Chile (FIGURE 6). Use the steps in the 'Show me' section to identify key shapes, sizes, patterns and textures. Expand the size of this aerial photo and, using the Paint program (or similar software), label the following features:
 - · the central vent
 - snow covered area
 - mud and/or lava flows
 - lakes
 - barren land
 - forested areas
 - · a coastal settlement.

FIGURE 6 Villarrica volcano, Chile



Source: © NASA Earth Observatory image by Jesse Allen and Robert Simmon, using EO-1 ALI data provided courtesy of the NASA EO-1 team.

- 2. Apply your skills in interpreting aerial photos to answer the following questions.
 - (a) Why do you think the mountain peak is covered in snow?
 - (b) What is the source of the water in the lakes?
 - (c) Suggest why some of the land is bare in the aerial photo.
 - (d) How do you know that small areas of land near the base of the volcano are used for agriculture?
 - (e) By its shape, what type of volcano is Mount Villarrica?
- 3. Write a detailed description of the aerial photograph, including your interpretation of the shapes, sizes, tones, patterns and textures in the image. Use the checklist to ensure you have covered all aspects of this task.

Checklist

I have:

- interpreted shapes, sizes, tones, patterns and textures on a vertical aerial photograph
- written a detailed description of the vertical aerial photograph.

16.10 Thinking Big research project: Earthquakes feature article

Scenario

Congratulations! You have been promoted to feature writer of the *Weekly Rattle*, a leading geographical magazine. Your first brief is to write a feature about the strongest earthquakes that occur in the world over a 1-week period.

Task

Your audience includes very keen geographers and earth scientists and they like to have detailed information about earthquakes. You work in a team of three with two researchers to help you. You need the following information to write your feature article:

- a spreadsheet recording the following information for each earthquake over a magnitude of 4:
 - date of earthquake
 - · country location
 - latitude and longitude for each location
 - earthquake depth
- a map of the location of the earthquakes
- a special case study of all earthquakes that occur in Australia in the same week
- a selection of photos showing the places where the earthquakes occurred
- a picture of a seismogram for one of the Australian earthquakes
- text to describe the location and severity of the earthquakes during one week – include largest, deepest and most shallow
- description of the earthquakes in Australia for the same week all magnitudes.



- Open the ProjectsPLUS application for this topic. Click the 'Start Project' button to set up your project group. Working in groups of three will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to your Research Forum. This is where the creation of your article begins.
- Use the weblinks provided in the Media Centre each day over one week to record the earthquakes that occur over a magnitude of 4.



- Your group will need to research the information listed in the task divide the tasks amongst you and add your findings to the Research Forum.
- Complete the earthquake spreadsheet. You can use the one supplied in the Media Centre.
- Create a world map showing the location of the earthquakes recorded in your spreadsheet. Download the blank world map from the Media Centre.
- Choose some locations to conduct a photo search you may find news services that carry images of the event. Select appropriate photos for your selected earthquake.
- When you have gathered all your information, you can begin writing your article.
- Once your article is complete, your researchers can design the layout of your article; research ideas for the design elements using the weblinks provided.
- Proofread your article and then submit it to your teacher for assessment and feedback.





ProjectsPLUS Earthquake feature article (pro-0171)

16.11 Review

16.11.1 Key knowledge summary

16.2 How mountains are formed

- The earth is made up of continental plates that are constantly moving slowly.
- Some plates converge; others diverge and others again slide past one another.
- This tectonic activity (moving plates) is a process for forming mountains.
- Mountains are classified by what they look like and how they were formed.
- The most common formations are fold mountains.
- Other mountain formations include fault-block, dome and plateau.

16.3 The world's mountains and ranges

- Mountains are found on every continent on Earth.
- There are major chains of mountains mountain ranges on all continents.
- Vegetation, climate and weather change as altitude in mountains increase.

16.5 How people use mountains

- Mountains can be remote but often support low population densities.
- Specific mountain landforms are sacred and special places to indigenous and other groups of people.

16.6 Earthquakes and tsunamis

- Earthquakes are a common occurrence each day across the Earth.
- There is a strong relationship between the location of plate boundaries (weaknesses in the Earth's crust) and the location of earthquakes.
- A tsunami can result if a large earthquake occurs on the ocean floor.
- Earthquakes and tsunamis can affect people and result in deaths, injuries and damage to homes and infrastructure.
- The impact of the same magnitude earthquake can vary depending on a country's level of income.
- The environment can be affected through landslides, erosion and liquefaction.

16.7 Volcanic mountains

- Volcanoes are formed when molten magma in the Earth's mantle is forced through an opening in the Earth's surface.
- Volcanoes can be formed in rift valleys and over hotspots.
- Mount Taranaki is the largest volcano on New Zealand's mainland, on the North Island.
- Mount Taranaki is a dormant stratovolcano that is likely to erupt in the future.
- Volcanic mountains form when magma erupts to the Earth's surface.
- The shapes and sizes of volcanic landscapes depend on the type of lava, the amount of ash and the speed of the eruption.

16.9 How do volcanic eruptions affect people?

- Volcanic eruptions can destroy landscapes and kill people.
- Large numbers of people across the world live near volcanoes because of the location of fertile soils, ore deposits and geothermal energy.

16.11.2 Reflection

Complete the following to reflect on your learning.

16.11 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Magma, water and tectonic plates - can they really move mountains?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.





eWorkbook Reflection (doc-31350)

Crossword (doc-31351)



Interactivity Mountain landscapes crossword (int-7598)

KEY TERMS

altitude height above sea level

convection current a current created when a fluid is heated, making it less dense, and causing it to rise through surrounding fluid and to sink if it is cooled; a steady source of heat can start a continuous current flow converging plates a tectonic boundary where two plates are moving towards each other cultural relating to the ideas, customs and social behaviour of a society

divergent plates a tectonic boundary where two plates are moving away from each other and new continental crust is forming from magma that rises to the Earth's surface between the two

epicentre the point on the Earth's surface directly above the focus of an earthquake

ethnic minority a group that has different national or cultural traditions from the main population

fault an area on the Earth's surface that has a fracture, along which the rocks have been displaced

focus the point where the sudden movement of an earthquake begins

geothermal energy energy derived from the heat in the Earth's interior

hotspot an area on the Earth's surface where the crust is quite thin, and volcanic activity can sometimes occur, even though it is not at a plate margin

indigenous peoples the descendants of those who inhabited a country or region before people of different cultures or ethnic origins colonised the area

landslide a rapid movement of rocks, soil and vegetation down a slope, sometimes caused by an earthquake or by excessive rain

liquefaction transformation of soil into a fluid, which occurs when vibrations created by an earthquake, or water pressure in a soil mass, cause the soil particles to lose contact with one another and become unstable; for this to happen, the spaces between soil particles must be saturated or near saturated

lithosphere the crust and upper mantle of the Earth

Pangaea the name given to all the landmass of the Earth before it split into Laurasia and Gondwana rift zone a large area of the Earth in which plates of the Earth's crust are moving away from each other, forming an extensive system of fractures and faults

seismic waves waves of energy that travel through the Earth as a result of an earthquake, explosion or volcanic eruption

volcanic loam a volcanic soil composed mostly of basalt, which has developed a crumbly mixture

17 Rainforest landscapes

17.1 Overview

We can plant new trees anytime and anywhere. What makes the world's rainforests so special?

17.1.1 Introduction

What do you know about rainforest landscapes? Did you know that rainforests have the greatest biodiversity of any forest environment? They contain complex layers that support thousands of species of plants and animals. The rainforest has supplied resources to all people, including indigenous communities. People are concerned that clearing large areas of this landscape is creating negative impacts that are unsustainable. In this topic we will look at rainforest landscapes around the world, how people use them and the threats these important environments face.



Resources

Customisable worksheets for this topic

Video eLesson Protecting our landscapes: rainforest (eles-1627)

LEARNING SEQUENCE

- 17.1 Overview
- 17.2 Rainforest characteristics
- 17.3 SkillBuilder: Creating and describing complex overlay maps
- 17.4 Changing rainforest environments
- 17.5 SkillBuilder: Drawing a précis map
- 17.6 Indigenous peoples and the rainforest
- 17.7 Disappearing rainforests
- 17.8 Social and environmental impacts of deforestation
- 17.9 Saving and preserving rainforests
- 17.10 Thinking Big research project: Rainforest display
- **17.11 Review**

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To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

17.2 Rainforest characteristics

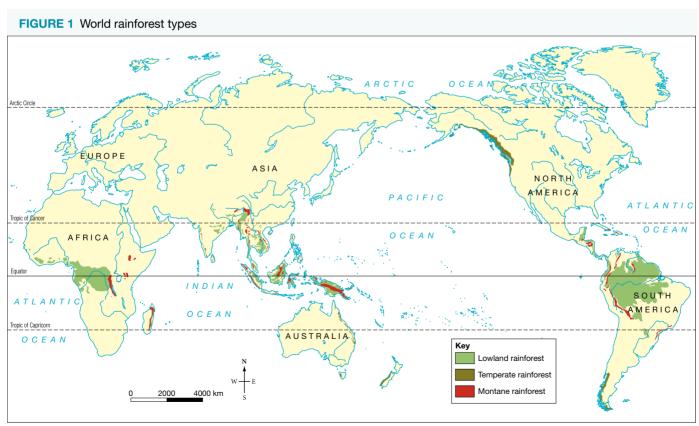
17.2.1 Rainforests

Forests that grow in constantly wet conditions are defined as rainforest landscapes. A rainforest is an example of a biome (a community of plants and animals spread over a large natural area). Rainforests are located wherever the annual rainfall is more than 1300 millimetres and is evenly spread throughout the year. While tropical rainforests are the best known of these landscapes, there are also other types.

17.2.2 Tropical rainforests and their processes

Tropical rainforest landscapes are found where there are both high temperatures and high precipitation. The sun's rays that reach the Earth near the equator have a smaller area of the Earth and atmosphere to heat than rays reaching the Earth at higher latitudes. Therefore, it is hotter at the equator than at higher latitudes. Rainforests are also generally warmer at night, because the cloud cover and high humidity help to keep the heat in. Tropical rainforests have a hot climate right throughout the year with no summer or winter. High precipitation around the equator is mainly due to convectional rainfall and is often associated with thunderstorms. Convectional rainfall occurs when warm, moist air is heated when it moves over a hot surface on Earth. As the air is heated it expands and becomes lighter than the surrounding air. This causes it to rise. If the air continues to rise, condensation and precipitation occur. This combination of high temperatures and high precipitation influences the global distribution of the tropical rainforest landscape. Plants flourish in these rainforests, which support a huge number of plants and animals — perhaps as many as 90 per cent of all known species. Poison-dart frogs, birds of paradise, piranha, tarantulas, anacondas, Komodo dragons and vampire bats are all found in tropical rainforests.

Tropical rainforests that occur in the mountains, 1000 metres or more above sea level, are called montane rainforests. Other tropical rainforests are known as lowland rainforests (see FIGURE 1).



Source: MAPgraphics Pty Ltd, Brisbane

Lowland tropical rainforest

Lowland tropical rainforests form the majority of the world's tropical rainforests. They grow at elevations generally below 1000 metres. Trees in lowland forests are usually taller than those in montane forest and include a greater diversity of fruiting trees. These attract animals and birds adapted to feed on their fruits. These rainforests are far more threatened than montane forests because of their accessibility, soils that are more suitable for agriculture and more valuable hardwoods for timber. Lowland forests occur in a belt around the equator, with the largest areas in the Amazon Basin of South America, the Congo Basin of central Africa, Indonesia and New Guinea.

FIGURE 2 (a) Montane rainforest, (b) temperate rainforest and (c) lowland rainforest







Temperate rainforests

The large area of the globe between the tropics and the polar regions (areas within the Arctic and Antarctic circles) is called the **temperate** zone, and rainforests can grow there too. Temperate rainforests occur in North America, Tasmania, New Zealand and China. Giant pandas, Tasmanian devils, brown bears, cougars and wolves all call temperate rainforests home.

17.2.3 Physical processes of a rainforest

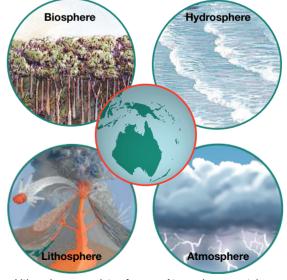
Rainforest landscapes are the result of the interaction between the Earth's four main systems or spheres. For example, the trees in a tropical rainforest (biosphere) rely on high levels of precipitation (hydrosphere), warm temperatures (atmosphere) and stability provided by soil (lithosphere) to thrive. Energy from the sun is stored by plants (biosphere). When humans or animals (biosphere) eat the plants, they acquire the energy originally captured by the plants.

17.2.4 Rainforest ecosystems

Rainforests are unique **ecosystems** consisting of four different layers — the emergent, canopy and understorey layers and the forest floor. Each layer can be identified by its distinct characteristics. Rainforests are actually a community of plants and animals working together to survive, linked in a food web (see **FIGURE 4**).

FIGURE 3 The Earth's four main systems

Hydrosphere: 97 per cent
of the Earth's water is found in
salty oceans, and the remainder
as vapour in the atmosphere and
Biosphere: the collection
of all Earth's life forms
rivers, glaciers and snowfields.



Lithosphere: consists of the core, mantle and crust of the Earth

Atmosphere: contains all of the Earth's air

Emergents

These are the tallest trees, ranging in height from 30 to 50 metres. They are so named because they rise up or emerge out of the forest canopy. Huge crowns of leaves and abundant animal life thrive on plenty of available sunlight.

Canopy

This describes the array of treetops that form a barrier between the sunlight and the underlying layers. Their height can vary from 20 to 45 metres. This layer contains a distinct microclimate and supports a variety of plants and animals. The taller trees host special vines called lianas that intertwine the branches. Other plants called epiphytes use the tree trunks and branches as anchors in order to capture water and sunlight.

Understorey

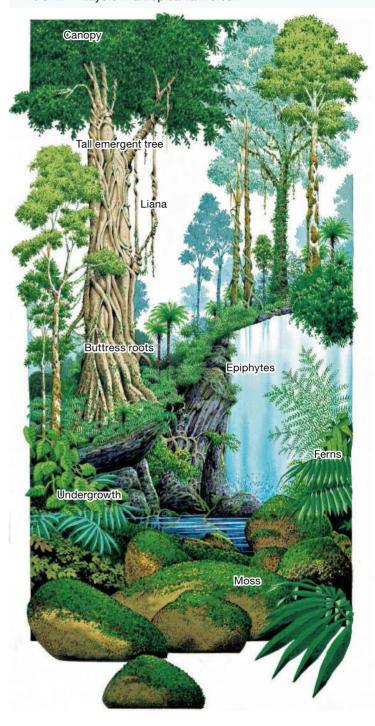
This layer contains a mixture of smaller trees and ferns that receive only about five per cent of the sun's energy. Many animals move around in the darkness and humidity, using the vines as highways.

Forest floor

This bottom layer is dominated by a thick carpet of leaves, fallen trees and huge buttress roots that support the giant trees above. Rainforest soils give the impression of being fertile because they support an enormous number of trees and plants. However, this impression is wrong, as the soil in rainforests is generally poor. Leaves and other matter are recycled by the many organisms to create an organic compost. The roots of trees must 'snatch' these nutrients from the soil before heavy rains wash them away and they are lost through a process called leaching.

Larger animals also roam through this layer in search of food.

FIGURE 4 Layers in a tropical rainforest





Resources



Interactivity Our living green dinosaurs (int-3112)



Rainforest layers

FIGURE 5 An example of a typical food web in an Australian rainforest



17.2 INQUIRY ACTIVITIES

- 1. Many rainforest animals live their whole life in the trees. Using the internet to help you, give some examples of these animals and conduct research into the habits of one animal. Classifying, organising, constructing
- 2. Use the Rainforest layers weblink in the Resources tab to explore the layers of the rainforest and the plants and animals that inhabit them.

 Examining, analysing, interpreting

17.2 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

17.2 Exercise 1: Check your understanding

- 1. **GS1** What conditions do rainforest **environments** thrive in?
- 2. **GS2** What are the differences between montane and lowland rainforest **environments**? What causes these **changes** in rainforest type?
- 3. **GS2** Study **FIGURE 1**. Describe the distribution of rainforests around the world. Think about in which continents and between which latitudes they are found, the size and **scale** of them, and whether they are continuous or scattered.

- 4. GS2 Imagine you are a raindrop. Recreate your journey through a rainforest, passing through each of the forest layers. Read or act out your descriptions to the rest of the class.
- 5. **GS1** Identify key characteristics of a tropical rainforest.
- 6. GS2 Why are lowland rainforest environments more threatened by human activity than montane rainforests?
- 7. **GS1** Why are montane forests often called 'cloud forests'?
- **8. GS1** How many layers are there in a rainforest *environment*?
- 9. **GS1** What are the tallest trees in the rainforest called?
- 10. **GS2** Describe how conditions in the canopy layer differ from those on the forest floor.

17.2 Exercise 2: Apply your understanding

- 1. GS5 Refer to FIGURE 1.
 - (a) Use an atlas to help you name six countries in the Asia-Pacific region that contain rainforests.
 - (b) What type of rainforest *environment* is found:
 - i. in north-eastern Australia
 - ii. along the western coastline of Canada?
- 2. GS4 Refer to FIGURE 3. List Earth's four spheres. Give several examples of features in each sphere.
- 3. **GS2** List some Earth sphere interactions from your own daily activities.
- 4. **GS2** Why are rainforest *environments* able to support a large range of animals and plants?
- 5. GS4 Draw up and complete a table like the one below that summarises the features of a rainforest environment.

| Layer | Height | Amount of light | Features |
|-------|--------|-----------------|----------|
| | | | |

- 6. GS2 In a rainforest, the soil below the trees is often poor and shallow, and the trees create their own nutrients. In one sentence describe how this happens, and draw a labelled sketch to illustrate the process.
- 7. GS6 What change might you expect in the success of plant growth if the rainforest trees are removed and crops are planted instead? Why?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

17.3 SkillBuilder: Creating and describing complex overlay maps

What is a complex overlay map?

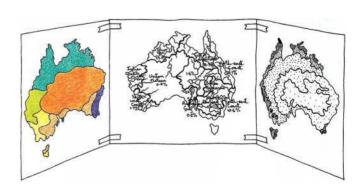
A complex overlay map is created when one or more maps of the same area are laid over one another to show similarities and differences between the mapped information. Traditionally, the second map is on tracing paper that is attached to the original page.

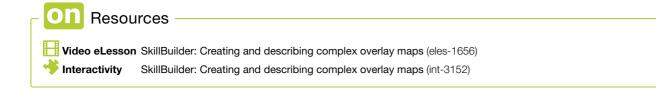
Complex overlay maps show relationships between factors - the similarities and the differences in a pattern.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.







17.4 Changing rainforest environments

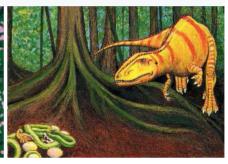
17.4.1 Australian rainforests

Australia's Daintree rainforest is the Earth's oldest tropical rainforest. It is estimated to be around 180 million years old and developed tens of millions years before the Amazon rainforest in Brazil. Although hard to believe now, Australia was once mostly covered in rainforest! Even areas that today are deserts were once teeming with plant and animal life similar to those in the Amazon. This is because Australia was further north than it is today. Over the past 100 million years, however, a series of events has gradually reduced the area of Australia's rainforests (see **FIGURE 1**).

FIGURE 1 The development of Australian rainforests through time







Triassic period (245-208 mya)

 Foundation of Australian rainforests was occurring as massive volcanic eruptions laid down thick layers of ash near freshwater lakes.

Early Cretaceous period (144-95 mya)

 Australia, as part of Gondwanaland, was very close to the South Pole and experienced the same conditions as present polar regions.
 However, the climate was temperate, supporting plant life, and the first flowering plants appeared.

Late Cretaceous period (95–66.4 mya)

 The climate was temperate and humid; species found in rainforests today began to develop. Dinosaurs were still present.

100 80 60 40 20

[Dates are expressed in mya — million years ago.]

260 24

Jurassic period (208–144 mya)

 Ash deposits developed into sedimentary rock; plants such as the cycad and southern pine first appeared. Late Oligocene/early Miocene periods (25–20 mya)

• The whole of Australia was covered by rainforest at the start of this period, but by the end of the Miocene sclerophyll forest and grasslands were starting to emerge. The rainforests

The gradual movement of Australia southwards as it separated from Gondwanaland and a series of **ice ages** have combined to make it a drier place (see **FIGURE 2**). Rainforests have become confined mainly to the mountains and **gorges** of the Great Dividing Range and Tasmania. These areas have higher rainfall and fewer fires.

The farming practices of European immigrants have reduced much of the remaining rainforest — in the past 200 years, more than 70 per cent of these forests have been cleared.

FIGURE 2 Difference in the location of Australia when it formed part of Gondwanaland compared with its location today

would have been similar to those of today.





Scientists have identified three major types of rainforest in Australia (see FIGURE 3). There are examples of all three in Queensland. This diversity occurs nowhere else on Earth.

-Montane ownsville Northern Territory Rockhampton Bundaberg Australia Gympie Brisbane South Australia Coffs Harbour New South Wale Port Macquarie Sydney Wollongong Victoria elbourne Kev Lowland rainforest Temperate rainforest <mark>Tas</mark>mania Montane rainforest 1000 km Hobart

FIGURE 3 Australia's rainforest areas

Source: MAPgraphics Pty Ltd, Brisbane

Much of Australia's tropical rainforests are now World Heritage areas. This means they have been listed by UNESCO as being of global importance. The Wet Tropics of Queensland are a World Heritage area containing some of the oldest rainforests in the world. They have the world's highest concentration of flowering plants, and have records that show Aboriginal communities are the world's oldest indigenous rainforest culture.

The Indigenous inhabitants of the Daintree Rainforest in North Queensland are the Kuku Yalanji Aboriginal people, believed to have lived in this area for more than 9000 years by European estimates. Their culture is uniquely adapted to the rainforest environment.

For the Kuku Yalanji, the natural world is often thought of in human terms and is closely linked to

FIGURE 4 Rainforest plants were used to make goods such as these baskets that were used for storage, food collection, carrying personal possessions, and leaching poisons (from seeds) in fresh running water.



the people. Any changes to the environment are seen as changes to themselves. Because of the powerful properties attributed to most story places (sites with links to the Dreamings) of the Daintree, the Kuku Yalanji regard damage and destruction to the environment as unacceptable.

The Kuku Yalanji people gather their food and medicine and many of their implements, weapons, fibres and construction material from plants in their environment. The natural patterns and cycles of the rainforest give important information about the food that is available. The plants are their calendar, marking the seasons. For example, when blue ginger (jun jun) is fruiting it is time to catch scrub turkey (diwan), and when mat grass (jilngan) is flowering it is time to collect the eggs of the scrub fowl (jarruka).

17.4.2 The Amazon rainforest

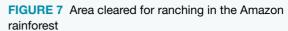
The world's largest remaining rainforest is in the Amazon Basin in South America. This truly remarkable forest is under increasing threat from forestry, mining and farming. The loss may cause severe problems worldwide. Most of us use rainforest products every day. More importantly, however, rainforests help control the world's climate and our oxygen supply. So the next time you eat chocolate, treat your asthma, play a guitar or even take a deep breath, you should thank the Amazon rainforest.



Source: MAPgraphics Pty Ltd, Brisbane

- The Amazon River and those rivers that feed into it (tributaries) contain one-fifth of the world's fresh water, and more than 2000 species of fish — more than in the Atlantic and Pacific oceans combined.
- The mouth of the Amazon River is approximately 325 kilometres wide and contains an island the size of Switzerland!
- The Amazon forest is home to more than 40 000 species of plants, 1300 bird species, 430 different mammals and 2.5 million different insects.
- Approximately 1.3 million tons of sediment is transported by the Amazon River to the sea daily.
- No bridges cross the main trunk of the Amazon River, which locals call the Ocean River.
- Since 2000, the Amazon rainforest has been facing deforestation at an average rate of 50 football fields per minute.
- The Amazon is the second longest river in the world, but it carries more water than the next six largest rivers combined.
- The Amazon River drains nearly 40 per cent of South America.
- There are official plans for 412 dams to be in operation in the Amazon River and its headwaters.
- Since 1900, more than 90 indigenous groups have disappeared in Brazil alone.

FIGURE 6 The brown waters of the Amazon show that it is carrying a lot of sediment.





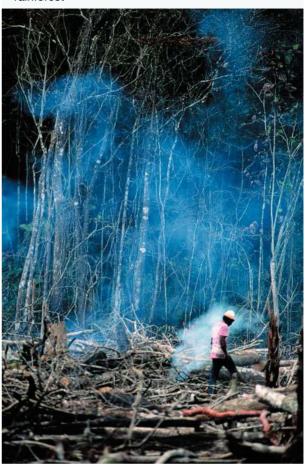


FIGURE 8 Development is clearly visible within the green carpet of the Amazon rainforest between 1975 (left) and 2012 (right).

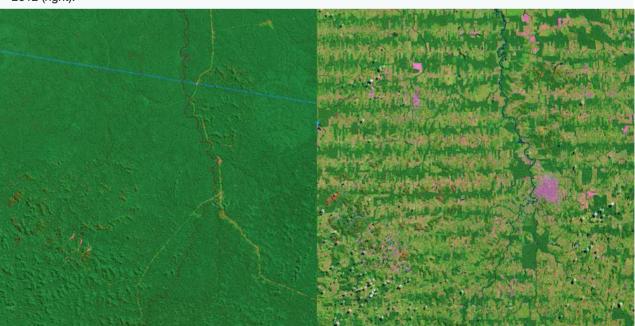
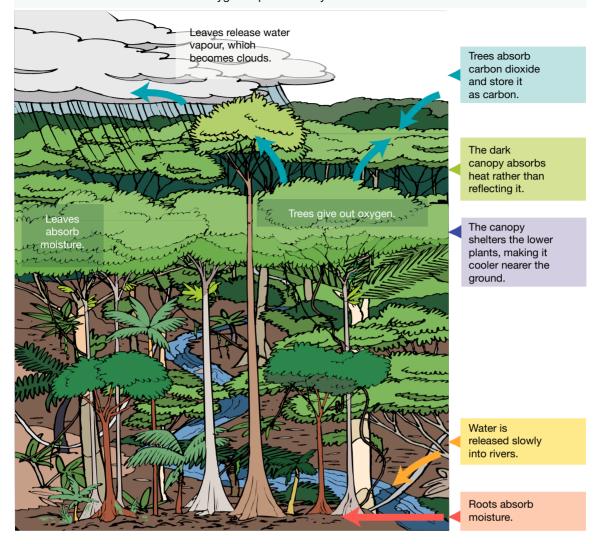


FIGURE 9 Rainforests play a vital role in controlling the world's climate and oxygen supply. Scientists believe that half of all the world's oxygen is produced by the Amazon rainforest alone.



17.4.3 Amazing rainforests

- More than 7000 modern medicines are made from rainforest plants. They can be used to treat problems from headaches to killer diseases like malaria. They are used by people who suffer from multiple sclerosis, Parkinson's disease, leukaemia, asthma, acne, arthritis, diabetes, dysentery and heart disease among many others.
- Even animals can be used to cure human diseases.
 Tree frogs from Australia give off a chemical that can heal sores, and a similar chemical from a South American frog is used as a powerful painkiller.
- The poisonous venom from an Amazonian snake is used to treat high blood pressure.
- Only one per cent of the known plants and animals
 of the rainforest have been properly analysed for their
 medicinal potential. Perhaps the greatest benefits to
 medicine and our own health, therefore, are yet
 to come.

FIGURE 10 Skin secretions from frogs such as the Waxy Monkey Treefrog (*Phyllomedusa bicolor*) contain powerful painkillers.



- Rainforests are home to the greatest profusion of life on the planet: at least half of all known plants and animals live in rainforests.
- At least 50 million indigenous peoples live in rainforests worldwide. From the Kuna people of Panama and the Yanomami of Brazil to the Baka people of Cameroon and the Penan of Borneo (Indonesia), these people have traditionally lived a way of life that has little impact on their forest home.
- The people who live in or near the rainforests gain much of their food from the forest. But rainforests also supply the supermarkets of the world with their bounty. Most of these fruits and nuts are now grown by farmers rather than harvested directly from the forest, but it was in the rainforests that they originated.
- Chocolate first came from cacao trees native to the Amazon rainforest. Today the cocoa in the chocolate you eat is most likely to have come from huge cacao plantations in West Africa. Similarly, brazil and cashew nuts, cinnamon, ginger, pepper, vanilla, bananas, pineapples, coconuts, paw-paws, mangoes and avocados were all originally rainforest plants. Even the gum used in chewing gum comes from a rainforest plant, as does the tree that produces rubber.
- Rainforest trees are generally hardwood trees, making them resistant to decay and attractive for building. Well-known rainforest timbers are mahogany, teak, ebony, balsa and rosewood. Rosewood is particularly interesting, as it is considered the best timber in the world for guitar making. In many tropical countries, people also collect timber as fuel for cooking or heating.

FIGURE 11 The Kamayurá people of the Brazilian rainforest live a traditional way of life.



FIGURE 12 Food products such as chocolate and chewing gum are made from ingredients that originally came from the rainforest.





Weblinks UNESCO Heritage Rainforest foods Amazon tour

17.4 INQUIRY ACTIVITIES

- 1. Use the UNESCO Heritage weblink in the Resources tab to complete the following.
 - (a) On a map of Australia, locate and label Australia's World Heritage sites.
 - (b) Which three sites have been added most recently?
 - (c) Which two sites protect Australian rainforests?
 - (d) The Wet Tropics of Queensland are particularly special because they border another World Heritage site. What is this other site?
 - (e) What criteria does UNESCO use to determine whether a natural region should be placed on its list?

Describing and explaining

- 2. A hotel chain has applied to the Queensland government for permission to build a resort in the Daintree. Assess this proposal from the perspectives of the developers, government, local residents, environmentalists and Kuku Yalanji people. Try to make a decision as to whether this project should be approved. This could be completed in small groups or debated as a class. Evaluating, predicting, proposing
- 3. Using a piece of tracing paper, trace the Amazon River and its tributaries. Draw a single line that joins the source of each of the tributaries. Shade the area within this line using a light blue pencil: this area is known as the catchment, or basin, of the river. Overlay your completed diagram on the map of the forest and comment on the interconnection between the river and the forest.
 Classifying, organising, constructing
- Use the Rainforest foods weblink in the Resources tab to learn how the food you eat comes from the rainforest.
 Examining, analysing, interpreting
- 5. Use the Amazon tour weblink in the Resources tab to take a tour through an Amazon rainforest slideshow.

Examining, analysing, interpreting

- 6. Make a list of things in your home that may come from the rainforest *environment*. Remember to look in the medicine cupboard and the pantry as well as at the furniture. Perhaps you could bring some examples to school and your class could set up a display.

 Classifying, organising, constructing
- 7. This subtopic lists only a few of the products we use from rainforests. List the value of these and other rainforest products under the following headings.
 - (a) Valued by different cultures
 - (b) Valued economically
 - (c) Valued for its aesthetic value (beauty)
 - (d) Other

Classifying, organising, constructing

17.4 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

17.4 Exercise 1: Check your understanding

- GS1 List the reasons given in this subtopic for the gradual disappearance of Australia's rainforest environments.
- 2. **GS1** What resources does the rainforest provide for the Kuku Yalanji people?
- 3. GS2 How has the scale of Australian rainforest environments changed over time?
- **4. GS2** Describe the location and distribution of Australia's remaining rainforest *environments*. What factors have contributed to their survival here?
- 5. GS5 There are three major types of rainforest environments found in Australia. What makes Queensland's rainforests unique? Why is this possible?
- 6. GS5 Refer to FIGURE 3. Why are there no rainforest environments on the western side of Australia?
- 7. GS2 Why do the Kuku Yalanji people regard damage to the Daintree Rainforest as unacceptable?

17.4 Exercise 2: Apply your understanding

- 1. **GS6** Based on the history of Australia's rainforests and the protection now in place for the remaining forests, what do you think the future holds for this important resource?
- GS6 Which of the present uses of the rainforest do you think is the most sustainable for the forest's future? Explain your answer.
- 3. GS5 Refer to FIGURE 8. Why does the clearing and change in the Amazon appear to occur in straight lines?
- 4. GS3 Looking at FIGURES 6, 7 and 8 for interconnections, what do you think could be contributing to the high levels of sediment in the Amazon River? Why?

- 5. GS5 Refer to FIGURE 9.
 - (a) Explain the role of the rainforest *environment* in relation to the climate.
 - (b) Why are rainforests sometimes called 'the lungs of the Earth'?
- 6. GS5 Look carefully at FIGURE 5.
 - (a) List the countries of South America into which the Amazon rainforest extends.
 - (b) Which country contains most of the Amazon rainforest?
 - (c) Why do you think there are so few large cities in the rainforest?
 - (d) Estimate the percentage of the rainforest that can be considered:
 - i. under low or no threat
 - ii under threat
 - iii. disturbed.

Describe in your own words what each of these terms means.

7. **GS6** If development in the Amazon Basin continues as seen in **FIGURES** 7 and 8, what could be the consequences in terms of the processes shown in **FIGURE** 9?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

17.5 SkillBuilder: Drawing a précis map

What is a précis map?

A précis map is a simplified map — the cartographer has decided which details to leave in and which to leave out. It is different from a sketch map, which includes all the main features.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.



online



17.6 Indigenous peoples and the rainforest

17.6.1 The Huli people of Papua New Guinea

It is difficult to accurately count all the people around the world who live in rainforests, but some estimates put the number as high as 150 million, including indigenous people. While these people are usually described as living a traditional **subsistence** way of life, this is generally combined with selling and buying items such as their labour, their land and assorted forest products.

Some 80 000 Huli people live in montane rainforest in the highlands of Papua New Guinea. The land on which they live has steep hillsides and dense rainforest. In the mountains the rivers cut deep gorges, and as they reach flat areas they form swampy, fertile basins.

The Huli people today use a farming system known as **shifting agriculture**. A patch of rainforest is cleared and crops of sweet potato, sugar cane, corn, taro and green vegetables are planted. It is the role



of the women to tend these gardens, and their individual huts are built next to the gardens. The men live together in a communal house and generally look after themselves.

When the soil of the garden no longer produces good crops, a new patch of rainforest is cleared, leaving the old one to recover naturally. The garden crops are supplemented by food that the men obtain by hunting. Wild and domesticated pigs are a common source of meat.

While most Huli people still live on their lands, the influence of Western society is very obvious. Most Huli people wear some items of western-style clothing, and knives, cooking utensils and mirrors are common.

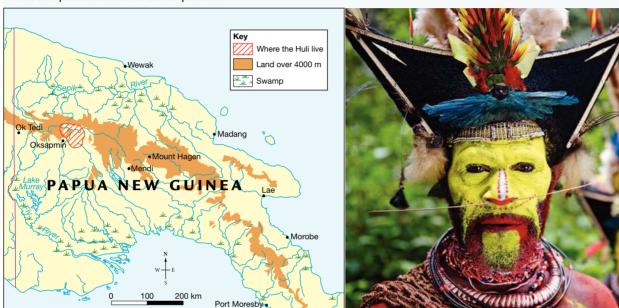


FIGURE 1 The Huli people of Papua New Guinea make wigs from their own hair, decorated with feathers from birds of paradise and colourful parrots.

Source: MAPgraphics Pty Ltd, Brisbane

17.6.2 The Penan people of Borneo

The Penan people of Malaysian Borneo are a truly **nomadic** rainforest people. Although their forest home has been largely destroyed by logging, about a thousand Penan people remain deep in the forest, following their traditional way of life.

The main food sources for the Penan people are the sago palm and other fruiting trees, but they are also extremely skilled hunters. They use blowpipes and poison darts to kill wild pigs and gibbons. Their knowledge of the rainforest has been built up over thousands of years, and the forest provides for all their needs. They do not practise agriculture; instead, they follow the flowering cycle of the sago palm.

In order to survive in this environment, the Penan people have a strong culture of sharing. This applies not only to objects used in daily life, such as cooking utensils and blowpipes, but also to land. The idea of owning land does not exist in Penan culture.

The Penan people recently became well known to the outside world when they blockaded roads in the Malaysian rainforest to stop logging trucks and machinery moving into it.

DISCUSS

Imagine that you live in a society in which no-one recognises individual ownership of anything. In groups of three or four, discuss the advantages and disadvantages of living in this type of society.

[Creative and Critical Thinking Capability]

Key Kota Kinabalu Town Sabah Areas where the Penan live **(MALAYSIA** Land 2000-4000 m Bandar Seri Begawar Land 1000-2000 m BRUNE Land 500-1000 m Land 200-500 m Land sea level to 200 m South China Sea Balingian Sarawak MALAYSIA) Kabong • Kok Kuching Kubumesaa Batukelau **INDONESIA** 200 km

FIGURE 2 A Penan hunter of Sarawak or Brunei can shoot a dart 50 metres from their blowpipe. About 1.2 metres long and completely straight, a blowpipe has a very accurate hole through the middle.

Source: MAPgraphics Pty Ltd, Brisbane

17.6.3 The Korowai and Kombai people of Papua

The Korowai and Kombai peoples live in the Indonesian province Papua, in the south-western part of the island of New Guinea. Mosquitoes, floodwaters and community rivalries have forced these groups to build houses high up in the forest's canopy. They collect food (for example, sago) from the rainforest using tools such as stone axes.





17.6 INQUIRY ACTIVITIES

- 1. Complete one of the following activities.
 - (a) In groups of two or three, use the internet to research other indigenous groups living in rainforests around the world. Create a visual presentation or 'documentary' (using a program such as PowerPoint or Photo Story) to educate your classmates about the history of the group, their use of their environment, and threats or changes they face. Examples of peoples you may like to investigate include the Kuna people of Panama, the Yanomami people of Brazil, the Mbuti people of Central Africa and the Baka people of Cameroon.
 Classifying, organising, constructing
 - (b) In groups of two or three, use the internet to research Indigenous communities that live in or have a connection to the rainforest in Australia. Create a visual presentation or 'documentary' (using a program such as PowerPoint or Photo Story) to educate your classmates about the history of the group, their use of their *environment*, threats or *changes* they face and their relationship with the land.

Classifying, organising, constructing

2. Use the **Treehouse** weblink in your Resources tab (click on the picture then choose the *My world* activity) to see the community of Paso Caballos in northern Guatemala and learn about their lives in the rainforest.

Examining, analysing, interpreting

17.6 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

17.6 Exercise 1: Check your understanding

- 1. **GS3** Make a list of the similarities between the Huli people and the Penan people. Make another list of the differences between them. Use the photographs as well as the text in this section to help you.
- GS2 The Penan people use only rainforest resources to make their blowpipes. How do you think they do this? Use diagrams to illustrate your ideas.
- 3. GS2 Why is a blowpipe better than a rifle in the rainforest?
- **4. GS3** The Penan people are nomadic. How is this lifestyle different to the shifting agriculture practised by the Huli people?
- 5. **GS3** Describe how the life of men and women differ in the Huli society.

17.6 Exercise 2: Apply your understanding

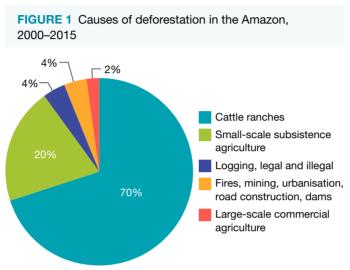
- 1. **GS3** Explain what is meant by shifting agriculture and how it differs from the farming methods used in Australia.
- GS6 The Korowai and Kombai people build their homes high in the forest canopy. How do you think they do this? Use diagrams to illustrate your answer.
- GS6 What is the major threat to the traditional lifestyle of the indigenous people of the rainforest? Justify your answer.
- **4. GS3** Compare the lifestyle of the Huli and the Penan people. Use a Venn diagram to explore the similarities and differences between them.
- **5. GS6** Indigenous rainforest peoples still practise their traditional lifestyles rather than a western-style lifestyle. Suggest a reason for this.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

17.7 Disappearing rainforests

17.7.1 Factors causing rainforest deforestation

Rainforests have the potential to provide a wide variety of useful resources. The temptation to use these pristine areas is often too difficult for people to resist, especially if they live in poverty. As a result, all around the world, rainforests are being destroyed for economic gain. The main reasons for rainforests being cleared are described below.



Most recent data available at time of publishing

Commercial logging

There are two main types of logging: clearfelling and selective logging. When a forest is clearfelled, all trees are removed either by chainsaw or with heavy machinery such as bulldozers. In selective logging, only the best and most valuable trees are cut down. But in clearing forest to reach those trees, it is estimated that a hectare (10000 square metres) of forest is destroyed for each log removed.

Farming

Rainforests grow in many developing countries. These countries struggle to provide the basic necessities of life for their people, and their populations are often rapidly increasing in size. In these countries, the land on which the forest grows is seen as more valuable than the forest itself.

FIGURE 2 It is thought that up to 80 per cent of logging in Brazil and Indonesia could be illegal.



Highways create access to these areas, opening up parts of the rainforest once almost impossible to reach. Soon after the roads are built, settlers (called homesteaders) arrive. Claiming a piece of the forest that borders the road, the homesteaders chop down a few trees as timber for fencing or a house, and then set fire to the rest.

Once the initial 'land rush' is over and all the land beside the roads has been claimed, tracks and roads leading from the highways will push deeper and deeper into the forest. Soon an area of 50 kilometres either side of the highway will have been destroyed and replaced by small farms or large-scale commercial farms that raise beef or crops for export to the richer countries of the world.

Mining

Many rainforests are growing on land that also contains large energy and mineral deposits such as oil, gold, silver, bauxite, iron ore, copper and zinc. Mineral companies build roads to the deposits and set up large-scale mining and processing plants. These plants require large amounts of electricity, and this is often supplied by burning trees to create charcoal or by constructing hydroelectric dams.

Deep in the Brazilian rainforest, a 2000-square-kilometre dam has been constructed to provide electricity for aluminium smelters. The dam flooded the entire tribal lands of two native peoples, and is so large that it has altered the climate in the area, making it drier.

Another problem created by mining is the pollution of nearby rivers and streams from chemicals used in the processing plants. Rivers downstream **FIGURE 3** Blocks of rainforest in Peru are burned to clear the area for agricultural use — here, maize seedlings have been planted.



FIGURE 4 The Ok Tedi gold and copper mine in the Papua New Guinea rainforest. The damage that mining has caused to the surrounding environment can be clearly seen.



from a vast goldmine in Papua New Guinea have been found to contain four times the safe limit of cyanide in the water. Cyanide is used to extract gold from rock.

DISCUSS

As a class, discuss the potential long-term problems that could result from the continued commercial use of rainforest *environments* around the world. Develop a list of the top five potential problems. **[Ethical Capability]**

17.7 INQUIRY ACTIVITY

Using the internet, research any economic activities that are supported by Australian rainforests.

Examining, analysing, interpreting

17.7 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

17.7 Exercise 1: Check your understanding

- 1. **GS1** What is the difference between clearfelling and selective logging?
- 2. **GS1** List four *changes*/problems caused by mining operations in rainforests.
- 3. GS2 'Many homesteaders are unable to make a good living from the poor tropical soils.' Explain the reasoning behind this statement. You may like to revisit subtopic 17.2 to help you with your response.
- 4. GS2 What is hydroelectricity? Explain how producing hydroelectricity can lead to destruction of the rainforest.
- 5. **GS1** What is the major cause of rainforest destruction?

17.7 Exercise 2: Apply your understanding

- 1. **GS5** Refer to **FIGURE 1**. What percentage of deforestation is caused by agriculture in the Amazon?
- 2. GS2 Many rainforest environments are located in developing countries. Why does this make the problem of rainforest destruction harder to solve?
- 3. GS6 Mining companies insist that mining in poorer countries brings benefits to the local community. Outline some of the benefits that mining could bring to poorer communities. Then outline any problems that mining could cause for such communities. What conclusions can you reach?
- 4. GS5 Explain how a dam built in the Brazilian rainforest can alter the climate in the surrounding area. You may like to revisit subtopic 17.4 to help you with your response.
- 5. GS6 'With the population of the world increasing, we have no choice, cutting down the rainforest is in the best interests of both people and the environment.' Write a paragraph for or against this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

17.8 Social and environmental impacts of deforestation

17.8.1 Impacts of rainforest deforestation

Deforestation of rainforests around the world is the major cause of problems in this ecosystem. The loss of unique habitats is the primary reason species are becoming endangered. Clearing creates smaller islands of vegetation, making it more difficult for animals to communicate and breed. People are also affected by the removal of the rainforest. While indigenous peoples may feel the effects first, others also experience negative consequences.

- About one hectare of rainforest is destroyed every second: this is about twice the size of a soccer pitch.
- Scientists estimate that 137 plants and animals are made extinct daily: that's 50 000 each year. Some haven't even been discovered yet!
- It is believed that in the year 1500 up to nine million indigenous peoples lived in the Amazon rainforest. The number is now lower than 200 000.
- The world loses about two per cent of its rainforest each year, but rates differ between countries.

17.8.2 Impacts on plants and animals

Islands in the forest

Many forests are cleared using fire. These fires will release millions of tonnes of carbon dioxide into the air, increasing the threat of global warming. At the same time, destroying the trees robs the planet of the natural system that helps regulate the amount of carbon dioxide in the air.

In many areas where forests are cleared, it has become a practice to leave behind 'islands' of rainforest. This is meant to assist in the natural regeneration of the forest and also to leave sufficient areas of the natural habitats of plants and animals that live in the rainforest. But is this working?

The islands that are left are often not big enough to ensure the survival of the large numbers of species that live there. For example, the endangered Queen Alexandra's Birdwing (the world's largest butterfly) is facing extinction. Confined to coastal rainforests near Popondetta Province in northern Papua New Guinea, its survival depends on the presence of old growth forests. Although the Popondetta covers approximately 100 square kilometres, butterfly populations are now only found in five isolated pockets of up to two square kilometres. These remaining refuges are threatened by surrounding palm oil plantations.

And there are other problems. When the forest is cleared, the exposed earth can quickly erode as the tree roots no longer hold the soil together, making the regrowth of vegetation slow. On steep slopes this can increase the risk of landslides, and sediments can flow into rivers.

During drought, the bare ground can become hot and barren. With the removal of the forest cover there is little moisture stored in the ground and a much lower rate of **evapotranspiration**. This in turn affects the water cycle, reducing the amount of rain that falls on the remaining islands of rainforest, and they quickly dry out.

17.8.3 CASE STUDY: Deforestation in Indonesia and the orangutan

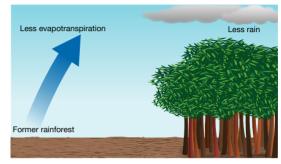
Nearly 10 per cent of the world's rainforests and 40 per cent of all Asian rainforests are found in Indonesia. Less than half of Indonesia's original rainforest area remains. Much of this is in Kalimantan, on the island of Borneo. Forests have been cleared for timber, for plantation crops such as palm oil trees, and to make way for Indonesia's growing population, which is now more than 200 million. Fires lit to clear land in 1982 and 1997 resulted in wildfires that severely damaged large areas of rainforest in Kalimantan. Orangutans, Sumatran tigers and Javan hawk-eagles may disappear from Indonesia as their natural habitats disappear.

Orangutans are the largest tree-living mammals and the only great ape that lives in Asia. They survive only on the islands of Borneo and Sumatra. Current estimates are that orangutans have lost 80 per cent of their habitat in the last 20 years. In 1997–98, wildfires burned through nearly two million hectares of land in Indonesia, killing up to 8000 orangutans.

FIGURE 1 Leftover pockets of rainforest are at risk from reduced rainfall and cannot survive drought conditions.



(a) Rainforest trees are cleared, with 'islands' left for regeneration



(b) There is less evapotranspiration and less rain on forest 'islands'.

FIGURE 2 The wingspan of the Queen Alexandra's Birdwing can reach 30 centimetres.



FIGURE 3 Mother and baby orangutan

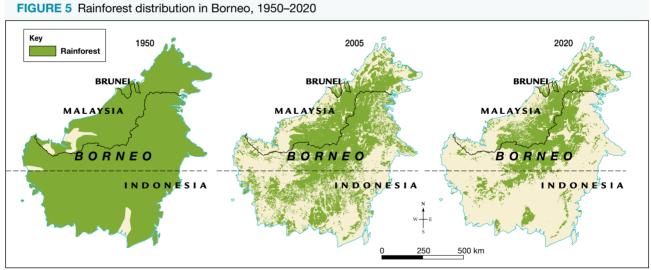


It is estimated that orangutan numbers have declined by more than 50 per cent in the last 60 years. Hunting and killing, particularly on the island of Borneo, has resulted in the loss of 150 000 individuals in the last 16 years. The current orangutan population is estimated to be between 70 000 and 100 000. Conservationists predict that without a renewed effort to protect the species, by 2055 their numbers will decline by another 45 000.

FIGURE 4 Orangutan distribution in Borneo, 1930–2015 Key 1930 1999 2015 Orangutan distribution BRUNE BRUNFI BRUNEI BORNEO BORNEO ORNEO INDONESIA NDONESIA INDONESIA

Source: IUCN Red list

Most recent data available at time of publishing



Source: Spatial Vision

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

• Investigate additional topics > Endangered and introduced species > Orangutans

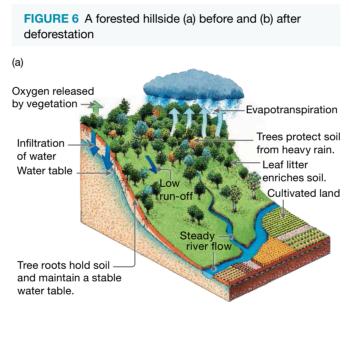
17.8.4 Impacts on people

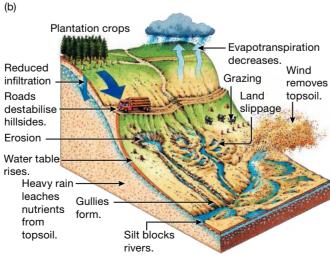
Indigenous peoples

As forests are cleared and new occupiers move into the region, the indigenous peoples of the area are often displaced and their cultures may disappear. The homesteaders bring new diseases to which indigenous peoples have no natural immunity. One group, the Nambiquara of Brazil, lost half its population to illness when a road was placed through their tribal land. Indigenous peoples aren't often given a choice about 'progress' coming to their section of the rainforest. As a result, tension can be created between these indigenous communities and the government. In 1999, the Bakun Dam Project began in Malaysia, resulting in the eviction of approximately 10 000 indigenous people from their ancestral homeland. While they were resettled as compensation, the land provided was too small to support their traditional forms of hunting and agriculture and many failed to adapt to their new lifestyles.

Landslides

A landslide, the downward movement of earth and rocks on a slope, occurs in the lithosphere (see subtopic 17.2). It can be caused by natural physical processes such as rainfall and earthquakes, or by human activities such as deforestation and road building. Usually, the roots of rainforest plants keep the





soil together and add stability to mountainous areas. This is especially important during times of heavier rainfall. However, sometimes the ground becomes so waterlogged that the roots can't keep the soil in place and it slips downhill, creating a landslide. The risk of this increases if deforestation has taken place on the hillside, as there are no tree roots to provide added stability.

Therefore, when these hills are cleared and settled by communities, the danger of property damage, and even death, increases. November 2011 saw 35 people killed in a landslide in the Colombian city of Manizales. Fourteen houses were destroyed, displacing up to 159 people. This mountainous, coffee-growing region used to be rainforest before it was cleared and settled.

The Philippines is at a high risk of landslides due to deforestation. Large tracks of forest have been removed by illegal logging, fires to clear the land for agriculture and mining operations. In 2018 Typhoon Ompong triggered massive landslides that buried the living quarters of miners. More than 100 people died despite attempts to clear the area before the Typhoon struck.

FIGURE 7 Landslides in intact forest in the Mata Atlantica rainforest, Brazil



Disease

The arrival of new tropical diseases is a less obvious result of deforestation. As animal **hosts** disappear and new human settlers move into previously inaccessible areas, 'new' disease-causing microorganisms are transferred into the human population. The frequency of mosquito-borne diseases such as malaria has increased due to the creation of more water puddles, for example in ditches and tyre treads, that are an excellent breeding ground for the mosquito. It is estimated that malaria is responsible for the deaths of 20 per cent of the Yanomami people in Brazil and Venezuela. Today, more than 99 per cent of malaria cases in Brazil occur in the Amazon Basin region, even though the mosquitoes that carry the disease are found across 80 per cent of the country. In 2018 the survival of Yanomami communities was further threatened by an outbreak of measles, thought to have been brought in by miners. With no natural immunity and a lack of medical care, whole populations can be wiped out.

FIGURE 8 Landslide in Manizales, Colombia, in November 2011



FIGURE 9 Deforestation and the subsequent erosion are clearly evident in Sumatra, Indonesia.



The outbreak of such diseases doesn't affect only the local area but the impact can also spread into other countries via people who visit these areas, unknowingly contract an illness and then travel home, spreading the disease along the way.

Interactivity Deforestation dilemma (int-3113)

17.8 INQUIRY ACTIVITIES

- 1. Research and create a list of 10 other animal species threatened by deforestation around the world. Choose one of these animals and report back to the class on its current location, the remaining population level and the main causes of deforestation. Present your report as a poster, PowerPoint presentation, movie (documentary), poem, song or drama performance. Classifying, organising, constructing
- 2. Using the internet, investigate two different management strategies, policies or laws that have been implemented around the world to try to conserve the rainforest environment. Note the positive and negative aspects of these strategies. Comment on their ability to support the sustainable use of rainforests. Discuss your results as a class. Create a summary on the board to evaluate all the options that are shared.

Examining, analysing, interpreting

3. Produce an A4-sized poster designed to publicise the rate and consequences of rainforest destruction. Your poster must include a colourful diagram and a short slogan based on the facts and figures presented in this subtopic. Classifying, organising, constructing

17.8 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

17.8 Exercise 1: Check your understanding

- 1. **GS1** Name some species threatened by deforestation in Indonesia.
- 2. **GS1** List the main threats to orangutans.
- 3. GS2 What is the interconnection between deforestation and the impact of disease on indigenous peoples?
- 4. GS2 How does deforestation affect the lithosphere, atmosphere and biosphere? (Refer to subtopic 17.2 to refresh your memory.)
- 5. GS2 Why does having separate small islands of vegetation make it more difficult for animals to communicate and breed?

17.8 Exercise 2: Apply your understanding

- 1. GS3 Refer to FIGURES 4 and 5. Describe the interconnection between the two sets of data.
- 2. GS2 Refer to FIGURE 6. Write a paragraph that explains how deforestation results in the consequences and changes illustrated in the diagram.
- 3. GS6 Study FIGURE 9. Indonesia recently granted a licence to a pulp paper producer to clear 50 000 hectares of forest near an orangutan sanctuary in Sumatra. What impact do you consider this might have on the orangutan population?
- 4. GS6 What could be some of the consequences if the rainforest environment continues disappearing at its current rate?
- **5. GS2** Why is it important to save species from extinction?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

17.9 Saving and preserving rainforests

17.9.1 Options for conserving rainforests

As people begin to realise the importance of rainforests, many have started to work towards preserving these valuable 'green dinosaurs'. Some methods of conservation are relevant only to governments and large companies, but some are relevant to you and the choices you make.

Rescue package 1: protect the remaining rainforests

While only six per cent of the world's rainforests are in a national park or reserve, there are many large areas of rainforest under protection. The number and size of these national parks are slowly increasing. The Korup National Park in Cameroon holds 126 000 hectares of Africa's richest untouched rainforest; the Khao Yai National Park in Thailand has 200 000 hectares, where the habitats of tigers, elephants and gibbons are protected; Costa Rica's rainforests are the most protected of all, with national parks and reserves covering almost one-third of that country.

Rescue package 2: use the forest without destroying it

This is called **sustainable development**. It means that resources are taken from the rainforests but the forest remains largely intact. It has been estimated that a forest used this way is worth \$12000 a hectare, while it is worth only \$300 a hectare if it is cleared for farming.

Timber users can now purchase timber from forests that are properly managed. A company in Mexico — the Forest Stewardship Council (FSC) — assesses forests around the world. If the forests comply with regulations, the timber is given the FSC stamp. People who purchase this timber know that the forest it came from is being responsibly managed.

FIGURE 1 The drill, one of Africa's most endangered primates, has a safe haven in the Korup National Park in Cameroon.



TABLE 1 Countries with FSC-certified forests totalling more than one million hectares, 2019

| Country | Area of certified forest (hectares) |
|------------------------|-------------------------------------|
| Australia | 1 244 096 |
| Belarus | 8 957 566 |
| Bosnia and Herzegovina | 1 768 071 |
| Brazil | 7 085 315 |
| Bulgaria | 1 461 593 |
| Canada | 50 654 172 |
| Chile | 2 331 850 |
| Congo, The Republic of | 2 410 693 |
| Croatia | 2 048 581 |
| Estonia | 1 523 958 |
| Finland | 1 623 311 |
| Gabon | 1 741 228 |
| Germany | 1 357 027 |

(continued)

TABLE 1 Countries with FSC-certified forests totalling more than one million hectares, 2019 (continued)

| Country | Area of certified forest (hectares) |
|----------------|-------------------------------------|
| Indonesia | 2 626 297 |
| Latvia | 1 105 787 |
| Lithuania | 1 170 683 |
| Mexico | 1 338 522 |
| New Zealand | 1 248 195 |
| Poland | 6 955 564 |
| Romania | 2 838 745 |
| Russia | 46 764 362 |
| South Africa | 1 438 881 |
| Sweden | 13 370 511 |
| Turkey | 3 121 401 |
| Ukraine | 4 296 157 |
| United Kingdom | 1 637 196 |
| United States | 13 933 516 |

Rescue package 3: use alternative timber

One further step is to not use rainforest timber at all. Many rainforest trees are now grown in plantations, and alternatives such as using steel beams in houses and recycled paper in cardboard help take the strain off the rainforests.

One alternative that has been developed is the processing of old coconut palms to create hardwood. The company that is developing this resource, Tangaloa, claims that there are enough non-productive coconut palms to produce timber equivalent to one million rainforest trees. If this concept proves popular, plantations of coconut palms could be grown specifically for this purpose.

Rescue package 4: act now!

While most of us do not have rainforests growing in our backyards, the choices we make each day can and do make a difference to the way resources are used around the world. There are many organisations that aim to conserve the world's remaining rainforests. Some of their suggestions are:

- use less wood and paper
- write to businesses that destroy the rainforest
- educate yourself about the importance of rainforests
- look for alternatives to rainforest products
- be an ecotourist visit rainforests where your tourist dollars go towards education and conservation.

FIGURE 2 Coconut plantation — could these palms help save the rainforests?







Interactivity Protecting or plundering rainforests (int-3114)

17.9 INQUIRY ACTIVITIES

- 1. On a countries outline map of the world, shade in those countries with FSC-certified forests of over one million hectares. Use lighter shades of one colour for countries with smaller areas of certified forest (such as 1 000 000-2 499 999 and 2 500 000-4 999 999 hectares), and darker shades of the same colour for countries with larger areas (5 000 000-7 499 999; 7 500 000-9 999 999; >10 000 000 hectares). This type of map is called a choropleth map. Classifying, organising, constructing
- 2. Design your own website encouraging people to donate money to save the rainforest environment.

Evaluating, predicting, proposing

- 3. Other methods to help conserve the world's rainforests include:
 - breeding endangered rainforest animals in captivity, and then releasing them
 - providing websites where sponsors can give money to buy some rainforest and put it into a
 - employing indigenous people to pick nuts and berries or even to breed butterflies for collectors. Use the internet to find an example of each of these methods and list any others that you find while completing this research. Document your findings. Examining, analysing, interpreting

17.9 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

17.9 Exercise 1: Check your understanding

- 1. **GS1** What percentage of the world's rainforests are in national parks or reserves?
- 2. **GS1** Which country has the most protected rainforests?
- 3. **GS1** How are rainforest *environments* in Costa Rica protected?
- 4. GS2 Explain in your own words what the FSC does to help protect the rainforest environment.
- 5. GS2 Explain what you understand by the term 'green dinosaur'.

17.9 Exercise 2: Apply your understanding

- 1. GS6 List two advantages and two disadvantages of each rescue package listed in this subtopic. Which of the four packages do you think offers the most hope for rainforest conservation and sustainability? Explain why.
- 2. GS2 Why is it good to have a variety of action options?
- 3. GS3 Use an atlas to help you classify countries with FSC-certified rainforests over one million hectares by continent. Which continent has the most and which has the least FSC-certified forest?
- 4. GS2 Write a letter to the editor, explaining the alternative timber products that are currently available.
- 5. GS5 Explain why 'sustainable development' use of rainforest resources is more profitable than clearing the land for farming.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

17.10 Thinking Big research project: Rainforest display

online =

SCENARIO

You have been commissioned by the Department of Natural Resources and Environment to complete an in-depth study on the importance of rainforests and present your information on their website, as part of an ongoing educational program.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources

projectsPLUS Thinking Big research project: Rainforest display (pro-0172)

17.11 Review



17.11.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

17.11.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31352)

Crossword (doc-31353)



Interactivity Rainforest landscapes crossword (int-7599)

KEY TERMS

catchment area of land that drains into a river

clearfelling a forestry practice in which most or all trees and forested areas are cut down

compost a mixture of various types of decaying organic matter such as dung and dead leaves

drainage basin an area of land that feeds a river with water; or the whole area of land drained by a river and its tributaries

ecosystem an interconnected community of plants, animals and other organisms that depend on each other and on the non-living things in their environment

ecotourist a tourist who travels to threatened ecosystems in order to help preserve them

evapotranspiration the process by which water is transferred to the atmosphere from surfaces such as the soil and plants

gorge narrow valley with steep rocky walls

habitat the total environment where a particular plant or animal lives, including shelter, access to food and water, and all of the right conditions for breeding

host an organism that supports another organism

hydroelectric dam a dam that harnesses the energy of falling or flowing water to generate electricity ice ages historical periods during which the Earth is colder, glaciers and ice sheets expand and sea levels fall leaching a process that occurs in areas of high rainfall, where water runs through the soil, dissolving minerals and carrying them into the subsoil. The process can be compared to a coffee pot in which the water drips through the coffee grounds.

microclimate specific atmospheric conditions within a small area

nomadic describes a group that moves from place to place depending on the food supply, or pastures for animals

selective logging a forestry practice in which only selected trees are cut down

shifting agriculture process of moving gardens or crops every couple of years because the soils are too poor to support repeated sowing

species a biological group of individuals having the same common characteristics and being able to breed with each other

subsistence producing only enough crops and raising only enough animals to feed yourself and your family or community

sustainable development economic development that causes a minimum of environmental damage, thereby protecting the interest of future generations

temperate describes the relatively mild climate experienced in the zones between the tropics and the polar circles

17.3 SkillBuilder: Creating and describing complex overlay maps

17.3.1 Tell me

What is a complex overlay map?

A complex overlay map is created when one or more maps of the same area are laid over one another to show similarities and differences between the mapped information. All maps must be at the same scale. Laid over a base map with information that is consistent (for example, landforms), traced copies of maps showing variables (for example, population) allow you to see the elements underneath. Traditionally, the second map is on tracing paper that is attached to the original page.

Why are complex overlay maps useful?

Complex overlay maps are analysed to show relationships between factors — the similarities and the differences in a pattern. They are useful when looking for the degree to which features are arranged in a similar pattern. In a complex overlay map there may be three or more layers, allowing three or more variables to be compared. Complex overlay maps also help you work out between which features there is the strongest or weakest relationship or interconnection.

In today's world of computers, geographic information system (GIS) programs do this task. Digitally, layers can be turned 'off' and 'on' to show the interconnection between factors in a distribution pattern. Complex overlay maps are useful for:

- town planners to see new settlement patterns overlaid on the land's shape
- construction engineers to see original buildings and the interconnection of extensions to a building
- logistic engineers to overlay the distribution of a number of features to identify similarities
- farmers to seek alternative planting rotations with an increased knowledge of the features involved, such as soil types, rainfall and topography.

A good series of complex overlay maps has:

- been drawn in pencil first, then coloured
- been drawn in light colours, so that the base map remains clear
- a key/legend on each overlay, offset so each can be seen
- been accurately taped together so the maps overlap exactly
- labelled features, if necessary
- included BOLTSS.

A clear description of complex overlay maps has:

- identified and communicated key features
- clearly represented and communicated the data.

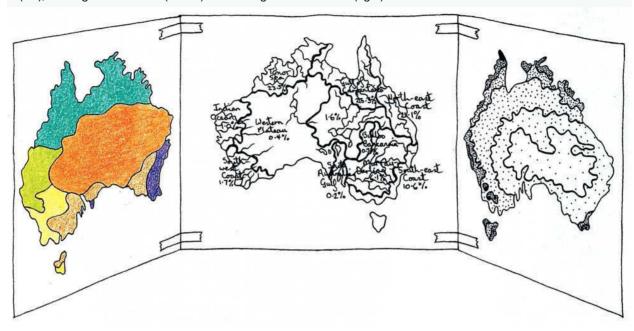
17.3.2 Show me

How to create and describe a complex overlay map

You will need:

- three maps of the same region at the same scale showing different information (one to be a base map)
- one of these maps to act as a base map
- two pieces of tracing paper, at least as large as the base map
- a light grey pencil and coloured pencils
- a ruler
- an eraser
- adhesive tape.

FIGURE 1 An illustration of a completed complex overlay map showing Australia's seasonal rainfall patterns (left), drainage catchments (centre) and average annual rainfall (right)



The **FIGURE 1** sample complex overlay shows a map of Australia's drainage catchments used as the base map (centre). Taped to this on tracing paper is a map of Australia's average annual rainfall shown at right in **FIGURE 1**, attached so as to be able to fold onto the base map. Also taped to the base map, from the opposite side, is a map of Australia's seasonal rainfall patterns, shown at left in **FIGURE 1**. This is also attached so as to be able to fold onto the base map. Additional layers could be added by taping further maps (drawn on tracing paper) to the top and bottom of the base map.

This series of map overlays provides an example of interconnection; in this case, the interconnection between annual rainfall and seasonal rainfall, between annual rainfall and drainage catchments, and between seasonal rainfall and drainage catchments.

Further analysis is required to show areas that are not connected and areas that are sometimes related, but not always. For example, the Murray–Darling Basin drainage catchment has a wide range of seasonal rainfall patterns across its area, varying from uniform rainfall to arid zones.

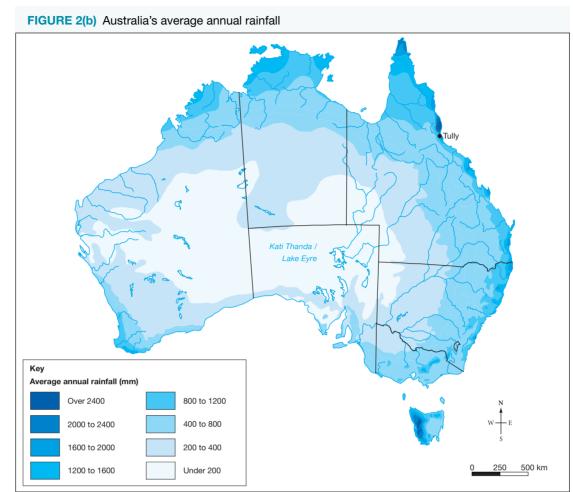
Procedure

To complete and describe complex overlay maps you must have two or more maps of the same place and at the same scale with different information. For this example, we will use maps showing Australia's drainage catchments (FIGURE 2a), Australia's average annual rainfall (FIGURE 2b) and Australia's seasonal rainfall patterns (FIGURE 2c).

23.3% Gulf of Carpentaria 23.3% North-east Lake Eyre Coast 1.6% 21.1% Indian Ocean Western Plateau **ી:0**% 0.4% Bancannia 0.3% Murray-Darling South-west 6.1% South-east Coast South Australian Water catchment area name Gulf 10.6% Distribution of Australia's run-off 0.2% Timor Sea 23.3% Tasmania 13.3%

FIGURE 2(a) Australia's drainage catchments

Source: MAPgraphics Pty Ltd, Brisbane



Source: Bureau of Meteorology, 2003, on the Australian Water Map, Earth Systems Pty Ltd

FIGURE 2(c) Australia's seasonal rainfall patterns

Description of the seasonal rainfall patterns

Northern Territory

Queensland

Australia

South

Australia

New South Wales

Wictoria

Victoria

Very marked winter rainfall

Uniform rainfall

Uniform rainfall

Uniform rainfall

Very marked winter rainfall

Arid zone: rainfall very low and erratic

Source: MAPgraphics Pty Ltd, Brisbane

Step 1

Select the base map — this will show information that is unlikely to vary. In this instance, it is the drainage catchments. You may need to trace the base map if it appears in a book, as it may not be possible to stick other maps to the original.

Step 2

Trace each of the other maps onto separate sheets of tracing paper. Don't forget to include BOLTSS on your maps. Each map should have its own title, its own key/legend and its own source. Scale and north pointer need to appear only on the base map.

Step 3

Using adhesive tape, hinge the maps to fold on top of each other so that the map outlines (coastlines) match up. Alignment is very important, so choose obvious borders to line up. **FIGURE 3** shows the second map hinged to the right of the base map. **FIGURE 4** shows the third map added, hinged to the left of the base map.

Step 4

You are now able to lift each map separately from the others to see the information individually, or view two or more maps combined.

FIGURE 3 Hinged map (first overlay) over base map

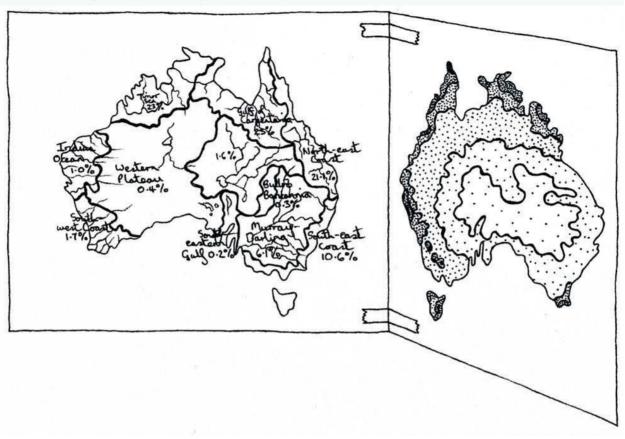


FIGURE 4 Two maps hinged to a base map, forming a complete overlay map shown prior to folding

Step 5

To analyse the information that the overlay maps show, you should comment on where there is a relationship or interconnection of features. Lay any two maps together and identify any similar patterns. Write a sentence about these similarities. Then lay all three maps together, identify any similar patterns and write a sentence about these. An example is that the area with less than 400 mm of rainfall forms the arid zone, with erratic rainfall across the Western Plateau and Lake Eyre catchments.

Step 6

Next, look for significant differences across two maps. Write a sentence about these differences. Then look for significant differences across the three maps and write a sentence about these. For example, the very marked winter rainfall in south-west Western Australia does not produce greater annual rainfall than that in western Tasmania and near Tully, Queensland.

Step 7

Now go through the process again looking for unusual occurrences; that is, where things appear random and show no interconnection. An example is that the Murray–Darling Basin drainage catchment has a wide range of seasonal rainfall patterns across its area, varying from uniform rainfall to arid zones.



17.3.3 Let me do it

Complete the following activities to practise this skill.

17.3 ACTIVITIES

- 1. Use **FIGURE 5** below, which shows the topography of Borneo, and the maps in **FIGURES 4** and **5** in subtopic 17.8 that show orangutan distribution in 2015 and rainforest distribution in 2020. Create an overlay map to show the *interconnection* between topography, rainforest distribution and orangutan distribution. Use the checklist to ensure you cover all aspects of the task correctly.
 - *Note:* You will need to make your base map (from **FIGURE 5**) the same scale as the maps in subtopic 17.8. To do this, draw a 3×3 grid over the base map, then draw a smaller 3×3 grid on a piece of paper this new grid should be the same size as the maps from subtopic 17.8 that you want to match. Working one grid square at a time, sketch a copy of the base map into the new smaller grid.
- 2. Apply your skills in describing a complex overlay map by answering the following questions.
 - (a) Is there a pattern (relationship or **interconnection**) between the location of the highest land and rainforest distribution (2005) in Borneo?
 - (b) Is there a pattern (relationship or **interconnection**) between the location of rainforests (2005) and the distribution of orangutans (2015) in Borneo?
 - (c) Are there any areas in Borneo where there is no relationship between rainforest distribution and orangutan numbers?
 - (d) On what type of land might rainforests be found in the future?
 - (e) Between which two features is the strongest relationship?
 - · High land and rainforest distribution
 - High land and distribution of orangutans
 - Rainforest distribution and the orangutan population.

What would explain this strong relationship?

FIGURE 5 Topography of Borneo





Checklist

In creating my complex overlay map, I have:

- · drawn in pencil first, then coloured
- · used light colours, so that the base map remains clear
- placed a key/legend on each overlay, but offset it so each can be seen
- created hinges with adhesive tape at appropriate spots
- labelled features, if necessary
- · included BOLTSS.

In describing my complex overlay map, I have:

- · identified and communicated key features
- clearly represented and communicated the data.

17.5 SkillBuilder: Drawing a précis map

17.5.1 Tell me

What is a précis map?

A précis map is a simplified map — the cartographer has decided which details to leave in and which to leave out. It is different from a sketch map, which includes all the main features.

Why are précis maps useful?

A précis map is a summary of an area. There may be just one feature shown, such as rainforest. Sometimes more features are shown, such as vegetation, urban areas and roads.

They are useful for:

- identifying a particular feature or features, such as rainforests or residential/industrial areas of a city
- close examination of a particular feature
- focusing the reader's attention on a feature, such as the distribution of a plant species
- showing or including detail not visible on a satellite image or aerial photograph.

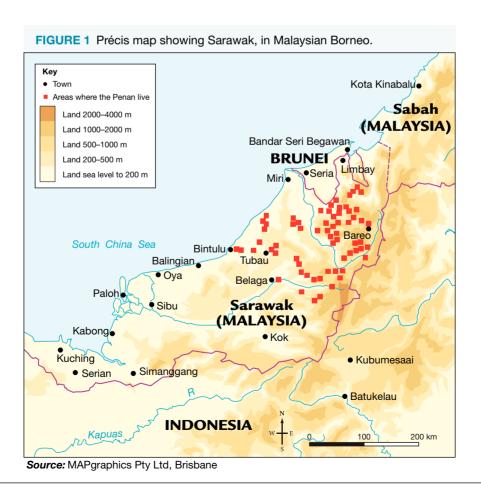
A good précis map has:

- been neatly presented
- been drawn in pencil
- been coloured or shaded and includes a key/legend
- accurately shown a feature or features
- included BOLTSS.

17.5.2 Show me

How to draw a précis map

Model



The map in **FIGURE 1** shows four aspects — the height of the land, the major towns, the rivers and the areas where the Penan people live. The cartographer has elected to omit aspects such as transport systems and vegetation. The areas in which the Penan people live have been drawn as symbols and in no way depict the boundaries of their locations. **FIGURE 1** is a précis of the complex map in **FIGURE 2**.



FIGURE 2 Complex map showing Sarawak, in Malaysian Borneo

You will need:

- a map of the region being considered
- a light grey pencil
- coloured pencils
- a ruler
- an eraser.

Procedure

Step 1

Determine the area that you want to use to create a précis map. In **FIGURE 1** this has been done by removing details for surrounding countries, so that only Sarawak is detailed.

Step 2

Rule a border on your page within which to create your map. Make this the same size as the original to avoid having to scale your drawing.

Step 3

Identify the feature/s and their extent that you are going to include on your précis map. In **FIGURE 1**, the cartographer has chosen to leave in land heights, rivers and towns, and has chosen to leave out roads and vegetation.

Step 4

Create a colour-coded key/legend for each feature and place it next to or below the map.

Step 5

Within the border that you created in Step 2, draw an outline of the area that is to be mapped. Retain the scale of the original map that you are using.



Step 6

Individually, take each of the features that you identified in Step 3 and mark onto your map, in a generalised way, the area that it covers. When you have completed one feature, colour it before moving to the next feature and mark your key/legend appropriately (see **FIGURES 4**, **5**, **6** and **7**). It will prevent confusion if you complete the colouring as you go, rather than leaving it all until the end.

Step 7

Complete the précis map with BOLTSS.

FIGURE 4 Land heights have been added to the base map.

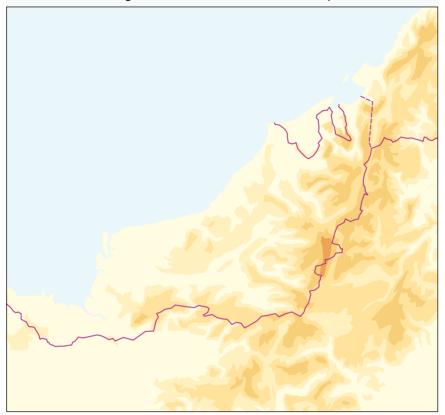


FIGURE 5 Rivers have been added to the base map.

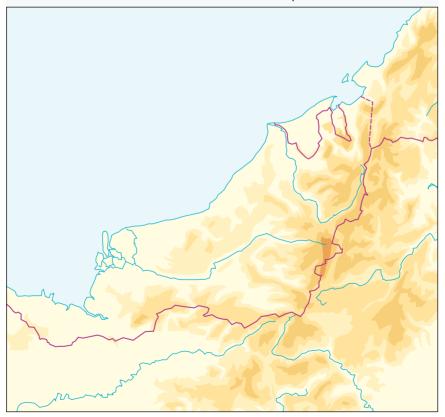


FIGURE 6 Towns have been added to the base map.

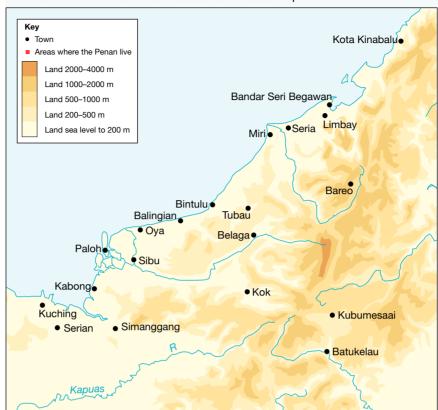
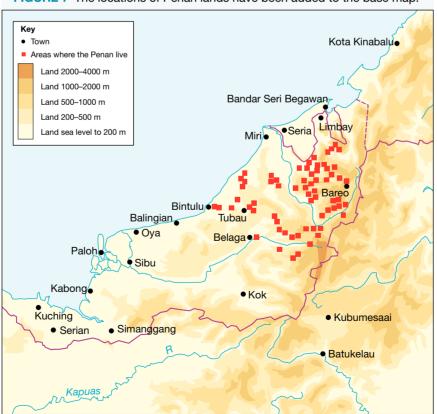


FIGURE 7 The locations of Penan lands have been added to the base map.





17.5.3 Let me do it

Complete the following activities to practise this skill.

17.5 ACTIVITIES

- 1. Refer to the map of the Amazon shown in **FIGURE 5** in subtopic 17.4. On a separate piece of paper, create a précis map showing only the levels of deforestation. Map the outline and include the borders of countries. To show levels of deforestation, you should include the areas of undisturbed natural forest (low or no threat), undisturbed natural forest (under threat) and disturbed forest. Ensure that you complete the conventions of good mapping include BOLTSS. Use the checklist to ensure that you cover all aspects of the task.
- 2. Use your completed précis map to answer the following questions.
 - (a) What level of deforestation dominates the Amazon Basin?
 - (b) Is there more area of forest under threat than there is deforested area?
 - (c) Is there a greater area of forest under threat than there is not threatened?
 - (d) In which area of the Amazon Basin is the majority of the least disturbed forest?
 - (e) Describe the regions of the Amazon Basin where you would be most likely to see evidence of deforestation.

Checklist

I have:

- · presented the information neatly
- drawn in pencil
- · coloured/shaded with a key/legend
- · accurately shown a feature or features
- · included BOLTSS.

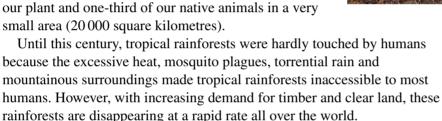
17.10 Thinking Big research project: Rainforest display

Scenario

Newsflash - rainforests will soon be gone

Over the past 10 000 years, human activities have reduced the Earth's forest by about one-third. Trees have been felled to make way for urban development and agriculture, and to obtain fuel and building materials. Today, approximately 34 per cent of the world's land area is covered by forest.

Rainforests are one of the most complicated environments on Earth. Mostly found in warm, moist areas near the equator, rainforests contain nearly three-quarters of all varieties of life on Earth and perform several important functions on our planet. Australia's rainforests are very important, as they contain half of our plant and one-third of our native animals in a very small area (20 000 square kilometres).



Urgent action is needed fast, but we need to know more information before the important decisions are made. Reliable sources suggest the Department for Natural Resources and Environment are compiling a top-secret document, detailing many factors in the 'Rainforest Debate'.

Task

In response to the above article, you have been commissioned by the Department of Natural Resources and Environment to complete an in-depth study of rainforests and present your information on their website, as part of an on-going educational program.

A representative from the Department has requested that you produce an annotated visual display that highlights the importance of rainforests and their plight, as well as suggestions for the conservation of the world's remaining tropical rainforests. Information about a specific rainforest and its unique or special features must be included.

The display must be visually stimulating and contain maps, diagrams and pictures as well as written information and a bibliography.

Follow the steps detailed in the **Process** section to complete this task.







Process

- Open the ProjectsPLUS application for this topic and then click the **Start new project** button to enter the project due date and set up your project group. This will enable you to share ideas, store your research and collaborate on the finished product. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- Check the assessment criteria before you begin.
- Revisit the relevant subtopics in the text and the suggested weblinks in the **Media centre** before conducting additional research. Don't forget to compile your bibliography as you progress through the task use the bibliography template in the Media centre.
- Select one of the following rainforests to investigate in detail:
 - Amazon
 - Daintree
 - Indonesian
 - Malaysian
 - Papua New Guinea
 - Congo.
- Your display should have four distinct sections you will need to have both written and visual material (images as well as data) in each section of your display.

The importance of rainforests

• Include information about the structure of rainforests, their unique role in regulating climates and acting as the Earth's lungs, source of food and medicines, and their importance as habitats.

What is happening to the world's rainforests and why?

- Research the reasons why our rainforests are being destroyed; such as for agriculture or urban development, or as a source of fuel and building materials.
- What statistics can you find in relation to the rate of destruction?

Saving the rainforest

- What conservation strategies are being used?
- How successful have these strategies been?
- Add your own suggestion what else could be done?
- Consider the views of the Traditional or Indigenous inhabitants of the rainforest.

Focus on a specific rainforest

- Show its location on both a world and country map remember to include BOLTSS.
- Include the unique features of this rainforest.
- What is happening to this rainforest?
- What is the effect on the Indigenous people who inhabit this rainforest?
- Decide how to best organise your material and create your annotated visual display.
- Submit your display, including the bibliography, to your teacher for assessment and feedback.





17.11 Review

17.11.1 Key knowledge summary

17.2 Rainforest characteristics

- There are different types of rainforest, montane, temperate and lowland.
- Rainforests have similar characteristics and a similar structure with distinct layers.

17.4 Changing rainforest environments

- Australia was once covered by rainforests. Over time the gradual movement of the continent southwards has resulted in a dramatic decrease in the amount of rainforest found in Australia.
- Australia's tropical rainforests have World Heritage status and Indigenous communities have adapted to live in the rainforest environment.
- The Amazon Basin is the world's largest remaining rainforest and plays an important role in controlling the world's climate and oxygen supply.
- Many products found in our pantries and medicine cabinets have their origins in the rainforest.

17.6 Indigenous peoples and the rainforest

- Indigenous people rely on the rainforest to supply all their needs.
- They live traditional lifestyles nomadic, subsistence and hunter–gatherers.

17.7 Disappearing rainforests

- The major issue facing today's rainforests is deforestation, mainly due to commercial logging, farming and mining activities.
- Rainforests in developing nations are most at risk. Here the population is expanding rapidly, and the people are poor. Exploitation of the rainforest is viewed as of more value than preserving it.
- Often small land-holdings are taken over by large-scale farming developments.

17.8 Social and environmental impacts of deforestation

- Deforestation has a dramatic impact on the environment. The regulating effect on the planet is lost and carbon dioxide is released into the atmosphere, accelerating global warming.
- As the rainforest becomes fragmented, animal species such as the orangutan lose their habitat and become isolated. Entire species are threatened with extinction.
- Indigenous people lose their traditional way of life and their lands. The land becomes more prone to landslides once vegetation is removed, posing a threat to the inhabitants of the region.
- As outsiders move into a region, they bring diseases such as the flu and measles; with no natural immunity, entire populations are at risk of being wiped out.

17.9 Saving and preserving rainforests

- Only a small proportion of rainforests are protected and in developing countries the challenge is on to protect them.
- Sustainable development, finding alternatives to timber products and educating the public are some of the measures being used to manage and preserve rainforests.

17.11.2 Reflection

Complete the following to reflect on your learning.

17.11 ACTIVITIES

Revisit the inquiry question posed in the Overview:

We can plant new trees anytime and anywhere. What makes the world's rainforests so special?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.





eWorkbook Reflection (doc-31352)

Crossword (doc-31353)



Interactivity Rainforest landscapes crossword (int-7599)

KEY TERMS

catchment area of land that drains into a river

clearfelling a forestry practice in which most or all trees and forested areas are cut down

compost a mixture of various types of decaying organic matter such as dung and dead leaves

drainage basin an area of land that feeds a river with water; or the whole area of land drained by a river and its tributaries

ecosystem an interconnected community of plants, animals and other organisms that depend on each other and on the non-living things in their environment

ecotourist a tourist who travels to threatened ecosystems in order to help preserve them

evapotranspiration the process by which water is transferred to the atmosphere from surfaces such as the soil and plants

gorge narrow valley with steep rocky walls

habitat the total environment where a particular plant or animal lives, including shelter, access to food and water, and all of the right conditions for breeding

host an organism that supports another organism

hydroelectric dam a dam that harnesses the energy of falling or flowing water to generate electricity ice ages historical periods during which the Earth is colder, glaciers and ice sheets expand and sea levels fall leaching a process that occurs in areas of high rainfall, where water runs through the soil, dissolving minerals and carrying them into the subsoil. The process can be compared to a coffee pot in which the water drips through the coffee grounds.

microclimate specific atmospheric conditions within a small area

nomadic describes a group that moves from place to place depending on the food supply, or pastures for animals

selective logging a forestry practice in which only selected trees are cut down

shifting agriculture process of moving gardens or crops every couple of years because the soils are too poor to support repeated sowing

species a biological group of individuals having the same common characteristics and being able to breed with each other

subsistence producing only enough crops and raising only enough animals to feed yourself and your family or community

sustainable development economic development that causes a minimum of environmental damage, thereby protecting the interest of future generations

temperate describes the relatively mild climate experienced in the zones between the tropics and the polar circles

FIELDWORK INQUIRY: LOCAL WATER CATCHMENT STUDY

Scenario

Everybody lives in a catchment and its health is influenced by the activities in all areas within it. Your local water authority has received contradictory reports about the current state and health of your local catchment. As the reports are contradictory and the local water authority is not sure which is valid and which is not, they need to undertake a detailed study of the natural and built environments in the local catchment area. This will put them in an expert position to question and quash statements made by non-experts.

Task

Your team has been commissioned by the local water authority to compile and present a report evaluating the current state of your local catchment. Your team must gather data to investigate how the catchment changes from the upper reaches to the lower. Your investigations will cover river characteristics such as depth, width and other channel characteristics, the fauna and flora in the area, and the land use in the catchment. In order to ensure that your report is accurate, your team can gather data about a local waterway and its immediate catchment by observing, collecting, interpreting and presenting your findings.



Process

- You can complete this project individually or invite members of your class to form a group. Open the ProjectsPLUS application in the Resources tab for this topic. Open the **Project set-up** tab to enter the project due date and set up members in your project group if you wish to work collaboratively.
- Planning: You will need to research the characteristics of your local catchment area. In order to
 complete sufficient research, you will need to visit a number of sites within the catchment, comparing
 different locations upstream and downstream of one creek or river. Access research topics in the
 Research Forum to provide a framework for your research:
 - What sort of data and information will you need to collect at your fieldwork sites?
 - **How** will you collect and record this information?
 - **Where** would be the best locations to obtain data? You can determine this once you know which waterway(s) you are visiting.
 - **How** will you record the information you are collecting? Consider using GPS, video recorders, cameras and mobile devices (laptop computer, tablet, mobile phone).
- Before going out into the field, examine topographic maps and aerial photos or satellite images of the relevant area to identify key landmarks (such as the location of your school, and the location of the waterway relative to the school). Locate the catchment boundary, the path of the waterway and the watercourse it contributes to. Construct a sketch map of the waterway this map should show the catchment boundary/watershed, the river channel and the direction in which the water is flowing. Clearly note compass directions on the map. Gather spatial (mapped data) information about the region (using, for example, street directories, topographic maps, aerial photos and satellite images from sources such as Google Earth) and information about planning, population, land use, and flora and fauna.
- Discuss with your group what you might already know about your catchment and then divide the
 research tasks between you. Discuss the information you will be looking for and where you might find
 it. Choose land use categories that you will be able to recognise and a mapping symbol to be used for
 each. The weblinks in your **Media Centre** will help you get started. You can view and comment on
 other group members' articles and rate the information they have entered.



Collecting and recording data

Depending on the catchment you visit, you could investigate some or all of the following:

- channel depth at various points across the stream
- channel width
- channel cross-section
- stream flow velocity (how fast the water is flowing)
- flora transects
- · fauna surveys
- land-use surveys.

Other relevant observations may include:

- condition of the waterway banks
- · general slope
- native and exotic vegetation
- cleared land
- evidence of erosion
- land-use zones
- potential pollution sources (including stormwater drains entering the waterway and sewage overflow points)
- building sites, industrial and residential areas
- pollution control devices
- erosion control.

Ensure that you take relevant measuring equipment into the field, and that several measurements are taken at each site. It is useful to divide tasks among groups and then share data when you are back at school. Use a copy of your map to record the information at each site.

Analysing your information and data

Once you have collected, collated and shared your data, you will need to decide what information to include in your report and the most appropriate way to show your findings. If using spreadsheet data, make total and percentage calculations. Some measurements are best presented in a table, others in graphs or on maps. If you have used a spreadsheet, you may like to produce your graphs electronically. Use photographs as map annotations (either scanned and attached to your electronic map or attached to your hand-drawn map) to show features recorded at each site. You may also like to annotate each photograph to show the geographical features you observed. Describing and interpreting your data is important.



Access the report template and the presentation planning template in the **Media Centre** to help you complete this project. Use the report template to create your report. Use the presentation template to create an engaging presentation that showcases all of your important findings.

Communicating your findings

You will now produce a fieldwork report and presentation of your findings. Your report should include all of the research that you completed and all evidence to support your findings. Ensure that your report includes a title, an aim, a hypothesis (what you think you will find, which is written before you go into the field), your findings and a conclusion. You will also need to recommend some type of action that needs to be taken to improve river management at the creek or river you visited. You can print your Research Report from the **Research Forum** to easily view all the information you have gathered. When you are happy with your work and are sure you have included all elements, hand in your fieldwork report and presentation.

UNIT 2 CHANGING NATIONS

Have you ever stopped to consider why you live where you do? What prompted your family to live there? There are so many different types of places where you *could* live: rural or urban, coastal or inland, small or large, bustling or quiet. Different people find different places suitable (or more 'liveable') for them than other places. Some people have no choice. The question is: how can we make places more liveable?

| 18 | Urbanisation and people on the move | 627 |
|----|--|-----|
| 19 | Our changing urban world | 660 |
| 20 | Managing and planning Australia's urban future | 703 |



GEOGRAPHICAL INQUIRY: INVESTIGATING AN ASIAN MEGACITY

Your task

Your team has been put in charge of creating a website designed to inform the residents of an Asian megacity about its characteristics. Each city will be different depending on its location, wealth or poverty, size and climate. A key feature of your website will be to cover any urban solutions and innovations that are currently being implemented in your megacity.

Select your learnON format to access:

- · an overview of the project task
- · details of the inquiry process
- resources to guide your inquiry
- an assessment rubric.



online ₹



Resources

P

ProjectsPLUS Geographical inquiry: Investigating an Asian megacity (pro-0146)

18 Urbanisation and people on the move

18.1 Overview

Why do millions of people choose to live so close to other people in busy urban areas?

18.1.1 Introduction

There are many advantages to living in large cities — for example, the economic benefit brought about by sharing the costs of providing fresh water, electricity or other energy sources and public transport between many people. There may be social benefits, because the cities provide a wider choice of sporting, recreational and cultural events. However, there are also disadvantages of living in a large city environment. In this topic we will explore and compare urbanisation around the world.





√ eWorkbook

Customisable worksheets for this topic

Video eLesson Our urban world (eles-1628)

LEARNING SEQUENCE

- 18.1 Overview
- 18.2 Urbanisation around the world
- 18.3 Australian urbanisation
- 18.4 SkillBuilder: Understanding thematic maps
- 18.5 Comparing urbanisation in the United States and Australia
- 18.6 Effects of international migration on Australia
- 18.7 SkillBuilder: Creating and reading pictographs
- 18.8 People on the move in Australia and China
- 18.9 SkillBuilder: Comparing population profiles
- 18.10 Thinking Big research project: Multicultural Australia photo essay
- **18.11 Review**

Oline

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To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.



18.2 Urbanisation around the world

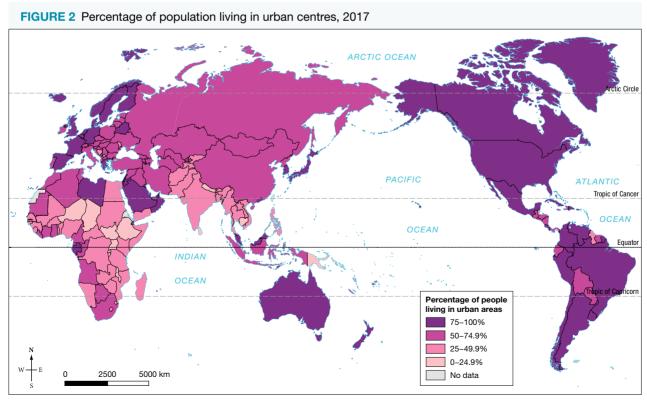
18.2.1 What is urbanisation?

As the world's population increases, **urban** areas continue to grow. In some regions, people are moving from rural to urban areas at very high rates.

Urbanisation is the growth and expansion of urban areas and involves the movement of people to towns and cities. The earliest cities emerged about 5000 years ago in Mesopotamia (part of present-day Iran, Iraq and Syria). Originally these cities depended on agriculture. In 1800, 98 per cent of the global population lived in rural areas and most were still dependent upon farming and livestock production — only 2 per cent of people lived in urban areas.

However, as cities grew and trade developed, urban areas became centres for merchants, traders, government officials and craftspeople. By 2008, the proportion of people living in urban areas had increased to 50.1 per cent, and in 2017 the figure had risen again to nearly 55 per cent. The rate of growth has varied in different regions (see **FIGURE 1**).

FIGURE 1 The growth in urban populations over time 100 90 80 70 60 % Urban 50 40 30 20 1960 1970 1980 1990 2000 2010 2020 Year Africa Asia Europe Latin America and the Caribbean North America Oceania



Source: World Bank Data

18.2.2 Uneven urbanisation

Urbanisation has not occurred evenly across the world. Some countries are predominantly rural, such as Cambodia and Papua New Guinea (populations 77 per cent and 87 per cent rural respectively), whereas others are almost completely urban, such as Belgium and Kuwait (98 per cent urban for both). In fact, some countries have 100 per cent urbanisation, including Bermuda, Cayman Islands, Hong Kong, Macau, Monaco, Vatican City and Singapore. South America is becoming one of the most urbanised regions in the world and currently has a population of around 385 million people. It is estimated that by 2050. 91.4 per cent of its population will be residing in urban areas.

Coastal urbanisation

People have lived on coastlines for thousands of years. Often at the mouth of rivers, coastal settlements became centres of trade and commerce and quickly grew into cities. Today, about half the world's population lives along or within 200 kilometres of a coastline (see FIGURE 4). According to the European Commission, 95 per cent of the world's population lives on only 10 per cent of the Earth's land area.

Countries that have over 80 per cent of their population living within 100 kilometres of a coastline include the United Kingdom, Senegal, Portugal, Belgium, the Netherlands, Sweden, Norway, Tunisia, Greece, Oman, the United Arab Emirates, Kuwait, Qatar, Sri Lanka, Japan, Singapore, Indonesia, Malaysia, the Philippines, Australia and New Zealand.

FIGURE 3 Urban housing in Kuwait



FIGURE 4 Cape Town in South Africa is a city located on the coast.





Resources

Interactivity Urban Indonesia (int-3115)

🤼 Google Earth Cape Town

Indonesia

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Urbanisation > World urbanisation

18.2 INQUIRY ACTIVITIES

- 1. Refer to a world population density map in your atlas or online. Compare this map with the two regions that have the highest rural population. What pattern do you see?

 Comparing and contrasting
- Look at a physical map in an atlas to locate the countries with more than 80 per cent of their population located on the coast. Study the location of each country and create a table to record possible reasons for this pattern.
 Classifying, organising, constructing

18.2 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

18.2 Exercise 1: Check your understanding

- 1. **GS1** Define *urbanisation* in your own words.
- 2. GS2 How has urbanisation changed from 1960 to the present? How is this different around the world?
- 3. **GS2** What is expected to happen with urbanisation in the future?
- **4. GS2** Explain how **FIGURE 1** shows that urbanisation has varied in different regions of the world. Which two regions have the greatest rural population?
- 5. GS1 Look at FIGURE 1. Which region's urbanisation rate has consistently been the highest over time?

18.2 Exercise 2: Apply your understanding

- 1. **GS5** Look at **FIGURE 2**, which shows the population in urban areas. Identify and name the three countries with the highest and the three with the lowest percentage of people living in urban areas. Write a description of the general pattern shown in the map. Include patterns within different continents in your description.
- 2. GS6 Rural areas are where most food is produced. What are two possible outcomes for food production if urbanisation continues?
- 3. GS4 Draw a sketch of the photograph of Cape Town in FIGURE 4. Annotate the sketch, identifying the possible advantages and disadvantages to the natural environment when cities and towns are located on the coast.
- 4. Look at FIGURE 2. How does Australia's urbanisation rate compare with it's closest neighbours?
- 5. Look at FIGURE 1. Which two continents have the lowest urbanisation rates?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

18.3 Australian urbanisation

18.3.1 Where do most Australians live?

Australians live on the smallest continent and in the sixth largest country on Earth. With a population of almost 25 million in 2019 and an area of 7 690 000 square kilometres, our **population density** is 3.1 people per square kilometre. We may think of ourselves as an outback-loving, farming nation, but we mostly live near the coast.

Most Australians currently live within a narrow coastal strip that extends from Brisbane in the north to Adelaide in the south. While 71 per cent of Australians live in major cities, one in ten people live in small towns of less than 10 000 people. In 2016 there were just over 1000 towns with populations of fewer than 1000. About 85 per cent of people live within 50 kilometres of the coast. Australians love the beach, but is it just a coastal location that can explain this uneven **population distribution** pattern?

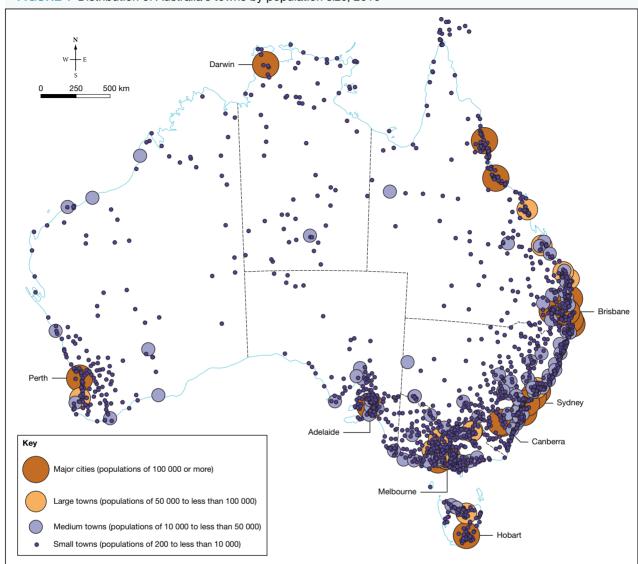


FIGURE 1 Distribution of Australia's towns by population size, 2016

Source: Australian Bureau of Statistics

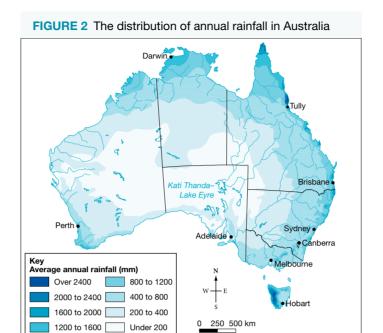
Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

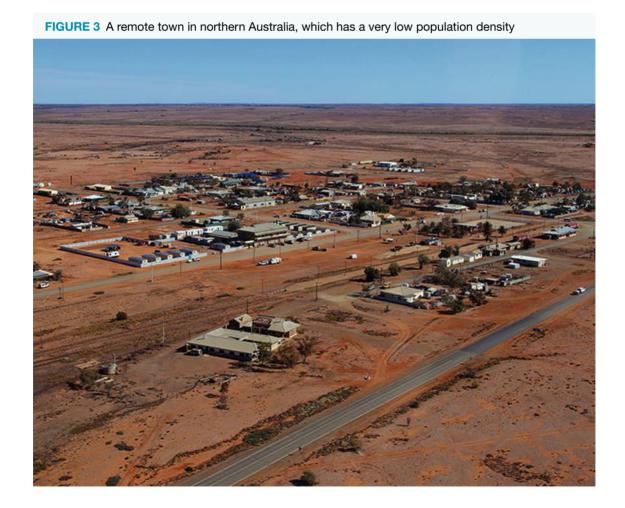
• Investigate additional topics > Population > Population of Australia

FIGURE 2 shows the distribution of rainfall within Australia. Comparing FIGURES 1 and 2, it is apparent that there is a strong interconnection between the availability of more than 800 millimetres of rainfall per year and population distribution in the east, south-east and south-west of Australia. It would be easy to say that Australians live in places where rainfall is higher, but if you look at these maps carefully there are major exceptions to this spatial pattern. What is the relationship between population distribution and total rainfall in the north of Australia? Is the population distribution high in the regions of high rainfall in Queensland and the Northern Territory?

Coastal locations and rainfall are not the only reasons Australians live where they do. The availability of mineral resources, irrigation schemes to enhance farm production, and remote and stunning tourist destinations are **geographical factors** that draw people to live in a particular place.



Source: Map drawn by MAPgraphics Pty Ltd, Brisbane



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18.3.2 Comparing population densities

FIGURE 1 shows Australia's population distribution in 2016. To better understand this data, we need to compare Australia's population density with that of other places in the world. This map shows that small areas around the major state capital cities have population densities of over 100 people per square kilometre of land. Look at TABLE 1 and you can see that the average population density for Australia is well below the global average, and is easily the lowest of any of the permanently inhabited continents.

The population density of Australia is similar to that of Canada (3 people per square kilometre), but much lower than that of New Zealand (15 people per square kilometre), the United States (33 people per square kilometre) or China (145 people per square kilometre).

TABLE 1 The average population density for each continent

| Continent | Average population density (people per km²) |
|---------------|--|
| Asia | 100 |
| Europe | 55 |
| Africa | 36 |
| North America | 20 |
| South America | 32 |
| Australia | 3 |
| Antarctica | 0.00007 |

Consider the geographical factors that Australia might share with Canada but not New Zealand, the United States or China that could explain the significant difference between their population densities.

18.3.3 Where have Australians lived in the past?

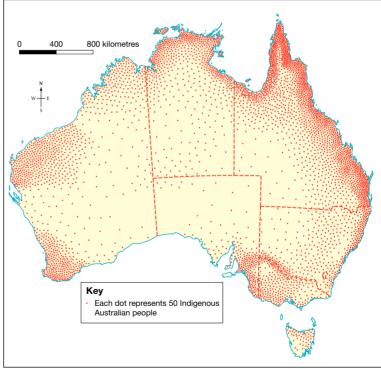
Before European occupation

Prior to European arrival to Australia, where did **Indigenous** Australian peoples live?

Until 1788, Indigenous Australian peoples inhabited all parts of Australia (see FIGURE 4). The most densely populated areas, with 1–10 square kilometres of land per person, were the south-east, south-west and far north coastal zones, the north of Tasmania and along the major rivers of the Riverina region (south-western New South Wales).

The population density of Aboriginal and Torres Strait Islander peoples was highest in places close to coastal and river environments. These places had the best availability of food and other resources. In a location such as Port Jackson, New South Wales, food was abundant, meaning that the inhabitants needed to spend only about four hours each day hunting or gathering enough for their survival. In places where rainfall was unreliable,





Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

such as central Australia, the local peoples found it harder to survive. They often needed more than half a day to hunt and gather enough to satisfy their basic needs. When food resources ran low or with changing seasons, communities moved on to another part of their country. Being nomadic, they could manage their environment by not over-using the resources available at any one site.

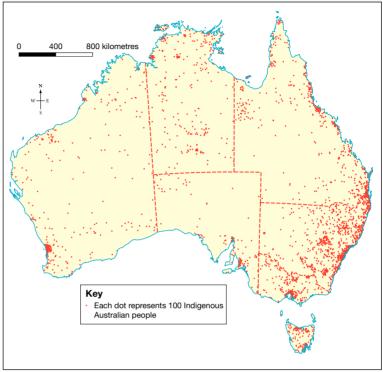
18.3.4 Where do Aboriginal and Torres Strait Islander peoples live today?

It is believed that in 1788 there were between 350 000 and 700 000 Aboriginal and Torres Strait Islander peoples. Within 50 years this population had been greatly reduced by disease and British colonists. In 2016, there were 649 200 Aboriginal and Torres Strait Islander peoples, making up about 2.8 per cent of Australia's population.

The Australian environment has changed significantly since 1788. Much land has been cleared, shaped and blasted for cities, farms and mines. Other than the management of vegetation by fire, prior to European colonisation the landscape of Australia had not been greatly altered by its human inhabitants. By the twenty-first century, little of Australia's environment remained significantly unchanged by human occupation.

The patterns in **FIGURES 4** and **5**, showing the distribution of Aboriginal and Torres Strait Islander populations

FIGURE 5 Where Aboriginal and Torres Strait Islander peoples live today



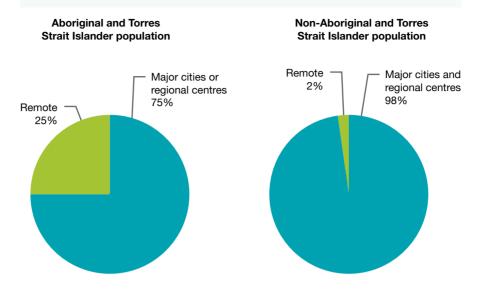
Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

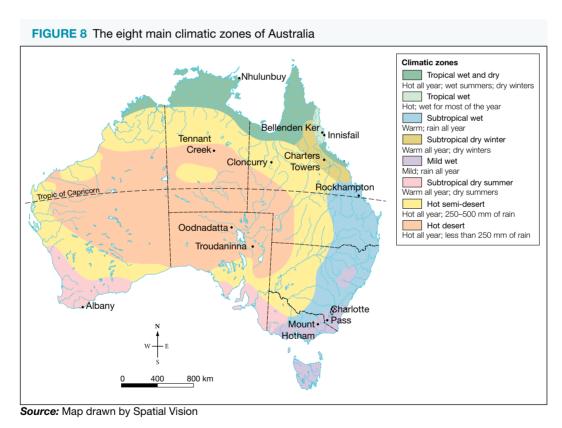
in 1788 and today, are generally very similar. Since before 1788, most of Australia's peoples have tended to live in the same relatively small region of this country.





FIGURE 7 Regional distribution of Aboriginal and Torres Strait Islander peoples and the non-Aboriginal and Torres Strait Islander population of Australia





-Explore more with my**World**Atlas

Deepen your understanding of this topic with related case studies and questions.

• Investigate additional topics > Population > Indigenous Australians

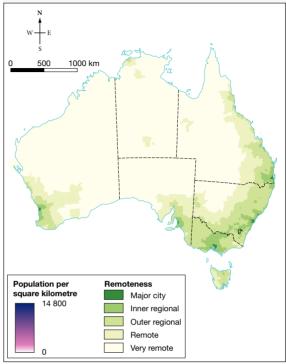
18.3.5 Is Australia an urbanised country?

With a population of nearly 25 million people in 2019 and a very large landmass, Australia has an average population density of only 3.1 people per square kilometre. Yet 85 per cent of people live within 50 kilometres of the coast, and most of these people — in 2018, 90 per cent of Australians — live in urban areas.

Australia is one of the most urbanised and coast-dwelling populations in the world and the level of urbanisation is increasing. From Federation (1901) until 1976, the number of Australians living in capital cities increased gradually from a little over one-third (36 per cent) to almost two-thirds (65 per cent). Since 1977, the population in capital cities has grown to 66 per cent. It is estimated that by 2053 this will have grown to 72 per cent (with an estimated 89 per cent in the four largest capital cities).

All of Australia's capital cities have grown over time, as have many regional urban areas such as the Gold Coast and Moreton Bay regions. This growth is expected to continue in the future (see **TABLE 2**).

FIGURE 9 A map of Australia's population distribution shows that it is highly urbanised and coastal



Source: © Australian Bureau of Statistics

TABLE 2 Australian capital city 2017 populations and projected 2036 and 2066

| City | 2017 population | Projected 2036 | Projected 2066 | |
|-----------|-----------------|----------------|----------------|--|
| Sydney | 5 132 355 | 7 379 976 | 11 240 860 | |
| Melbourne | 4 843 781 | 7 520 830 | 12 235 490 | |
| Brisbane | 2 413 457 | 3 596 431 | 5 782 256 | |
| Perth | 2 039 041 | 2 798 994 | 4 330 509 | |
| Adelaide | 1 334 167 | 1 605 335 | 2 068 550 | |
| Hobart | 229 088 | 297 085 | 466 752 | |
| Darwin | 148 884 | 195 082 | 295 458 | |
| Total | 16 140 773 | 23 393 733 | 36 419 875 | |

DISCUSS

Consider the issues and problems that increasing city populations will create. Discuss this as a class and construct a consequence chart to summarise all the ideas. What might be some solutions to these issues and problems? Add these to your chart.

[Critical and Creative Thinking Capability]

18.3.6 What are the consequences of a highly urbanised Australia?

More land is needed when cities expand and this results in the greatest change — from agricultural to urban land. This has been called **urban sprawl**. Melbourne's growth has resulted in many new suburbs and extensive growth into and over food-growing areas, particularly in the west and south-east of the CBD (see **FIGURE 10**). Sydney, Perth and Brisbane have also spread into distant, previously agricultural areas.

FIGURE 10 Melbourne's urban growth over time Whittlesea Yarra Glen Greensborough Mordialloc Key 1888 Fruit growing area 1954 1954 Vegetable growing area 1954 1971 Market garden / orchard 2009 2010 2030 forecast Urban growth boundary to 2030

Source: Various Victorian planning studies and current land use mapping. Map produced by Spatial Vision 2019.

Historically, urban areas were settled where the land was flat, the water and soil were good and the climate was temperate — in other words, where good farmland is located. When cities spread, the sprawl takes over arable land (land able to be farmed for crops). Urban sprawl has long-term effects, as it is very difficult to bring the soil back to its former state once the predominant land use has been for buildings.

Many of Australia's cities have been called 'car cities' due to the reliance on cars and road networks for transport. These have an impact on distances and commuting times for people travelling to and from workplaces.

18.3.7 Ecological footprint

The amount of productive land needed on average by each person (in the world or in a country, city or suburb, for example) for food, water, transport, housing and waste management is known as an **ecological footprint**. It is measured in hectares per person per year. In 2016, the World Wide Fund for Nature (WWF) reported that the average global ecological footprint was 2.8 hectares per person. In 2014, Australia had an ecological footprint of 6.9 hectares per person. The United States had an ecological footprint of 8.4 hectare per person in 2014.

TABLE 3 Ecological footprints of Australian capital cities

| City | Ecological footprint value (hectares/person/year) | | | |
|-----------|---|--|--|--|
| Perth | 7.66 | | | |
| Canberra | 7.09 | | | |
| Darwin | 7.06 | | | |
| Brisbane | 6.87 | | | |
| Sydney | 6.82 | | | |
| Adelaide | 6.72 | | | |
| Melbourne | 6.33 | | | |
| Hobart | 5.50 | | | |



Weblinks UAE ecological footprint
ABS: Indigenous health

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Urbanisation > Urbanisation in Australia

18.3 INQUIRY ACTIVITIES

- 1. Use your atlas to identify and list:
 - (a) geographical land forms or climatic features that are common to Australia and Canada. *Hint:* Look for large regions that have an extreme climate. Explain why.
 - (b) reasons New Zealand, the United States or China may have a higher population density than Australia. Explain. Examining, analysing, interpreting
- 2. Refer to FIGURES 1 and 2 to produce an overlay map that identifies the *interconnection* between the distribution of population and the distribution of rainfall within Australia.
 - (a) Describe areas where there are strong similarities between these two features, i.e. high population distribution and high rainfall, or low population distribution and low rainfall.
 - (b) Describe *places* that have a high population distribution but low rainfall or vice versa.

Classifying, organising, constructing

- 3. Use various theme maps of Australia in your atlas to identify at least four possible place or environmental explanations for the pattern of distribution and density of Australia's population. Discuss your findings with the class. Examining, analysing, interpreting
- 4. Refer to FIGURE 7. Living so far away from major cities means that 25 per cent of Aboriginal and Torres Strait Islander communities have limited access to many of the services and opportunities that cities offer their residents. In a small group, brainstorm the lifestyle and service difficulties that may be associated with living so remotely. Evaluating, predicting, proposing
- 5. Collect some statistics that identify the health, wealth and educational inequalities that exist between Aboriginal and Torres Strait Islander peoples and non-Aboriginal and Torres Strait Islanders. For example. Aboriginal males have a life expectancy 17 years lower than that of non-Aboriginal males born in the same year. Use the ABS: Indigenous health weblink in the Resources tab to start your research. Write a paragraph or produce a series of graphs to comment on the inequalities you have discovered.

Examining, analysing, interpreting

- 6. Conduct research to find which country in the world has the highest average population density. Find one country with a lower average population density than Australia. Comparing and contrasting
- 7. Use your atlas or online research to find an urban growth map for the capital city in your state or territory. Describe the *change* that has taken place over time. Using this map and a physical map of your state or territory, predict where future growth might occur. Justify your responses. **Evaluating, predicting, proposing**
- 8. (a) What is an ecological footprint?
 - (b) Refer to TABLE 3. How does the ecological footprint data compare for Australian cities?
 - (c) How do these figures compare with the average global ecological footprint?
 - (d) Use internet sources (such as the **UAE ecological footprint** weblink in the Resources tab) to find out how the ecological footprint in the United Arab Emirates compares to that of Australian cities. What would happen if all cities had such a high footprint?
 - (e) Create your own advertisement or animation using a video editing program to encourage people in your capital city to reduce their ecological footprint. Examining, analysing, interpreting

18.3 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

18.3 Exercise 1: Check your understanding

- 1. GS5 Use FIGURE 1 and an atlas to describe where most people in Australia live.
- 2. **GS1** What is the difference between population density and population distribution?
- 3. GS2 What geographical factors other than rainfall may lead to the uneven distribution of population in Australia?
- 4. **GS1** How many Aboriginal and Torres Strait Islander peoples:
 - (a) lived in Australia in 1788
 - (b) live in Australia today?
- 5. GS1 What percentage of Australians live in urban areas? Of these, what percentage live in urban areas close to the coast?
- **6. GS2** List the disadvantages of urban sprawl.
- 7. GS2 Describe the growth of Melbourne over time. What impact has this growth had on food production

18.3 Exercise 2: Apply your understanding

- 1. **GS4** Use the statistics in **TABLE 1** to produce a world map that illustrates the contrasts between the average population densities for each continent. Hint: A pictograph may best highlight the differences.
- 2. GS6 Write a paragraph to explain the possible change in the distribution of Australia's predominantly urban population over the next 50 years if one of the following situations occurs.
 - (a) The coastal urban areas become adversely affected by loss of land due to rising sea levels.
 - (b) A 20-year-long drought occurs in south-eastern Australia.
- 3. GS6 Use information from FIGURE 2 to explain why, in the future, there may be significant movement of people from the southern states of Australia to places in the tropical north. Your answer must refer to specific information from the map.

- 4. Study FIGURES 1 and 8.
 - (a) GS5 Identify the climatic zones in FIGURE 8 that best match the population density areas in FIGURE 1.
 - (b) **GS2** For each of the states shown in **FIGURE 8**, write a sentence to describe the climate for the region. For example, 'This region has a mostly mild to subtropical climate with rainfall all year round'.
- 5. **GS5** Refer to **FIGURE 9** and describe the population distribution of Australia.
- **6. GS4** Refer to **TABLE 2**. Draw a bar graph to show the predicted **change** in the populations of Australia's capital cities. What does your graph reveal?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

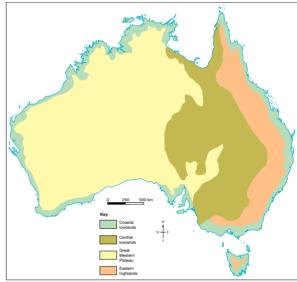
18.4 SkillBuilder: Understanding thematic maps

What is a thematic map?

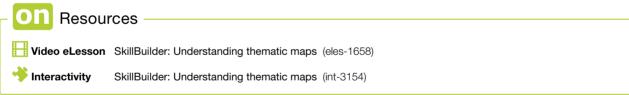
A thematic map is a map drawn to show one aspect; that is, one theme. For example, a map may show the location of vegetation types, hazards or weather. Parts of the theme are given different colours or, if only one idea is conveyed, symbols may show location.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.



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18.5 Comparing urbanisation in the United States and Australia

18.5.1 Urbanisation in the United States and Australia

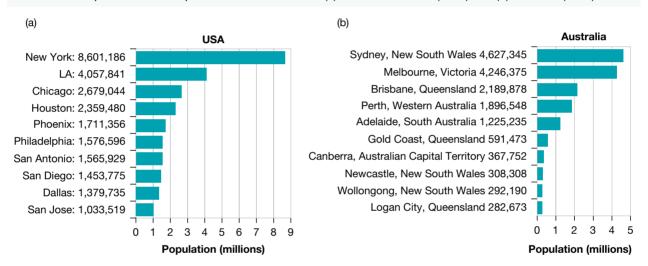
Both the United States and Australia are very large countries that are highly urbanised. In fact, both are among the world's most urbanised nations.

The United States and Australia have some similarities and some differences in terms of how urbanised they are, as revealed in **TABLE 1** and **FIGURE 1**.

TABLE 1 A comparison of urbanisation in the United States and Australia

| | United States | Australia | |
|-------------------------------|--|---|--|
| Population | 326 700 000 in 2018 | 24 530 000 in 2018 | |
| Population distribution | Over 81% live in urban areas, and 19.5% in rural areas. | Over 89% live in urban areas, less than 11% in rural areas. | |
| People living in large cities | The United States has 10 cities that have a population of more than 1 million people. | Australia has 5 cities that have a population of more than 1 million people. | |
| | Approximately 1 of every 10 people in the United States live in either the New York or Los Angeles metropolitan areas. | Approximately 4 of every 10 people in Australia live in either Melbourne or Sydney. | |

FIGURE 1 Population of the top 10 urban settlements in (a) the United States (2018) and (b) Australia (2019)



18.5.2 Causes of urbanisation

The causes of urbanisation are similar for both Australia and the United States. In each case, since the country was founded:

- fewer people were needed to work in rural areas as technology reduced the demand for labour on
- more jobs and opportunities were available in factories, which were located in urban areas
- the development of railways allowed goods produced in one city to be transported to rural and urban
- cities could grow and develop thanks to new technologies (steel-framed skyscrapers) and utilities (for example, electricity and water supply).

18.5.3 Consequences of urbanisation

Conurbations

Sometimes there are so many cities in a particular region that they seem to merge almost into one city as they expand. A conurbation is made up of cities that have grown and merged to form one continuous urban area. Both the United States and, to a lesser extent, Australia have conurbations.

United States

Eleven conurbations have been identified in the United States (see **FIGURE 2**). The major conurbation is in the north-east region. It is often called BosNYWash because it covers the area from Boston in the north, through New York to Washington in the south. This region is home to over 50 million people (17% of the US population) and accounts for 20 per cent of the gross domestic product (GDP) of the United States.

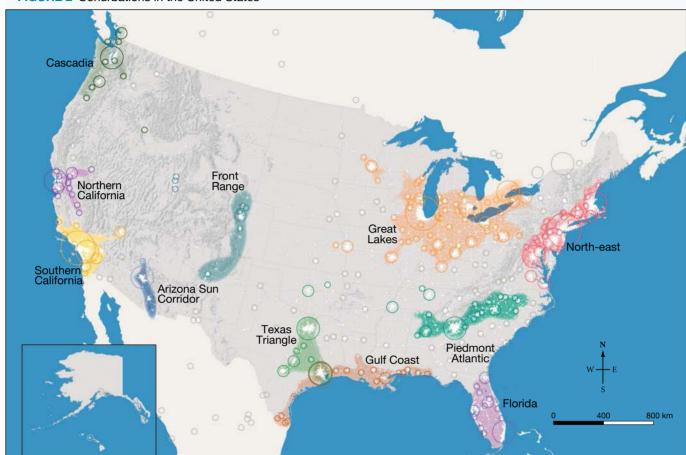


FIGURE 2 Conurbations in the United States

Source: Adapted with permission from Bernard Salt

Australia

Australia, on the other hand, has four conurbations (see **FIGURE 3**). One is in south-east Queensland, one joins Melbourne and Geelong, one is from Perth to Mandurah, and the Newcastle–Wollongong conurbation stretches for over 250 kilometres and is home to almost six million people.

18.5.4 Other consequences of urbanisation

Homelessness

According to the US National Alliance to End Homelessness, as of 2018 there were around 553 000 homeless people in the United States on a given night. This represents 17 people in every 10 000. Although the trend has been downwards from 2007–17, there was a slight rise in 2018. The five states with the highest homeless counts in 2018 were California (129 972), New York State (91 897), Florida (31 030), Texas (25 310) and Washington State (22 305).

In comparison, census data shows that the number of homeless people in Australia increased by more than 15 000 (14 per cent) over five years to 2016. According to the Australian Bureau of Statistics, 116 000 people were homeless on census night in 2016, representing 50 homeless people per 10 000. This was an increase of 13.7 per cent from the 2011 census.

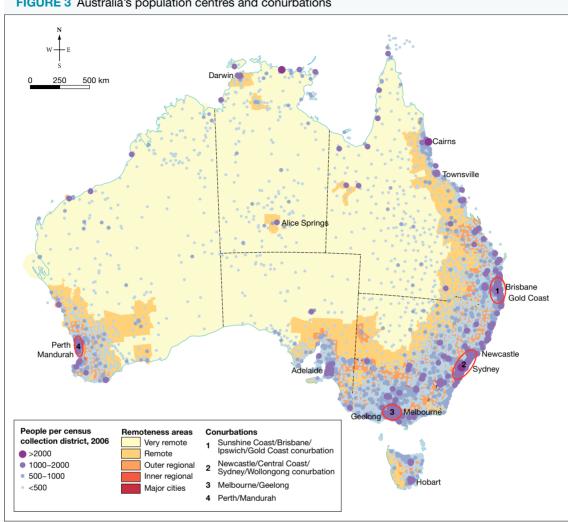


FIGURE 3 Australia's population centres and conurbations

Source: Australian Bureau of Statistics

Health issues

High population densities in urban areas make it easier for diseases to be transmitted, especially in poor neighbourhoods. The urban poor suffer health issues caused by reduced access to sanitation and hygiene facilities and health care.

Pollution

Air pollution from cars, industry and heating affects people who live in cities. A study in the United States showed that more than 3800 people die prematurely in the Los Angeles Basin and San Joaquin Valley region of southern California because of air pollution. Generally, Australia has a fairly high level of air quality. Cars and industry are the main factors influencing air quality in urban areas.



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18.5 INQUIRY ACTIVITY

Conduct research to find out about other consequences of urbanisation in the United States and Australia, such as those affecting traffic, provision of adequate public transport, water supply and energy, waste management issues, urban sprawl and loss of farmland.

Comparing and contrasting

18.5 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

18.5 Exercise 1: Check your understanding

- 1. GS2 Explain, in your own words, the causes of urbanisation in the United States and Australia.
- 2. **GS1** What is a conurbation?
- 3. GS2 Why do you think both Australia and the United States have conurbations?
- 4. **GS3** Why might there be more conurbations in the United States than in Australia?
- 5. **GS1** Name the largest conurbation in the United States and in Australia.

18.5 Exercise 2: Apply your understanding

- **1. GS3** How does the population of the United States compare to that of Australia? How many times larger (approximately) is one than the other?
- GS2 Refer to FIGURES 2 and 3. Describe the distribution of the population in the United States and in Australia.
- 3. GS3 Refer to TABLE 1.
 - (a) Compare the scale of urbanisation in the United States and in Australia.
 - (b) Compare the numbers of people living in large cities in the United States and in Australia.
- 4. GS3 Refer to FIGURE 1.
 - (a) Compare the size of the 10 largest cities in the United States and in Australia.
 - (b) What might explain the differences you noticed?
- 5. GS2 Apart from conurbations, what are three consequences of urbanisation?

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18.6 Effects of international migration on Australia

18.6.1 Why have people migrated to Australia?

Australia is a land of **migrants**. In a way all non-Indigenous Australian people are migrants — at some stage in the past, our ancestors came to this country to live. In 2016, nearly half of Australia's population was born overseas or had at least one parent who was born overseas.

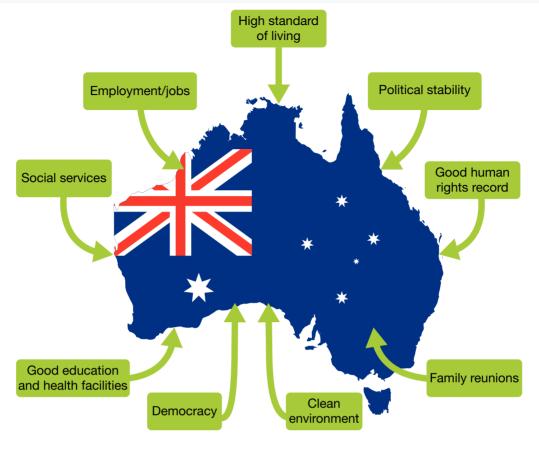
Since the earliest times, people have moved from one part of the world to another in search of places to live. Migrants have come to Australia for many reasons (see FIGURE 1).

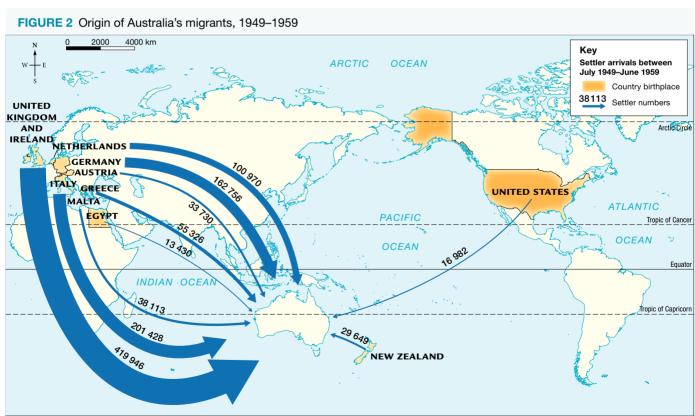
18.6.2 Where have our migrants come from?

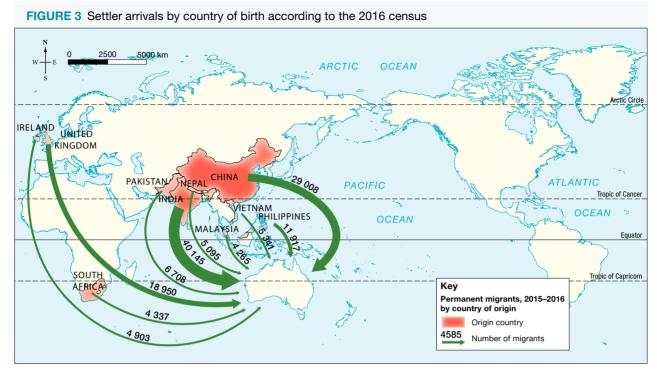
Between 1851 and 1861 over 600 000 people came to Australia. While the majority were from Britain and Ireland, 60 000 came from Continental Europe, 42 000 from China, 10 000 from the United States and just over 5000 from New Zealand and the South Pacific. However, since 1975, the country has attracted more immigrants from Asia (see **FIGURE 3** and **TABLE 2**). Despite this, the most common ancestries today are still English, Australian, Irish, Scottish and Italian (see **TABLE 1**).

FIGURE 1 Reasons for immigration to Australia

Source: Map drawn by Spatial Vision







Source: Department of Immigration and Border Protection

TABLE 1 Ancestry by birthplace of parents, 2016

| Ancestry (top responses) | Number of Australians | Percentage | | |
|--------------------------|-----------------------|------------|--|--|
| English | 7 852 224 | 33.6 | | |
| Australian | 7 298 243 | 31.2 | | |
| Irish | 2 388 058 | 10.2 | | |
| Scottish | 2 023 470 | 8.6 | | |
| Chinese | 1 213 903 | 5.2 | | |
| Italian | 1 000 006 | 4.3 | | |
| German | 982 226 | 4.2 | | |
| Indian | 619 164 | 2.6 | | |
| Greek | 397 431 | 1.7 | | |
| Filipino | 304 015 | 1.3 | | |
| Vietnamese | 294 798 | 1.3 | | |
| Lebanese | 230 869 | 1.0 | | |

Source: © Australian Bureau of Statistics, licensed under a Creative Commons Attribution 2.5 Australia licence

Where have our migrants settled?

When they arrive, migrants tend to live in capital cities because of the greater availability of jobs and to be near family members, friends and people from the same country (see TABLE 2). In 2016, 83 per cent of the overseas-born population in Australia lived in capital cities. About one-third of the population in our large cities was born overseas.

Overseas-born migrants who arrived in the past 20 years are more likely to live in a capital city than those who arrived before 1992 (85 per cent compared to 79 per cent).

Migrants from certain countries tend to be attracted to certain Australian states or territories more than others (see TABLE 3).

TABLE 2 Top 10 birthplaces of Australians, 2016

| Country of birth Number of people | | Percentage of state population | Percentage of state population living in capital city | |
|-----------------------------------|-----------|--------------------------------|---|--|
| United Kingdom | 1 087 749 | 4.6% | 5.0 | |
| New Zealand | 518 466 | 2.2% | 2.3 | |
| China | 509 563 | 2.2% | 3.1 | |
| India | 455 388 | 1.9% | 2.7 | |
| Philippines | 232 397 | 1.0% | 1.2 | |
| Vietnam | 219349 | 0.9% | 1.4 | |
| Italy | 174 051 | 0.7% | 1.0 | |
| South Africa | 162 450 | 0.7% | 0.8 | |
| Malaysia | 138371 | 0.6% | 0.8 | |
| Sri Lanka | 109 841 | 0.5% | 0.7 | |

Source: © Australian Bureau of Statistics

TABLE 3 Top four countries of birth by state or territory ('000), 2016

| ACT | NSW | NT | Qld | SA | TAS | VIC | WA |
|-------------------------|---------------------------|-------------------------|---------------------------|--------------------|-------------------------|---------------------------|--------------------------|
| England (13.3) | China (256.0) | England (6.7) | New Zealand (200.4) | England (103.7) | England (20.5) | England (192.7) | England 213.9 |
| China (11.9) | England (250.7) | Philippines (7.0) | England (219.9) | India (29.0) | New Zealand (5.4) | India (182.8) | New Zealand (87.4) |
| India (10.9) | India (153.8) | New Zealand (5.6) | India (53.1) | China (26.8) | China (3.3) | China (176.6) | India (53.4) |
| New Zealand (5.0) | New Zealand (127.9) | India (4.2) | China (51.6) | Italy (20.2) | India (2.1) | New Zealand (102.7) | Philippines (33.4) |

Source: © Australian Bureau of Statistics

For example:

- 1. In 2016, Western Australia had the highest proportion of residents that were born in England of any state or territory (8.4%), more than twice the Australian proportion of 4.1 per cent.
- 2. Western Australia recorded the highest proportion of the population born overseas at 35 per cent (895 400 persons).
- 3. Victoria recorded the second highest proportion with 30.7 per cent of its residents born overseas (1 892 500 persons).
- 4. Queensland had the highest proportion of the population that were born in New Zealand (4.5%).
- 5. New South Wales had a higher proportion of residents born in China (3.3%) and South Korea (0.8%) than any other state or territory.
- 6. Victoria had the highest proportions of residents born in India (3.0%), Vietnam (1.5%), Italy (1.3%), Sri Lanka (1.0%) and Greece (0.9%).
- 7. The Northern Territory had the highest proportion of people born in the Philippines (2.8%).

Not only have immigrants tended to settle in larger cities, they have settled in particular suburbs and regions within the capital cities. Many migrants have settled in inner Sydney, for example, and especially in western Sydney suburbs (see FIGURE 4).

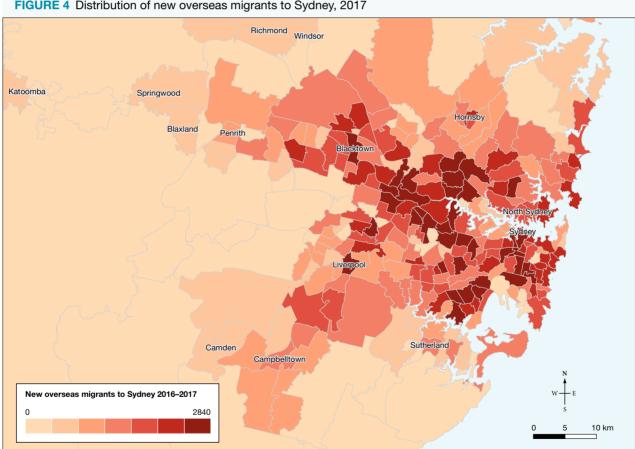


FIGURE 4 Distribution of new overseas migrants to Sydney, 2017

Source: The Sydney Morning Herald

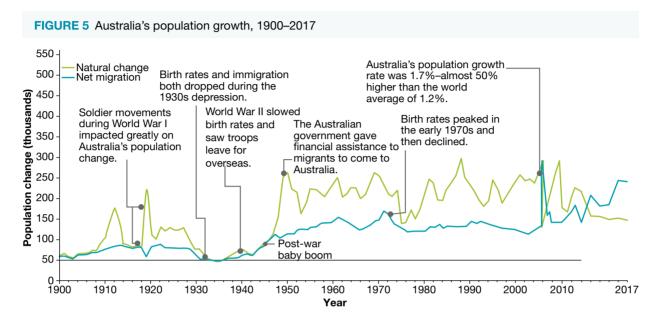
18.6.3 Effects of international migration

Social effects

Migration has helped increase Australia's population. The increase in population from only seven million at the end of World War II to more than triple that now is caused by both the arrival of migrants and increased birth rates since then (see FIGURE 5).

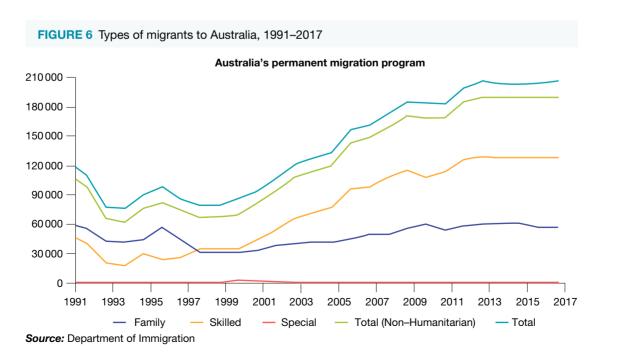
Migrants to Australia have contributed to our society, culture and prosperity. Many communities hold festivals and cultural events where we can all share and enjoy the foods, languages, music, customs, art and dance.

Australian society is made up of people from many different backgrounds and origins. We have come from more than 200 countries to live here. Therefore, we are a very multicultural society — one which needs to respect and support each other's differences, and the rights of everyone to have their own culture, language and religion.



Economic effects

An increased population also means a greater demand for goods and services, which stimulates the economy. Migrants need food, housing, education and health services, and their taxes and spending allows businesses to expand. Apart from labour and capital (money), migrants also bring many skills to Australia (see FIGURE 6).



Migrants generate more in taxes than they consume in benefits and government goods and services. As a result, migrants as a whole contribute more financially than they take from society.

Environmental effects

In the past, people argued that immigrants put pressures on Australia's environment and resources by increasing our population and the need for water, energy and other requirements. However, today many people believe that Australia's environmental problems are not caused by migration and population increase, but by inadequate planning and management.

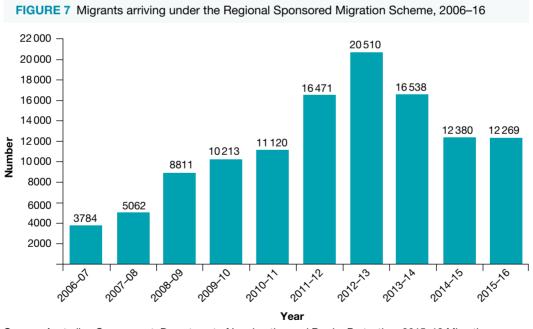
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18.6.4 The future

Since 1995, the Australian government has been working to encourage new migrants to settle in regional and rural Australia. The Regional Sponsored Migration Scheme (RSMS) allows employers in areas of Australia that are regional, remote or have low population growth to sponsor employees to work with them in those regions (see **FIGURE 7**). This takes the pressure off large cities and also provides regional employers with skilled workers. As we have seen, it has always been the case that most immigrants settle first in our cities, especially the state capitals. In 2017–18, 101 255 migrants arrived in Australia and of these, 6637 settled in regional Australia. There are many regional locations that want to attract migrants.



Source: Australian Government, Department of Immigration and Border Protection, 2015–16 Migration Programme Report

18.6 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

18.6 Exercise 1: Check your understanding

- 1. **GS2** Using statistics, describe how Australia is truly a land of migrants.
- 2. GS2 Refer to FIGURES 2 and 3. Describe how the origins of our migrants have *changed* since 1949.
- 3. GS2 Refer to FIGURE 7. Describe how the number of migrants coming into Australia under the Regional Sponsored Migration Scheme has *changed* between 2006 and 2016.
- 4. GS2 Refer to FIGURE 5. Describe how important migration has been in terms of Australia's population
- 5. GS5 Look at FIGURE 6. Which two categories provide the greatest number of migrants to Australia?

18.6 Exercise 2: Apply your understanding

- 1. GS5 Refer to TABLE 3 and FIGURE 4. Describe how the distribution of the areas of settlement by migrants varies within Australia.
- 2. **GS6** What do you consider to be the main reasons for why people would migrate to Australia?
- 3. GS6 What do you believe are the two main benefits of migration to Australia? Give reasons for your answer.
- 4. GS5 Study FIGURE 5. What impact did World War II have on Australia's birth rate and why?
- 5. GS5 Study FIGURE 5. In which year was Australia's birth rate almost 50 per cent more than the world average? Suggest a reason for this.

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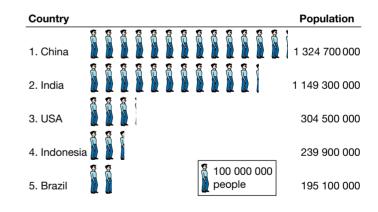
18.7 SkillBuilder: Creating and reading pictographs

What is a pictograph?

A pictograph is a graph drawn using pictures to represent numbers, instead of bars or dots that are traditionally used on graphs. A pictograph is a simple way of representing data and conveying information quickly and efficiently in a different format.

Select your learnON format to access:

- · an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.





Resources

Video eLesson SkillBuilder: Creating and reading pictographs (eles-1659)

Interactivity

SkillBuilder: Creating and reading pictographs (int-3155)

18.8 People on the move in Australia and China

18.8.1 What makes Australians move?

In the United States, it is common for young people to leave home and travel to a university in another state or on the opposite side of the country. This is less common in Australia.

People move for many reasons. The average Australian will live in 11 houses during their lifetime — this means that many people will live in more. You may move to live in a larger house, or a smaller house as your family size or income changes. On retirement you may want to live near the mountains or the sea.

Thirty-nine per cent of Australians changed the place where they lived in the five years between 2006 and 2011. Most of the moves were limited to local areas especially within capital cities. About 4.4 per cent of moves involved a change of state or territory.

The major movements of Australians since 1788 are shown in **FIGURE 1**. The Great Australian Divide separates Australia into two regions, known as the Heartland and the Frontier. The Heartland is home to over 19 million people who live in a modern, urbanised, industrial state. The Frontier is a sparsely populated region of around three million people who live in a place that is remote but rich in resources.

Sea change or tree change

The population movement caused by 'sea change' or 'tree change' — a move from an urban environment to a rural location — is a national issue affecting coastal and forested mountain communities in every state in Australia. The movement involves people who are searching for a more peaceful or meaningful existence, who want to know their neighbours and have plenty of time to relax. Local communities in high-growth coastal and mountain areas often cannot afford the services and increased infrastructure, such as roads, water and sewerage, that a larger population requires. Geelong, Wollongong, Cairns and the Gold Coast are all popular places for sea changers to settle.

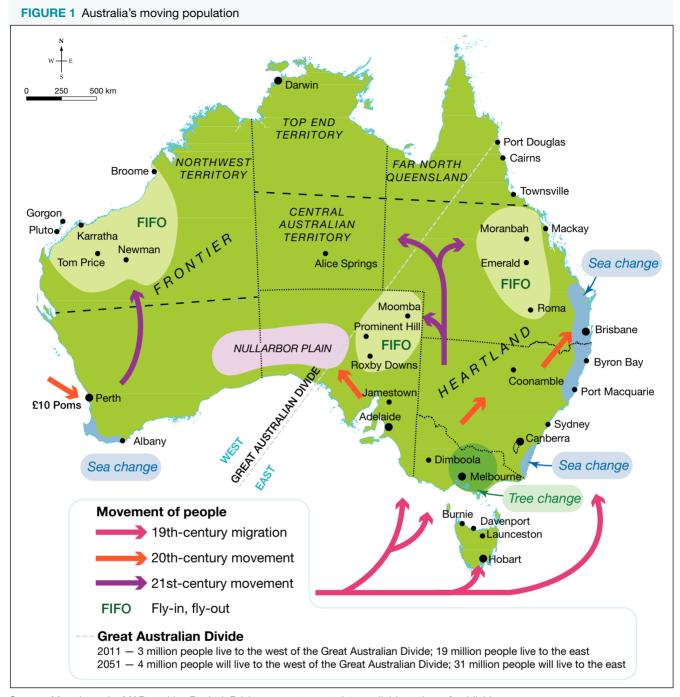
Not every sea changer loves their new life, and many return to the city. Factors such as distance from family, friends, cultural activities and various professional or health services may pull people back to their previous city residences.

Fly-in, fly-out workers

Employment opportunities have grown within the mining industry in places such as the Pilbara. However, local towns do not have the infrastructure, such as water, power and other services, to support a large population increase. Rental payments for homes can be as high as \$3000 per week. One way to attract workers to these regions is to have a **fly-in**, **fly-out** (**FIFO**) workforce. FIFO workers are not actually 'settlers', as they choose not to live where they work. Some mine workers from the Pilbara live in Perth or even Bali, and commute to their workplace on a weekly, fortnightly or longer-term basis. The permanent residents of these remote towns are uneasy with the effects of the FIFO workforce because they change the nature of the town but choose not to make it their home. By not living locally, their wages leave the region and are not invested in local businesses and services.

Seasonal agricultural workers

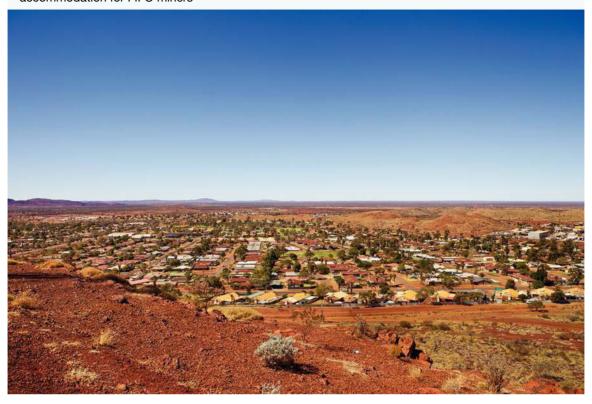
Many jobs in rural areas are seasonal — for example, the picking and pruning of grapes and fruit trees requires a large workforce for only a few months each year. Many children born in rural areas leave their homes and move to the city for education, employment or a more exciting lifestyle than the one they knew in the country. This means that there are not enough agricultural workers to cover the seasonal activities.



Source: Map drawn by MAPgraphics Pty Ltd, Brisbane; most recent data available at time of publishing

Backpackers plus people from Asia and the Pacific Islands on short-term work visas often provide the seasonal workforce in these regions. Country towns such as Robinvale in northern Victoria now have Asian grocery stores, an Asian bakery and a shop selling Tongan canned goods, providing the seasonal farm workforce with a taste of home. Robinvale has many people from different nationalities living as both permanent residents and seasonal workers. These include people from Italy, Tonga, Vietnam, Malaysia, New Zealand, China and Greece.

FIGURE 2 Newman, a mining town in the Pilbara region of Western Australia, provides accommodation for FIFO miners



18.8.2 Reasons for rural-urban migration in China

China has been experiencing a changing population distribution. The country's urban population became larger than that of rural areas for the first time in its history in 2012, as rural people moved to towns and cities to seek better living standards. China has become the world's largest urban nation.

Chinese labourers from the provinces have been moving to coastal cities in search of job opportunities, following reforms in 1978 that opened up China to foreign investment. Until then, rural—urban migration was strictly forbidden in China. Since then, more than 150 million peasants have migrated from the inner provinces to cities, mainly on the east coast. About half of rural migrants moved across provinces. This is the largest migration wave in human history (see **FIGURE 3**).

Pull factors

Migrants from rural areas are attracted to urban regions largely for economic reasons — a higher income is achievable in a city (see **FIGURE 3**). The average income of rural residents is about one-fifth that of urban residents on the east coast of China. Social factors are also important, with more opportunities for career development being available in cities; many people also desire a more modern urban lifestyle, with the benefits brought about by access to improved infrastructure and technology.

Push factors

Increasing agricultural productivity since the late 1970s has resulted in fewer labourers being needed on farms and thus a huge surplus of rural workers. These people have been forced to move to more urban areas in order to find employment. Agricultural production has meanwhile become less profitable, so workers have again been driven to cities to try to improve their economic situations (see **FIGURE 4**).

Political factors are also influential. China's central planners have encouraged local leaders in poor regions to encourage people to move to the cities. Their slogan was 'the migration of one person frees the entire household from poverty'.

HDI 0.600-0.699 0.700-0.749 0.750-0.799 0.800-0.849 HEILONOJIANO 0.850+ LIAONING XINJIANG INNER MONGOLIA BEIJING **GANSU** TIANJIN SHANX NINGXIA HEBEI SHANDONG **QINGHAI** CHONGQUING HENAN JIANDS TIBET ANHUI SHANGHAI CHONGQUING SICHUAN ZHEJIANG JIANGXI HUNAN GUZHOU Number of migrants 1995-2000 **FUJIAN** >2 500 000 YUNNAN GUANGXI **TAIWAN** 1 000 000-2 500 000 GUANDONG 600 km <1 000 000

FIGURE 3 People from Chinese inland provinces with lower wages and Human Development Index (HDI) values have moved to cities and provinces with higher HDIs and incomes.

Source: Map drawn by Spatial Vision



HAINAN

FIGURE 5 In 2017, Shanghai's population was estimated to be 24.21 million.



18.8.3 Consequences of rural-urban migration

- China's urban population rose from around 170 million people in 1978 to 540 million in 2004, and then to nearly 839 million in 2018.
- In 1949, 89 per cent of people lived in rural areas; by 1979 this figure had dropped to 81 per cent. In 2018 it was 59.3 per cent.
- It is expected that by 2050, only 25 per cent of China's population will be living in rural areas, while the number of city-dwellers will reach 940 million people.
- Some people predict that by 2025, China will have 19 super-cities with an average population of 25 million people each.
- Labourers from rural regions working in cities have to leave their families for months at a time or more.
- Tens of millions of people are classified as rural dwellers, even though they spend most or all of their time working in the cities. These people are denied access to social services, including subsidised housing, income support and education for their children.
- A shift to an increased urban population results in reduced population pressures on the land.
- Up to 40 per cent of rural income comes from urban workers sending money to their families at home.

DISCUSS

If 'a shift to an increased urban population results in reduced population pressures on the land', discuss what pressures might be added to urban areas. [Critical and Creative Thinking Capability]



Interactivity Urban/rural China (int-3116)
Weblink China's urban growth

🔧 Google Earth 🏻 Shanghai

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and guestions.

Investigating Australian Curriculum topics > Year 8: Changing nations > China

18.8 INQUIRY ACTIVITIES

- 1. Use internet sources (such as the China's urban growth weblink in the Resources tab) to respond to the following:
 - (a) Describe population *changes* in the various cities in China.
 - (b) 'The largest population growth has occurred in cities on China's coastline.' How true is this statement? Explain your answer using figures from the website you used. Examining, analysing, interpreting
- 2. Creatively (in graphic or diagrammatic form) present some of the dramatic statistics in this subtopic to inform others of the scale of the changes happening to the distribution of China's population.

Classifying, organising, constructing

18.8 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

18.8 Exercise 1: Check your understanding

- 1. GS1 What does FIFO mean?
- 2. **GS1** What is the difference between a tree changer and a sea changer?
- 3. **GS2** List the positive and negative factors of making a tree *change* or sea *change* as a: (a) family with young children

 - (b) retired couple.
- 4. GS1 How has the percentage of people living in China's rural areas changed since 1949? What is this number expected to be in the future?
- 5. GS2 Describe the main changes that have occurred within China's urban population since 1978.

18.8 Exercise 2: Apply your understanding

- 1. GS5 Look carefully at FIGURE 1 and explain how the gap between Australia's east and west is predicted to alter over the next 40 years.
- 2. GS6 A more recent population migration is towards high-rise apartment living in the centre of major cities. How might this trend impact on these new residents and the sustainability of the environment their migration is creating? Use examples to justify your stance.
- 3. **GS2** Explain in your own words the main reasons for the dramatic *change* in China's population distribution.
- 4. **GS4** Classify each of the various consequences of this *change* as positive or negative.
- 5. GS2 Refer to FIGURE 1. Explain the difference between Australia's Heartland and its Frontier.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

18.9 SkillBuilder: Comparing population profiles

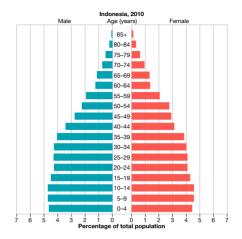
on line $\frac{1}{5}$

What is a population profile?

A population profile, sometimes called a population pyramid, is a bar graph that provides information about the age and gender of a population. The shape of the population profile tells us about a particular population. Comparing population profiles of different places helps us try to understand how and why they may be similar or different.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





Resources

Video eLesson SkillBuilder: Comparing population profiles (eles-1704)

Interactivity

SkillBuilder: Comparing population profiles (int-3284)

Weblink

Population pyramid

18.10 Thinking Big research project: Multicultural Australia photo essay

SCENARIO

Australia is celebrating a new national holiday - Multicultural Australia Day – to acknowledge the fact that Australia is made up of people from many backgrounds and origins. You are entering the inaugural photo essay competition, which aims to show aspects of Australia's rich multicultural heritage.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- an assessment rubric.



Resources



projectsPLUS Thinking Big research project: Multicultural Australia photo essay (pro-0173)





18.11 Review



18.11.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

18.11.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources -



eWorkbook Reflection (doc-31354)

Crossword (doc-31355)



Interactivity Urbanisation and people on the move crossword (int-7600)

KEY TERMS

country the area of land, river and sea that is the traditional land of each Aboriginal language group or community; the place where they live

ecological footprint the amount of productive land needed on average by each person in a selected area for food, water, transport, housing and waste management

fly-in, fly-out (FIFO) a system in which workers fly to work, in places such as remote mines, and after a week or more fly back to their home elsewhere

geographical factors reasons for spatial patterns, including patterns noticeable in the landscape, topography, climate and population

indigenous native to or belonging to a particular region or country

migrant a person who leaves their own country to go and live in another

population density the number of people living within one square kilometre of land; it identifies the intensity of land use or how crowded a place is

population distribution the pattern of where people live; population distribution is not even — cities have high population densities and remote places such as deserts usually have low population densities

sea change movement of people from major cities to live near the coast to achieve a change of lifestyle tree change movement of people from major cities to live near the forest to achieve a change of lifestyle

urban relating to a city or town; the definition of an urban area varies from one country to another depending on population size and density

urbanisation the growth and expansion of urban areas

urban sprawl the spreading of urban areas into surrounding rural areas to accommodate an expanding population

18.4 SkillBuilder: Understanding thematic maps

18.4.1 Tell me

What is a thematic map?

A thematic map is a map drawn to show one aspect; that is, one theme. For example, a map may show the location of vegetation types, hazards or weather. Parts of the theme are given different colours or, if only one idea is conveyed, symbols may show location.

Why are thematic maps useful?

Thematic maps are used to identify and represent a single feature. No additional clutter is presented on the map — it allows the reader to focus on one feature only.

Thematic maps are useful for:

- focusing the viewer's attention on a single feature
- highlighting the significance of a single feature
- comparing different areas of a map in terms of the existence of a feature.

A good description of a thematic map:

- utilises the title to identify the theme
- applies the key/legend in order to understand the colouring and/or symbols
- identifies and communicates the key theme and features.

18.4.2 Show me

How to understand a thematic map

You will need:

- a thematic map
- an atlas.

Model

FIGURE 1(a) shows four major landform regions. It is a simplified version of the natural features map shown in FIGURE 1(b). Much of Australia is dominated by the Great Western Plateau, particularly in the west of the country. Following the coastline are the coastal lowlands, except around the Great Australian Bight and near the Victorian/South Australian border. The eastern highlands run parallel to the east coast from the northern tip of Australia to the south. The central lowlands run from the Gulf of Carpentaria to the Victorian/South Australian border.

Procedure

To understand a thematic map, you must be prepared to follow a planned approach to its study.

Step 1

Read the title of the thematic map. What part of the world does the map show? When was the data gathered? What is the theme? In **FIGURE 1(a)**, the theme is 'major landforms in Australia'.

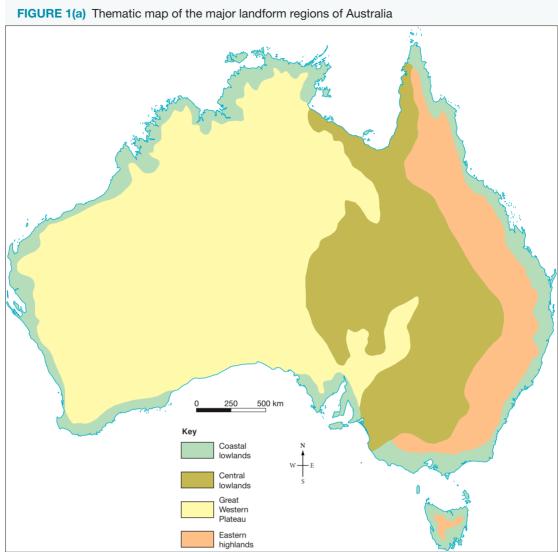
Step 2

Check that the map was put together by a reliable authority. Who is the source of the map? Sometimes textbooks don't state the source. However, you can usually find this information by looking at the list of acknowledgements in the book.

Step 3

Read the key/legend to understand the colours and/or symbols that are used. In **FIGURE 1(a)**, four different colours are used to represent each of the four major landforms.

To interpret the colours you need to comment on where the various colours or symbols occur. Can you discuss the map by continent, or by region? An atlas may be useful to help you identify regions or places. In **FIGURE 1(a)**, the eastern highlands stretch from the north of Australia to the south, parallel to the coastline.

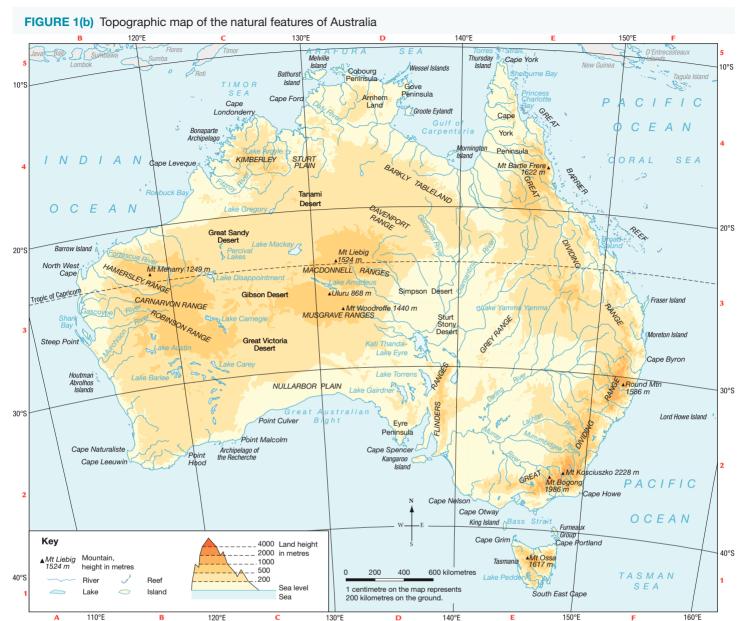


Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

Step 4

You also need to discuss the colours or symbols that appear only in small areas of the map. In **FIGURE 1(a)**, the central lowlands reach to the coast near the Victorian/South Australian border and the Great Western Plateau meets the coast in the Great Australian Bight.





Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

18.4.3 Let me do it

Complete the following activities to practise this skill.

FIGURE 2 The world's 20 largest cities Arctic Circle Istanbul (14.1) Beijing (20.4) New York (18.6) Tokyo (38.0) Osaka (20.2) Chonagina Karachi (16.6) Delhi (25.7) (13.3) PACIFIC Shanghai (23.7) ATLANTIC Guangzhou (12.4) OCEAN Mexico City (21.0) Manila (12.9) Lagos (13.1) INDIAN OCEAN OCEAN Tropic of Capricorn Key ■ Top-20 largest city (millions) 4000 km

Source: Map drawn by MAPgraphics Pty Ltd, Brisbane. Data from United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, CD-ROM Edition.

18.4 ACTIVITIES

- 1. Using **FIGURE 2**, describe the locations of the world's 20 largest cities. Use the checklist to ensure you cover all aspects of the task.
- 2. Apply your skills by answering the following questions.
 - (a) What is the title of the map in FIGURE 2?
 - (b) What theme is being shown in FIGURE 2?
 - (c) In which continent are most of the 20 largest cities located?
 - (d) Which continents contain none of the 20 largest cities?
 - (e) How many people live in the three largest cities in South America?

Checklist

I have:

- utilised the map title to identify the theme
- applied the key/legend in order to understand the colouring and/or symbols
- identified and communicated the key theme and features.

18.7 SkillBuilder: Creating and reading pictographs

18.7.1 Tell me

What is a pictograph?

A pictograph is a graph drawn using pictures to represent numbers, instead of bars or dots that are traditionally used on graphs. Data can be drawn vertically or horizontally. Each picture is given a value.

Why are pictographs useful?

A pictograph is a simple way of representing data and conveying information quickly and efficiently in a different format. It is very visual for the reader.

Pictographs are useful for:

- · simplifying data
- showing differences between data
- presenting data.

A good pictograph has:

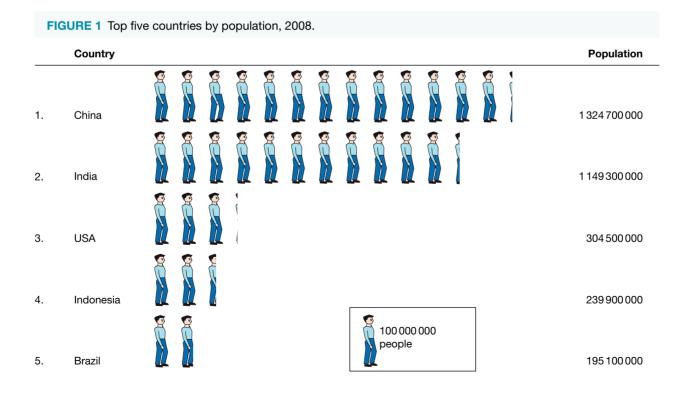
- been drawn in pencil
- used clear and simple pictures or graphics of the same size.

18.7.2 Show me

How to create and read a pictograph

Model

The pictograph in **FIGURE 1** shows that the populations of China and India are large in comparison to those of other countries. The populations of the United States and Indonesia appear to be similar, but the key/legend shows that each complete symbol (person) represents 100 million people, so in fact there is a large difference in the population sizes. Indonesia's population is almost 250 million, while that of the United States is over 300 million.



You will need:

- a basic set of data
- a piece of paper on which to draw the pictograph
- · a light grey pencil
- coloured pencils
- a ruler.

Procedure

To complete a pictograph you need a small set of data on one theme to graph.

Step 1

Decide on a simple picture to represent the data that you are going to graph. For example, you might decide to use stick figures to represent numbers of people, fish if your data is about fishing, or dollar signs if your data concerns money.

Step 2

Consider the data and determine a number that each picture should represent. In **FIGURE 1**, the drawing of one person is equivalent to 100 000 000 people in a population. Choose a scale that will not require too many pictures for each part of the graph, and check what the size of the graph will be when your representations are included. The pictograph must fit on the page or in the space you have available.

Step 3

Draw lines on your page, equal distances apart, to represent each variable (for example, country or year) for which you have data. On these lines you need to draw the appropriate number of pictures.

Step 4

Spend some time doing calculations to determine how many pictures you need to represent each number. Notice in **FIGURE 1** that 'part people' are used. For example, half a person in the pictograph would represent 50 000 000 people. Think how your pictograph will show 'parts of the whole' to represent the data you are plotting.

Step 5

Complete your pictograph with its drawings. Ensure that the key/legend is in place and that the pictograph has a clear title.

Step 6

Reading a pictograph requires you to carefully analyse the data provided. Check the title, check the key/legend and determine the numbers represented by the graph. Write a few sentences summarising what the pictograph tells you. For example, the pictograph in **FIGURE 1** shows that the populations of China and India are large in comparison to those of other countries.



18.7.3 Let me do it

Complete the following activities to practise this skill.

18.7 ACTIVITIES

1. Use the data below to draw a pictograph of the ten cities with the largest populations. Use the checklist to ensure you complete the task correctly.

| Rank | City | Country | Population (rounded figures, 2011) |
|------|---------------|---------------|---------------------------------------|
| 1 | Tokyo | Japan | 35.7 million |
| 2 | Mexico City | Mexico | 19.0 million |
| 2 | Mumbai | India | 19.0 million |
| 2 | New York City | United States | 19.0 million |
| 5 | São Paulo | Brazil | 18.8 million |
| 6 | Delhi | India | 15.9 million |
| 7 | Shanghai | China | 15.0 million |
| 8 | Kolkata | India | 14.8 million |
| 9 | Dhaka | Bangladesh | 13.2 million |
| 10 | Jakarta | Indonesia | 13.2 million |

- 2. Apply your skills to answer the following questions.
 - (a) What did you immediately notice when you first looked at your completed pictograph?
 - (b) Which cities did you not expect to see on this list? Why?
 - (c) Which country did you think would contain one of the ten cities with the highest populations, but does not?
 - (d) How much larger is Tokyo than Mexico City?
 - (e) Sydney is Australia's largest city (5.7 million in 2019). Add Sydney to your pictograph. What do you notice?

Checklist

I have:

- drawn in pencil
- used clear and simple pictures or graphics of the same size.

18.9 SkillBuilder: Comparing population profiles

18.9.1 Tell me

What is a population profile?

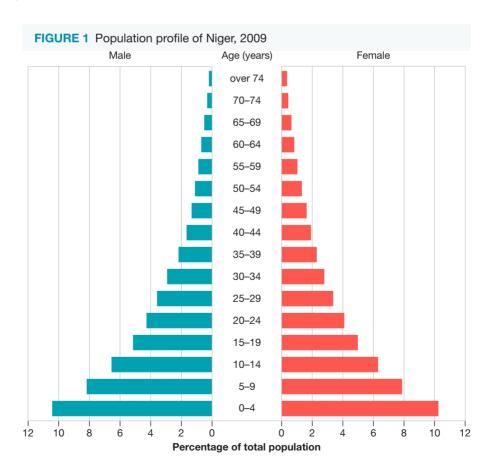
A population profile, sometimes called a population pyramid, is a bar graph that provides information about the age and gender of a population. The bars identify the proportion of a country's population within a particular age group. The graph is split to show information about males and females. The shape of the population profile tells us about a particular population.

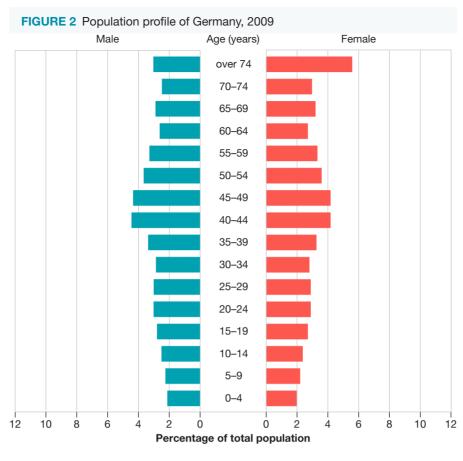
Why are population profiles useful?

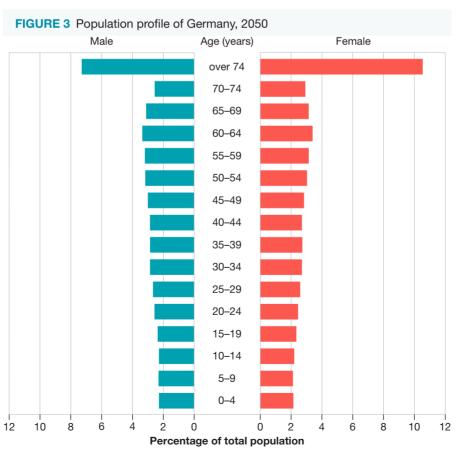
Population profiles help us to interpret and understand a list of statistics. Any patterns are easily identified and compared. A triangular shape that is widest at the base, as in **FIGURE 1**, tells us that the population is growing rapidly. A square shape, as in **FIGURE 2**, indicates that population growth is slow. An inverted triangle, as in **FIGURE 3** (a prediction of Germany's population in 2050), tells us that there is negative growth — that is, the population is decreasing.

A population profile is used to show us the structure of a population.

- If the lower bars of the profile are wide, then the population is young (that is, there is a larger proportion of young people than older people in the population).
- If the upper bars of the profile are wide, then the population is ageing.
- Comparisons can be made of the numbers of males and females within a population.
- Exceptions, particularly indents, in the shape may be due to significant events, such as war, disease, emigration or natural disasters.
- Expansions in the shape may be due to factors such as immigration, changes in birth control laws or the ending of a war.







Population profiles are useful for:

- comparing populations of different countries or places
- planning future urban developments
- determining the facilities required in an area for example, a widening in the bars showing the 5–14 years age groups means more schools will be needed, while a widening in the bars showing the 60+ years age groups means aged care facilities will be required
- planning by governments for services for the future.

A clear comparison of population profiles has:

- identified the countries to be compared
- considered the three categories of level of dependence (see Step 2 of the Procedure to follow)
- provided quantification (numbers) from the population profile
- compared male populations with female populations.

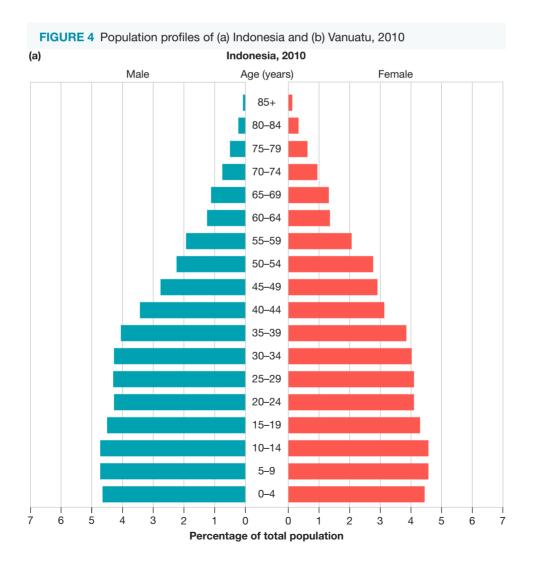
18.9.2 Show me

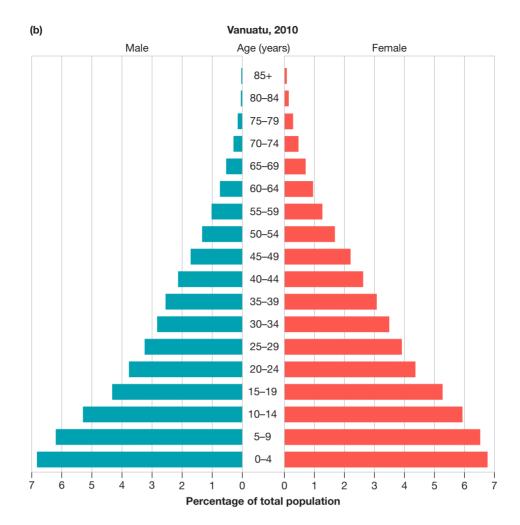
How to compare population profiles

You will need:

• two population profiles to compare — these can be for the same place at different times, or for two different places at the same time, such as in **FIGURES 4(a)** and **(b)**.

Model





In **FIGURE 4(a)**, Indonesia's profile does not fit a triangular shape; it is not very wide at the bottom, suggesting that it has relatively fewer young people and an ageing population. The profile of Vanuatu is widest at the base (the 0–4 years age group) and tapers in a triangular shape, indicating that it has a youthful population. Vanuatu will have to consider the needs of its population carefully in the future.

In Vanuatu, 41.8 per cent of the population can be regarded as dependent (very young or very old), but in Indonesia the dependent population makes up 32.5 per cent of the population. People in Vanuatu's population could be expected to live into their 70s, whereas those in Indonesia can expect to live into their 80s.

In Vanuatu, the gender balance is skewed to males (the bars show that the male population is slightly larger than that of females in most age groups), whereas in Indonesia the numbers are more evenly balanced (although the proportion of females increases in the 60+ years age groups).

Procedure

Step 1

To complete a comparison of population profiles, you must have two or more population profiles for the same place at different times, or for different places at the same time. For this example, we will use the population profiles for Indonesia and Vanuatu shown in **FIGURES 4(a)** and **(b)**.

Step 2

Populations can be broadly grouped into three categories according to the level of dependence of the age groups:

- children (0–14 years) dependent population, i.e. those that need others to provide their basic needs
- adults (15–64 years) economically productive and independent, i.e. the workforce of a population
- aged (65 years and over) economically inactive and dependent, i.e. no longer earning money and therefore relying on other means of support such as pensions or savings.

A population is considered to be old when less than 30 per cent of the population is younger than 15 years and more than 6 per cent is aged 65 years and over. A population is considered to be young when more than 30 per cent of the population is younger than 15 years and less than 6 per cent is aged 65 years and over.

For each population profile, calculate the percentage of males and females in each of the three categories described above. You can do this by using the **Population pyramid** weblink in the Resources tab and selecting the country and year that you want to research. Calculate the total population in each of the three categories of dependence. What does this tell you about the population in each of the population profiles?

Step 3

Look for patterns revealed by each population profile. Look at the gender structure — the number of males and females — of the graph. Is it in balance — that is, are there as many males as females? Often there are more females than males in the older age groups because females tend to have a longer lifespan. Migration can result in the movement of one gender more than another. War can affect the gender structure as a higher proportion of men may be killed. However, after a war, more births are likely to occur. Government policies such as the one-child policy of China (since 1979, but became less restrictive in 2016), where males are favoured, has changed the gender balance in affected countries. Write a statement about the balance of the population profiles.

Are the profile shapes for Indonesia and Vanuatu similar? If not, at what age groupings do the variations appear? Write a few statements to summarise your findings. Some key points you could cover include Vanuatu's economic development and Indonesia's mass education and family planning programs of the 1990s.

Step 4

Consider any unusual aspects. Traditionally, population profiles were called population pyramids because they were shaped like a pyramid or triangle — wide at the base and narrow at the top. Are there any indents (places where the graph narrows unexpectedly) or extended age groupings? Can you suggest why these may occur? Historical and economic events are an important consideration. A country's history — for example, conflicts or natural disasters — can often explain unusual changes. When economic times are tough, fewer children are born; when economic times are good, parents feel they have the finances to support larger families. You will need to research the background of a country to gain information that will allow you to make an accurate interpretation of its population figures.



18.9.3 Let me do it

Complete the following activities to practise this skill.

18.9 ACTIVITIES

- 1. (a) Using the **Population pyramid** weblink in the Resources tab, find the current year population profile for South Africa and compare it with the current year population profile for Thailand by writing a paragraph about population structure (using the steps in the 'Show me' section to help you). Use the checklist to ensure you cover all aspects of the task.
 - (b) Spend some additional time on the website looking at the changes in population pyramids over time for other countries. It is amazing what you will discover!
- 2. Apply your skills by answering the following questions.
 - (a) What percentage of people in Thailand are aged less than 10 years? Compare this with the figure for South Africa what percentage of people in that country are aged less than 10 years?
 - (b) In which country, South Africa or Thailand, is a female most likely to live longest?
 - (c) Which population profile is narrowest in the 0-4 years age group?
 - (d) At what point does the population structure for South Africa take on a pyramid shape?
 - (e) Which country, South Africa or Thailand, is likely to have more people in the workforce in 2025? Give reasons for your answer.

Checklist

I have:

- identified the countries to be compared
- considered the three categories of level of dependence
- provided quantification (numbers) from the population profile
- identified and utilised male population and female population numbers
- · compared the total populations in each gender.

18.10 Thinking Big research project: Multicultural Australia photo essay

Scenario

Australia is celebrating a new national holiday — Multicultural Australia Day — to acknowledge the fact that Australia is made up of people from many backgrounds and origins. You are entering the inaugural photo essay competition, which aims to show aspects of Australia's rich multicultural heritage.



Task

Create a photo essay — a story told through a series of photographs with some accompanying text. The purpose of this photo essay is to inform people of the rich and diverse cultures that make up Australian society. The Multicultural Australia Day competition has a few rules:

- The photo essay must reflect the current top five migrant groups in Australia.
- It must also reflect a selection of migrant heritage from your Geography class.
- Aboriginal and Torres Strait Islanders (ATSI) will also be included in the essay.



You will conduct research on the cultural groups and provide a series of photos with captions that reflect these cultural practices.

Follow the steps detailed in the **Process** section to complete this task.

Process

- Open the ProjectsPLUS application for this topic. Click
 the Start new project button to enter the project due
 date and set up your project group. Working in pairs will
 enable you to share responsibility for the project. Save
 your settings and the project will be launched.
- Navigate to the Research forum, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the Research report in the Research forum to easily view all the information you have gathered.



- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Your teacher will help you conduct a survey to establish the migrant heritage of your class. Once this survey has been completed, choose three migrant groups from your class to research in addition to the top five migrant groups in Australia (do not repeat groups). Your photo essay will therefore include a total of eight migrant groups plus Aboriginal and Torres Strait Islanders.
- Once your migrant groups have been decided, you must conduct research on the following for each group (see the weblinks in the Media centre for some starting sites):
 - current number of each migrant group in Australia
 - cultural heritage festivals, foods, music and dance
 - language and religion.
- If you can take some of the photos yourself, do so. Otherwise, use photo sites to search for and select the images for your photo essay. Keep a record of the source of your photos and the photographer and include them at the end of your photo caption.
- Carefully plan your photo essay sequence the images to tell your story. Use the Storyboard template weblink in the Media centre to help you organise the sequence of photos.
- Add text to each photo in the form of a caption the captions do not need to be short and can help explain facts that the photo does not show. This information will come from the research you conducted earlier and include facts about the migrant group.
- The last photo will include a concluding caption on the importance and significance of a multicultural Australia.
- Submit your photo essay to your teacher for assessment and feedback.



Resources

ProjectsPLUS Multicultural Australia photo essay (pro-0173)

18.11 Review

18.11.1 Key knowledge summary

18.2 Urbanisation around the world

- Urbanisation is the growth and expansion of urban areas and involves the movement of people from rural to urban areas.
- Patterns of urbanisation across the world are uneven.
- Coastal settlements are often highly urbanised.

18.3 Australian urbanisation

- Australia's population is mostly distributed along the eastern coastline.
- There is a strong relationship between population distribution in Australia and the distribution of rainfall and availability of water.
- Australia has a low population density overall but this is unevenly distributed.
- There is a different population distribution between Australia's current population and the Indigenous population prior to European settlement.
- The number and distribution of Aboriginal and Torres Strait Islanders has changed significantly over time.
- Australia is a highly urbanised country.
- Urban sprawl, especially in the larger cities of Sydney, Melbourne and Brisbane, is a characteristic of urbanisation in Australia.

18.5 Comparing urbanisation in the United States and Australia

- Australia and the United States are both countries with large land areas and are very urbanised.
- The two countries share patterns of growing urbanisation and consequences such as homelessness and pollution.
- The United States has a much larger population and many more large cities than Australia.

18.6 Effects of international migration on Australia

- Australia is a migrant nation with people from many nations.
- There are many ancestries that make up the Australian population.
- Migrants predominantly settle in large cities, especially capital cities.

18.8 People on the move in Australia and China

- Australians move homes and states much more than people from many other countries.
- The eastern seaboard is the most attractive place for Australians to move.
- China's population is rapidly becoming more urban.
- Large numbers of surplus agricultural workers move to urban areas to find work.

18.11.2 Reflection

Complete the following to reflect on your learning.

18.11 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Why do millions of people choose to live so close to other people in busy urban areas?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



eWorkbook Reflection (doc-31354)

Crossword (doc-31355)

Interactivity Urbanisation and people on the move crossword (int-7600)

KEY TERMS

country the area of land, river and sea that is the traditional land of each Aboriginal language group or community; the place where they live

ecological footprint the amount of productive land needed on average by each person in a selected area for food, water, transport, housing and waste management

fly-in, fly-out (FIFO) a system in which workers fly to work, in places such as remote mines, and after a week or more fly back to their home elsewhere

geographical factors reasons for spatial patterns, including patterns noticeable in the landscape, topography, climate and population

indigenous native to or belonging to a particular region or country

migrant a person who leaves their own country to go and live in another

population density the number of people living within one square kilometre of land; it identifies the intensity of land use or how crowded a place is

population distribution the pattern of where people live; population distribution is not even — cities have high population densities and remote places such as deserts usually have low population densities sea change movement of people from major cities to live near the coast to achieve a change of lifestyle

tree change movement of people from major cities to live near the forest to achieve a change of lifestyle urban relating to a city or town; the definition of an urban area varies from one country to another depending on population size and density

urbanisation the growth and expansion of urban areas

urban sprawl the spreading of urban areas into surrounding rural areas to accommodate an expanding population

19 Our changing urban world

19.1 Overview

From cities to megacities to megaregions, why are the world's urban areas on the rise?

19.1.1 Introduction

In 2008, for the first time in history, the majority of the world's population lived and worked in towns and cities. This urban population is projected to continue growing in the future. The fast pace and unplanned nature of this growth has seen the development of megacities. However, along with the opportunities provided by the megacities come many problems. It is a challenge to create sustainable urban environments that meet the needs of the people living in these places.





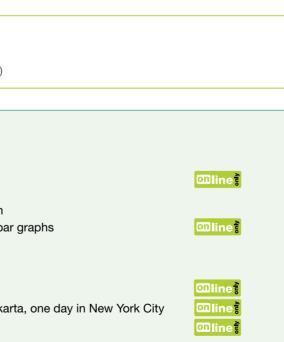
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Video eLesson Megacities and megaregions (eles-1629)

LEARNING SEQUENCE

- 19.1 Overview
- 19.2 Urban areas and their effects on people
- 19.3 SkillBuilder: Describing photographs
- 19.4 Cities and megacities of the world
- 19.5 Causes and effects of Indonesia's urban growth
- 19.6 SkillBuilder: Creating and reading compound bar graphs
- 19.7 Characteristics of cities around the world
- 19.8 Creating sustainable cities
- 19.9 Sustainable cities in Australia
- 19.10 SkillBuilder: Constructing a basic sketch map
- 19.11 Thinking Big research project: One day in Jakarta, one day in New York City
- **19.12** Review

To access a pre-test and starter questions and receive immediate, **corrective feedback** and **sample responses** to every question, select your learnON format at www.jacplus.com.au.



19.2 Urban areas and their effects on people 19.2.1 Why people move to urban areas

There are many and varied reasons for people migrating to urban locations. These reasons are usually a combination of push and pull factors. Some people are 'pushed' from rural to urban areas within their own country. Others will travel from other countries to urban areas, 'pulled' by better opportunities.

Push factors

Geographical inequality is mostly responsible for the migration of people from rural to urban areas. Push factors that drive people towards cities usually involve a decline in living conditions in the rural area in which the people live. There are various situations that can cause this, including a decrease in the quality of agricultural land (caused by factors such as prolonged drought, erosion or desertification); poverty; lack of medical services or educational opportunities; war; famine from lack of food and/or crop failure; and natural disasters.

Pull factors

Pull factors refer to the attractions of urban areas that make people want to move there. Urbanisation in any country generally begins when enough businesses are established in the cities to provide many new jobs. Pull factors include job opportunities; better housing and infrastructure; political or religious freedom; improved education and healthcare; activities and enjoyment of public facilities; and family links.

FIGURE 1 Examples of push factors include lack of medical services, war, crop failure, prolonged drought and

desertification, famine, poverty and lack of educational opportunities.

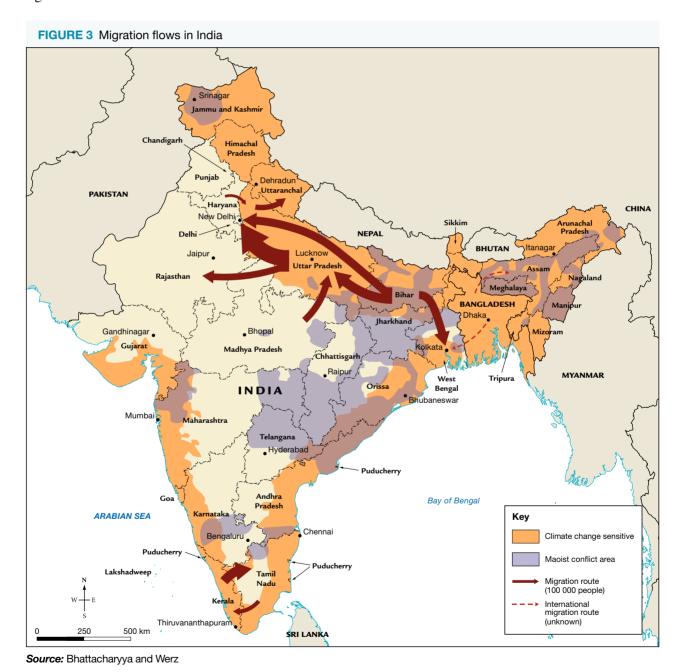
FIGURE 2 Examples of pull factors include religious tolerance, improved healthcare, job opportunities, family links, better housing and infrastructure, political freedom and better educational opportunities.

19.2.2 CASE STUDY: Migration due to climate change in India and Bangladesh

Climate change has resulted in higher temperatures, more extreme weather, rising sea levels, flooding and increased cyclonic activity in the Bay of Bengal and the Arabian Sea. These changes have affected the environment in many places in Bangladesh and India.

Bangladesh is a low-lying country with a dense population. The population in many regions rely on farming for their livelihood. Rising sea levels have introduced salt water into rice fields and reduced food production, income and job opportunities. Along with the attraction of jobs in construction in India, this has resulted in international migration from Bangladesh to India.

India also experiences climate change issues — flooding, erosion and landslides and areas of drought. The stresses caused by these issues have had an effect on millions of people in this region and has led to internal migration, particularly from rural to urban areas. The population density in 2018 in Mumbai was over 28 000 people per square kilometre; in Delhi it was 12 600 people per square kilometre. This movement of people has also increased tensions and conflict between ethnic groups, including over land rights.



19.2.3 Which cities attract workers?

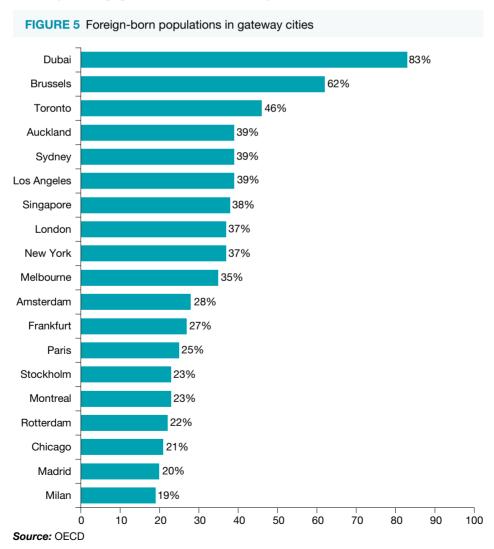
Taxi drivers, construction workers, teachers, nurses, house cleaners, accountants, nannies — there are many job opportunities for both skilled and unskilled workers that attract people to cities. These people may come from a different area within a country or across borders from different countries.

'Gateway cities' are cities in the world that are arrival points for many migrant workers. These cities are large enough to provide many different jobs and are therefore attractive to people moving from other regions. Some cities, such as Dubai, are reliant on their foreign workers.

FIGURE 4 These migrants are working in a fish-cleaning station in Dubai, United Arab Emirates.



More than two-thirds of Dubai's population is migrant labour, with many working in building construction. These labourers — mostly from India, Pakistan and Bangladesh — are often poorly paid, and live in migrant camps that can be up to two hours away from the work site. **FIGURE 5** shows the cities with the highest foreign-born population that attract foreign workers.



19.2.4 CASE STUDY: Growth of cities in Africa

Africa now has a larger urban population than North America and has 25 of the world's fastest-growing large cities — the number of people living in cities in Africa is increasing by about one million every week. Some of Africa's cities are expected to grow by 85 per cent by 2025. By 2050, the urban population is expected to triple from 400 million people to 1.2 billion. Over half of the urban population in Angola, Chad, Madagascar, Malawi, Mozambique, Niger, Sierra Leone and Zambia is below the poverty line. In many other countries, including Burundi, Gambia, Kenya and Zimbabwe, 40-50 per cent of the population are living below the poverty line.

In most African cities, between 40 and 70 per cent of the population live in slums or squatter settlements. In cities such as Nairobi, Lagos, Cairo and Rwanda, 60-70 per cent of the population live in slum conditions, which occupy about five per cent of the land in the city.

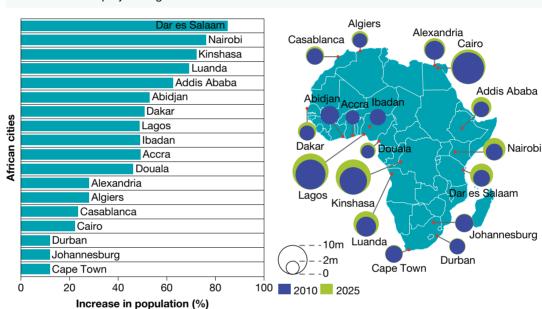
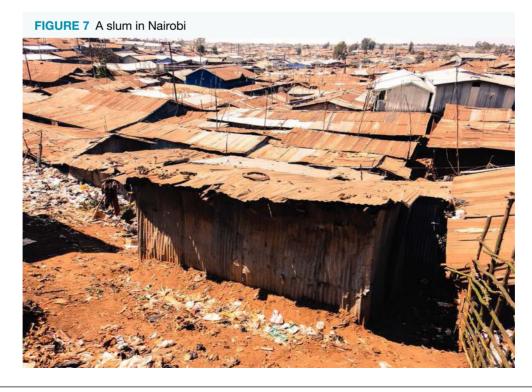


FIGURE 6 The projected growth of African cities from 2010 to 2025



19.2.5 Regional differences

During the nineteenth and early twentieth centuries, urbanisation occurred because of migration and the growth of industries. New job opportunities in the cities attracted people from rural areas and migrants provided a cheap workforce for factories. At that time, death rates in cities were high because they were unhealthy places (with crowded living conditions, diseases and a lack of sanitation) and urban growth was slow. Workers often found it hard to find somewhere to live — it was not unusual for an entire family to be living in a single room. In many European cities (such as London) the number of deaths was higher than the number of births, and migrants provided most of the population growth.

It is a very different experience in developing countries today. Most urban growth results from natural increase; that is, people being born in cities, rather than migrating to cities. With the additional population increase caused by migration from rural areas in search of better jobs, many cities in Asia and Africa have exploded in size.

Cities can be great places and should not be viewed negatively. For example, people can more easily access basic services in urban areas than in rural areas so, although poverty may be present in urban environments, cities also offer an escape from poverty. Cultural activities are often enhanced in cities that attract migrants from many different areas — food and music are obvious examples. There also tends to be a greater tolerance of different migrant and racial groups living close together.



Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Urbanisation > Mongolia

19.2.6 How urban areas affect people's ways of life

Both small and large urban areas can provide people with positive and negative experiences.

Cities attract people to them with the opportunity of work and the possibility of better housing, education and health services. There is a strong interconnection between the wealth of a country and how urbanised it is. Generally, countries with a high **per capita income** tend to be more urbanised, while low-income countries are the least urbanised.

This happens because people grouped together create many chances to move out of poverty, generally because of increased work opportunities. There are often better support networks from governments and local councils. It is also cheaper to provide facilities such as housing, roads, public transport, hospitals and schools to a population concentrated into a smaller area.

19.2.7 Urban challenges

Rapid population growth in urban areas can result in problems such as poverty, unemployment, inadequate shelter, poor sanitation, dirty or depleted water supplies, air pollution, road congestion and overcrowded public transport.

Slums

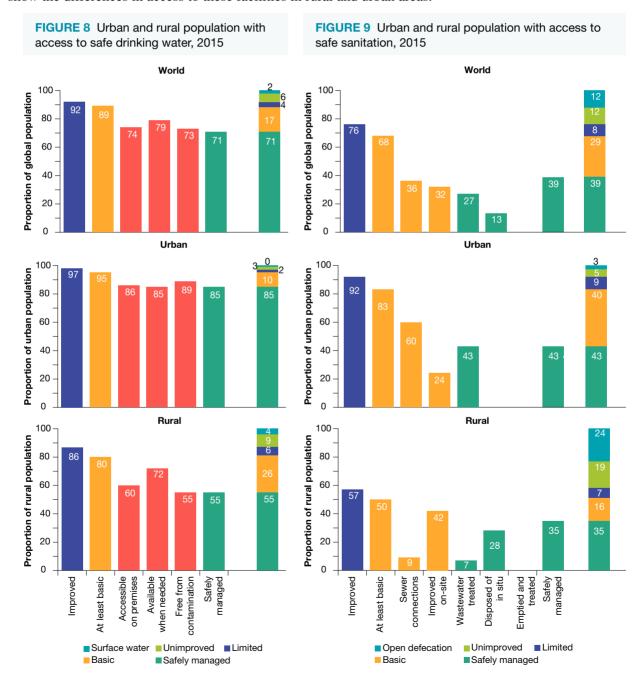
In many developing countries, urban growth has resulted in unplanned settlements called **slums** (other terms used around the world include ghettos, favelas, shantytowns, bidonvilles and bustees). Almost 1 billion people live in slums worldwide.

The United Nations defines a slum as follows.

... one or a group of individuals living under the same roof in an urban area, lacking one or more of the following five amenities: (1) durable housing (a permanent structure providing protection from extreme climatic conditions); (2) sufficient living area (no more than three people sharing a room); (3) access to improved water (water that is sufficient, affordable and can be obtained without extreme effort); (4) access to improved sanitation facilities (a private toilet, or a public one shared with a reasonable number of people); and (5) secure tenure and protection against forced eviction.

Water and sanitation

Providing clean and safe water and sanitation in rural and urban areas is one of the Sustainable Development Goals (SDGs), Targets 6.1 and 6.2. Not all people have access to safe drinking water and to safely managed sanitation. In some countries, people still defecate in open areas. FIGURES 8 and 9 show the differences in access to these facilities in rural and urban areas.



Transport and pollution

In cities that can't keep up with rapid population growth, traffic congestion and overcrowded public transport mean that many people must travel for hours to get to and from work (see FIGURE 10).

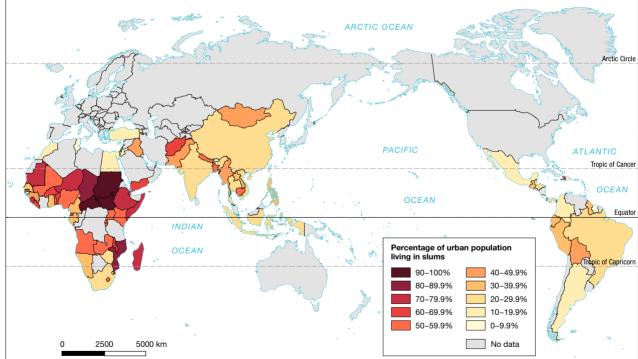
Pollution is also a problem that affects the health of people living in cities. Many cities have high levels of air pollution and some — including Mexico City, Buenos Aires, Beijing and Los Angeles — are famous for being so polluted.

According to the World Health Organization in 2016, 12 of the world's 25 cities with the worst air pollution were in India. Most of the pollution comes from the growing industrial sector and vehicle emissions.

FIGURE 10 Traffic congestion in Los Angeles, United States







Source: World Bank Data

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Urbanisation > Mexico City

19.2 INQUIRY ACTIVITIES

- 1. Use an atlas to locate all the gateway cities mentioned in FIGURE 5, and then mark their locations on a blank map of the world. When your map is complete, describe the distribution of the major gateway cities around the world. Describing and explaining
- 2. Find out the population density of the capital city in your state or territory. How does it compare to that of Mumbai and New Delhi in 2018? List all the ways in which living in one of these Indian cities might be different to life in your local city. Comparing and contrasting
- 3. Watch the video about urbanisation in Mongolia in myWorld Atlas.
 - (a) List the push and pull factors that have caused people to move to Ulaanbaatar.
 - (b) Describe the living conditions of these people. Do you think they are better or worse than their living conditions in rural areas? Justify your response. Examining, analysing, interpreting
- 4. Why is it difficult in a country the size of Australia, with population concentrated on the coast, to provide services in outback areas? How would providing services be different in a country such as Luxembourg in Europe? Look at the size of Luxembourg in an atlas or by using Google Maps or Google Earth.

Comparing and contrasting

5. Use FIGURE 2 in subtopic 19.4 and the myWorld Atlas statistical mapper to find the relationship between urbanisation and wealth. Give five examples of countries from different continents that are highly urbanised and wealthy, and five that are not urbanised and are poor. Do any countries not fit this pattern? Name them.

Classifying, organising, constructing

6. Conduct some research to find out which Australian city has the worst data for the two urban problems of transport and pollution. Examining, analysing, interpreting

19.2 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

19.2 Exercise 1: Check your understanding

- 1. **GS1** What are push factors? What are pull factors? Give two examples of each.
- 2. GS1 Match each of the images in FIGURES 1 and 2 with the push or pull factors listed in the captions.
- 3. **GS1** What is a gateway city? Why are people attracted to them?
- 4. GS5 Which gateway city in FIGURE 5 do you think would provide the greatest chance for foreign people to get work? Explain your answer.
- 5. GS2 What is the difference between urban population increase from migration and from natural increase? Which of these is more likely to occur in a city located in a developing country? Why?
- 6. GS1 What is a slum? Make a list of some other names for slums.
- 7. **GS1** Why are transport and pollution often problematic in large urban areas?
- 8. GS2 Imagine you live in a poor rural village in India with no education or work. List the possible attractions of moving to an urban area.

19.2 Exercise 2: Apply your understanding

- 1. GS5 Study FIGURE 3 and the text in the case study 'Climate change and migration in India and Bangladesh'. Identify the push and pull factors that result in migration in India and Bangladesh.
- 2. **GS5** Study **FIGURE 6** and refer to an atlas map of Africa.
 - (a) Name the three largest African cities in 2010 and the three predicted to be largest in 2025. In which countries are they located?
 - (b) Describe the distribution of Africa's large cities. How many are inland? How many are on the coast? Which are located in the north, south-east and west of the continent? List the countries that do not have large cities.
 - (c) What does it mean to live below the poverty line? Locate the cities in which more than half the population is living below the poverty line.
- 3. GS4 Look at FIGURE 7. Draw a sketch of this scene and annotate it with geographical questions you would like answered about the **environment** and the people living there.
- 4. GS6 What do you think is the future sustainability of the place shown in FIGURE 7, especially if the population of this city is going to increase?

- 5. GS5 Study FIGURES 8 and 9. Identify which of the following statements are true and which are false. Rewrite the false ones so they are true.
 - (a) Providing safe access to drinking water to the world has been more successful than providing safe and adequate sanitation.
 - (b) Most people in urban areas have access to safely managed drinking water.
 - (c) Overall, a greater proportion of people in urban areas have access to improved drinking water.
 - (d) Forty-three per cent of people in rural areas have unimproved or no access to sanitation.
 - (e) Overall, people have better access to safe sanitation facilities than safe drinking water.
- 6. GS5 Study FIGURE 11.
 - (a) In which continent are the most urban slums found?
 - (b) Name three countries in this continent with a very high proportion of people living in slums.
 - (c) Describe the general pattern shown in the map.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

19.3 SkillBuilder: Describing photographs



What is meant by 'describing photographs'?

A description is a brief comment (up to a paragraph) on a photograph, identifying and communicating features from a geographic point of view. As geographers, we use our understanding of the world to interpret the image and tell others about the main features or information the photograph reveals.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





19.4 Cities and megacities of the world

19.4.1 Where are cities located?

How is a city different from other urban areas such as towns and villages? A city is a large and permanent settlement, and is usually quite complex in terms of transport, land use and **utilities** such as water, power and **sanitation**.

The image of the Earth at night (FIGURE 1) shows where lights are shining. The brightest areas on the map are the most urbanised, but might not be the most populated. If you compare this image with FIGURE 2, you can make some comparisons. For example, there are very bright lights in western Europe (Belgium, The Netherlands, France, Spain and Portugal, Germany, Switzerland, Italy and Austria) and yet more people living in China and India. Refer to your atlas to locate these countries.

The world's cities are generally located along or close to coastlines and transport routes. Some regions remain thinly populated and unlit. Antarctica is entirely dark. The interior jungles of Africa and South

America are mostly dark, but lights are beginning to appear there. Deserts in Africa, Arabia, Australia, Mongolia and the United States are poorly lit as well, although there are some lights along coastlines. Other dark areas include the forests of Canada and Russia, and the great mountains of the Himalayan region and Mongolia.



FIGURE 1 Satellite image of the Earth at night

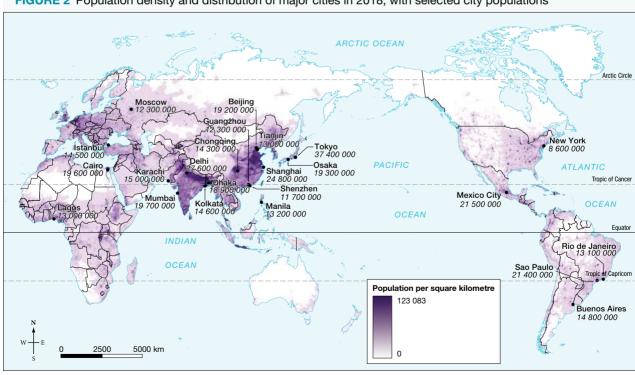


FIGURE 2 Population density and distribution of major cities in 2018, with selected city populations

Source: United Nations, Department of Economic and Social Affairs, Population Division (2018). World Urbanization Prospects: The 2018 Revision.

DISCUSS

'As the world's population continues to increase, cities will spread into the darker regions shown in **FIGURE 1**.' State whether you agree or disagree with this statement, providing reasons for your decision.

[Critical and Creative Thinking Capability]

FIGURE 3 Medellin, the second-largest city in Colombia, South America



✓ Weblink World City PopulationsRoogle Earth Medellin, Colombia

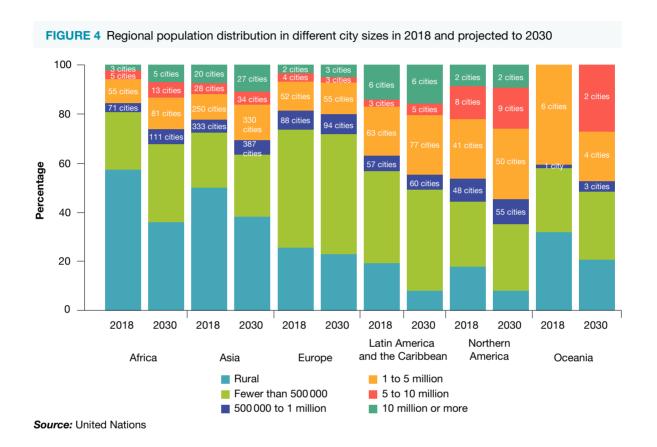
19.4.2 What is a megacity?

Over the next century, urbanisation is predicted to increase at an even greater rate than it has in the past. Around the year 1900 only 15 per cent of the world's population lived in cities. At some time in 2007 this reached 50 per cent. In 2018, this figure was 55 per cent, with projections expecting that two-thirds of the population will live in cities by 2050. People are attracted to cities with huge populations, and increasingly these cities are becoming megacities.

A **megacity** is a city with more than 10 million inhabitants. When you consider that Australia's population was almost 25 million in 2018 — with over 5 million living in Sydney and 5 million in Melbourne — it is hard to imagine what it would be like to live in a megacity.

The number of megacities has grown over time. In 1950, only two cities in the world — Tokyo and New York — had a population above 10 million. By 1975 there were four; by 2000 there were 17, and in 2018 there were 33 megacities. By 2030, it is predicted that there will be 43 megacities in the world. Nineteen of these cities have a population greater than 15 million.

The distribution of megacities — that is, where they are located over space in the world — has also changed. In 1975, two megacities were located in the Americas and two in Asia. In 2014 more than half (15) of all megacities were located in Asia; and it is predicted that, in 2030, 23 of the 41 megacities will be located in Asia. There is also a change in terms of the wealth of countries that contain megacities, with the majority now located in developing countries. This is in contrast to the development of urbanisation, when North America and Europe were the focus of historic urban growth. By 2030, it is predicted that 23 megacities will exist in less developed countries.



19.4.3 The never-ending city

In some parts of the world, megacities are merging to create megaregions. These regions are home to huge populations. Examples of megaregions include:

- Hong Kong-Shenzhen-Guangzhou in China, already home to 65 million people
- Kyoto–Osaka–Kobe, with a population of over 20 million in 2015.

Pearl River Delta (PRD)

This region is located in southern China on the South China Sea. The PRD is one of the fastest-growing regions in the world. There are five major cities — Hong Kong, Shenzhen, Dongguan, Foshan and Guangzhou and six smaller cities made up of Macau, Zhaoqing, Zhuhai, Jiangmen, Huizhou, and Zhongshan, which are linked by transport routes and provide great economic opportunities. Until 1979, Shenzhen was a fishing village. In 1980 the government declared the area to be a Special Economic Zone (SEZ), attracting businesses and investment from other countries. Since then, the area has undergone rapid urbanisation that has dramatically changed the landscape around the Pearl River Delta (see FIGURE 5).

FIGURE 5 Change in the Pearl River Delta between (a) 1988 and (b) 2014





Source: NASA Source: NASA

In 1988, the rivers and streams flowed through a fertile region with rice paddies, wheat fields, orchards and fish ponds. The region was mostly rural, and the population of roughly 10 million distributed between rural areas and a few cities.

By 2014 these cities had grown quickly and merged into an interconnected megalopolis with a population of 42 million. When combining the population of Hong Kong, the total is around 65 million.

Megacity facts

- Over half the future growth in megacities will be within Asia.
- The 20 largest cities consume 80 per cent of the world's energy and produce 80 per cent of global greenhouse gas emissions.
- Slums in megacities are especially vulnerable to climate change, as they are often built on hazardous sites in high-risk locations.

FIGURE 6 The city of Shenzhen, in the Pearl River Delta, in

the twenty-first century

Resources



Interactivity Megacity march (int-3119)

19.4 INQUIRY ACTIVITIES

- 1. Use a political map in your atlas and FIGURE 2 to identify the following.
 - (a) The Nile River
 - (b) The Trans-Siberian railway from Moscow to Vladivostok
 - (c) Highways linking cities in the western and eastern United States
 - (d) The Himalayan mountain range

Examining, analysing, interpreting

2. Go to the World City Populations weblink in the Resources tab. Work as a team of five and investigate the change in city population in different continents. Discuss which regions each member will investigate and record maps, data and graphs. Report your findings back to the group.

Classifying, organising, constructing

3. Use an atlas to locate the two megaregions mentioned in section 19.4.3. Why do these regions develop?

Describing and explaining

- 4. Research the 'dead zone' in the sea at the mouth of the Pearl River. What does this mean, and what is its **Describing and explaining**
- 5. Describe the changes that have occurred in the Pearl River Delta region. Find this place in an atlas and describe where it is in relation to the rest of China and to two other countries in Asia.

Describing and explaining

- 6. Work with another student to produce a Prezi or PowerPoint presentation or an animation showing the world's megacities in 2018 and 2030. Include images from the internet and data from FIGURE 4. You may like to choose appropriate music to accompany the presentation. Classifying, organising, constructing
- 7. After completing the 'Describing photographs' SkillBuilder in subtopic 19.3, complete the following questions about FIGURE 3.
 - (a) Describe the foreground and background shown in the photograph.
 - (b) List the natural and human characteristics shown in the photograph.
 - (c) What does this photograph show about urban environments? How has the urban environment **changed** the natural **environment**?
 - (d) How might the changes described in part (b) lead to an increased risk of erosion? (See topic 13 for information on erosion processes.)
 - (e) Imagine that the population of this city continues to increase. Describe what might happen to the land in the future.
 - (f) Do you think that all land surrounding cities should be able to be taken up by buildings? Why or why not?
 - (g) Investigate the place where you live. Are there land-use zones that cannot be built upon, such as 'green wedges'? Where are they and why are they there? Do you think they should be protected from development? Justify your answer. Examining, analysing, interpreting

19.4 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

19.4 Exercise 1: Check your understanding

- 1. **GS1** How is a city different from a town or a village?
- 2. **GS1** What do the bright lights in **FIGURE 1** show?
- 3. GS1 What is a megacity? How many megacities were there in 2018?
- 4. **GS1** How many megacities are predicted by 2030?
- 5. **GS1** Name the first two megacities and the countries where they are located.
- 6. **GS1** What is a megaregion?

19.4 Exercise 2: Apply your understanding

- 1. GS5 Study FIGURES 1 and 2 and refer to a political map in your atlas. Which of the following statements are true and which are false? Rewrite the false statements to make them true.
 - (a) Japan is a highly populated country with many cities.
 - (b) The west coast of the United States is more densely populated than the east coast.
 - (c) The Amazon rainforest does not have any settlements.
 - (d) The eastern region of China has more cities than the western region.
 - (e) The main city settlements in Australia are along the east coast.
 - (f) The distribution of cities across Europe is uneven.

- 2. **GS5** Refer to **FIGURE 4**. This is a compound bar graph (see SkillBuilder 19.6) showing the projected distribution of cities, including megacities, between 2018 and 2030. Study the graph and the statements below, identifying which are true and which are false. Rewrite the false ones to make them true.
 - (a) Rural populations across all regions are declining.
 - (b) The highest number of megacities are located in Latin America and the Caribbean.
 - (c) In 2018 over half the population in Asia and Africa lived in rural areas.
 - (d) In 2030 Europe will have the highest percentage of cities with fewer than 500 000 people.
- 3. GS5 Describe the changes to the Pearl River Delta from 1988 to 2014.
- 4. **GS6** What impact will the *changes* identified in question 3 have on people and the *environment*?
- 5. **GS4** Study **FIGURE 4**. Create a list of regions from highest to lowest that will have the highest percentage of people living in rural areas in 2030.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

19.5 Causes and effects of Indonesia's urban growth 19.5.1 Indonesia's population

Many people do not realise that the fourth most populated country in the world is one of our nearest neighbours. Like many countries in Asia, Indonesia has experienced rapid urban growth, but this has occurred only relatively recently.

Indonesia's population of nearly 270 million people (2019) lives on a chain or cluster (an archipelago) of more than 18 000 islands (see **FIGURE 1**). However, its population is not evenly distributed. Only about 11 000 of the islands are actually inhabited. Sixty per cent of Indonesia's population is concentrated on only seven per cent of the total land area — on the island of Java.



Source: Spatial Vision

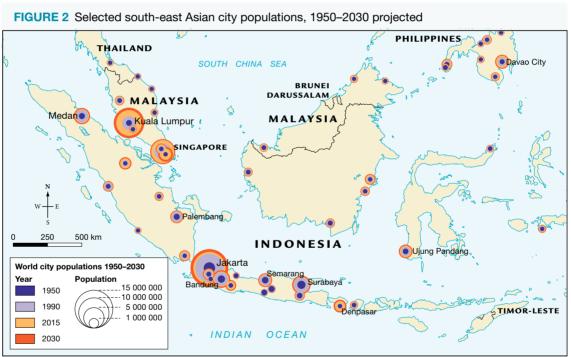
Indonesia has changed from a rural to an urban society quite recently. In 1950, only 15.5 per cent of its population lived in urban areas. In 2018, this had increased to 55.3 per cent.

Like many countries in Asia, Indonesia has a high concentration of its urban population in a few large cities. In 1950, there was only one city that was home to more than one million people in Indonesia: Jakarta. That had increased to four cities by 1980, eight by 1990, 10 by 2000 and 14 by 2016. More than one-fifth of the Indonesian urban population now lives in the Jakarta metropolitan area (JMA).

19.5.2 Causes of urbanisation

More than one-third of Indonesia's urban population growth resulted from natural increase. It took until 1962 for Indonesia's population to reach 100 million people. However, it then took only until 1997 to reach 200 million. In the early 1970s, Indonesia's birth rate was very high — 5.6 children per woman. However, the growth rate has fallen dramatically from 2.3 per cent in 1970 to about 1.2 per cent in 2015. In 2018 there were nearly 5.5 million babies born in Indonesia — almost the equivalent of the population of Melbourne.

As few restrictions were placed on rural-urban migration, most of the migration movement consisted of the rural poor moving into cities and especially into slums, leaving their families behind in the villages. On top of this, in recent years about 20 000 foreigners per year have obtained work permits for Indonesia.



Source: United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision. CD-ROM Edition

Investment from within Indonesia and from other countries has tended to occur mainly in the large urban areas, because these areas can supply the workers, transport (by sea and over land), water and electricity that are needed by industry.

The first president of Indonesia wanted Jakarta to be like the world's great cities, such as Paris and New York, as well as a focus for other Indonesian cities. President Sukarno therefore built broad avenues, highways and electric railway lines, luxurious housing estates, high-rise buildings, universities and industrial estates in Jakarta.

FIGURE 3 The Jakarta metropolitan area had a population of over 10 million in 2018 and a population density of over 14 000 people per square kilometre. It is the second largest urban area in the world.



19.5.3 Consequences of urbanisation

Growth of Jakarta

One of the consequences of urbanisation in Indonesia has been the dramatic growth of Jakarta, Indonesia's capital and largest city, located on the north-west coast of Java. The central island of Java is the world's most populous island, having a population density of 1000 people per square kilometre. The Jakarta Metropolitan Area (JMA) is now one of the world's largest urban areas. In 1930, Jakarta's population was around half a million people. By 1961 it had grown almost six-fold to 2.97 million. By 2005, it was almost 9 million. In 2019, the Special Capital Region of Jakarta had a population of almost 10 million, while the greater metropolitan agglomeration had a population of over 31 million.

FIGURE 4 Jakarta's urban growth











2014 (population 10.3 million)



祸 Google Earth Jakarta, Indonesia

Loss of land

As Jakarta has become more urbanised, there has been a decrease in the amount of open green space — from nearly 30 per cent of the city's total area in 1984 to less than 10 per cent in 2015.

Prime agricultural areas have been lost and become residential and industrial areas. Urban land is worth more than agricultural land.

Environment

Indonesia's level of sewerage and sanitation coverage is very low. Sewage from houses and from industry, as well as industrial effluents and agricultural run-off, are polluting surface and groundwater. Air pollution levels are high, with traffic and industrial fumes combining with smoke from fires set by farmers and plantation owners in rural areas clearing forest lands for agricultural use.

Food production

Because young people, especially young men, migrate to Indonesia's cities in search of better job opportunities, there are fewer people taking over their families' farms. This could lead to the possibility of a food crisis if food production levels are not increased.

Job opportunities

Labourers who lived in Java and did not own land used to have very few sources of income. Now, most landless rural families on Java have at least one person working outside the village in a factory or service job. Today, less than 20 per cent of households depend on agriculture for their livelihood.

Subsidence

Land has been subsiding because more groundwater is being extracted, and also because of the additional load that the ground has to bear due to an increased volume of construction. Subsidence causes cracking of buildings and roads, changes in the flow of rivers, canals and drains, and increased inland and coastal flooding. In some parts of Jakarta, land has subsided by 1–15 centimetres per year — in other areas, this has been up to 28 centimetres per year.

New urban areas

New towns and large-scale residential areas have been developed in and around Jakarta. However, heavy flows of commuter traffic have led to increased levels of traffic congestion between the scattered new towns and the cities.

Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

• Investigating Australian Curriculum topics > Year 8: Changing nations > Urbanisation in Indonesia

FIGURE 5 Smog over Jakarta



FIGURE 6 Traffic congestion in Jakarta



19.5 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

19.5 Exercise 1: Check your understanding

- 1. **GS2** Explain, in your own words, why Indonesia has become very urbanised.
- 2. GS2 Explain how and why Jakarta has become a major city within Indonesia and also on a world scale.
- 3. GS2 Why do you think people have moved from rural areas to urban areas within Indonesia?
- 4. GS2 What is the interconnection between the increasing population in Indonesia and the subsidence of land?
- GS1 Study FIGURE 2. Identify and list the cities that have become megacities (greater than 10 million people).

19.5 Exercise 2: Apply your understanding

- 1. **GS5** Refer to section 19.5.1.
 - (a) What is Indonesia's current population? If the area of Indonesia is 1 904 569 square kilometres, what is its approximate population density?
 - (b) How does this compare to Australia's population density of 3.1 people per square kilometre?
 - (c) Describe, using statistics, how Indonesia has become very urbanised in a relatively short time.
- 2. **GS5** What do you believe are the three main reasons that Indonesia has undergone such rapid urbanisation? Give reasons for your choices.
- **3. GS6** Which of the consequences of urbanisation do you think may continue to have the biggest effects on the *environment* in the future? Why? How important are these considerations to you?
- **4. GS3** How is the urbanisation of Indonesia similar to and different from the urbanisation of another country you have studied, such as Australia, China or the United States?
- 5. Study **FIGURE 2**. In which time period did Jakarta experience its fastest growth? (*Hint:* Look at the width of the colour circle bands.)

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

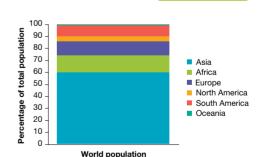
19.6 SkillBuilder: Creating and reading compound bar graphs

What are compound bar graphs?

A compound bar graph is a bar or series of bars divided into sections to provide detail of a total figure. These bars can be drawn vertically or horizontally. Compound bar graphs allow us to see at a glance the various components that make up the total.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.





Resources

Video eLesson SkillBuilder: Creating and reading compound bar graphs (eles-1705)

Interactivity

SkillBuilder: Creating and reading compound bar graphs (int-3285)

19.7 Characteristics of cities around the world

19.7.1 Urbanisation in South America

Megacities are primarily a phenomenon of the developing world, where their populations are increasing by between one and five per cent every year. If this continues, it is predicted that 40 megacities will exist by 2030 — and 21 of these will be located in the developing world, including countries in South America.

In recent years, the pace of urbanisation has been more rapid in South America than in North America and Europe. One hundred years ago, Buenos Aires was the only South American city with a population larger than one million. By 2015 there were 33 cities of this size. The five largest cities are São Paulo, Rio de Janeiro, Buenos Aires, Lima and Bogotá, with the first three defined as megacities.

These cities are a typical result of the urbanisation process occurring in South America, where the fastest population growth occurred between 1950 and the 1990s. The combined urban population of these five cities is nearly 73 million, one-fifth of South America's total urban population.

FIGURE 1 South America's urban population has kept up with total population growth.

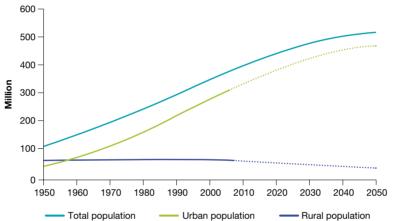
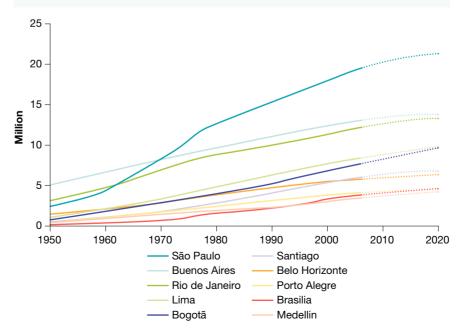


FIGURE 2 There are a number of very large cities in South America, which continue to increase in size.



19.7.2 Urban issues in São Paulo, Brazil

São Paulo is located on a plateau on the top of an escarpment on the south-eastern coast of Brazil in South America (see FIGURE 3). From 1950 to 1980, São Paulo's population quadrupled from two million to more than eight million people. Since the 1980s growth has slowed, but it is still the largest city in South America. Its population is sprawled over an area of 7951 square kilometres (the city centre alone takes up an area of 1502 square kilometres). Compare this with Melbourne, which covers a total of 2453 square kilometres, and Sydney, with an area of 2037 square kilometres.

FIGURE 3 São Paulo sprawls into the distance; a sea of tall buildings.



The population density of São Paulo is 2469 people per square kilometre in the **metropolitan region** and 6832 in the inner-city district. São Paulo's population was 20 831 000 in 2014.

An average of 27 per cent of people in South America live in favelas (a term commonly used in Brazil meaning 'slums') — 28 per cent of the population in Brazil, 24 per cent in Argentina and over 36 per cent in Peru. This is a real challenge for these countries as they try to provide adequate housing, sanitation and other services to the urban poor.

São Paulo has become a major coffee producer, attracting workers and investors from throughout Brazil and many other countries. Today, many of the city's residents are direct or indirect descendants of immigrant groups including Italian, Portuguese, African, German, Lebanese and Japanese. São Paulo is home to the largest number of Japanese people outside Japan, the largest Lebanese population outside Lebanon, and the third largest Italian community outside Italy (after Buenos Aires and New York City).

TABLE 1 Growth of São Paulo's population from 1950 to 2030 (predicted)

| Year | Population | Percentage of Brazil's urban population |
|------------------|------------|---|
| 1950 | 2 528 000 | 12.8 |
| 1955 | 3 521 000 | 13.7 |
| 1960 | 4 876 000 | 14.7 |
| 1965 | 6 380 000 | 14.8 |
| 1970 | 8 308 000 | 15.3 |
| 1975 | 10 333 000 | 15.5 |
| 1980 | 12 693 000 | 15.6 |
| 1985 | 13 844 000 | 14.4 |
| 1990 | 15 100 000 | 13.7 |
| 1995 | 16 469 000 | 13.2 |
| 2000 | 17 962 000 | 13.0 |
| 2005 | 19 591 000 | 12.9 |
| 2016 | 21 000 000 | 12.3 |
| 2030 (predicted) | 23 444 000 | 12.0 |

Urban problems

São Paulo has grown rapidly and in an unplanned manner, leaving little space for highways and parks. Six million cars contribute to crippling traffic congestion and choking levels of air pollution in the city. South America has one of the highest car densities in the world. São Paulo is known for its chaotic traffic and in 2014 set a new record with a traffic jam stretching more than 344 kilometres during one peak hour. Some residents in outer city areas in São Paulo can spend between two and three hours each way commuting to and from work.

FIGURE 4 The built-up area can be clearly seen in this satellite image of São Paulo.



Air pollution levels in São Paulo are twice as high as those of New York City and London, even though Paulistanos (the name for people who live in São Paulo) have relatively low carbon emissions per capita.

19.7.3 Highways in the sky

Extreme wealth, as well as extreme poverty, exists in São Paulo. A number of wealthy elite live in luxury and avoid traffic congestion by travelling to and from work in helicopters. The rate of helicopter ownership in São Paulo is the highest in the world with around 700 registered helicopters taking up to 1300 flights per day in the city. This number is expected to continue to rise in the future.

Living in poverty

Brazilian and overseas migrants who move to São Paulo with hopes of a better life often find it very difficult to find work and end up living in poverty. Around 3 million people live in favelas in São Paulo and surrounding areas. These favelas are located near gullies, on floodplains, on riverbanks, along railways, beside main roads and next to industrial areas.

Floods are common in São Paulo because there are very few green spaces to soak up the water. Air pollution is high and the two major rivers crossing the city are severely polluted, although these rivers are currently being cleaned up. The shortage and condition of the water supply are serious problems, especially for the urban poor living in favelas in São Paulo.

FIGURE 5 The location of São Paulo in Brazil GUYANA SURINAME ECUADOR PERÜ BOLIVIA URUGUAY ARGENTINA CHILE 2000 km 1000

Source: Spatial Vision

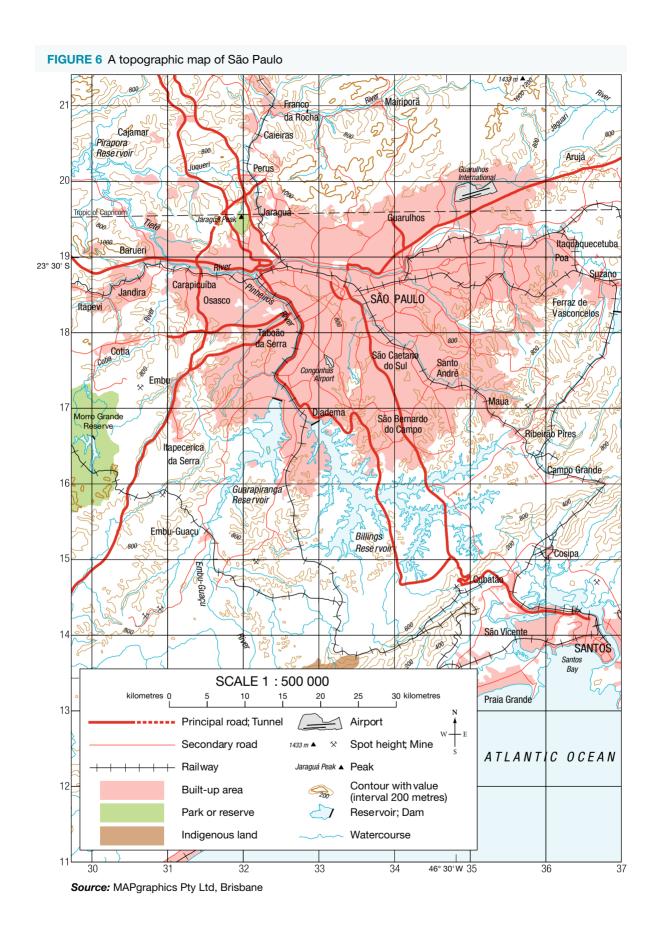


FIGURE 7 Extremes of wealth and poverty in São Paulo. The Paraisópolis favela, home to between 80 000 and 100 000 people, is situated next to the gated complexes of the wealthy Morumbi district.



19.7.4 Cities in the United States

The distribution of major cities across the United States, including the largest cities (by population), is shown in FIGURE 8. The largest is New York City, New York, which is home to 8.6 million people. The second-largest city is Los Angeles, California, with a population of over 4 million; and the third-largest is Chicago, Illinois, with nearly 2.7 million people.



Source: Spatial Vision

19.7.5 New York City

The United States has a number of major cities distributed across the country. The largest of these is New York, one of the world's megacities, as its metropolitan area includes New York–New Jersey–White Plains. Its population in 2017 was 20.3 million.

In 1950 there were only two megacities, and New York was one of them (Tokyo in Japan was the other). In 2015, New York was the ninthlargest city in the world. By 2030 it is expected to be the thirtieth. There are only 11 states in the United States that are home to more people than New York City.



New York City is located on the eastern Atlantic Ocean at the mouth of the Hudson River. It is made up of five counties, or boroughs, separated by waterways — these are The Bronx, Brooklyn, Manhattan, Queens and Staten Island. Being located on four islands makes land very scarce and population density very high, at 11084 people per square kilometre.

People

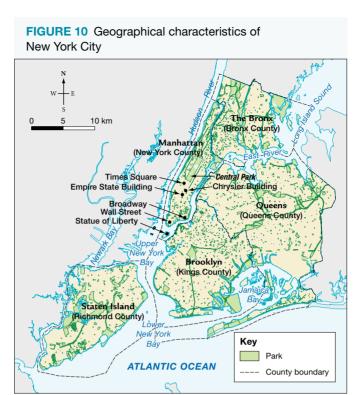
For many years, almost all immigrants came to the United States through New York City — and many of them remained. Many people living in New York are originally from European countries, but there are large numbers from the West Indies, South and Central America, the Middle East and eastern Asia. Around 800 languages are spoken in New York — around 37 per cent of the city's population were born overseas.

| TABLE 2 | Population | statistics | of New | York | City |
|---------|------------|------------|--------|------|------|
|---------|------------|------------|--------|------|------|

| City/Borough | 2017 population | Population density (people/km²) |
|-------------------|-----------------|---------------------------------|
| City of New York | 8 622 698 | 10947 |
| The Bronx | 1 471 160 | 13 231 |
| Brooklyn | 2 648 771 | 14 649 |
| Manhattan | 1 664 727 | 27 826 |
| Queens | 2 358 582 | 8 354 |
| Staten Island | 479 458 | 3 132 |
| State of New York | 19 849 399 | 159 |

Economy

New York City is a major world centre of trade, commerce and banking (New York is also home to the largest stock exchange in the world), manufacturing, transportation, finance, communications, and culture and theatrical production. It is also the headquarters of the United Nations and a leading seaport.



Source: Created from data from City of New York, New Jersey Department of Environmental Protection, New Jersey Geographic Information Network 2012

Boroughs

The Bronx County is the only part of New York that is connected to the US mainland. Historically there were many Irish and Italian migrants; today they are mostly Russian and Hispanic.

Brooklyn (also known as Kings County) is where most New Yorkers live; but Manhattan is the most densely populated county. It contains the highest number of skyscrapers, and includes Central Park and the village of Harlem. Central Park is nearly twice as large as the world's second-smallest country, Monaco.

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19.7.6 What are European cities like?

European cities are old — many were first built by the Romans, and most existed during the Middle Ages. European cities are often smaller in scale and the buildings shorter than in the huge modern cities of North America and China. European cities are often described as romantic, chic or picturesque, words that would rarely be used to describe the cities of the United States or China.

Most European cities became cities 700–1000 years ago. They grew from being small-scale marketplaces, river crossings, road intersections, safe refuges and places of political power into the business, industrial and cultural centres they are today. Some of the largest and best known cities in Europe include London, Paris, Rome, Barcelona, Berlin, Milan, Vienna, Venice, Amsterdam and Prague.

A vibrant main square is a feature of European cities from Spain to Sweden and from England to Greece. The square was usually the site of a market place in medieval times, as well as being the communal and cultural centre of the city. Surrounding this square would be the most impressive buildings, such as the

cathedral, town hall, concert hall, homes of the wealthiest families, museums and public monuments. It was the most prestigious place to live and to conduct business. The plaza, forum or market square was also an important meeting place for locals of all classes to mingle, gossip, find out local news and hold religious festivals.

As you can see in **FIGURE 11**, this square continues to bring pleasure to the local community and tourists alike. As a car-free space it is perfect for outdoor dining; and a weekly farmers' market is also held here. Interesting shops are located in the lower levels of the buildings and apartments, hotels and small offices on the upper floors.

Many cities in Australia and the United States have an area they refer to as their 'Little Italy' or 'Paris End'. These places usually have European-style features (see **FIGURE 12**) such as narrow laneways, outdoor dining, awnings, French or Italian restaurants and flower boxes.

FIGURE 11 This Italian piazza in Lucca occupies the site of a Roman amphitheatre. The curved row of buildings was built where the spectator stands once stood.



FIGURE 12 A laneway of restaurants and bars in Brussels, Belgium



In European cities, the tallest building is often a church. Even though some of the buildings crammed within the protective defences of the medieval city walls seen in **FIGURE 13** are less than 50 years old, they have been constructed to look the same as those built many hundreds of years earlier. The compact nature of European cities encourages wise use of space and encourages residents to walk, cycle or use public transport.

In Barcelona, Spain, the spires of the as-yet unfinished Basilica la Sagrada Familia, a huge Roman Catholic church that has been under construction for more than 100 years, dominate the city skyline in an older part of the city. It is being built in a region where the **population density** is greater than 50 000 residents per square kilometre (the city's highest). In a North American or Asian city, achieving a population density this great would be possible only with the building of residential skyscrapers. However, in this neighbourhood of Barcelona, the buildings are only five or six storeys high. Barcelona does have some very tall buildings, but they are found on the outer edges of the city and not in the older city centre.

FIGURE 13 The medieval quarter of a small French city



19.7.7 What is the future for European cities?

As they have developed, the ancient city centres of Europe have had to add water and sewerage systems and provide electric power, telephone and internet services as well as public transport access for their residents. The biggest issue in the past thirty years has been a huge increase in the level of car ownership. In parts of Paris, local people park their cars without applying the handbrake so that the vehicles can be pushed along by other drivers trying to fit their cars into very small parking spaces. The increased number of cars, even though many are small, has resulted in congestion and increased pollution.

To try to solve some transport problems, most European cities are trying to encourage people to walk, cycle and use public transport within the city. Many European cities, including London, Amsterdam, Paris, Barcelona and Copenhagen, have introduced public bicycle sharing schemes to provide people with an alternative to motorised transport, thereby helping to reduce traffic congestion, air pollution and noise.

FIGURE 14 A narrow French street that was not originally designed for car access or parking



FIGURE 15 Public share bikes in London



Growth of São Paulo

BubbleUs São Paulo

European traffic

Interactivity Urban USA (int-3120)

19.7 INQUIRY ACTIVITIES

- 1. Compare the area of São Paulo to that of the capital city in your state or territory. Trace an atlas map of your chosen city and add a scale. Now use the scale to draw an area of 90 square kilometres over the city area. This is the area of São Paulo. How does it compare to your city? Comparing and contrasting
- 2. Study FIGURE 4. Describe the location of São Paulo and draw a sketch of the satellite image showing the area of the city. If Melbourne and Sydney were grid-shaped they would measure 40 and 33 square kilometres respectively. Now calculate the area that Melbourne or Sydney would take up and draw this over São Paulo. Compare the size of São Paulo with that of Melbourne and Sydney — write two statements to describe the differences. Comparing and contrasting

- 3. Use the **Growth of São Paulo** weblink to learn how this city has grown over time. Where might future growth occur? Use the maps and images in this section to help you. **Evaluating, predicting, proposing**
- **4.** Use the **BubbleUs** weblink in the Resources tab to brainstorm the urban problems experienced in São Paulo. Refer to the text and photographs in this section to help you get started.

Classifying, organising, constructing

- 5. Study FIGURE 6.
 - (a) Record the highest and lowest elevations in São Paulo's built-up area.
 - (b) What evidence supports the fact that São Paulo is located on a plateau?
 - (c) Describe where the steepest land is located.
 - (d) Describe the rail and road routes from the coast to São Paulo. How can you explain the pattern shown?
 - (e) Name one river that flows from the plateau to the sea and one that flows inland.
 - (f) Use tracing paper to make a sketch of the built-up area of São Paulo, including the grid squares. Shade the built-up area and use the **scale** to calculate the area covered by one grid square on the map. Calculate the total area of São Paulo.
 - (g) Describe the physical limitations to the growth of São Paulo. Predict where future urban growth will occur by shading areas on your map. Make notes on your map to justify why growth will occur in these locations and not in others.

 Classifying, organising, constructing
- 6. Use the São Paulo weblink in the Resources tab to watch the video.
 - (a) Make a list of the projects that are trying to reduce urban problems in São Paulo. Rank these from 1 to 5, with 1 being the most effective and 5 the least. Justify your choices.
 - (b) Compare your rankings with those of other students and discuss any similarities or differences.

Evaluating, predicting, proposing

- 7. Conduct some research to find images of New York that reflect its characteristics. Use the information in this subtopic about its people and economy as well as the information in FIGURE 10. Include images of buildings, transport, culture and businesses, and produce a collage with labels. This might be in an electronic format or produced as a poster.
 Classifying, organising, constructing
- 8. Draw a sketch of **FIGURE 9**. Use the map to help you label Central Park and the Hudson River. In which direction is the photographer facing?

 Classifying, organising, constructing
- 9. What makes car ownership problematic for the residents of European cities? Use the European traffic weblink in the Resources tab, as well as evidence from the images in this subtopic, to support your answer. Use the concepts of space, change, sustainability and scale in your response.

Describing and explaining

- 10. Investigate the city nearest to where you live to see whether it has a *place* influenced by European city design. *Hint:* Look for an area like Chinatown but European. How does the *environment* of this *place* reflect European cities?
 Describing and explaining
- 11. (a) Use your atlas and the internet to locate, on a base map of Europe, all the cities mentioned in this subtopic.
 - (b) Annotate each city with its population size, the river that flows through it and one landmark found in that city.
 - (c) Use a symbol to identify which cities have a public bicycle sharing scheme.

Classifying, organising, constructing

12. How could European cities solve the problem of being overrun by cars? Produce a poster, brochure or PowerPoint presentation that fully explains the *change* required to implement your solution.

Evaluating, predicting, proposing

19.7 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

19.7 Exercise 1: Check your understanding

- 1. **GS1** Why have people been attracted to São Paulo?
- 2. **GS1** What is a favela? In which general areas are favelas located in São Paulo? Why do you think they are located in these *places*?

- 3. GS2 Refer to FIGURE 1 to describe South America's population growth. How does this compare to the population change in cities within the continent, shown in FIGURE 2?
- 4. GS2 Study FIGURE 5. Describe São Paulo's location within both South America and Brazil.
- 5. **GS1** Name the five boroughs or counties that make up New York.
- 6. GS1 In what year was New York one of the world's only two megacities?
- 7. GS2 Describe the distribution of major cities in the United States. Where are most located?
- 8. GS2 Describe New York's location within the United States and in terms of its natural geographical features. How have these features helped make New York a major city?
- 9. **GS1** List the terms used to describe a European market square.
- 10. **GS1** What features do most European cities have in common?
- 11. GS2 How does the market square encourage interconnections between people and places in a European city?
- 12. GS2 Explain why all the cities mentioned in this section were built near rivers.

19.7 Exercise 2: Apply your understanding

- 1. GS4 Use TABLE 1 to draw a graph showing the growth of São Paulo's population. When did the greatest growth take place? What percentage of Brazil's urban population lives there?
- 2. GS6 Look at FIGURES 3 and 7. What do you think it would be like to live in such environments?
- 3. GS4 Use the data in TABLE 2 to draw a bar graph showing the population and densities of New York and its boroughs. Describe the pattern that you see.
- 4. GS6 Use FIGURES 9 and 10 and the graph you created in question 3 to write two sentences about population density in New York and where growth might occur in the future.
- 5. **GS5** Identify the **sustainable** and **unsustainable** features of European cities. Explain your answer.
- 6. **GS6** A European city such as Barcelona has regions of very high population density, even though the buildings are not as tall as those in a more recently developed city such as New York. How might the five-or six-storey buildings be able to contain so many living spaces?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

19.8 Creating sustainable cities

19.8.1 Sustainable urban solutions

Cities are huge consumers of goods and services. To be sustainable, cities need to develop so that they meet present needs and leave sufficient resources for future generations to meet their needs.

A sustainable city, or eco-city, is a city designed to reduce its environmental impact by minimising energy use, water use and waste production (including heat), and reducing air and water pollution.

Every city in the world experiences some type of problem that needs to be overcome — inadequate housing, urban sprawl, air and/or water pollution and waste disposal are just a few. Solutions to city problems have a better chance of succeeding if:

- responsibility is shared between governments, communities and citizens
- communities are involved in projects and decision making.

19.8.2 Sustainable urban projects

Urban greening program, Sri Lanka

Producing food in cities provides people with an income and improves local environments, as well as reducing the distance that food must travel to a consumer — 'food miles'. With support from the Department of Agriculture, the Department of Education and the Youth Services Council, three city councils in Sri Lanka developed a program of community environmental management that led to the creation of 300 home gardens and 100 home-composting programs. It also helped organise and empower community groups, and the idea has now spread to many other municipalities in the country.

FIGURE 1 The urban greening program in Sri Lanka has been a success in many communities.



Beekeeping in urban areas

A worldwide movement of urban beekeeping has had beekeepers, in partnership with businesses and property owners in major cities, placing beehives on rooftops. The movement makes a strong connection between urban areas and food supply. This is happening in cities such as London (the Lancaster Hotel in London has its own hives, as does Buckingham Palace), New York, San Francisco, Paris, Berlin and Toronto. In Australia, there is a growing number of hives on city rooftops in Melbourne, Sydney and Brisbane.

FIGURE 2 Beehives on city rooftops, from where bees collect city pollen to make honey



Solar panels in Vatican City and Japan

Vatican City, Italy

Vatican City is the world's smallest independent state. In 2008 more than 2000 photovoltaic panels were fixed to the roof of one of the city-state's main buildings — the roof of the Paul VI Hall — enabling the Vatican to cut its carbon dioxide emissions by about 225 tonnes a year.

The 2400 panels heat, light and cool the hall and several surrounding buildings, producing 300 kilowatt hours (MWh) of clean energy a year. (see **FIGURE 3**).

Ota, Japan

Ota is located 80 kilometres north-west of Tokyo and is one of Japan's sunniest locations. Through investment by the local government, Ota is one of Japan's first solar cities — three-quarters of the town's homes are covered by solar panels that have been distributed free of charge.

FIGURE 3 Solar panels cover the roof of the Paul VI Hall, as seen from the dome of St Peter's Basilica.



FIGURE 4 A street in Ota, Japan - solar panels are visible on most of the houses.



Waste incineration in Vienna

A waste incineration and heat generation plant is part of a hard-waste management system in Vienna, Austria (see FIGURE 5). This plant became the first in the world to burn waste that cannot be recycled and use the energy generated by the plant in a heating network. The plant burns more cleanly and produces more heat and energy than many other waste generation plants, making it attractive to many urban communities. Each year, waste is turned into heat and electricity and supplies heating and hot water for 350 000 apartments — around a third of the city's total. The actual proportion of energy the waste supplies the city varies from season to season. Landfill waste has been reduced by 60 per cent in the city.

FIGURE 5 Spittelau waste treatment plant in Vienna, Austria. This power station burns waste, thus reducing landfill, to produce heat that is supplied to thousands of buildings.



The Loading Dock, Baltimore

The Loading Dock (TLD) is an organisation based in Baltimore, Maryland, in the United States, that recycles building material that was destined for landfill. The material is reused to help develop affordable housing while preserving the urban environment. The organisation works with non-profit housing groups, environmental organisations, local government, building contractors, manufacturers and distributors and uses human resources from within the community, improving living conditions for families, neighbourhoods and communities.

Since 1984, TLD has saved clients \$40 million and diverted 12 000 truckloads of materials from the landfill.

Each year:

- TLD saves 421 kitchen cabinet sets, 68 km of timber and 1634 windows.
- TLD diverts 4489 doors from the landfill, which, if stood end-to-end, would be taller than 25 Empire State Buildings.
- The 83 000 carpet tiles saved from landfills would cover a football field.
- TLD could paint the exterior of the White House 85 times with the 98 000 litres of paint donated.
- TLD assists in the rehabilitation of nearly 15 000 homes. There has been interest in the project from 3000 other cities within the United States and in Mexico, the Caribbean, Hungary, Germany and five countries in Africa. All these projects will have a positive impact on people's lives and the urban environment.

DISCUSS

The projects described in this subtopic have been completed on a local *scale*. As a class, discuss why you think this might be the case. Do you think any of these *sustainable* city projects would work on a suburb-wide or city-wide *scale*? Why or why not?

[Critical and Creative Thinking Capability]

19.8 INQUIRY ACTIVITY

Work in pairs to identify one urban problem and design a **sustainable** program that would help to improve the condition. You will need to conduct some research to find similar problems and ways in which they have been tackled. Your program should include responses to the following.

- What is the urban problem? Include statistics (graphs or tables).
- Where is the problem located? Describe the location and include city/state/country map/s.
- What are the aims of your project? Describe what you hope to achieve.
- How will you achieve your aims? Describe your program or idea.
- Which individuals or groups are to be involved?
- · What results would reflect success for your project?

Present your program to the class in the form of a Prezi or multimedia presentation, panel discussion or other format of your choice. Alternatively, you could share your programs through a class blog or wiki.

Evaluating, predicting, proposing

19.8 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

19.8 Exercise 1: Check your understanding

- 1. GS1 List the aims of a sustainable city.
- 2. GS1 Which projects have the best chance of succeeding to overcome city problems?

- 3. GS1 What is meant by the term 'food miles'?
- 4. GS5 Refer to an atlas map of Europe. Describe the location of Vatican City and Vienna.
- 5. **GS1** Use **FIGURE 8** in subtopic 19.7 to describe the location of Baltimore in Maryland, USA.

19.8 Exercise 2: Apply your understanding

- 1. **GS2** Describe the elements of the urban greening program in Sri Lanka that identify it as **sustainable**.
- 2. **GS2** Why are urban bee programs an example of a sustainable urban solution?
- 3. GS2 How have the urban solar programs in Vatican City and Ota, Japan contributed to sustainable solutions?
- 4. GS2 Outline how burning waste in Vienna has become a sustainable solution.
- 5. GS2 Describe the elements of the Loading Dock program that makes it sustainable.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

19.9 Sustainable cities in Australia

19.9.1 Liveable Australian cities

Australian cities often perform well in worldwide rankings of liveability. In a 2018 survey, three Australian cities were ranked in the top 10 — Melbourne (2), Sydney (5) and Adelaide (10). Liveability is an assessment of the quality of life in a particular place — living in comfortable conditions in a pleasant location. But being liveable is not the same as being sustainable, which involves living in a way that sustains the environment and conserves resources into the future.

19.9.2 Measuring city sustainability

What makes a city sustainable? In 2010, the Australian Conservation Foundation conducted a study to measure the sustainability of Australia's 20 largest cities. The indicators measured were a combination of:

- environment air quality, ecological footprint, water, green building and biodiversity
- quality of life health, transport, wellbeing, population density and employment
- resilience (the ability of a city to cope with future change): climate change, public participation, education, household repayments and food production.



The results showed that Darwin was the most sustainable city in Australia in 2010. It performed best in terms of the economic indicators of employment and household repayments. FIGURE 2 shows the ranking for other cities.

Darwin Cairns (9) Townsville 4 Sunshine Coast 2 Brisbane (3) Toowoomba (11) ● Gold Coast-Tweed Heads (8) Perth (19) Newcastle (17) Sydney (12) Wollongong 16 Canberra-Queanbeyan (5) Bailarat (14 Key Geelong Sustainability ranking Launceston (13) ania ● Hobart 6 1000 km

FIGURE 2 A sustainability ranking of Australia's cities

Source: MAPgraphics Pty LTd, Brisbane

19.9.3 Local urban communities

In most cities, it is often action at a local community scale that can make the most difference in improving city sustainability. State governments and local councils have responsibility for improving complex infrastructure (for example, transport and water supply) for whole cities, but change at a local level can have positive results.

Sustainable communities in cities may have some of the following in common:

- friendly and social communities
- consume less energy and water and produce less waste
- have medium- to high-density rather than low-density housing
- are within walking distance of some public facilities and have excellent public transport links for longer trips
- include public places that people can walk to
- have good landscaping
- dwellings have been built to a budget to make them affordable.

FIGURE 3 The ACROS Fukuoka building located in Fukuoka, Japan

The ACROS Fukuoka building located in Fukuoka, Japan is an example of plants and greening being used to enhance a building (FIGURE 3). The terraced green roof and green walls merge with a park and contain around 35 000 plants. The green roof keeps the temperature inside more constant and comfortable, thus reducing energy consumption. It is also able to capture rainwater run-off and attracts many insects and birds. In addition, it is visually appealing and attracts many people to the surrounding park.

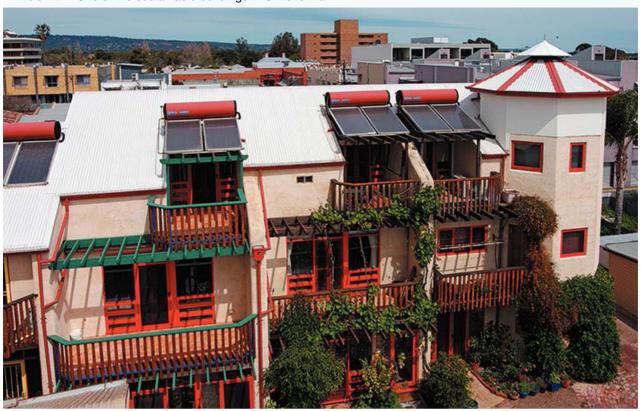
19.9.4 CASE STUDY: Christie Walk, Adelaide

Christie Walk is located in Adelaide in South Australia. It is a small urban village of 27 dwellings located on a quarter of an acre of land. The site is within easy walking distance of Adelaide's markets, parklands and CBD, which means car use is reduced. Around 40 people live at Christie Walk, ranging in age from very young to over 80 years.

A number of principles were used in the design of Christie Walk.

- Low energy demand (passive heating and cooling; natural lighting and sealed double glazing in all windows and glass doors)
- Maximising the use of renewable/solar-based energy sources (photovoltaic cells on the roof) and minimising the use of non-renewable energy sources
- Capturing and using storm water (in large underground rainwater tanks) and recycling waste water
- Creating healthy gardens and maximising the biodiversity of indigenous flora and fauna. The gardens also produce herbs, vegetables and fruit.
- Avoiding the use of products that damage human health
- Minimising the use of non-recyclable materials

FIGURE 4 One of the sustainable buildings in Christie Walk



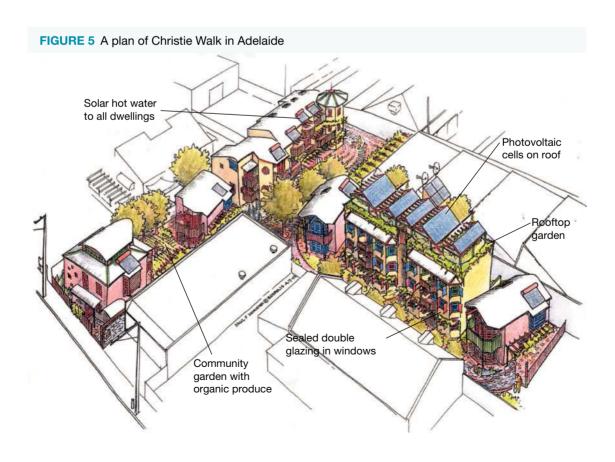
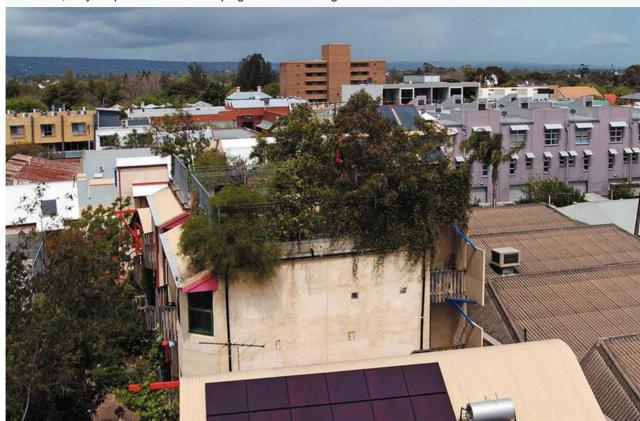


FIGURE 6 Rooftop gardens provide good insulation, protecting the buildings below from the hot sun in summer. In winter, they keep warmth from escaping from the building below.





Weblinks Sustainable cities index

Sustainable Cities Awards

-Explore more with my World Atlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Urbanisation > Brisbane: an eco-city

19.9 INQUIRY ACTIVITIES

- 1. A hectare is equivalent to 10 000 square metres, or about 2.5 acres. In urban Australia, most houses were traditionally built on quarter-acre blocks (about 12 house blocks per hectare).
 - (a) Walk around your neighbourhood or school area and pace out 100 × 100 metres. This gives you an idea of what one hectare looks like.
 - (b) Use Google Earth or Google Maps to count or estimate the number of dwellings in your local area.
 - (c) Compare your data with the definitions for low-, medium- and high-density housing. What type of housing density is in your local area? Examining, analysing, interpreting

- 2. Use the **Sustainable cities index** weblink in the Resources tab to find out how cities in your state or territory have performed in measurements of sustainability. List five things that could improve sustainability in these cities. Is there anything you personally can do to make a difference? **Evaluating, predicting, proposing**
- 3. Work in groups of three. Use the Sustainable Cities Awards weblink in the Resources tab to learn about projects that have won Sustainable Cities Awards in Australia. Each group member should read about three awards and summarise the projects to the others. Using a diamond ranking chart, rank the projects from most to least important for sustainability. Write the name or description of the best project in the top space of the diamond and the least sustainable at the bottom. Add the other projects to the chart after your group has discussed and agreed on the ranking.
 Classifying, organising, constructing
- 4. Use ideas from this subtopic and further research to design a small sustainable urban neighbourhood. You may choose to work in groups or individually. You may like to use photographs of examples you find in your city/town or on the internet to draw your plan. Alternatively, video some examples and incorporate them into your design. Justify the inclusion of all the features you choose by annotating the plan or writing some notes to explain your choices. Present your final plan to the class as a panel presentation or on a class blog or wiki.
 Classifying, organising, constructing

19.9 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

19.9 Exercise 1: Check your understanding

- 1. GS2 In your own words, describe the difference between a liveable and a sustainable city.
- 2. GS1 List the indicators that were used to measure sustainability of cities in Australia.
- 3. **GS1** Why was Darwin voted the most **sustainable** city in 2010?
- 4. **GS1** Use **FIGURE 2** to find the direction and distance of Melbourne to Darwin.
- 5. **GS1** Study **FIGURE 2**. Which two cities are located the closest together?

19.9 Exercise 2: Apply your understanding

- **1. GS1** Why is low-density housing considered *unsustainable* compared to medium- and high-density housing?
- GS2 Outline why a city's ability to produce food (with surrounding market gardens and farms) is a sign of resilience.
- 3. **GS4** Why is the ACROS Fukuoka (FIGURE 3) an example of a sustainable building?
- 4. GS1 List four common characteristics of sustainable cities.
- 5. GS2 Why is Christie Walk in Adelaide an example of a sustainable urban project?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

19.10 SkillBuilder: Constructing a basic sketch map

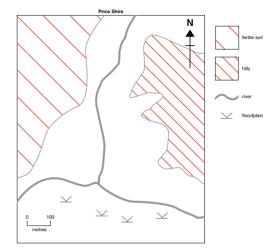
on line $\frac{1}{5}$

What is a basic sketch map?

A basic sketch map is a map drawn from an aerial photograph or developed during field work that identifies the main features of an area. Basic sketch maps are used to show the key elements of an area, so other more detailed characteristics are not shown.

Select your learnON format to access:

- · an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- · an activity and interactivity for you to practise the skill (Let me do it)
- · questions to consolidate your understanding of the skill.





Resources

Video eLesson SkillBuilder: Constructing a basic sketch map (eles-1661)

Interactivity

SkillBuilder: Constructing a basic sketch map (int-3157)

19.11 Thinking Big research project: One day in Jakarta, one day in New York City

on line $\frac{1}{5}$

SCENARIO

Your task is to plan an itinerary for someone visiting New York City and Jakarta for just one day each. What places can they visit that provide them with an experience of the life of these two cities? At the end of the day the visitor should have an understanding about the population characteristics, culture and environmental challenges for each city.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources



projectsPLUS Thinking Big research project: One day in Jakarta, one day in New York City (pro-0174)

19.12 Review



19.12.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

19.12.2 Reflection

Reflect on your learning using the activities and resources provided.



Crossword (doc-31357)

Interactivity Our changing urban world crossword (int-7601)

KEY TERMS

escarpment a steep slope or long cliff formed by erosion or vertical movement of the Earth's crust along a

food miles the distance food is transported from the time it is produced until it reaches the consumer

high-density housing residential developments with more than 50 dwellings per hectare

low-density housing residential developments with around 12–15 dwellings per hectare, usually located in outer suburbs

medium-density housing residential developments with around 20-50 dwellings per hectare megacity city with more than 10 million inhabitants

megaregion area where two or more megacities become connected as increasing numbers of towns and ghettos develop between them

metropolitan region an urban area that consists of the inner urban zone and the surrounding built-up area and outer commuter zones of a city

migration the movement of people (or animals) from one location to another

per capita income average income per person; calculated as a country's total income (earned by all people) divided by the number of people in the country

plateau an extensive area of flat land that is higher than the land around it. Plateaus are sometimes referred to as tablelands.

population density the number of people living within one square kilometre of land; it identifies the intensity of land use or how crowded a place is

pull factor favourable quality or attribute that attracts people to a particular location

push factor unfavourable quality or attribute of a person's current location that drives them to move elsewhere sanitation facilities provided to remove waste such as sewage and household or business rubbish

slum a run-down area of a city characterised by poor housing and poverty

utilities services provided to a population, such as water, natural gas, electricity and communication facilities

19.3 SkillBuilder: Describing photographs

19.3.1 Tell me

What is meant by 'describing a photograph'?

A description is a brief comment (up to a paragraph) on a photograph, identifying and communicating features from a geographic point of view. Sometimes it is necessary to infer information from a photograph; for example, a cloud of dust in an image may tell us that the climate is dry, or that the place is experiencing drought, or that some movement has disturbed the soil at the time the photograph was taken.

Why is describing photographs useful?

Photographs record the details of a place at a particular moment in time. As geographers, we use our understanding of the world to interpret the image and tell others about the main features or information the photograph reveals.

Photographs are also useful for:

- comparing features before and after a disaster
- showing land features when planning town expansions
- explaining about a place and the way people use space
- revealing the living conditions of people on the other side of the world.

A good description of a photograph:

- includes an overview of the main features
- has considered the angle of photography aerial, oblique or ground
- has tried to identify the place in the photograph
- notes other relevant information from the photograph
- acknowledges the anomalies in the image those things that seem out of place
- includes any written information that came with the photograph
- has considered the time of the day and the date when the photograph was taken
- has looked for visual clues of scale comparisons with people or building heights
- clearly communicates what you want the viewer to notice or see in the photograph
- has considered whether there is evidence of bias from the photographer, especially with the size of the image.

19.3.2 Show me

How to interpret photographs

Model

FIGURE 1 is a ground-level photograph of a city, which shows a mix of traditional buildings of about 10 storeys in height and modern sky scrapers of at least double that height. You can see an inner-urban area with traffic lights, street vendors and one-way streets. A lone tree is struggling to grow in the shade of the buildings. Some of the people may be tourists, as the man in the light-coloured shirt seems to be looking around as he walks. It appears to be a warm summer or autumn day, as people are wearing short-sleeved shirts and sunglasses, and some buildings are casting shadows onto others. You can tell that people are at work in these offices, as the lights are on in many levels of the buildings. The street name (W 56 St) tells the viewer that this is a street in New York. It is likely that the photograph was taken within the last 15 years, because the man in the foreground wears earphones and is listening to music while he walks.

You will need:

• a photograph of a built or natural environment.

Procedure

To interpret a photograph, you must have a geographic photograph of a place. Begin by using the 'See, Think, Wonder' technique.

Step 1

See

What can you see? Look for all the main details. What takes up most of the space? Look for all the small details. What are you wanting or needing to point out in this image? Do not try to explain anything. Make a list of the things that you can see. In **FIGURE 1**, this list would include high-rise buildings, traffic on the roads, pedestrians, street signs and more.

Step 2

Think

What do you think is happening? What do you think about it? Make a list of what you think. In **FIGURE 1**, you might think it is early morning and workers and tourists are in the street, going about their daily activities. Perhaps you think that the high-rise buildings contain offices within which people are beginning their work for the day.

FIGURE 1 A modern city environment



Step 3

Wonder

What is the mystery? What do you wonder about this image? For example, in **FIGURE 1**, why are all the streets one way? Make a list of what you wonder about.

Step 4

Is there any information with the photograph? For example, information might be given about the photographer or when the image was taken. Does the photograph appear with an article?

Step 5

Have you determined where the place is? Can you suggest in which region of the world the photograph is taken, even if the exact country or place is difficult to decide? As you develop your geographic understanding, you will gain impressions from images. In **FIGURE 1**, the street name (using numbering) on the sign indicates that this is a city in the United States, probably New York.

Step 6

What does the light in the image indicate about the time of day when the photograph was taken? Are there any shadows? Are there any indications as to whether the sun is high in the sky, rising in the early morning, or setting in the evening? This might tell you about the activities of people at a particular time of day. In **FIGURE 1**, the light comes from an angle and so appears to be the light of early morning.

Step 7

Is this a recent or an old photograph? Clothes, cars and other items in the image, such as appliances, can help to date the photograph. Sometimes photographs have dates embedded in the corner of the image.

FIGURE 1 shows a man walking with earphones in, listening to a personal media player. This technology has only been widely available for around 15 years.

Step 8

At what angle is the photograph taken — aerial, oblique or ground? Think about why the photographer may have used this angle. Does the background information add to your understanding of the photograph? Think

about the things that you cannot see. For example, what types of office work might happen in the buildings in **FIGURE 1**?

Step 9

Do you need to make a statement about the height of any objects in the photograph? Is there an item from which you can reference height? In **FIGURE 1**, each floor of a building represents about four metres.

Step 10

Ask yourself whether you think the photographer may be using bias in the photograph; that is, has the photographer unfairly influenced the image? Is it likely that left and right or top and bottom of this image show the same scene, or has the photographer selected these elements to tell a particular story? In **FIGURE 1**, bias does not seem to be apparent. The photographer has included what his eye can see. Look at **FIGURES 2(a)** and **(b)** — is the story the same in both images?

FIGURE 2(a) appears to be a scene of a peaceful rural or parkland environment. When the full image including the city skyline is shown in **FIGURE 2(b)**, it becomes apparent that this place is part of a very urban space, in the centre of a large city.

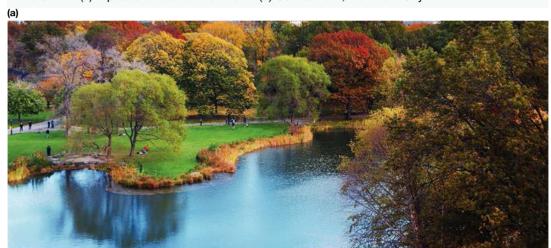


FIGURE 2 (a) A peaceful rural environment? (b) Central Park, New York City





Video eLesson Describing photographs (eles-1660)

Interactivity Describing photographs (int-3156)

Weblink Kibera slum

19.3.3 Let me do it

Complete the following activity to practise this skill.

19.3 ACTIVITY

Use the **Kibera slum** weblink in the Resources tab to look at the photograph of the Kibera slum in Nairobi, Kenya. Using the online zoom tool, explore the details of the photograph. Interpret the image by answering the following questions. Use the checklist to ensure you cover all aspects of the task.

- a. What activities are being carried out in the slums?
- **b.** Describe the buildings in the slum, including size, construction techniques, building materials and density of buildings.
- c. Describe the possible movement of people through the slums.
- **d.** In the left foreground is a water tank. This seems unusual in this environment. Can you suggest what might be happening in this community?
- e. What additional information would you like to have about this place, especially considering the presence of the multistorey buildings in the background?
- f. Write a paragraph of text, following the steps outlined above, describing the Kibera slum.

Checklist

I have:

- included an overview of the main features
- considered the angle of photography aerial, oblique or ground
- tried to identify the place in the photograph
- noted other relevant information from the photograph
- acknowledged the anomalies in the image those things that seem out of place
- included any written information that came with the photograph
- considered the time of the day and the date when the photograph was taken
- looked for visual clues of **scale** comparisons with people or building heights
- clearly communicated what I want the viewer to notice or see in the photograph
- considered whether there is evidence of photographer bias, especially with the size of the image.

19.6 SkillBuilder: Creating and reading compound bar graphs

19.6.1 Tell me

What are compound bar graphs?

A compound bar graph is a bar or series of bars divided into sections to provide detail of a total figure. These bars can be drawn vertically or horizontally. The height or length of each section represents a percentage, with the total length of the bar representing 100 per cent.

Why are compound bar graphs useful?

Compound bar graphs allow us to see at a glance the various components that make up the total. For example, it might show the origin of tourists arriving in a country. In this case, each part of the compound bar would allow the reader to visually interpret what percentage of tourists came from each country of origin.

Compound bar graphs are useful for:

- showing the proportion of sectors within a total
- comparing sets of data between places
- comparing sets of data over time
- accurate interpretation of comparisons.

A good compound bar graph has:

- been drawn in pencil
- ruled lines to clearly represent and communicate data
- used colour according to a key or legend
- a scale
- provided the source of the data
- a clear title.

A good interpretation of a compound bar graph has:

• clearly represented and communicated the data.

19.6.2 Show me

How to create and interpret a compound bar graph

You will need:

- a set of data including parts that make up a total figure of 100 per cent
- a piece of paper on which to draw a graph, preferably graph paper
- a light grey pencil
- a ruler
- coloured pencils
- a calculator.

Model

FIGURE 1 clearly shows that the greatest percentage (60 per cent) of the world's population lived in Asia in 2011. Africa was the second most populated continent, with 15 per cent of the population. Europe was home to fewer people than Africa, with 11 per cent of the population. North and South America combined contained fewer people (14 per cent) than Africa. Oceania, including Australia, was home to a very small percentage of the world's population (0.5 per cent).

| TABLE 1 World population 2011 | | | |
|-------------------------------|---------------|------------------------|--|
| Region | Population | Percentage of total | |
| Asia | 4 140 336 501 | 60.7 | |
| Africa | 994 527 534 | 14.6 | |
| Europe | 738 523 843 | 10.8 | |
| North America | 528 720 588 | 7.7 | |
| South America | 385 742 554 | 5.7 | |
| Oceania | 36 102 071 | 0.5 | |
| Total | 6 823 953 091 | 100 | |

2011 world population figures from TABLE 1 100 90 80 Percentage of total population 70 60 Africa Europe 50 North America 40 South America Oceania 30 20 10 World population

FIGURE 1 Compound bar graph illustrating the

Procedure

To complete a compound bar you must have a set of data that totals 100 per cent, with detailed information as to how that total is made up.

Step 1

Decide on a width (x-axis) and length (y-axis) for the bar graph — this will depend on the amount of space available and the complexity of the data being graphed. The x-axis width is not particularly important, but it is easier if the length is easily divided into hundredths (where each division equals 1 per cent). The easiest length to work with is 10 centimetres (100 millimetres). This means that each millimetre represents 1 per cent, or 10 millimetres represents 10 per cent. Draw your y-axis 10 centimetres long. Add a scale alongside the axis (see **FIGURE 2**).

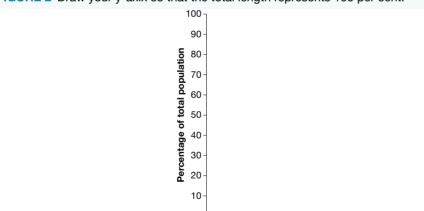


FIGURE 2 Draw your y-axix so that the total length represents 100 per cent.

Step 2

Look at the set of data and use a calculator to convert the data into percentages of the total, if necessary. To do this, divide the figure for any part (**TABLE 1** from e.g. Oceania's population, 36 102 071) by the total figure (total world population, 6 823 953 091) and multiply the result by 100. Check your data before beginning to graph. The percentages you have should add up to 100 per cent (see **TABLE 1**). You don't want to finish colouring your bar and find that one data piece won't fit.

World population

Step 3

Since this is a compound graph, all numbers compound, or add onto one another. Mark on your graph the length of the section of bar representing your first piece of data as a percentage. For example, 60.7 per cent = 60.7 millimetres if your total bar length is 100 millimetres. Colour this segment and add a key or legend near your graph, with appropriate labelling (see **FIGURE 3**). Data will usually be graphed in order from the largest to the smallest.

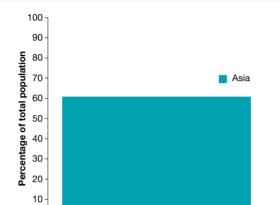


FIGURE 3 Colour the first section of your bar, representing the first (and largest) piece of data, and add a key.

Step 4

Add the next percentage to the percentage for the first piece of data. In this example, add 14.6 per cent to the previous 60.7 per cent and you have a total of 75.3 per cent — this indicates where the next segment of the bar will end. Draw a line where this percentage is represented on your bar (75.3 per cent = 75.3 millimetres if your total bar length is 100 millimetres). Shade the segment in a different colour and add this colour to the key.

World population

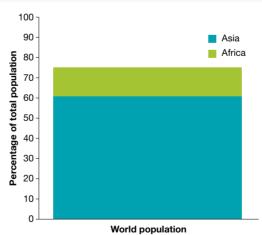


FIGURE 4 Colour the second section of your bar and add the new colour to the key.

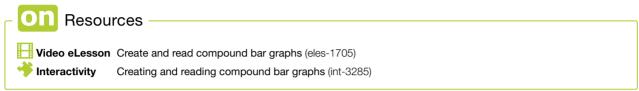
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Step 5

Complete the graphing, colouring and key. Don't forget to give your compound bar graph a title and state the source of your data under the graph (see the **FIGURE 1** model for final graph).

Step 6

Now you can interpret the information displayed in your compound bar graph. Write a description of the information it shows about world population. Begin with a comment on the most obvious feature — the colour that fills the largest section of the bar. In this example, you would state that the greatest percentage of the world's people (60.7 per cent) live in Asia. Now consider each of the other coloured sections of the compound bar and comment on how these colours (and therefore the data) relate to one another. For example, the combined population of North and South America (13.4 per cent) is smaller than that of Africa. The model text following **FIGURE 1** gives a sample description of the data.



19.6.3 Let me do it

Complete the following activities to practise this skill.

19.6 ACTIVITIES

 Using the data provided in TABLE 2, create compound bar graphs to show the proportion by continent of the world's urban population in 2000, and as predicted for 2030. Hint: The numbers you need to create the graph are percentages, which you will need to calculate. Use the checklist to ensure you complete all aspects of the task correctly.

TABLE 2 Global urban population in 2000, and predicted urban population 2030

| Continent | Urban population 2000 (millions) | Predicted urban population 2030 (millions) |
|---------------------------------|-------------------------------------|---|
| North America | 248 | 344 |
| Latin America and the Caribbean | 394 | 585 |
| Oceania | 22 | 34 |
| Europe | 515 | 573 |
| Asia | 1392 | 2703 |
| Africa | 288 | 744 |
| Total | 2859 | 4983 |

Source: United Nations, Department of Economic and Social Affairs, Population Division (2012). *World Urbanization Prospects: The 2011 Revision*

- 2. Carefully analyse your two completed compound bar graphs to answer the following questions.
 - (a) i. Which continent had the second highest proportion of people living in urban areas in 2000?ii. What ranking is that continent expected to have in 2030?
 - (b) Which continent is predicted to have the greatest increase in urban population by 2030?
 - (c) What do you notice about the expected *change* in the urban population of Europe between 2000 and 2030?
 - (d) Compare the expected change in the urban population in Asia and Africa between 2000 and 2030.
 - (e) Give two other interesting facts your two compound graphs show about the expected *changes* to the world's urban population between 2000 and 2030.

Checklist

I have:

- drawn in pencil
- ruled lines to clearly represent and communicate the data
- coloured according to a key or legend
- included a scale
- provided the source of the data
- included a clear title
- clearly represented and communicated the data in my interpretation.

19.10 SkillBuilder: Constructing a basic sketch map

19.10.1 Tell me

What is a basic sketch map?

A basic sketch map is a map drawn from an aerial photograph or developed during fieldwork that identifies the main features of an area. It is different from a précis map, in which the cartographer opts to include or leave out certain features.

Why are basic sketch maps useful?

Basic sketch maps are used to show the key elements of an area, so other more detailed characteristics are not shown.

They are useful for:

- summarising an idea for presentations about a feature
- identifying and communicating key features or characteristics of an area.

A basic sketch map has:

- been drawn in pencil
- not tried to show everything in great detail
- been coloured using a key/legend
- included BOLTSS.

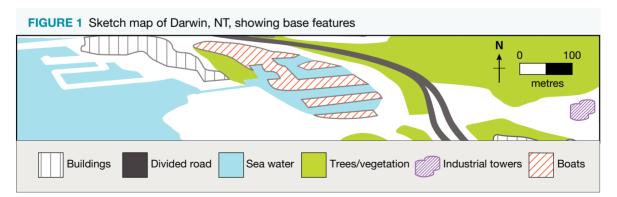
19.10.2 Show me

How to construct a basic sketch map

You will need:

- an aerial photograph
- a piece of paper on which to draw the map
- a light grey pencil
- coloured pencils
- a ruler
- an eraser.

Model



Procedure

To complete a basic sketch map from an aerial photograph of a place, complete the following steps.



FIGURE 2 Aerial photograph of Darwin, Northern Territory

Step 1

Determine the relevant area of the aerial photograph that you want to use to make a basic sketch map.



Step 2

Rule a border on your page within which to create your map. Keep the border the same size as the area of the photograph you are planning to draw, to avoid scale issues.

Step 3

Identify the feature(s), and their extent, that you are going to transfer onto your basic sketch map. Look for both natural and human features. In **FIGURE 3**, we can identify buildings, a divided road, sea water, trees and vegetation, industrial towers, and boats.

Step 4

Create a colour-coded key/legend for each feature and place it near the map. If you want to use appropriate symbols, choose those too. For example, a red cross might be a suitable symbol to represent a hospital. You can add to your key/legend as you go.

Step 5

Inside the border, draw an outline of the base features of the area, such as rivers, coastlines and major roads. These will guide your colouring.

Step 6

Individually, take each of the features that you have identified and mark onto your base map the approximate area that it covers. When you have completed one feature, colour it before moving to the next feature. This will prevent confusion with colouring other features.

Step 7

You may wish to label some significant features of the sketch map. This should be done neatly and horizontally.

Step 8

Complete the simplified sketch map with BOLTSS.



19.10.3 Let me do it

Complete the following activities to practise this skill.

19.10 ACTIVITIES

- 1. Using the aerial photograph of Darwin shown in **FIGURE 2**, complete a basic sketch map of the city and its **environments**. Use the checklist to ensure you have completed the task correctly.
- 2. Use your sketch map to answer the following questions.
 - (a) Describe the natural *environment* of Darwin. Mention the base features that you used to make your sketch.
 - (b) What type of buildings make up the greatest proportion of the built environment of Darwin?
 - (c) Suggest two reasons for the focus of the city on marine activities.
 - (d) There is vacant land to the right of the coastal road. On your sketch map, shade the land use that might appear here in 20 years' time. Justify your shading using labelling placed on your sketch map.
 - (e) How does this city compare to the place in which you live?

Checklist

I have:

- · drawn in pencil
- · not tried to show everything in great detail
- used colour with a key/legend
- · included BOLTSS.

19.11 Thinking Big research project: One day in Jakarta, one day in New York City

Scenario

Jakarta and Greater New York City are both megacities — they have a population of over 10 million people. What is it like to live in these megacities, located in very different parts of the world?



Task

Your task is to plan an itinerary for someone visiting each of these cities for just one day. What places can they visit that provide them with an experience of the life of these two cities?

At the end of the day, the visitor should have an understanding about the population characteristics, culture and environmental challenges for each city.

Follow the steps detailed in the **Process** section to complete this task.





Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in pairs will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered. One student will research living in Jakarta and the other in New York City.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Conduct some research for each city under the following headings:
 - physical description including a map and an aerial photo
 - climate and weather
 - current population and population density (where are the highest population densities in each city?)
 - migration patterns (internal and international)
 - cultural characteristics language/s, celebrations, religion, museums
 - environmental challenges pollution, traffic, transport, housing
 - examples of sustainable planning/development.
- In addition, choose a topic of interest and provide some details for example, sport, food or fashion that reflects the city.
- Also include three interesting facts that most people won't know about.

- Use the information and some photos to create a 1-day travel itinerary for each city that includes your research findings. Some of the weblinks in the Media centre provide sample templates you can use, or go to Word or Pages templates to develop your own.
- Check thoroughly to ensure correct spelling and grammar, and that you have completed all elements required. When happy with your work, submit your itineraries to your teacher for assessment.



19.12 Review

19.12.1 Key knowledge summary

19.2 Urban areas and their effects on people

- There are push and pull factors that determine people's movements to cities.
- Gateway cities (high foreign-born population) attract people as they provide opportunities to work.
- People can experience life in cities in both positive and negative ways.
- Urban challenges can include inadequate and substandard housing, lack of access to safe water and sanitation, traffic congestion and air pollution.

19.4 Cities and megacities of the world

- Most of the world's cities are located on coastlines and major transport routes.
- Dense forests, deserts and polar regions have the fewest cities.
- Megacities are classified as cities with a population of 10 million or more people.
- Most megacities are located in Asia.

19.5 Causes and effects of Indonesia's urban growth

- Rural-urban migration and natural population increase have changed Indonesia's population over time.
- Jakarta has experienced rapid population growth over time.

19.7 Characteristics of cities around the world

- South America has experienced rapid population growth.
- São Paolo in Brazil experiences rapid growth and urban issues such as congestion, slum development and air pollution.
- There are 11 cities of over one million people distributed across North America.
- New York City is the largest city and continues to experience population growth.
- Because of their age, many European cities have a central square, dominant churches and compact growth.
- Outside city centres, many larger urban cities are experiencing some sprawl.

19.8 Creating sustainable cities

- Cities can consume large amounts of land and energy to supply people with their needs.
- Examples of sustainable developments include innovative ways to deal with waste, use of solar and other renewable energies, and developing small communities within cities.

19.9 Sustainable cities in Australia

- Australian cities are attempting to become more sustainable.
- Community and small-scale projects are improving people's living conditions and overall sustainability.

19.12.2 Reflection

Complete the following to reflect on your learning.

19.12 ACTIVITIES

Revisit the inquiry question posed in the Overview:

From cities to megacities to megaregions. Why are the world's urban areas on the rise?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



٦,

eWorkbook Reflection (doc-31356)

Crossword (doc-31357)

4

Interactivity Our changing urban world crossword (int-7601)

KEY TERMS

escarpment a steep slope or long cliff formed by erosion or vertical movement of the Earth's crust along a fault line

food miles the distance food is transported from the time it is produced until it reaches the consumer **high-density housing** residential developments with more than 50 dwellings per hectare

low-density housing residential developments with around 12–15 dwellings per hectare, usually located in outer suburbs

medium-density housing residential developments with around 20–50 dwellings per hectare megacity city with more than 10 million inhabitants

megaregion area where two or more megacities become connected as increasing numbers of towns and ghettos develop between them

metropolitan region an urban area that consists of the inner urban zone and the surrounding built-up area and outer commuter zones of a city

migration the movement of people (or animals) from one location to another

per capita income average income per person; calculated as a country's total income (earned by all people) divided by the number of people in the country

plateau an extensive area of flat land that is higher than the land around it. Plateaus are sometimes referred to as tablelands.

population density the number of people living within one square kilometre of land; it identifies the intensity of land use or how crowded a place is

pull factor favourable quality or attribute that attracts people to a particular location

push factor unfavourable quality or attribute of a person's current location that drives them to move elsewhere **sanitation** facilities provided to remove waste such as sewage and household or business rubbish

slum a run-down area of a city characterised by poor housing and poverty

utilities services provided to a population, such as water, natural gas, electricity and communication facilities

20 Managing and planning Australia's urban future

20.1 Overview

Can Australia live in and grow its urban areas without making things worse for the future?

20.1.1 Introduction

We often hear the word sustainable, but what does it mean? Sustainability means meeting our own current needs while still ensuring that future generations can do the same. To make this happen, human and natural systems must work together without depleting our resources. Ultimately, sustainability is about improving the quality of life for all — socially, economically and environmentally — both now and in the future. In the words of HRH The Prince of Wales, 'Remember, our children and our grandchildren will ask not what our generation said, but what they did'.





Video eLesson Sustainable cities (eles-3495)

LEARNING SEQUENCE

- 20.1 Overview
- 20.2 Characteristics of sustainable cities
- 20.3 Sustainability of growing urban communities
- 20.4 SkillBuilder: Reading and describing basic choropleth maps
- 20.5 Managing our suburbs
- 20.6 Managing traffic
- 20.7 SkillBuilder: Drawing a line graph using Excel
- 20.8 Sustainable cities
- 20.9 Planning for a sustainable and liveable future
- 20.10 Thinking Big research project: Electric vehicle report
- 20.11 Review

on line

on line

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To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

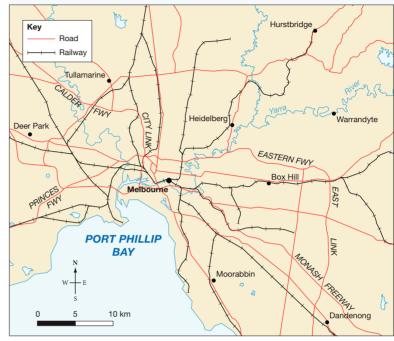
20.2 Characteristics of sustainable cities

20.2.1 A common purpose

Our cities are facing an important challenge. Some predict that Australia's population will reach 45 million by 2050. If this is the case, then our cities must change and adapt to become more efficient in order to maintain or improve our current quality of life. How will we cope with a growing population?

Sustainable communities share a common purpose of building places where people enjoy good health and a high quality of life. A sustainable community can thrive without damaging the land, water, air, natural and cultural resources that support them, and ensures that future generations have the chance to do the same. The basic **infrastructure** should be designed to minimise consumption, waste, pollution and the production of greenhouse gases. Sustainable urban areas strike a

FIGURE 1 Melbourne, Victoria. Planning for sustainable use of Australian urban areas requires an understanding of scale.



Source: Department of Environment, Land, Water and Planning

delicate but achievable balance between the economic, environmental and social factors.

A sustainable city is one that has a small **ecological footprint**. The ecological footprint of a city is the surface area required to supply a city with food and other resources and to absorb its wastes. At the same time, a sustainable city is improving its quality of life in health, housing, work opportunities and liveability.

We can address the challenges and opportunities for sustainable communities at two different scales: neighbourhood and city.





Ways to improve sustainability at the neighbourhood scale:

- reducing the ecological footprint
- protecting the natural environment
- increasing community wellbeing and pride in the local area
- changing behaviour patterns by providing better local options
- encouraging compact or dense living
- providing easy access to work, play and schools.

Ways to improve sustainability at the city scale:

- building strong central activities areas (either one major hub, or a number of specified activity areas)
- reducing traffic congestion
- protecting natural systems
- avoiding suburban sprawl and reducing inefficient land use
- distributing infrastructure and transport networks equally and efficiently to provide accessible, cheap transportation options
- promoting inclusive planning and urban design
- providing better access to healthy lifestyles (e.g. cycle and walking paths)
- improving air quality and waste management
- using stormwater more efficiently
- increasing access to parks and green spaces
- reducing car dependency and increasing walkability
- promoting green space and recreational areas
- demonstrating a high mix of uses (e.g. commercial, residential and recreational).



FIGURE 3 The Melbourne skyline with the Melbourne Sports and Entertainment Precinct in the foreground

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

Investigate additional topics > Urbanisation > Brisbane: an eco-city



20.2 INQUIRY ACTIVITIES

1. How is an ecological footprint measured? Use the **Ecological footprint calculator** weblink in the Resources tab, or a teacher recommendation, to work through the steps to determine your own ecological footprint.

Examining, analysing, interpreting

2. After using the calculator, compare your ecological footprint with those of your classmates by creating a continuum on the board. It should start from smallest footprint (least planets consumed) to largest footprint (most planets consumed). Discuss which areas you think contributed to the wide variety of footprints.

Comparing and contrasting

- 3. Consider the areas listed in which a neighbourhood can become more sustainable. Create a table and, from your own perspective, detail the ways in which you believe your own suburb or neighbourhood is meeting these aims. Add another column and use the internet to research how your local council is trying to make your suburb more sustainable. Conclude by writing a few sentences to answer the following questions:
 - (a) Is my neighbourhood sustainable?
 - (b) How will liveability be improved?
 - (c) What needs to change in order to make it even more **sustainable**?

Evaluating, predicting, proposing

20.2 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

20.2 Exercise 1: Check your understanding

- GS1 Complete the following sentence: Some organisations have projected that Australia's population will reach million by
- 2. GS1 What are the two main aims of a sustainable community?
- 3. **GS2** Explain the term *ecological footprint* in your own words.
- 4. GS1 What are the two scales at which we can work to improve the sustainability of our communities? What are some of the differences between the two?
- 5. GS2 What might a sustainable home look like to you?

20.2 Exercise 2: Apply your understanding

- 1. GS2 Explain how the average Victorian's ecological footprint has *changed* in the last decade.
- 2. GS2 Describe your understanding of what it means to have a good quality of life.
- 3. GS6 Explain in a paragraph the simple actions everyone can make to reduce their ecological footprint.
- 4. GS2 Explain how someone's quality of life can improve whilst still reducing his or her ecological footprint.
- 5. GS2 Explain how increased green space and recreational areas can improve someone's quality of life.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

20.3 Sustainability of growing urban communities

20.3.1 The urban explosion

In 2008, for the first time in history, the world's urban population outnumbered its rural population. In 2019, the world's population exceeded 7.7 billion; it is expected to reach 9.2 billion by 2050. Where will all these people live? What challenges will cities and communities face in trying to ensure a decent standard of living for all of us?

Global population growth will be concentrated mainly in urban areas of developing countries. It is forecast that by 2030, 3.9 billion people will be living in cities of the developing world. The impact of expanding urban populations will vary from country to country and could prove a great challenge if a country is not able to produce or import sufficient food. Hunger and starvation may increase the risk of social unrest and conflict. On the other hand, farmers can help satisfy the food needs of expanding urban populations and provide an economic livelihood for people in the surrounding region.

One of the biggest challenges we face is ensuring that the sustainability of our economy, communities and environment is compatible with Australia's growing urban population (see TABLE 1).

TABLE 1 Percentage of population residing in urban areas by country, 1950–2050

| | 1950 | 1975 | 2000 | 2025 | 2050 |
|------------------|------|------|------|------|------|
| Australia | 77.0 | 85.9 | 87.2 | 90.9 | 92.9 |
| Brazil | 36.2 | 60.8 | 81.2 | 87.7 | 90.7 |
| Cambodia | 10.2 | 4.4 | 18.6 | 23.8 | 37.6 |
| China | 11.8 | 17.4 | 35.9 | 65.4 | 77.3 |
| France | 55.2 | 72.9 | 76.9 | 90.7 | 93.3 |
| India | 17.0 | 21.3 | 27.7 | 37.2 | 51.7 |
| Indonesia | 12.4 | 19.3 | 42.0 | 60.3 | 72.1 |
| Japan | 53.4 | 75.7 | 78.6 | 96.3 | 97.6 |
| Papua New Guinea | 1.7 | 11.9 | 13.2 | 15.1 | 26.3 |
| United Kingdom | 79.0 | 77.7 | 78.7 | 81.8 | 85.9 |

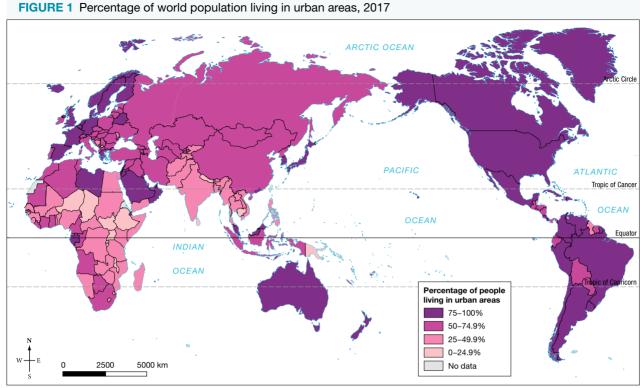
Source: UN Population Division 2011

20.3.2 The future for Australia

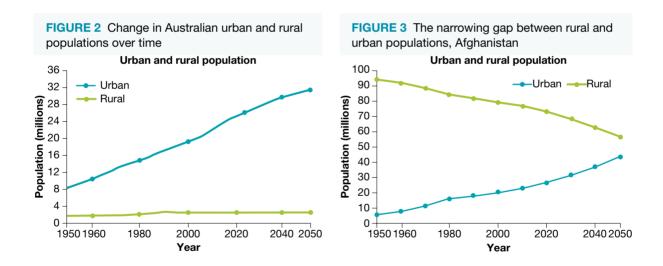
Australia's population will continue to grow and change. In particular, it will become more urban and its composition will age. Population increase threatens our fragile Australian environment. We continue to witness loss of biodiversity, limits on water supply, more greenhouse gas emissions and threats to food security. Our cities experience more traffic congestion and there are problems with housing availability and affordability. Access to services, infrastructure and green space are limited for some people in our communities. To handle these many challenges, we must plan effectively for an increased population by building communities that can accommodate future changes. This will build communities in which all Australians live and prosper.

20.3.3 The rural lifestyle

Approximately 93 per cent of Australia's growing population will be living in urban areas by 2050 (see TABLE 1). However, some urban residents will make a 'tree change' or a 'sea change' and relocate to rural areas or the coast. The population in rural communities is generally stable or decreasing, as many young people leave in search of jobs and study opportunities. Some rural communities manage to keep their populations stable by shifting their employment focus from manufacturing to services; by utilising better internet connections, to allow people to work remotely from their office; or by improving public transport links.



Source: World Bank Data



DISCUSS

Growing communities create growing problems. For example, social problems may include poverty, chronic unemployment, welfare dependence, drug and alcohol abuse, crime and homelessness. Working in small groups, brainstorm some of the impacts that growing communities may have on (a) the *environment* and (b) the economy.

[Critical and Creative Thinking Capability]

20.3 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

20.3 Exercise 1: Check your understanding

- GS6 The global population is changing. Where do you think most of the world's population will live in the future?
- 2. GS1 Is the pattern of population change the same or different in Australia?
- 3. **GS1** Where might the increased population live in Australia?
- 4. **GS2** Explain the social benefits of a sea *change* or tree *change*.
- 5. **GS5** Examine **FIGURES 2** and **3**. Explain the similarities and differences in the **changes** in urban and rural populations between the two **places**.

20.3 Exercise 2: Apply your understanding

- 1. GS5 Refer to TABLE 1.
 - (a) Which countries will be the most and least urbanised in 2050?
 - (b) Which countries are predicted to experience the greatest percentage *change* in their urban population?
 - (c) Are there any countries that have not seen a gradual increase in their percentage of urban population since 1950? Why might this be the case?
- GS4 Examine TABLE 1. Create a bar graph that shows the change over time for four countries of your choice.
- 3. **GS6** Young people leave rural areas in search of employment and education. What factors could contribute to you leaving the area where you live?
- 4. GS6 In cities, we must face the challenges and opportunities of productivity, sustainability and liveability. If we address one goal, we can have an impact, either positively or negatively, on others. This demonstrates interconnection. For example, efficient public transport can fix congestion and improve access to jobs and opportunity (productivity). It can also reduce greenhouse gas emissions (sustainability) and make access to education, health and recreational facilities more affordable (liveability). Using the example of the National Broadband Network, how might productivity, sustainability and liveability be affected? Classify the effects you have listed as positive or negative.
- GS6 Evaluate the social, economic and environmental benefits and drawbacks of living in an urban area in Australia.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

20.4 SkillBuilder: Reading and describing basic choropleth maps

What is a choropleth map?

A choropleth map is a shaded or coloured map that shows the density or concentration of a particular aspect of an area. The key/legend shows the value of each shading or colouring. The darkest colours usually show the highest concentration, and the lightest colours usually show the lowest concentration.

Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





20.5 Managing our suburbs

20.5.1 Living on the edge

There is much at stake on the rural—urban fringe, with the conflict between farming and urban residential development reaching a critical point on the outskirts of Australia's cities. Australia is the driest inhabited continent on Earth, and just six per cent of its total area (45 million hectares) is arable land. The areas targeted by our state governments for residential development continue to expand. When some of our most fertile farmland is lost to **urban sprawl**, we reduce our productive capacity. Is this a recipe for sustainability?

On the edge of many Australian cities, new homes are being built as part of planned developments on greenfield sites. These were previously green wedges, wildlife habitats and productive farmland on the urban fringe. Accompanying these housing developments are plans for kindergartens, schools, parks, pools, cafés and shopping centres (often called amenities and facilities).

Having an 'affordable lifestyle' is the main attraction for people who purchase these brand new homes. They like the idea of joining a community and having the feeling of safety in their newly established neighbourhood.

Most new houses on the rural—urban fringe are bought by young first-home buyers, attracted by cheaper housing and greener surroundings. Generally, the residents of these fringe households feel that the benefits of their location outweigh the poor public transport provisions and long journeys to work and activities — trips that are usually made in a car.

20.5.2 Feeding our growing cities

Market gardens have traditionally provided much of a growing city's food needs, supplying produce to central fruit and vegetable markets. These 'urban farms' were located on fertile land within a city's boundaries but close to its edge, with a water source nearby and often on floodplains. They have been in existence in and around Australia's major cities since the 1800s, and some (such as Burnley Gardens in Richmond, Victoria) are now listed on the National Trust heritage garden register.

Fifty per cent of Victoria's fresh vegetable production still occurs in and around Melbourne, on farms such as those at Werribee and Bacchus Marsh. More than 60 per cent of Sydney's fresh produce is grown close to the city, with the bulk of it coming from commercial gardens such as those in Bilpin, Marsden Park and Liverpool.

These farms are important because:

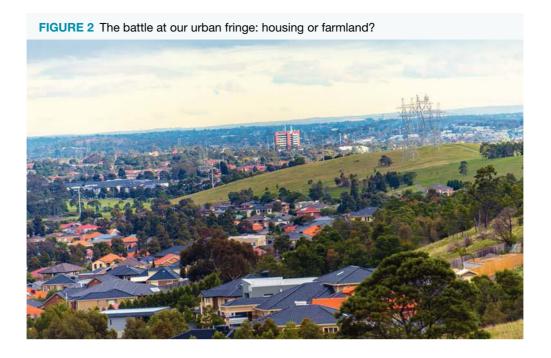
- they provide us with nutritious food that does not have to be transported very far
- they provide local employment
- they preserve a mix of different land uses in and around our cities.

Currently, we can obtain our food from almost anywhere because we have modern transportation (such as trucks and planes), better storage technology (refrigeration and ripening techniques) and cheap sources (not necessarily the closest). However, this fails to recognise that Australia's population may double by 2050 and food will become more scarce on a global level. The eradication of our local food providers may be at our own peril.

Land use zoning is generally the responsibility of state planning departments but cooperation is required by all three levels of government: local, state and federal. We need to ensure that our green wedges are protected from becoming **development corridors**. The needs on both sides of the argument are valid. How can we house a growing population and provide enough food for them? Can we do both?

FIGURE 1 The history of Melbourne's urban sprawl Whittlesea Yarra Glen Greensborough St Kilda Mordialloc Key 1888 Fruit growing area 1954 1954 Vegetable growing area 1954 1971 Market garden / orchard 2009 2010 2030 forecast Urban growth boundary to 2030 10 km

Source: Various Victorian planning studies and current land use mapping. Map produced by Spatial Vision 2019.



DISCUSS

'Sprawl is created by people escaping sprawl.' Discuss this statement in small groups.

[Critical and Creative Thinking Capability]



Interactivity The 20-minute city (int-3122)

20.5 INQUIRY ACTIVITIES

- 1. Use the internet to research some companies that sell house and land packages in Victoria. What are some of the marketing messages that are used to sell the properties? Do you think they are able to deliver on their **Evaluating, predicting, proposing** promises?
- 2. Many new homes on the urban fringe are built with six-star or seven-star energy efficiency. Use the internet to help you find out what this means. Evaluating, predicting, proposing
- 3. To deal with the demand for affordable housing in Melbourne, 12 new Melbourne suburbs were created between 2019 and 2020. The new suburbs are Beveridge North West, Wallan South, Wallan East, Merrifield North/Kalkallo Basin, Shenstone Park, Lindum Vale, Craigieburn West, Pakenham East, Officer South Employment Precinct, Croskell, Kororoit Part 2 and Aviators Field.
 - (a) Using a spatial technology tool such as Google Earth, locate these places by dropping a pin on each.
 - (b) Assess these locations' access to public transport and major road infrastructure and proximity to essential services.
 - (c) Using the ruler tool, calculate the approximate distance from each suburb to the Melbourne CBD.
 - (d) Using Google Maps, calculate the estimated commute time between each suburb and the Melbourne CBD and Tullamarine Airport. Classifying, organising, constructing
- 4. Housing and agriculture demands on land are two of the biggest dilemmas of the twenty-first century. A growing population needs to be housed, but it also needs to be fed, and the cost of relying on imported food can be very high. Set up a debate with your classmates on the following statement: 'Green belts close to the city should be preserved and protected.' The affirmative team will argue for this, while the negative team will argue that green belts should be removed and used for new housing developments.

Evaluating, predicting, proposing

20.5 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

20.5 Exercise 1: Check your understanding

- 1. **GS1** List the groups involved in the conflict over our rural-urban *spaces*.
- 2. GS1 Why is it important for people to have rural spaces, such as market gardens, close to the city?
- 3. GS1 Why is it important for cities to have access to more land for urban development?
- 4. GS2 Refer to FIGURE 1. Describe how Melbourne's urban sprawl has changed in direction and pace.
- GS1 'The eradication of our local food providers may be at our own peril.' Suggest what you think this statement means.

20.5 Exercise 2: Apply your understanding

- 1. **GS2** Explain the problems associated with urban sprawl with reference to locations around the city closest to where you live.
- 2. **GS2** Suggest some possible benefits of living in a newly created suburb.
- 3. **GS6** Predict how your own suburb or town might look as its population grows. List all the *changes* you may see due to increased population in your local area.
- **4. GS6** Propose specific *changes* to transport infrastructure, which will prepare your own suburb or town for population growth.
- GS6 Predict how Melbourne's inner city will change with increased inner-urban population growth over the next decade.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

20.6 Managing traffic

20.6.1 The way forward

How did you get to school today? How long did you spend in the car? Were you stuck in a traffic jam? Australians who live in cities are experiencing longer commuting times than ever before, and this is only going to get worse. A growing population will mean an increase in cars — unless we start to tackle the problem from a sustainable perspective.

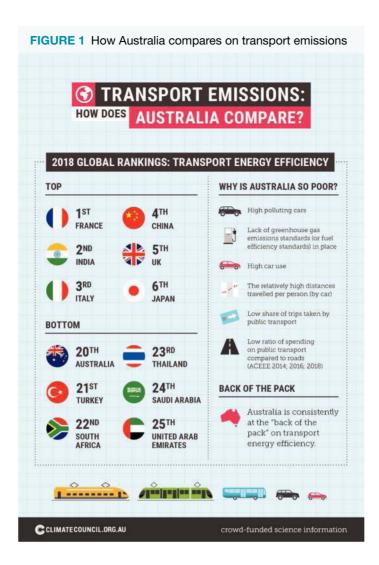
Road transport is a large source of greenhouse gas emissions in Australia (18 per cent), with passenger cars contributing more greenhouse gases than any other part of the transport sector. Some of the big issues in improving the sustainability of our transport systems are listed below.

Improving our infrastructure

Better public transport infrastructure will help improve the sustainability of our communities. Some cities have excellent rail systems or electrified tramways that were installed many years ago. But as cities grow and change, costly extensions may be required. Buses are much cheaper and quicker to upgrade. In Curitiba, Brazil, **bi-articulated buses** travel in dedicated bus lanes, and 70 per cent of the population uses the service. Public transport systems are cost-effective because it costs the same to run a bus or train with one passenger as it does with 1000 passengers. The more people who travel, the less it costs to transport each person.

Technologically advanced transportation

Since the late twentieth century, there have been many improvements in car design, occupant safety and fuel efficiency. In 2018, China sold over 1 million plug-in electric cars, and cities such as Paris, London and Melbourne are installing hundreds of car charging stations. Tesla motors has the largest share of the world's electric car market (50 per cent) but major car companies such as Volkswagen and Mercedes—Benz are investing billions of dollars and are therefore catching up. In Adelaide, the Tindo bus is powered by solar energy and can run for 200 kilometres between charges. More than 80 per cent of Brisbane's bus fleet runs on compressed natural gas (CNG) or meets the Euro V of VI diesel emissions standard.



Denser urban settlements

When an urban area is dense, the buildings are more compact, and more people live there. Dense urban settlements have 'efficiencies' already built in. Older cities, such as those in Europe, were established long before the invention of motor vehicles, meaning that they were built for walking. The older parts of European cities have narrow streets and laneways, and cannot cope with congestion. Europeans are less likely to own cars because they live close to their daily destinations, and this reduces the need for cars. In New York City, approximately 70 per cent of people travel to work by public

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FIGURE 2 The Tindo bus in Adelaide runs on solar energy.

transport, bicycle or foot and only about 50 per cent of families own a car. This is very different from the American average of 8 per cent of people who travel to work by public transport.

20.6.2 Changing our behaviour

Did you use a sustainable form of transport to get to school today? Cycling and walking are forms of mass urban transportation. Providing safe bike paths and walking routes makes people more likely to change their behaviours. If you have to travel by car, one way of increasing the effectiveness of each trip is car pooling. Governments or workplaces may also provide incentives for individuals to make a more sustainable transport choice.





Positive changes are happening, even if it is a little slow. The most recent figures show that approximately 10 per cent of Melbourne commuters either rode their bicycles to work or travelled on foot. This compares with approximately 4 per cent in 2001.

The toll we pay

Travel, particularly in our own cars, has increased at a rapid rate over the past 50 years. We have increased our mobility, independence and opportunities, and this has transformed the way in which land is used and people live. But as well as these benefits, car travel has created many health problems. Accidents and injury, climate change, air, water, soil and noise pollution, reduction in social interaction, and declining physical activity are all negative effects of car travel that take their toll on our health.



20.6.3 Why don't we just build more roads?

In an ideal world, a sustainable transport system would have a fast, clean, reliable and regular train service with waiting times of no more than ten minutes, day or night. Trams and buses would link into the train

network, bringing people to the main parts of the system. Trams and buses would have priority over other traffic and run on the weekends. Station staff would be present at all times and the services would be safe and clean. What are some of the costs, other than financial, of using our cars instead of public transport?

Contrary to popular belief, building new roads and freeways does not actually ease congestion. This is because a new road simply becomes an opportunity for people to make new journeys that they may not have contemplated before; or they make the same journey more often; or they drive instead of taking public transport; or travel longer distances to accomplish the same task. All these things result in increased traffic on the new road, so the road system ends up just as congested as before. More energy and resources are consumed, and more pollution is generated.

FIGURE 4 Traffic jams slow down people and the economy.



FIGURE 5 This cyclist in China may be wearing a mask to reduce the effects of air pollution.



20.6.4 The benefits of an efficient public transport system

By shifting from car trips to public transport we can improve our **triple bottom line**. In other words, we improve economic efficiency, help the natural environment and do something good for society.

FIGURE 6 A model for transport in a sustainable city

When people are able to 'reclaim the streets', they make them safer for all community members; for example, children feel safe walking and cycling to school.

Public transport infrastructure should be in place before new developments are built on the fringe. New developments within densely populated areas (in-fill development) can take advantage of existing transport networks.

A 24-hour service that is safe, clean and pleasant to use allows all workers an opportunity to choose public transport. Without it, people who work a night shift may be left with no option but to drive.

Different transport options must work effectively with each other; that is, your train should deliver you on time to your connecting bus, and the tram should be there to meet your ferry.

The transport system of a city has to work as an integrated whole, rather than as separate parts. Trains need to link to buses and cycle paths, and vice versa.

A simple and easy ticketing system makes travelling by public transport more attractive. If passengers are able to save money by travelling more often (for example, by buying a monthly ticket), then this will act as an added incentive.

However, we also know that people will not get out of their cars and use public transport until public transport offers a high-quality, convenient and affordable service. Australia needs to make huge improvements in service frequency, connections and coverage. This formula has worked in other cities around the world and could work here in Australia.

Here in Australia we must look to develop Sustainaville — a community with its focus on public transport, walking and cycling.



Weblinks Urban habitat

Crank busters

Transport urban myths

20.6 INQUIRY ACTIVITIES

1. What mode of transportation did you use to come to school today? How long did it take? How did your family members travel to their *place* of work or their school or university today? Use an internet mapping tool to help you work out how many kilometres your family travelled and by what means.

Classifying, organising, constructing

- 2. Tally the results for your class's responses to question 1. Present the information in graph format. If possible, compare your results with another class. Classifying, organising, constructing
- 3. As a class, work out the minimum number of cars it would take to efficiently transport your entire class to school if everyone carpooled. Classifying, organising, constructing
- 4. Create a mind map of the way car travel affects your health, and then create a corresponding mind map of the way public transport affects your health. Include as many positive and negative points as you can with a brief explanation. Classifying, organising, constructing
- 5. Download a map of your suburb and print it out. Annotate it with current public transport options, such as trains, buses, bike paths and footpaths. Use different colours and a key to suggest improvements to existing Classifying, organising, constructing options in your local space.
- 6. There are many arguments for getting out of our cars and onto trams, trains, buses or bikes. Use the Crank busters and Transport urban myths weblinks in the Resources tab and other resources to prepare a class debate on one of the following topics.
 - People who own cars won't use public transport.
 - Bringing back tram conductors and station staff would increase fares.
 - Cars are more efficient than public transport.
 - Freeways reduce traffic congestion and pollution.

You may be able to share the topics listed above among different groups and then present to the entire class. Evaluating, predicting, proposing

- 7. Curitiba in Brazil has installed a very successful bus rapid transit system (BRT), which has buses running about every 90 seconds and is used by 70 per cent of Curitiba's residents. Conduct some internet research using the Urban habitat weblink in the Resources tab or other sites, or view one of the many videos available online about the BRT system. Make a list of the unique features of the BRT and include some facts about the effect the system has had on the triple bottom line of Curitiba. How does this system compare to those you are aware of in your local community here in Australia? Comparing and contrasting
- 8. What kind of public transport system would you like to use? Design your own regional public transport option, using your local council area borders. Create a brochure showcasing the many benefits and features of the service. Include a map that details the routes of the service, frequency of service, hours of operation and cost. Use FIGURE 6 to assist you. Classifying, organising, constructing

20.6 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting,

20.6 Exercise 1: Check your understanding

- 1. **GS1** Which three areas does the triple bottom line concern?
- 2. **GS1** What are some of the negative effects of car travel?
- 3. **GS1** What is carpooling?
- 4. **GS2** Explain why public transport systems are cost effective.
- 5. **GS2** Explain the benefits of ride sharing for private transport.

20.6 Exercise 2: Apply your understanding

- 1. GS3 Study FIGURE 1. How does Australia compare to the rest of the world in transport energy efficiency? What are some of the reasons for this?
- 2. GS6 Consider the four areas for improvement listed in this subtopic. Which do you think will be the most important for (a) individuals and (b) the government to focus on in the next five years?
- 3. GS2 The benefits of an efficient public transport system are many. If we were to discuss its impact on the environment, we would see less air and noise pollution, conservation of green spaces (public transport uses less space than roads), and reduced greenhouse gas emissions (GHGE). A full train produces about five times less GHGE than the cars needed to move the same number of people. Explain how an efficient public transport system would benefit the economy and society, following the FIGURE 6 example to assist you.
- 4. **GS5** Study **FIGURE** 6. What does a public transport system need to be like in order to be a success?
- 5. **GS6** Propose methods to increase commuters of Melbourne's trains and trams.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

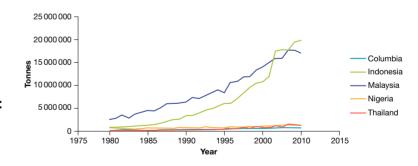
20.7 SkillBuilder: Drawing a line graph using Excel

What is a line graph?

A line graph is a clear method of displaying information so it can be easily understood. Using a digital means of drawing a line graph enables you to show multiple data sets clearly.

Go to your learnON title to access:

- · an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.





Resources

Video eLesson SkillBuilder: Drawing a line graph using Excel (eles-1662)



Interactivity

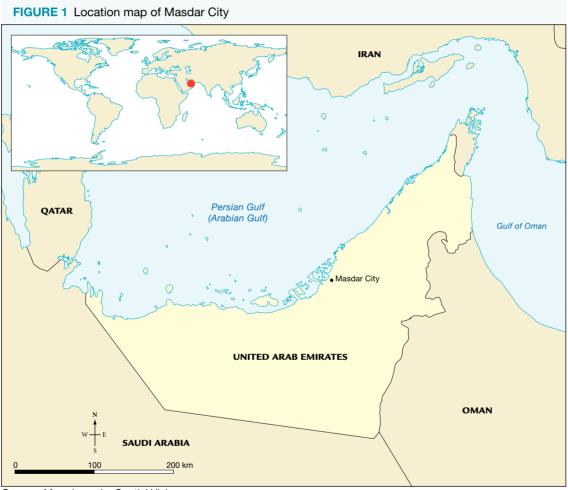
SkillBuilder: Drawing a line graph using Excel (int-3158)

20.8 Sustainable cities

20.8.1 Masdar City

It may seem a little unusual to find a place like Masdar City in the Arabian Gulf. Masdar City, in the United Arab Emirates (UAE), was founded in 2006 to provide cutting-edge research into renewable and clean energy technologies. In this harsh and unforgiving climate, survival is all about sustainability, and resources must be used wisely in order to ensure a viable future.

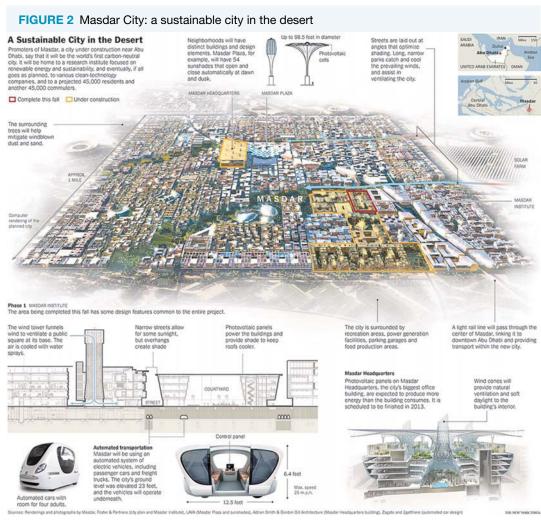
The UAE possesses eight per cent of the world's oil reserves. By economic standards, it is a strong and stable country. The UAE government has recognised that, although it may have 100 years' worth of oil supplies left to sell to the rest of the world, it needs to ensure that, by the end of this century, its economy does not rely on its natural resources alone.



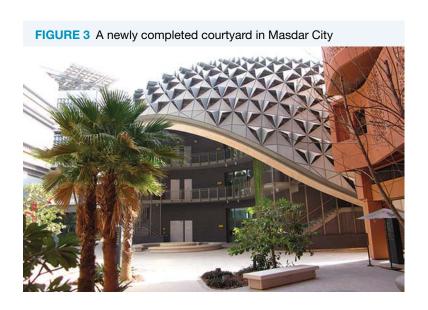
Source: Map drawn by Spatial Vision

The plan is for Masdar City to become a global leader in sustainability. Sustainable city-scale technologies and systems will be tested and then shared with other cities. This approach is intended to reduce the local and global ecological footprint of cities across the world.

It is intended for the city to have a population of 45 000 residents, and to make people, not cars, the focus. Pedestrians are king, streets are shaded by buildings or trees, and pleasant shaded walkways encourage walking. Masdar Plaza has 54, 30-metre-wide sunshades that open and close automatically at dawn and dusk. All these features aim to provide the highest quality working and living experience with the lowest possible environmental footprint.

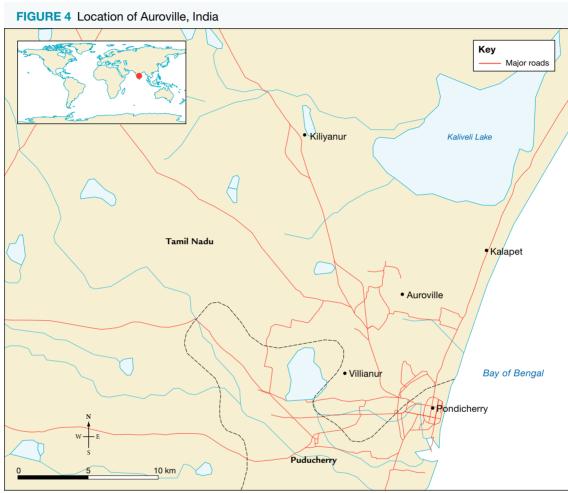


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20.8.2 Auroville

Auroville is a planned community in south-east India for up to 50 000 people, which has been under development since its inception in 1968. As of 2019, more than 2700 people from over 50 nations live and work in Auroville. It is located close to the Coromandel Coast, 10 kilometres north of Pondicherry and 150 kilometres south of Chennai (see FIGURE 4).



Source: Map drawn by Spatial Vision

The Auroville vision

Auroville wants to be a universal town where men and women of all countries are able to live in peace and progressive harmony above all creeds, all politics and all nationalities. The purpose of Auroville is to realise human unity.

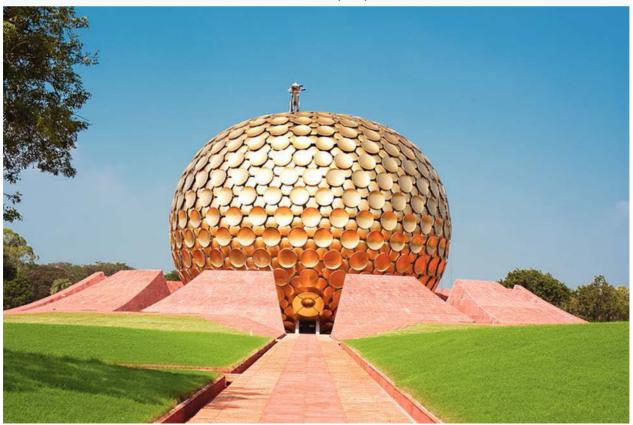
Source: Mirra Alfassa, the 'Mother' of Auroville

The grand plan for Auroville was to create two geographical regions around the Matrimandir — a gleaming dome-shaped building that is the spiritual centre of Auroville (see FIGURE 6). The city area contains residential houses and community centres. The planned green belt is a forest that surrounds the city area. It has two functions: adding greenery and beauty, and to be a source of food and raw materials. Residential quarters within the city area are organised into self-contained communities with shared local water and wastewater systems (although the entire city shares an electricity supply).

FIGURE 5 A plan of Auroville, India



FIGURE 6 The Matrimandir is at the centre of the Auroville spiral plan.



Sustainable features of Auroville

Solar technology

- Water pumping and heating, street lighting and electricity generation all use solar power.
- A 1000-meal per day solar kitchen is powered by a solar concentrator. The design uses hundreds of mirrors to focus sunlight onto a heat receiver. The coils around the heat receiver are filled with water and, when the water turns to steam, it is used for cooking.

Water technology

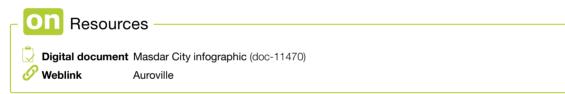
- Waste water is treated at individual households and local communities, rather than at large sewage treatment plants.
- Rainwater harvesting is an important source of fresh water.

Revegetation

• The site chosen for Auroville was an eroded plateau that was suffering from desertification. Two million trees have been planted, and the area is now a green and forested landscape.

Community recycling and reuse projects

- Examples of recycling projects include the Auroville central exchange shop. Instead of dumping old and unwanted items in the rubbish, community members are encouraged to exchange or donate these items to the shop, since another person may find the item useful.
- Auroville has provided social and economic benefits for the surrounding villages. More than 5000 villagers are hired from nearby villages as cleaners, construction workers and maintenance workers, and are given job training. This has increased family incomes substantially and improved the standard of living within the communities.



20.8 INQUIRY ACTIVITIES

- Locate Abu Dhabi and your home town or city on a world map. Describe the location of each *place*, including the latitude and longitude of each.
 Describing and explaining
- 2. Design your own **sustainable** city, using the image of Masdar City in **FIGURE 2** as a guide. Ensure you provide:
 - a map of the city, noting important features
 - an inset map showing potential location (country and continent, with some reference to climate)
 - information on scale
 - information on how the city generates its own energy sources
 - a list of water efficiency measures
 - · descriptions of green spaces
 - an outline of transport options provided to residents.

You could choose to create a model in a small group or a blueprint on paper, using ICT to assist you.

Classifying, organising, constructing

- Conduct internet research to find out more about the solar kitchen at Auroville, or other examples around the world. Create a diagram that shows how heat is generated by the solar bowl concentrator, which cooks the meals in the shared kitchen.
 Describing and explaining
- 4. Use the Auroville weblink in the Resources tab to find out more about Auroville.

Examining, analysing, interpreting

20.8 EXERCISES

Geographical skills key: GS1 Remembering and understanding **GS2** Describing and explaining **GS3** Comparing and contrasting **GS4** Classifying, organising, constructing **GS5** Examining, analysing, interpreting **GS6** Evaluating, predicting, proposing

20.8 Exercise 1: Check your understanding

- 1. GS1 Refer to FIGURE 1. Which countries border the United Arab Emirates?
- 2. GS6 In what activities might the residents of Masdar City be engaged?
- 3. **GS6** The Arabic word *masdar* means 'the source'. Why do you think the city was given this name?
- 4. GS3 What type of climate exists in Abu Dhabi? How does it compare with the climate of where you live?
- 5. GS1 What was the Auroville site like before 1968? How has the site changed over time?
- 6. GS2 Explain the principles behind developing the community of Auroville. Is this how most cities or communities are planned? Why or why not?
- 7. **GS2** Would a solar kitchen be useful in a school setting? Justify your response.

20.8 Exercise 2: Apply your understanding

- 1. GS6 What do you think it would be like to be a teenager living in Masdar? Would you like to live there? Why or why not?
- GS4 Study FIGURE 2, also available as the 'Masdar City infographic' resource (doc-11470) in the Resources tab. Create a table that shows the economic, social and environmental benefits of Masdar City.
- 3. GS6 Masdar City was master-planned with many efficiencies built into the design. Do you think it's easier to design a city from scratch or to make changes to an existing city in order to make it sustainable? Explain your response.
- 4. GS3 How is the development of Auroville different from that of Masdar? Are they both trying to achieve the same outcome? How are they each proposing to reach their goals? Use a Venn diagram to compare and contrast.
- 5. GS6 Would a community like Auroville succeed here in Australia? Why or why not?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

20.9 Planning for a sustainable and liveable future 20.9.1 Higher-density living, smaller households

Australian cities are experiencing an apartment revolution. More people are choosing to live in the centre of cities in high-rise apartments rather than in houses on big suburban blocks. Urban life now sees families and individuals moving to the inner city for a variety of reasons, such as seeking to make a smaller ecological footprint, or avoiding long commutes to school, work and shops.

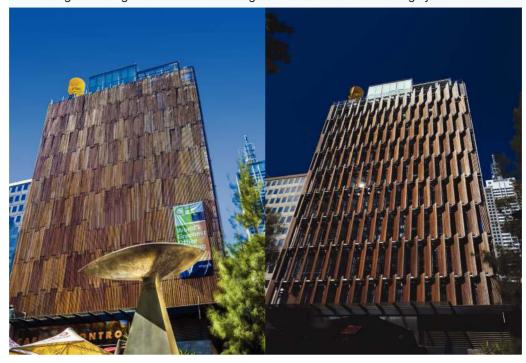
Australian households are changing in structure all the time, and recent data suggest the greatest increase will be in **family households**, which will grow from 6.5 million in 2016 to around 9.2 million in 2041 and will remain the most common type of household in Australia. Single-person households are projected to rise from 2.3 million in 2016 to 3.5 million in 2041. This is due to two main factors: the ageing Australian population, where women predominantly outlive men, and the fact that many adults are delaying marriage and starting a family much later.

20.9.2 Going green

All housing can be designed to be sustainable. However, medium- and higher-density housing can offer the greatest opportunity for energy savings. Buildings with shared walls and more than one storey (such as two-storey and semi-detached homes, terraces and apartments) use less energy for heating and cooling than single-storey detached homes.

In Australia, people have started to value being able to walk to facilities and workplaces, so our urban centres are increasing in population density. For business and residential purposes, urban sprawl is far less sustainable than high-rise buildings. A sustainable building may include on-site energy generation (such as solar panels and wind turbines) and passive energy design (such as insulation), reducing the need for air-conditioning and heating. 'Green' or recycled building materials can also lower the environmental costs of construction.

FIGURE 1 Council House 2 in Melbourne was the first Australian building to be awarded a six-star green rating. Its features include a green roof and louvred shading system.



Green roofs and walls

Green roofs and walls have a history dating back thousands of years. People are rediscovering the benefits of creating healthy, green buildings. A green, or living, roof is a roof surface that is planted partially or completely with vegetation over a waterproof layer. They may be extensive, with simple ground-cover vegetation, or intensive, with soil more than 200 millimetres deep and planted with trees. Green walls are external or internal walls of buildings that include vegetation, either in stacked pots or in growing mats.

FIGURE 2 The Burnley Living Roof at the University of Melbourne's Burnley Campus

Green roofs have several benefits. They:

- are aesthetically pleasing
- provide a cooling effect on local microclimate
- reduce carbon dioxide (CO₂)
- reduce air pollution
- provide insulation for buildings
- provide recreational space for local residents and workers
- allow for fresh food to be grown close to where it's needed, thus reducing transport costs.

The high life

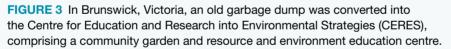
In the last century, Europe has transformed itself from a largely rural to a mostly urban continent. It is estimated that in 2019, approximately 75 per cent of Europe's population (550 million people) lived in urban centres of more than 5000 people. About two-thirds of energy demand is linked to urban consumption and up to 70 per cent of CO₂ emissions are generated in cities. The urban way of life is both part of the problem and part of the solution. The density of urban areas allows for more energy-efficient forms of housing, transport and other services. Consequently, measures to address climate change may be more efficient and cost-effective in big, compact cities than in less densely built spaces.

20.9.3 Planning for a liveable future

Managing and planning Australia's future urban areas will take the efforts of many. We, as citizens of Australia and the world, must be prepared to make significant changes to the way we live if we wish to enjoy a good quality of life in the future. Sustainability and liveability must be on the agenda for governments, communities and individuals.

The role of governments

Governments can commit to sustainability in a number of ways. They may offer incentives such as **rebates** on solar panels or water-efficient showerheads. They can fund research into sustainable technologies. Governments can adopt strict planning regulations and well-defined urban growth boundaries. They can have clear policies on levels of air quality, business sustainability, and the construction or **retrofitting** for sustainability of 'green' buildings. They can develop land-use plans that encourage sustainability and biodiversity.





The role of communities

Communities and organisations are working with governments, businesses and individuals to respond to global challenges such as climate change. There are many measures in place to improve transport and mobility, develop effective use of our land, and plan and develop appropriate policies.

Communities maintain and improve infrastructure and open spaces, and can help us work at the neighbourhood level to build a more sustainable community. The Sustainable Street Approach has seen the emergence of hundreds of Sustainable Villages around Australia. These villages are run by local residents who work together to improve local liveability. They might establish community gardens or purchase solar systems in bulk. Some great examples of communities working with governments to improve liveability and sustainability are shown in FIGURES 3, 4 and 5.



The role of the individual

We can all seek to enjoy a quality of life that does not damage the environment. Although you might feel powerless, in the next decade you will be making your own contribution to society and thinking about what kind of world you would like to grow old in. You will need to consider your sustainable choices in the action areas shown below. What is *your* personal sustainability plan? Ultimately, if you want to improve your quality of life and the environment, make your choices sustainable ones. You could get involved by:

- riding or walking to school each day
- establishing an eco-classroom at your school
- learning more about the connections between Aboriginal and Torres Strait Islander peoples and their land
- installing solar hot water or solar panels at your residence
- growing your own food.



FIGURE 6 Action areas



Energy



Aboriginal and Torres Strait Islander knowledae



Waste



Community



Transport



Sustainable purchasing

20.9 INQUIRY ACTIVITIES

- 1. Green roofs can be built anywhere. Select a rooftop on a building at your school, and create a plan for your own green roof. To find inspiration, conduct research on successful green roofs around the world. You will need to include a design, information on size and materials needed, and how and why it would be accessed. Present your design using a program such as Prezi or PowerPoint. Classifying, organising, constructing
- 2. Using a program such as Google Earth, try to locate any green roofs in Melbourne. How many green roofs can you find in the central business district? Comparing and contrasting
- 3. Use the internet to research Melbourne's award-winning building Council House 2.
 - (a) What features of the building are sustainable?
 - (b) Would you like to work in a building like this? Why or why not?
 - (c) Should any of the sustainable features of this building be made mandatory for future building developments? Explain your response.
 - (d) Outline any future plans for the building. Why are they being considered?

Evaluating, predicting, proposing

4. Research the ways in which your local council is working at a local level to improve sustainability. Most councils have a section on their website dedicated to actions for sustainability. Work in a small group to create a short presentation on the various programs at work. What kind of programs can individuals participate in? Classifying, organising, constructing 5. Use the internet to find out how an existing building can be made more sustainable.

Examining, analysing, interpreting

6. As you get older, your needs, wants and priorities will change. Imagine you have now completed Year 12 and are ready to move out into your first share house. In a small group (representing your new housemates), agree on a list of 10 ways that you and your housemates could live more sustainably.

Evaluating, predicting, proposing

20.9 EXERCISES

Geographical skills key: GS1 Remembering and understanding GS2 Describing and explaining GS3 Comparing and contrasting GS4 Classifying, organising, constructing GS5 Examining, analysing, interpreting GS6 Evaluating, predicting, proposing

20.9 Exercise 1: Check your understanding

- 1. **GS1** What type of dwelling is your residence?
- 2. GS2 Explain why the types of households are going to change in the next 20 years in Australia.
- 3. **GS1** Who are the three key groups making our urban areas more sustainable?
- 4. **GS1** List the benefits of green roofs.
- 5. GS2 Many governments offer subsidies when elements such as green roofs and solar panels are included in building designs. Why do you think they would do that?

20.9 Exercise 2: Apply your understanding

- 1. GS5 How are Australian households predicted to change over the next 20 years? What type of household do you live in?
- 2. GS6 As a teenager, what do you think are some of the advantages and disadvantages of living in a high-rise or apartment building?
- 3. GS6 Study FIGURES 3, 4, 5 and 6.
 - (a) What are some ways in which governments can make changes to create a more liveable future?
 - (b) What are some ways in which you, as a high-school student, can make changes to create a more liveable future?
- 4. GS6 Make your own personal sustainability plan, using a mind map to help categorise your ideas. Consider how you could make changes in various areas of your life (school, home, sport, hobbies). List the actions that you would take, and identify what the outcome would be. For example, 'I could ride to soccer practice after school instead of being driven'. Outcome: reduced GHGE from the family car.
- 5. GS6 Propose simple actions that you and your classmates could do to improve the sustainability of your school. Explain how each of these actions can improve sustainability as well as improving the quality of life for your school's students.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

20.10 Thinking Big research project: Electric vehicle report

SCENARIO

Your local council has asked you to prepare a report on the viability of electric vehicle (EV) use in your suburb. You are to research and assess electric vehicle use and availability and compare it to petrol and diesel alternatives. Your detailed report outlining the viability of EVs in your suburb or town will be presented at the next council meeting.





Select your learnON format to access:

- the full project scenario
- details of the project task
- resources to guide your project work
- an assessment rubric.



Resources

projectsPLUS Thinking Big research project: Electric vehicle report (pro-0175)

20.11 Review



20.11.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

20.11.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31358)

Crossword (doc-31359)



Interactivity Managing and planning Australia's urban future crossword (int-7602)

KEY TERMS

affordability the quality of being affordable - priced so that people can buy an item without inconvenience bi-articulated bus an extension of an articulated bus, with three passenger sections instead of two congestion the state of being overfilled or overcrowded

development corridor area set aside for urban growth or development

ecological footprint the amount of productive land needed on average by each person in a selected area for food, water, transport, housing and waste management

family household two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step-relationship or fostering

incentive something that motivates or encourages a person to do something

infrastructure the facilities, services and installations needed for a society to function, such as transportation and communications systems, water and power lines

livelihood job or skill that supports a person's existence, so that they can have the necessities of life rebate a partial refund on something that has been bought or paid for

retrofitting adding a component or accessory to something that did not have it when it was originally built or manufactured

triple bottom line an accounting term for measuring the success of a city, country or organisation by the health of its environment, its society and its economy

urban relating to a city or town; the definition of an urban area varies from one country to another depending on population size and density

urban sprawl the spreading of urban areas into surrounding rural areas to accommodate an expanding population

viable capable of working successfully

20.4 SkillBuilder: Reading and describing basic choropleth maps

20.4.1 Tell me

What is a basic choropleth map?

A basic choropleth map is a shaded or coloured map that shows the density or concentration of a particular aspect of an area. The key/legend shows the value of each shading or colouring. The darkest colours show the highest concentration, and the lightest colours show the lowest concentration.

Why are basic choropleth maps useful?

A basic choropleth map is used to show particular aspects in a pictorial way. They allow the viewer to quickly identify where the values are highest (darkest) and lowest (lightest) and note any patterns over space. However, the information is based on averages and precise data is not given for a particular place or region within the map. Areas can contain within them wide variations from the average value mapped. An atlas will have a wide range of choropleth maps.

Basic choropleth maps are useful for showing:

- differences between the highest and lowest concentrations of aspects
- average rainfall across a country
- average population densities per region
- average wealth per country
- average number of cars per household in local council areas.

A good description of a basic choropleth map is achieved if:

- an overall pattern is described
- the highest concentration is identified
- the lowest concentration is identified
- any anomalies are stated
- quantification is used wherever possible.

20.4.2 Show me

How to read and describe a basic choropleth map

Model

The population density across Brazil varies considerably from the coast to the inland regions. The population density is greatest (over 100 people per square kilometre) along the Atlantic Ocean coast, especially in the largest cities. For a distance of about 700 kilometres from the coast, the population density is generally around 50 people per square kilometre. The large inland area of Brazil has a low population density of less than 10 people per square kilometre.

You will need:

• a basic choropleth map.

Procedure

Step 1

Read the title of the map to get an impression of what the map is going to show you. Check that the source of the information is a recognised authority. If the source is not stated, check the list of acknowledgements for the textbook to find out where the information came from.

Step 2

Read the key/legend next. Check the units of measurement that are used. Think about the divisions that are used for colours. The darker the colour, the more intense or higher the value; similarly, the paler the colour,

the less intense or lower the value. Cast your eye over the map, taking in the colours and trying to work out any general patterns that emerge.

Step 3

To interpret the colours, you need to comment on where the darkest colours or the more intense/higher values occur. Can you discuss the map by continent, or by region? For example, the highest density of people in Brazil occurs in the cities, such as São Paulo and Fortaleza, on the Atlantic Ocean coastline.

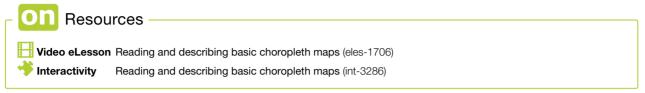
Step 4

To further interpret the colours, you need to comment on where the lightest colours or the least intense/lower values occur. Can you discuss the map by continent, or by region? For example, the lowest density of people in Brazil occurs in the large inland region, especially along and around the Amazon River and its tributaries.



Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

Are there any coloured areas that stand out from the rest as being unusual? That is, is there a colour among a mass of another colour that isn't expected? This is referred to as an anomaly, and needs to be discussed. Identify the place that is different from the surrounding area. For example, the population densities around Brasilia and Goiania are unusual as these appear to be isolated clusters of higher population, whereas most of the area contains fewer than 10 people per square kilometre.



20.4.3 Let me do it

Complete the following activity to practise this skill.

20.4 ACTIVITY

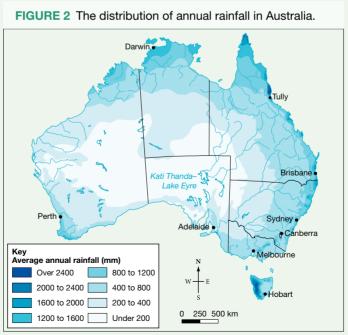
Read and interpret **FIGURE 2**, a basic choropleth map of Australia's annual rainfall distribution, by answering the following questions. Use the checklist to ensure you cover all aspects of the task.

- a. Which region(s) of Australia has a pattern indicating the highest rainfall? Provide statistics or numbers (quantification) in your answer, such as percentage (%), size or area (square kilometres, km²).
- b. Which region(s) of Australia has a pattern indicating the lowest rainfall? Include quantification in your answer.
- c. Are there any places that do not fit the expected pattern? State the locations of these anomalies.
- d. Which Australian state receives the most rainfall?
- e. Give two reasons that large parts of Australia have a low rainfall.

Checklist

I have:

- · described an overall pattern
- identified the highest concentration
- identified the lowest concentration
- · stated any anomalies
- · used quantification wherever possible.



Source: Map drawn by MAPgraphics Pty Ltd, Brisbane

20.7 SkillBuilder: Drawing a line graph using Excel

20.7.1 Tell me

What is a line graph?

A line graph is a clear method of displaying information so it can be easily understood. It is best used to show changes in data over time.

A line graph can be drawn by hand. In this SkillBuilder, you will develop your skills in constructing a line graph using Excel, which is a spreadsheet program. Using a digital means of drawing a line graph enables you to show multiple data sets clearly.

Why are line graphs useful?

A line graph is useful to help analyse data quickly and also to compare data. **FIGURE 1** shows five data sets and you can quickly see which two countries are the top producers of palm oil.

A good line graph has:

- time shown on the horizontal axis
- axes labelled
- a key, if necessary
- a clear title
- shown the source of the data.

20.7.2 Show me

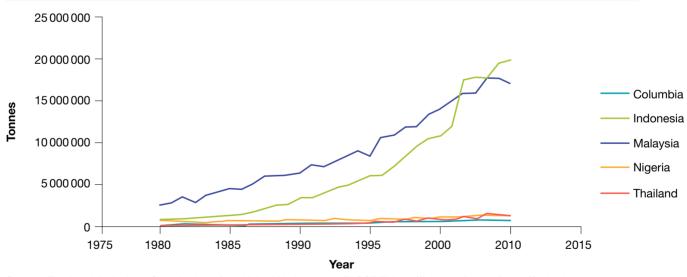
How to draw a line graph using Excel

You will need:

- Excel software
- a set of data.

Model

FIGURE 1 Production of palm oil for the top five producers (1980–2010)



Source: Food and Agriculture Organization of the United Nations 2012 FAOSTAT, http://faostat3.fao.org/home//index.html

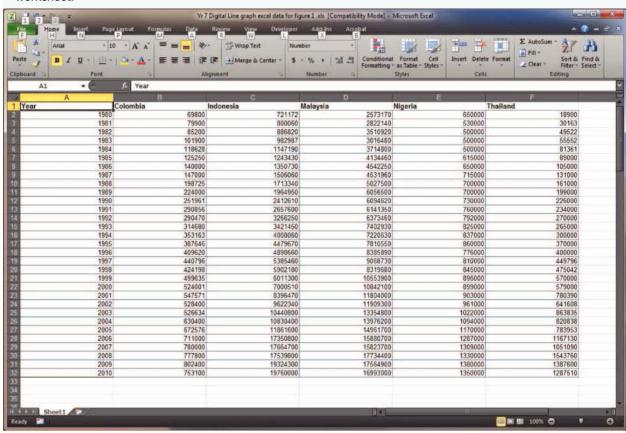
Procedure

Step 1

Enter the data into the worksheet. Put time (hours, days, months or years) in column A and the other variable in column B. Do not leave blank rows or columns.

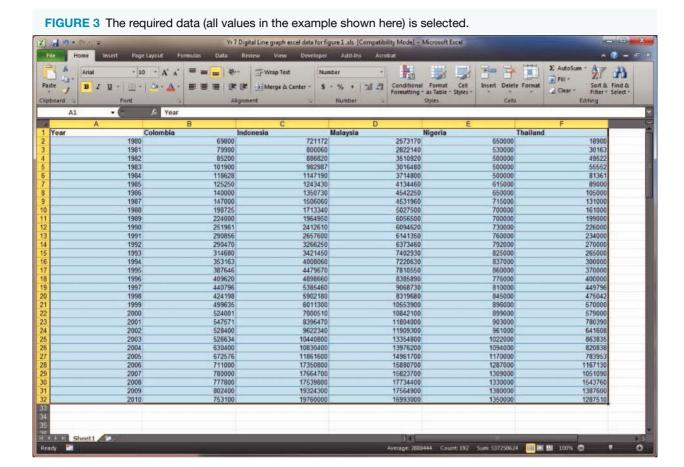
If there is more than one set of data, list the second data set in column C, and so on.

FIGURE 2 Data for the top five producers of palm oil (1980–2010) is entered in separate columns of an Excel worksheet.

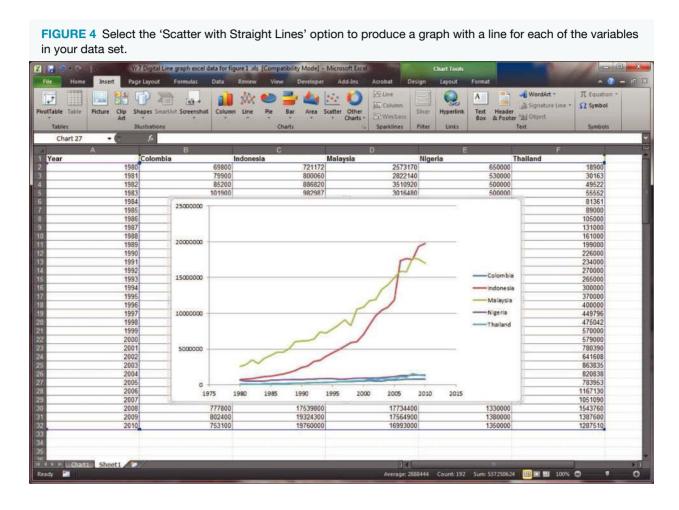


Drag select with the mouse button to highlight the cells containing the data to be included in your line graph.

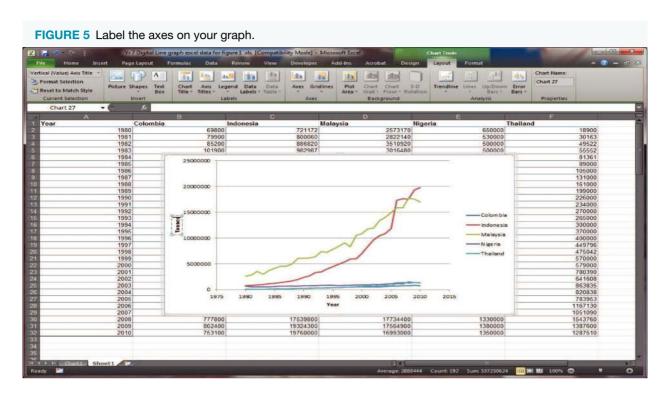
Note: Make sure you select any column and row details (headings) that you want included in the graph.



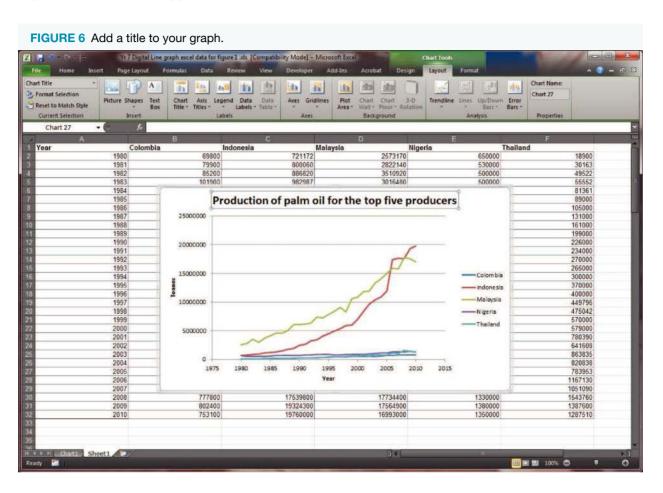
Click on the 'Insert' tab, then click on a category in the 'Charts' section to open a drop-down list of available graph types. Hover your mouse pointer over a graph type to bring up a description of the graph. Click on the 'Scattergraph' category and select the 'Scatter with Straight Lines' option. A line graph is created and placed on your worksheet. You can change the graph style using the tabs within the 'Chart Tools' section.



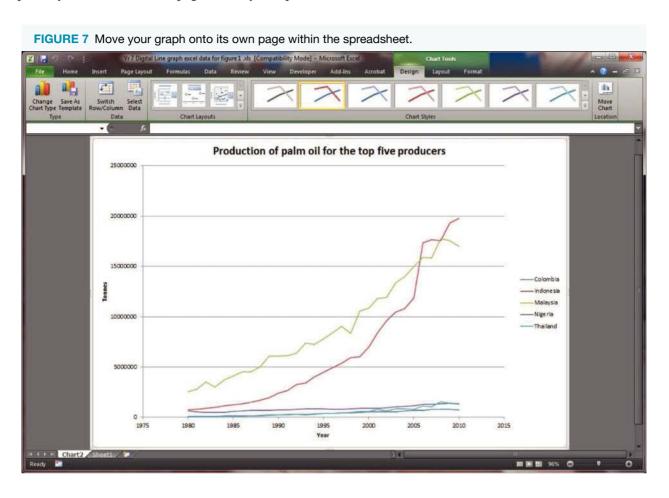
Label the axes. Click on the 'Layout' tab within the 'Chart Tools' section. Select 'Axis Titles' and enter the axis names for the horizontal and vertical axes.



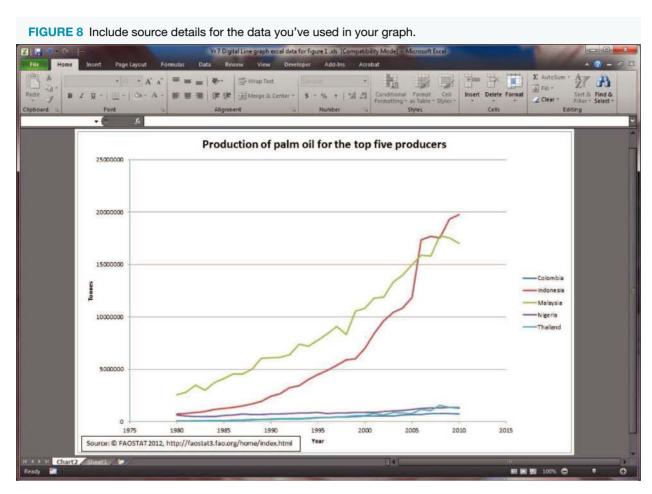
To add a title to the line graph, click on the 'Layout' tab within the 'Chart Tools' section. Select 'Chart Title' and choose the option, 'Above Chart', for placement of your title. Type an appropriate title for your graph in the text box that appears.



Select the 'Design' tab within the 'Chart Tools' section. Click on the 'Move Chart' button on the right. This places your chart on a new page within your spreadsheet.



Add the source of the data. One way to add this kind of extra information is to use a text box. Select the chart. Click on the 'Insert' tab and select 'Text Box'. Drag your cursor to draw a text box of an appropriate size, and enter the details of the source of your data. Format your text to a suitable size and style, and move the text box to an area where it does not interfere with the reading of the graph.





20.7.3 Let me do it

Complete the following activities to practise this skill.

20.7 ACTIVITIES

- 1. Use the data shown in **TABLE 1** to create a line graph using Excel.
- 2. Analyse your graph to answer the following questions.
 - (a) What unit of measurement is used in this graph?
 - (b) Describe the general trend of palm oil production from 1985 to 2010.
 - (c) Suggest two possible causes for the change in palm oil production in 1998.
 - (d) What has happened to palm oil production since 2008?

Checklist

I have:

- · shown time on the horizontal axis
- labelled the axes
- included a key, if necessary
- provided a clear title and source information.

TABLE 1 Palm oil production in Malaysia, 1980–2010

| TABLE 1 1 aim oii production in Maiaysia, 1900–2010 | | | | |
|---|-----------------------------|--|--|--|
| Year | Tonnes of palm oil produced | | | |
| 1985 | 4 134 460 | | | |
| 1986 | 4 542 250 | | | |
| 1987 | 4 531 960 | | | |
| 1988 | 5 027 500 | | | |
| 1989 | 6 056 500 | | | |
| 1990 | 6 094 620 | | | |
| 1991 | 6 141 350 | | | |
| 1992 | 6 373 460 | | | |
| 1993 | 7 402 930 | | | |
| 1994 | 7 220 630 | | | |
| 1995 | 7 810 550 | | | |
| 1996 | 8 385 890 | | | |
| 1997 | 9 068 730 | | | |
| 1998 | 8 319 680 | | | |
| 1999 | 10 553 900 | | | |
| 2000 | 10 842 100 | | | |
| 2001 | 11 804 000 | | | |
| 2002 | 11 909 300 | | | |
| 2003 | 13 354 800 | | | |
| 2004 | 13 976 200 | | | |
| 2005 | 14 961 700 | | | |
| 2006 | 15 880 700 | | | |
| 2007 | 15 823 700 | | | |
| 2008 | 17 734 400 | | | |
| 2009 | 17 564 900 | | | |
| 2010 | 16 993 000 | | | |
| | | | | |

20.10 Thinking Big research project: Electric vehicle report

Scenario

The use of electric vehicles (EV) around the world is increasing. As technology such as autonomous driving, fast charging and other advancements continue to improve, it is likely that in Australia the popularity of EVs will increase. In March 2019, the Australian Labor Party (ALP) made a target of 50% of all car sales in Australia being electric by 2030. Your local council has asked you to prepare a report on the viability of electric vehicle use in your suburb.



Task

You are to research and assess electric vehicle use and availability and compare it to petrol and diesel alternatives. Your detailed report outlining the viability of EVs in your suburb or town will be presented at the next council meeting.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in pairs or small groups will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the Research forum, where you will find starter topics loaded to guide your research. You
 can add further topics to the Research forum if you wish. When you have completed your research,
 you can print out the Research report in the Research forum to easily view all the information you
 have gathered.
- Identify the vehicle choices currently available to a new car purchaser in your area. Identify where the closest dealerships are for each of these vehicles and use Google Earth or Google Maps to determine their distance from your house or school.
- Identify the closest charging stations to your house or school. A weblink is provided in the Media centre.
- Discuss the potential positives of purchasing an electric vehicle compared to a conventional petrol- or diesel-powered alternative.
- Discuss the negatives of purchasing an electric vehicle compared to a conventional petrol- or diesel-powered alternative.
- Using your research, explain whether an electric vehicle is viable for someone living in your suburb or town. Include images to provide colour and interest.
- (Optional extension activity) Explain how the use of EVs can improve society and the environment in Australia.
- Submit your report to your teacher for assessment and feedback.





ProjectsPLUS Electric vehicle report (pro-0175)

20.11 Review

20.11.1 Key knowledge summary

20.2 Characteristics of sustainable cities

- Australia has a growing population and to allow our quality of life to match this growth, we will need to develop more sustainable urban areas.
- Infrastructure design should minimise consumption, waste, pollution and the production of greenhouse gases.
- Sustainable urban areas must strike the balance between the needs of the environment, society and the economy.
- Sustainable communities must have a small ecological footprint.
- These communities can reduce their footprint by growing their own food, reducing their waste output and promoting sustainable living amongst residents and visitors.

20.3 Sustainability of growing urban communities

- World population growth is likely to be centred on urban areas.
- By 2030, more than 3.9 billion people will live in urban areas and much of this growth is occurring in Less Economically Developed Countries (LEDC).
- As this growth occurs, there are serious risks around food security and social order.
- Australia is also urbanising at a rapid rate as people move away from rural and regional centres.
- This urban development is most evident on the east coast in Sydney, Melbourne and south-east Oueensland.

20.5 Managing our suburbs

- Urban sprawl is a significant challenge in Australia's major cities.
- Sprawl is threatening these cities' ability to provide food for their expanding populations.
- Urban expansion is also threatening the ecologically valuable green spaces that surround our cities.
- The areas around Greater Melbourne are able to produce approximately 50 per cent of Victoria's fresh food needs, and approximately 60 per cent of Sydney's vegetable requirements is grown close to the city.
- This reduces the carbon footprint of these cities due to lower transport costs.

20.6 Managing traffic

- Road transport produces approximately 18 per cent of greenhouse gas emissions in Australia.
- The movement of goods around our cities also increases traffic congestion.
- Public transport infrastructure in Australian cities and the use of a private vehicle is still the most common method of travelling to work in Sydney, Melbourne and Brisbane.
- In New York City, approximately 70 per cent of commuters travel to work using public transport; in Melbourne, this is close to 35 per cent.
- Traffic congestion issues can be improved by increasing public transport infrastructure expenditure, reducing costs and changing commuter behaviour.
- Improving local road networks does not always have a positive impact on traffic congestion.
- Public transport interconnections are vital as many commuters use more than one form of public transport on their way to work, school or university.
- Frequency and reliability of services is also critical in increasing the number of users on public transport.

20.8 Sustainable cities

- Masdar City in the United Arab Emirates (UAE) is an example of a sustainable city for transport.
- Masdar City has an integrated public transport network, clean energy sources such as solar, excellent
 community recycling and reusing programs, and revegetation has reduced the risk of desertification in
 this area dramatically.

- Auroville is a planned community in south-east India for 50 000 residents.
- Approximately 2500 people currently live in Auroville and they benefit from its advances in solar technology, safety, waste reduction and job opportunities.

20.9 Planning for a sustainable and liveable future

- Australian cities are going vertical and the construction of smaller apartments in Sydney, Melbourne and Brisbane is occurring at a rapid rate.
- Single person households are predicted to have the highest growth rate in the next 20 years.
- Medium-high density housing can offer the best benefits of sustainable living.
- Rooftop gardens can produce fresh food and provide green spaces for residents and roofs can be used for power generation with solar panels and wind turbines.
- Australians living in urban areas need to work together to improve their quality of life now and in the future.
- The idea of 'think global, act local' will help support community advancements in energy generation, waste reduction and food security.
- Individual residents also can have a positive impact on quality of living by thinking sustainably.
- Small actions made by many people can make a difference.

20.11.2 Reflection

Complete the following to reflect on your learning.

20.11 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Can Australia live in and grow its urban areas without making things worse for the future?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.





eWorkbook Reflection (doc-31358)

Crossword (doc-31359)



Interactivity Managing and planning Australia's urban future crossword (int-7602)

KEY TERMS

affordability the quality of being affordable — priced so that people can buy an item without inconvenience **bi-articulated bus** an extension of an articulated bus, with three passenger sections instead of two **congestion** the state of being overfilled or overcrowded

development corridor area set aside for urban growth or development

ecological footprint the amount of productive land needed on average by each person in a selected area for food, water, transport, housing and waste management

family household two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step-relationship or fostering

incentive something that motivates or encourages a person to do something

infrastructure the facilities, services and installations needed for a society to function, such as transportation and communications systems, water and power lines

livelihood job or skill that supports a person's existence, so that they can have the necessities of life **rebate** a partial refund on something that has been bought or paid for

retrofitting adding a component or accessory to something that did not have it when it was originally built or manufactured

triple bottom line an accounting term for measuring the success of a city, country or organisation by the health of its environment, its society and its economy

urban relating to a city or town; the definition of an urban area varies from one country to another depending on population size and density

urban sprawl the spreading of urban areas into surrounding rural areas to accommodate an expanding population

viable capable of working successfully

GEOGRAPHICAL INQUIRY: INVESTIGATING AN ASIAN MEGACITY

Scenario

The latest liveability report for Asian megacities has been released, and residents are concerned. Populations are increasing by between one and five per cent every year, putting city infrastructure under extreme pressure.

City authorities have commissioned your team to put together a website increasing awareness of the characteristics of the Asian megacity and informing residents of current and newly proposed sustainable development planning initiatives.

Task

Your team has been put in charge of creating a website designed to inform the residents of an Asian megacity about its characteristics. Each city will be different depending on its location, wealth or poverty, size and climate. Your investigations need to ensure that the audience can gain a comprehensive understanding of both population characteristics and city characteristics, and that any urban problems are presented. A key feature of your website will be to cover any urban solutions and innovations that are currently being implemented in your megacity.



Process

- You can complete this project individually or invite members of your class to form a group. Open the ProjectsPLUS application in the Resources tab for this topic. Open the **Project set-up** tab to enter the project due date and set up members in your project group if you wish to work collaboratively.
- Planning: You will need to research the characteristics of your chosen Asian megacity. Research
 topics that have been loaded in the Research Forum to provide a framework for your research include:
 location and city characteristics (main economy, tourism, culture); population characteristics (migrants
 and migration, languages, religion); and urban problems, solutions and innovations. Choose a number
 of these topics to include in your website and ensure you add your own. Divide the research tasks
 among the members of your group.

Collecting and recording data

Begin by discussing with your group what you might already know about your chosen Asian megacity. Then discuss the information you will be looking for and where you might find it. To discover extra information about life in your Asian megacity, find at least three sources other than the textbook. At least one of these should be an offline source such as a book or an encyclopaedia. Remember that you will need to choose specific keywords to enter into your search engine to find other data. You can view and comment on other group members' articles and rate the information they have entered in the **Research Forum**.



Analysing your information and data

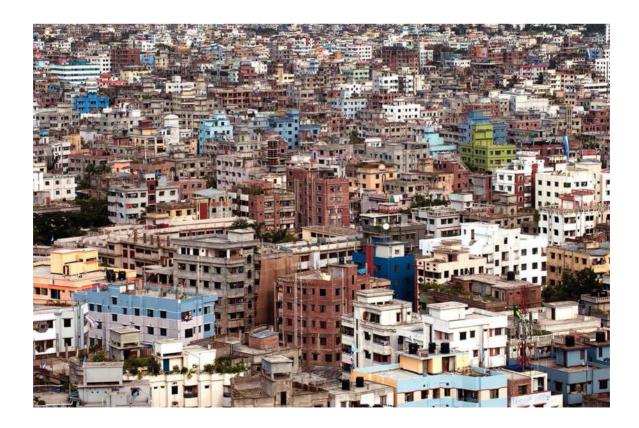
• You now need to decide what information to include in your website. Maps to show location, graphs, tables and lists to illustrate data, and images and photos with annotations (descriptive notes) should all

be included. Each of these should also have a written description. You should make sure that you have addressed each of the following points.

- 1. Describe the pattern of distribution on each of the maps or satellite images you have drawn or collected.
- 2. What are the main characteristics of your city?
- 3. How has your city changed over time? Is information available on how it is predicted to change in the future?
- 4. For what reasons are people attracted to move to this city?
- 5. What are the main problems in this city? Are there any solutions being introduced to try to overcome these problems?
- Download the website model and website-planning template from the **Media Centre** to help you build your website.
- Use the website-planning template to create design specifications for your site. You should have a home page and at least three link pages per topic. You might want to insert features such as 'Amazing facts' and 'Did you know?' into your interactive website. Remember the three-click rule in web design you should be able to get anywhere in a website (including back to the homepage) with a maximum of three clicks.

Communicating your findings

Use website-building software to build your website. Remember that less is more with website design. Your mission is to inform people about your Asian megacity in an informative and engaging way. You want people to take the time to read your entire website. You can print your Research Report from the **Research Forum** to easily view all the information you have gathered. When you are happy with your work and are sure you have included all elements, present your website to your teacher.



CIVICS AND CITIZENSHIP



21 Rights, freedoms, democracy and the law

21.1 Overview

How should Australians behave? Who made those rules and why should we follow them?

21.1.1 Introduction

In Australia we are said to be governed by the 'rule of law'. This means that no person is above the law, no matter how rich or important they are. Our rights and freedoms are protected by some provisions in our Constitution, as well as by laws that govern our behaviour. We expect our elected representatives in Parliament to reflect our values and to represent us honestly and we have the right to present our views to those representatives, through activities such as lobbying, protest rallies and marches. We also expect that the law is designed to protect us. Our laws include the criminal law, through which the state prosecutes those who might try to harm us, and the civil law, which provides a means of resolving disputes between members of society.





21.2 Protecting our rights and freedoms

21.2.1 What laws protect us?

Under the rule of law, the protection of our **rights** and freedoms comes from a number of sources. The Australian **Constitution** includes provisions that protect some of our basic rights. In addition, state and federal governments have passed **laws** aimed at protecting many of our rights as citizens.

21.2.2 Rights contained in the Constitution

The Australian Constitution contains a number of sections that ensure that Australia must be ruled as a **democracy**. It also includes five specific rights. Because these five rights are written in the Constitution, they cannot be changed or taken away without a **referendum**.

FIGURE 1 Our rights and freedoms unite us as Australians.



Protecting democracy

The Constitution ensures that Australia must be governed as a democracy in the following ways:

- Representatives to both houses of parliament are elected by a direct vote of the people.
- Each person has only one vote for each house of parliament, so all voters are equal.
- Parliament is limited to a three-year term, so all the members have to face the voters on a regular basis to be judged on their performance.
- All laws passed by the parliament have to be agreed to by a majority of members, so they represent the wishes of the majority of voters.
- There is a division of powers between the federal and state governments, so power is spread between these two levels of government.
- The courts are independent of government, so they can enforce the law fairly and equally to all.



Five express rights

Our Constitution contains a small number of rights. Because they are clearly expressed in the wording of the Constitution, they are known as 'express rights'. The five express rights are as follows:

1. Freedom of religion. Under section 116 of the Constitution, the government cannot force anyone to follow any one religion, nor can it prevent anyone from freely practising his or her own religion.



2. Trial by jury. Under section 80 of the Constitution, anyone accused of a serious crime under Commonwealth law must be tried in court by a jury. This right only applies to Commonwealth law, so it is a very limited right. Most criminal law is decided by state governments, and criminal trials take place in state courts. Trial by jury in these state courts is not protected by the Constitution, but is covered by state laws.



FIGURE 4 Trial by jury is guaranteed by our Constitution for anyone charged with a serious offence under Commonwealth law.

3. Compensation for acquired property. Sometimes the Commonwealth Government may need to take over property from individuals or organisations. They may do this, for example, when they are building new freeways or railways. Under section 51(xxxi) of the Constitution, if the government does this, it must be on 'just terms'. This means that the person who owns the property must get a fair price for that property.

FIGURE 5 If the government needs to take over property, the owner is entitled to a fair price under our Constitution.



- 4. *Residential non-discrimination*. Under section 117 of the Constitution, no state government can treat someone differently, or discriminate against a person, just because he or she is a resident of a different state.
- 5. *Interstate trade and commerce*. Under section 92 of the Constitution, all trade between the states must be completely free. This means that no government, or any other person or business, can do anything that interferes with the free operation of commerce across state borders.

FIGURE 6 Under our Constitution, all trade across state borders must be free from interference.



Video eLesson The Australian Constitution (eles-2076)

21.2.3 Rights protected by legislation

Federal, state and territory parliaments have all passed legislation designed to protect the rights and freedoms of all members of the community. For example, they have all passed laws designed to make it illegal to discriminate against any person based on certain personal characteristics. This means that you cannot treat someone differently or unfairly because they happen to be different from yourself or from the majority of society. Under these laws, it is illegal to discriminate against anyone on the basis of:

- gender or gender identity
- sexual orientation
- pregnancy
- breastfeeding
- marital status
- status as a carer
- age
- race

- skin colour
- nationality
- ethnicity
- parental status (including childlessness)
- physical features (Victoria only)
- religious belief or activity

- physical impairment
- mental illness or disability
- a personal association with anyone having any of the above characteristics.

This means that an employer cannot refuse to employ someone because of any of the above characteristics. It also means that a business owner cannot use any of the above as a reason to refuse to do business with a person. For example, the owner of a restaurant cannot refuse entry to a person based on any of the above characteristics. These laws are designed to ensure that all members of Australian society are treated fairly and equally.

FIGURE 7 Employers interviewing job applicants must treat them all equally.





21.2 ACTIVITY

Use internet resources to identify three laws, passed by either a state parliament or the Commonwealth Parliament, designed to make it illegal to discriminate against any person based on his or her personal characteristics.

Examining, analysing, interpreting

21.2 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.2 Exercise 1: Check your understanding

- 1. CS1 What is the meaning of the term 'democracy'?
- 2. CS1 In what way is freedom of religion protected in Australia?
- 3. CS1 In what circumstances does the Constitution guarantee a jury trial to an accused person?
- 4. CS2 Choose two democratic rights and explain what they are.
- 5. CS2 Identify and explain five ways in which the Australian Constitution protects our rights.
- 6. **CS1** What does the Constitution say about trade between the states?

21.2 Exercise 2: Apply your understanding

- 1. CS1 What safeguards does the Constitution provide for anyone who has his or her property taken by the Commonwealth Government?
- 2. **CS5** Some members of the community have called for a ban on the burqa, the full body covering worn by some Muslim women. Why would such a ban probably be unlawful in Australia?
- 3. CS5 A woman qualified as a doctor in Melbourne and moved to Queensland to live. The Queensland medical authorities attempted to prevent her from practising as a doctor, because she did not gain her qualifications there. Explain why such action would be unlawful.
- 4. CS3 When we refer to free trade between the states, what does this mean in terms of the powers of the federal and state parliaments?
- 5. CS3 Examine each of the following cases and determine whether or not there has been a case of discrimination, and explain your reasons:
 - (a) A woman was unsuccessful in gaining a job because she was pregnant.
 - (b) A real estate agent refused to rent an apartment to an Indigenous family.
 - (c) A man failed to get a job as a bus driver because he had no driver's license.
 - (d) A taxi driver with a sign on his cab saying 'No dogs' refused to pick up a blind person with a guide dog.
 - (e) A carpenter advertises for an apprentice to work with him, and specifies that only males should apply.
 - (f) A menswear store advertises for a model for its advertising catalogue, and specifies that only males should apply.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

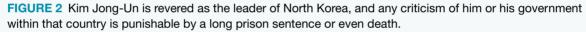
21.3 Freedom of speech and other democratic freedoms

21.3.1 The importance of freedom of speech

One of the key freedoms enjoyed by Australians is freedom of speech. In most cases, we have the freedom to express our opinions publicly. However, there are some legal limits on freedom of speech. This is because our right of free speech must be balanced against the rights of other people who may be harmed by what we say.

For us to be able to exercise our democratic rights in a free society, we must have the right to express our opinions without risk of punishment. In many countries around the world, and throughout history, this right has not always existed. In some medieval societies, anyone who publicly criticised the king or the church could be executed. Even today, there are many countries where freedom of speech is very limited or non-existent, and people are punished for publicly expressing their opinions:

- The Middle-Eastern country of Iran is ruled under Islamic religious law. This means that all citizens are expected to observe religious practices as prescribed by the government. Failure to do so can be punished by the authorities, with the possibility of imprisonment, and even execution, for failing to adhere to strict religious laws.
- In North Korea, it is illegal to say or do anything that criticises the government or is seen to insult the country's leader, Kim Jong-un. It was recently reported that a man was thrown into prison for wiping up a spilt drink with a sheet of newspaper. Someone noticed that the newspaper featured a photo of Kim Jong-un and reported the man, who was imprisoned for insulting the leader.





21.3.2 Limits on our freedom of speech

Our right to freedom of speech in Australia is said to be limited by the 'bounds of law'. The word 'bounds' is an old-fashioned form of the word 'boundaries'. We understand boundaries to be limits on what we may do in any set of circumstances. The limits or boundaries on our freedom of speech are imposed by laws that prohibit (among other things) hate speech, bullying, defamation and obscenity.

Hate speech

Australia's laws against racial discrimination place a limit on our right of free speech. It is illegal in Australia to publicly use language that is likely to offend, insult, humiliate or intimidate anyone because of that person's race, colour or national or ethnic origin. Very few people have actually been brought to court under this law, but it sends a strong message to the community about using racially abusive language. In February 2019, AFL footballer Eddie Betts was subjected to anonymous racial abuse on social media. His club, the Adelaide Crows, vowed to track down the person who posted the abuse and to 'name and shame' them. Unfortunately, social media has become a favourite avenue for many people to attempt to abuse others anonymously.

FIGURE 3 AFL footballer Eddie Betts was subjected to racist abuse on social media in early 2019.



DISCUSS

After watching the Je suis Charlie video eLesson in the Resources tab, discuss as a class the meaning of the term 'Je suis Charlie': the phrase used by people showing support for free speech after the terrorist attack on the satirical magazine Charlie Hebdo in Paris in early 2015. Discuss whether you think there should be limits on free speech. What are the pros and cons of placing limits on free speech? [Ethical Capability]



Video eLesson Je suis Charlie (eles-2430)

Bullying and harassment

In recent years, state governments have acted to protect people from bullying, particularly in the workplace. In February 2010, four men and the company they worked for were fined a total of \$335 000 for bullying a young waitress who later killed herself. The waitress, Brodie Panlock, committed suicide after months of bullying at the café where she worked. Much of the bullying involved name-calling and using offensive language towards Ms Panlock, who was 19 years old. Following this case, the Victorian state government brought in a new law against workplace bullying, allowing for prison sentences of up to 10 years for anyone found guilty of this offence. In recent years, sexual harassment in the workplace has become a

significant issue, with a 2018 survey by the Australian Human Rights Commission reporting that in the previous 12 months, 23 per cent of women and 16 per cent of men had experienced sexual harassment at work.

Defamation

Defamation occurs when one person writes or says something likely to damage the reputation of another person. Any communicated material that harms the reputation of another person is said to be 'defamatory'. If you believe someone has defamed you, you can take legal action (that is, you can sue that person). For your legal action to be successful, you have to prove the following:

- The defamatory material was published or communicated to someone other than yourself. It is not defamatory if the person communicates it only to you, and no-one else sees or hears it. It would be defamatory, though, if someone published it on his or her Facebook page, or anywhere likely to be read by other people.
- It has to be clear that it is you as an individual the person is referring to. If someone said that members of your sports team were cheats, you could not sue them unless they clearly identified you in person.
- There has to be some clear damage to your reputation. If the material is likely to prevent you getting a particular job, or in some other way can be seen to disadvantage you, you may have a good legal case.
- The material must be untrue. If someone communicates material about you that can be proven to be true, then that person has a strong defence if you try to take legal action for defamation. In this case, a court may rule that no defamation has occurred.

The law relating to defamation puts a limit on free speech but it also protects innocent people from having their reputations ruined publicly. It demonstrates that any right to freedom of speech imposes an obligation on all of us to use that right responsibly.

FIGURE 5 Spreading rumours likely to damage another person's reputation could be defamatory.

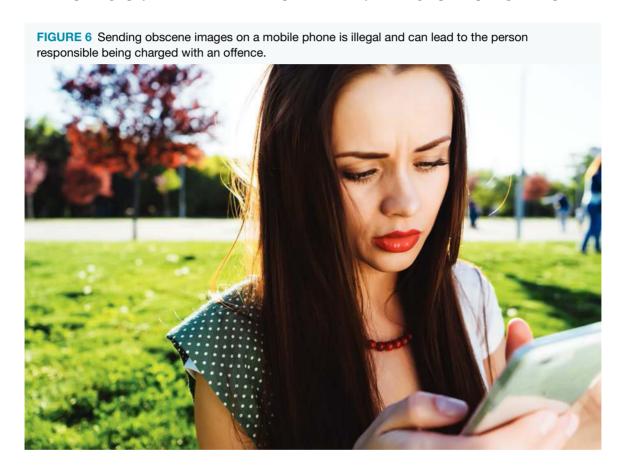
FIGURE 4 The suicide of 19-year-old Brodie Panlock led to a change in the law in Victoria regarding workplace bullying.



Obscenity

Freedom of speech is also limited by the need for all written and spoken material to conform to reasonable community standards. Laws against obscenity are designed to protect these standards. Obscenity laws vary by state and territory, but generally cover cases such as the following:

- Offensive language. If you are caught swearing loudly in public, you can be charged with using offensive language in a public place.
- Sexually explicit or violent material. A number of laws govern the publication or display of such material. In some cases, film and television classification authorities may place restrictions on violent or sexually explicit material by giving it an 'R 18+' classification. Some other material (such as child pornography) is banned completely, and people can be prosecuted and imprisoned for possessing it. Recently there has been a lot of publicity relating to the practice of 'sexting' by teenagers. This is seen as child pornography and has serious consequences for anyone caught participating in the practice.



Despite these limits, freedom of speech plays a significant role in Australia's democracy. Our right of free speech allows the open exchange of political ideas and policies. This means that when we vote to elect representatives to parliament, we should be fully informed about the promises and policies of all candidates. No-one can restrict the rights of political parties and their candidates from getting their message out to voters.

21.3.3 The benefits of living in a democracy

In addition to freedom of speech, there are a number of other freedoms we associate with living in a democracy. These include freedom of association, freedom of assembly, freedom of movement and freedom of conscience. All of these freedoms have been included in international **treaties** that have been agreed to by Australian governments. Any attempt to limit these would be seen as an infringement (a violation or restriction) of our democratic rights.

Freedom of association

It is generally accepted in Australia that we have the right to have anyone we wish as a friend. It is also accepted that we can socialise with any individual or group of people we choose. This is freedom of association at its simplest level, but our right to freedom of association goes further than this. Fundamental to freedom of association is the right to join any group, club or organisation we wish. This means that we have the right to join any political party, religious group, sporting club or **trade union**. While we take this right for granted, it has not always been protected. At different times, in different countries, it has in fact been severely limited.

- Much of our legal and constitutional system comes from Britain. Trade unions were banned in Britain in 1799 under laws known as the Combination Acts. Although these laws were repealed in 1825, there were still strict limitations on what unions were allowed to do. In 1834, a group of six men from the village of Tolpuddle in southern England formed an association to campaign for better wages for farm workers. They were prosecuted, found guilty and sentenced to seven years' **transportation** to the colony of New South Wales. They became known as the Tolpuddle Martyrs, and were regarded by many as heroes for standing up for the right to freedom of association. Following public protests, they were released in 1836 and allowed to return to England.
- In 1951, the Menzies government in Australia tried to ban the Communist Party by holding a referendum to change the Australian Constitution. Because the Communist Party believed in the overthrow of existing society, many people viewed it as a dangerous organisation. The Communist Party had only a relatively small number of supporters and members, and most Australians were strongly opposed to communism. Nevertheless, the referendum failed and the Communist Party remained a legal organisation. It appears that most Australians were not prepared to sacrifice the right to freedom of association not even to ban an organisation they did not support.

FIGURE 7 Between 50 000 and 60 000 people gathered outside London to protest at the transportation of the Tolpuddle Martyrs in 1834.

DEMONSTRATION AT COPENHAGEN FIELDS, LONDON

Freedom of association is an important part of our democracy. Having the right to elect representatives to make laws on our behalf works most fairly when we have a number of alternative candidates from which to choose. Freedom of association allows anyone to form a political party (or any other organisation) to campaign for new laws or changes to existing laws. Anyone can join such groups and, if they gain enough support, their ideas and proposals can eventually become law. Australian democracy is stronger because we have many different groups and ideas to choose from when we vote.

Freedom of assembly

Related to freedom of association is freedom of assembly. This gives individuals and groups the right to assemble (or come together) for a meeting, or the right to assemble in public to protest against actions by a government or other organisation. Freedom of assembly can be limited, depending on the type of assembly and its location. In Australia, there is no specific law that protects freedom of assembly. It is included in international treaties that have been agreed to by Australian governments, and is therefore regarded as one of our natural democratic rights. State governments are usually responsible for dealing with public order, and so will make laws that deal with public protests. In this way, freedom of assembly is subject to the bounds of law.

While there are generally no restrictions on any group holding a meeting in a hall or similar space, assembling in a public space may limit the access of others to that space. For example, a protest march along a busy main road may cause severe traffic problems. It is for these reasons that some state governments have placed restrictions on freedom of assembly. Most people would accept that, for any assembly or protest to be legal, it should be peaceful and not threaten bystanders. In most cases, the organisers of public protests in Australia make sure their activities are well publicised in advance, so they can attract the largest number of supporters to their actions. This means that the authorities can plan to ensure minimum disruption to people going about their normal business.



FIGURE 8 Freedom of assembly includes the right to public protest.

Freedom of assembly, including the right to public protest, provides many groups with a means of having their views heard by the broader public. If these views then gain support among large numbers of people, they can influence a government to change laws or make new laws to deal with the issue under protest. (See subtopic 21.4 for further discussion of this issue.)

Freedom of movement

As with other rights, freedom of movement is limited by the bounds of law. We have the freedom to move freely within most public spaces in the community, but obviously we do not have the right to trespass on someone else's private property. The right to freedom of movement allows us to move freely between different towns and cities, and to move between the states of Australia without restriction — a right reinforced by the constitutional right of free trade and commerce between the states. Freedom of movement also gives us the right to leave Australia for work or a holiday, and to return at any time.

Freedom of movement is sometimes restricted as a means of protecting the public. Before trial, a person accused of a crime may be prevented from leaving the state or country. After floods or bushfires, people may be lawfully prevented from entering an area declared a natural disaster area. When parents are in dispute over the custody of children during a divorce, courts may restrict the movement of those children to ensure they have regular access to both parents.

FIGURE 9 Freedom of movement includes the right of Australians to leave the country and return at any time.



Any general attempt to restrict people's right of movement could limit their rights to participate in Australian democracy. If we wish to attend a meeting or public lecture to find out more about a political issue, we should be free to do so. Similarly, we must be able to get to a polling place to vote in an election. Freedom of movement therefore enables us to exercise our democratic rights.

Freedom of conscience

Freedom of conscience means that we have the right to hold opinions and to express those opinions freely. It applies to religious views, political views, scientific ideas or any other beliefs or ideas we may have. It means we can hold our own beliefs and not be forced to accept the beliefs of others.



As we know from the discussion in subtopic 21.2, freedom of religion is protected by the Australian Constitution, but the broader concept of freedom of conscience is included in international treaties agreed to by Australian governments. Freedom of conscience has not always been guaranteed, and is still not guaranteed in some countries:

- In some Muslim countries (including Saudi Arabia and Iran), anyone who converts from Islam to another religion (such as Christianity) is guilty of a crime. The person will usually be imprisoned and may be subject to the death penalty.
- In Indonesia in August 2018, a Buddhist woman complained about the volume of the Islamic call to prayer, broadcast over loudspeakers near her home. She was charged and convicted of blasphemy, with the court finding that her complaint was 'an insult to Islam' and sentencing her to 18 months in prison. This is in spite of Indonesia being a country in which six different religions, including Buddhism, are officially recognised as being equal before the law.

FIGURE 11 Galileo Galilei was imprisoned by the Catholic Church because he published scientific findings that were different from accepted beliefs.





Video eLesson Dangerous ideas (eles-2427)

In Australia, expressing one's own conscientious beliefs is subject to the same bounds of law that apply to freedom of speech generally. Freedom of conscience is important in a democracy because we need to have choices when we vote. The free exchange of political ideas can help us to decide who we want to represent us in parliament and make laws on our behalf. We will usually vote for people whose beliefs and values are as close as possible to our own because they are more likely to make laws we agree with.

DISCUSS

'There are a number of freedoms we associate with living in a democracy such as Australia.' What does the concept of freedom mean to you? Discuss how our freedoms are protected in Australia and if there are any limitations on these freedoms.

[Ethical Capability]

21.3 ACTIVITY

A number of states are considering changing the laws dealing with sexting. Using internet resources, find out the following:

- a. Which states have changed or are considering changes?
- b. What changes are being considered?

Examining, analysing, interpreting

21.3 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.3 Exercise 1: Check your understanding

- 1. CS1 What is meant by the term 'bounds of law'?
- 2. CS1 Outline the purpose of laws against obscenity.
- 3. CS1 In what ways do laws against racial discrimination put limits on our right of free speech?
- 4. CS1 What are the four elements you would have to prove to be able to successfully take legal action against someone for defamation?
- 5. CS2 Explain why freedom of speech is important in supporting democracy in Australia.
- 6. CS1 Who were the Tolpuddle Martyrs?
- 7. CS1 Why did the Menzies government try to ban the Communist Party in 1951?
- 8. **CS1** List two examples of freedom of conscience.

21.3 Exercise 2: Apply your understanding

- 1. CS3 What are the likely consequences of each of the following actions?
 - (a) A group of employees in a factory engages in name-calling and using insulting language towards a workmate, who becomes afraid to go to work as a result.
 - (b) A young man lies about his ex-girlfriend on his Facebook page, saying that she lost her job because she stole money from her employer. When the girlfriend applies for another job, she is unsuccessful because the prospective employer believes she is a thief.
 - (c) A passenger on a bus begins harassing a family of African migrants, using racist language and telling them to 'go back where they came from'.
 - (d) A 14-year-old girl sends a topless photograph of herself to her boyfriend's phone. The boy keeps the photograph on his phone and, when they break up, he resends it to all his friends with nasty comments about the girl.
- 2. CS5 Why is each of the following important in maintaining Australia as a democratic society?
 - (a) Freedom of association
 - (b) Freedom of assembly
 - (c) Freedom of movement
 - (d) Freedom of conscience
- 3. CS5 In October 2013, the Queensland government brought in new laws directed at members of motorcycle clubs, particularly those labelled as members of 'criminal motorcycle gangs'. The laws prohibit any gathering of those members in groups of three or more. They also ban such members from going to certain declared locations, promoting their organisation or recruiting new members.
 - (a) Identify two rights or freedoms that may have been breached by these laws.
 - (b) The Queensland government has claimed that the laws are designed to protect innocent people from violent bikie gangs. Explain whether or not you agree with this argument, and give reasons for your response.
 - (c) The government that brought in these laws was democratically elected by a huge majority of the voters. Do you believe this gives the government the right to make any laws it wishes, or should there be some limits on the power of governments to restrict basic rights and freedoms? Give reasons for your answer.
- 4. CS2 Outline one way in which freedom of assembly might be restricted by the bounds of law.
- 5. CS2 Describe two circumstances when it might be reasonable to restrict a person's freedom of movement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.4 Dissent in a democracy and taking direct action 21.4.1 The right to disagree

Not everyone will agree with actions taken by our governments. In a democracy — where we all have freedom of conscience, freedom of speech, freedom of association and freedom of assembly — we have the right to express that disagreement. When a person (or group of people) expresses that disagreement publicly, it is known as dissent. In a democratic country like Australia, the right to dissent is one of our basic rights.

21.4.2 Expressing dissent

Expressing dissent is one of the ways in which we can participate in a democratic society. While we are required to obey the law, we are not required to blindly follow whatever a government tells us. Every individual is free to undertake a range of activities in an attempt to have a particular law changed — for example, to organise and participate in a demonstration or public rally, or to sign a petition supporting a change in the law. (Details of such activities are discussed later in this subtopic.) Participation in a rally or protest march allows many people who disagree with particular government policies to express their point of view. Such protests are also aimed at changing those policies, and convincing other undecided citizens to support their cause.

21.4.3 CASE STUDY: Protests against offshore detention

On October 27, 2018, demonstrators in Sydney and Melbourne rallied to protest against the federal government policy of keeping asylum seekers on Manus Island and Nauru. Since 2013, asylum seekers who attempt to come to Australia by boat have been placed in detention on these two islands. The aim of the policy has been to discourage people from risking their lives by paying people-smugglers to transport them to Australia in unsafe boats. Prior to 2013, a number of asylum seekers had died at sea when boats they were travelling in sank.

Those attending the demonstrations believed that it was cruel to keep the

FIGURE 1 Sydney protesters rally to support refugees being detained by the Australian government.



asylum seekers in detention for such a long time. They pointed to the deteriorating mental health of some of the refugees who had been detained for over five years. Demonstrators in Melbourne heard a phone call from one of the refugees on Manus Island who described his situation as one of suffering and hopelessness. The rally in Sydney was also addressed by singer Jimmy Barnes, who described the government policy of offshore detention as 'criminal' and 'disgusting'.

21.4.4 Taking direct action

Most of the time, people are prepared to participate in Australia's democracy by exercising their right to vote at state, federal and local government elections. Circumstances arise at other times when many feel that an issue requires immediate action, or they believe that the government is making the wrong decisions. In these circumstances, people will often take direct action to influence government actions. Direct action usually consists of some form of public demonstration, and can sometimes involve citizens deliberately breaking the law to bring their views to public attention.

Demonstrations

A demonstration is a public protest in which people take to the streets to protest against the actions of government, or to raise awareness of an issue of concern. The success of a demonstration depends on how many people participate. It also depends on how well they can capture public support. Most demonstrations involve marching through the city streets or protesting outside a significant public location.

FIGURE 2 A demonstration is a way different groups can make their views known to government and the general public.



Over the years, many causes have resulted in different types of demonstration. Not all involved street marches.

• In the late 1960s, demonstrations against Australia's involvement in the Vietnam War were relatively small, often with only a few hundred protesters. They were largely dismissed by government as the views of a small minority. As more people became aware of the issues, the size of the demonstrations grew, culminating in protest marches in all major cities and towns across Australia in May 1970. More than 200 000 demonstrators marched in total, with 100 000 of these in Melbourne. Within 18 months,

FIGURE 3 In May 1970, marchers outside the Melbourne Town Hall protested against Australia's involvement in the Vietnam War.



Australian troops had been withdrawn from Vietnam. Go to the **Melbourne moratorium march** weblink in the Resources tab for more information on the protests against the Vietnam War.

- On October 23, 2018, over 150 000 unionists and their supporters rallied in Melbourne in support of the ACTU 'Change the Rules' campaign. The campaign is aimed at improving pay and conditions for workers, specifically:
 - a fair minimum wage
 - the protection of penalty rates
 - pay rises that reflect the cost of living
 - equal pay for equal work
 - better job security.

Several streets in the centre of the city were closed to traffic, and trams were diverted from Swanston St as protesters marched from the Trades Hall in Lygon St, Carlton to Flinders St Station. The ACTU vowed to continue to organise rallies and to make workers' pay and conditions an issue in the 2019 federal election.





Resources



Weblink Melbourne moratorium march

Defiance of the law

Another very public way of campaigning on an issue is to deliberately break the law. This is sometimes done when a group of people believe that a particular law is bad or unfair. They argue that if enough people deliberately break the law, it will convince the government to change or **repeal** that law. On other occasions, protesters deliberately break the law because they realise that their arrest and trial will help publicise an issue.

• In the late 1960s, one of the main grievances arising from Australia's participation in the Vietnam War was the use of **conscription** to increase the

FIGURE 5 Many of those conscripted to fight in the Vietnam War burned their conscription documents and refused to report to the army.



number of soldiers that could be sent to fight in that war. Many of those conscripted chose to defy the law by burning their conscription documents and refusing to join the army. The court cases and imprisonment of many of these young men helped to turn public opinion against the war.

• In 1982, as protests grew against the proposed Franklin Dam, the Tasmanian government passed laws making much of the area around the construction site private property. It also began to prosecute anyone caught trespassing there. Protesters attempted to set up a blockade to prevent earth-moving equipment from being used on the dam site. Over 1400 people were arrested for trespassing, and more than 500 were imprisoned. In 1983, the newly elected federal government passed laws prohibiting construction of the dam. Go to the **Franklin River blockade** weblinks in the Resources tab to find out more information on this issue.

FIGURE 6 Protesters set up a blockade in 1982 to prevent earth-moving equipment being brought onto the Franklin River dam site in Tasmania.





Weblinks Franklin River blockade 1
Franklin River blockade 2

21.4.5 The effectiveness of direct action

Demonstrations can be effective if they attract media attention. This highlights the issue and can influence members of parliament, particularly if the cause gains public support. When Victorian nurses staged a protest in Melbourne in 2012, many patients and members of the public joined the protest to support the nurses in their bid for better working conditions. If demonstrations become violent, however, they may be less effective because they are less likely to win community support.

Disobeying the law can be effective if it raises media awareness of the issue. It can be particularly useful if it can show that the law is out of date or unfair, and needs to be changed. Breaking the law to highlight a cause, however, can lead to prosecution and may result only in turning public opinion against that cause.

21.4 ACTIVITIES

- 1. Using internet resources, identify who has been involved in expressing dissent towards the following government actions and the methods they have used to present their views.
 - (a) The development of the Adani mine in Queensland
 - (b) The detention of asylum seekers on Nauru and Manus Island
 - (c) Laws preventing same-sex marriage

Examining, analysing, interpreting

2. Why were so many people in Australia opposed to this country's involvement in the Vietnam War in the 1960s and early 1970s? Use internet resources to research the main reasons for this opposition.

Examining, analysing, interpreting

21.4 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.4 Exercise 1: Check your understanding

- 1. CS1 Why is it reasonable for groups and individuals to express dissent towards government policies and actions?
- CS2 Give two examples of limits or bounds of law, and explain how they could reasonably be placed on dissent in Australian society.
- 3. CS1 What do we mean by 'direct action' as a form of political activity?
- 4. CS1 Why did some young men opposed to conscription break the law? How did they do this?
- 5. CS1 How did the Franklin River protesters defy the law during that campaign?

21.4 Exercise 2: Apply your understanding

- 1. **CS6** Is dissent directed towards government policies or actions a positive or negative influence on Australian democracy? Give reasons for your answer.
- 2. **CS5** In both the anti-conscription campaign during the Vietnam War and the Franklin blockade, people broke the law to achieve their aims. Their campaigns were ultimately successful. Is it appropriate for people to break the law to achieve the changes they want? Give reasons for your answer.
- 3. CS5 Can you think of occasions when it would definitely not be appropriate to break the law?
- **4. CS4** When a group of vegans protesting against cruelty to animals blocked the Flinders St Swanston St intersection in 2019, they were criticised for interfering with other people's freedom of movement. The protesters claim that without causing disruption such as this, their protest would not have been as effective. Do you think protest has to be disruptive to be effective? Give reasons for your opinion.
- 5. CS6 School students in many parts of the world have taken time off school to protest against government inaction on climate change. Should such action take place in school hours or at weekends or after school? Justify your answer.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.5 SkillBuilder: Questioning and research

What is questioning and research?

Using questioning and research involves identifying and understanding the task you are undertaking and developing a series of specific questions to help quide your research.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it).





21.6 Taking part in the democratic process

21.6.1 How to have your say

What makes Australia a democracy? Most people would probably say that the right to vote for our government is the answer to that question. While voting in elections is important, it is certainly not the only way of participating in the democratic process. There are many other ways in which we can have our voices heard and influence the future of our country.

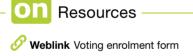
One of our key rights as Australian citizens is the right to actively take part in the democratic processes. We can do this in a number of ways. First, there is our right to vote — a right that can be exercised by all Australian citizens over the age of 18. Then there is our right to freedom of speech, which allows us to express our opinions through a variety of methods. We can write letters to the newspapers, we can phone in to talkback radio, and we can publicise our views on social media using Facebook or Twitter, or even create our own website or blog. In addition, there are opinion polling companies that conduct surveys of ordinary people on all sorts of issues. They then publish the results of these surveys.

21.6.2 The electoral system

Our system of government is a democracy. This means it is based on the idea that we elect representatives to make laws for us. Because we vote for them, these representatives would be expected to make laws that we agree with. If they do not do that, then we can vote for different representatives at the next election. Those with the right to vote have the opportunity to elect representatives to:

- the Commonwealth Parliament in Canberra
- the state or territory parliament sitting in each capital city
- local councils in the city, town or shire in which the electors live.

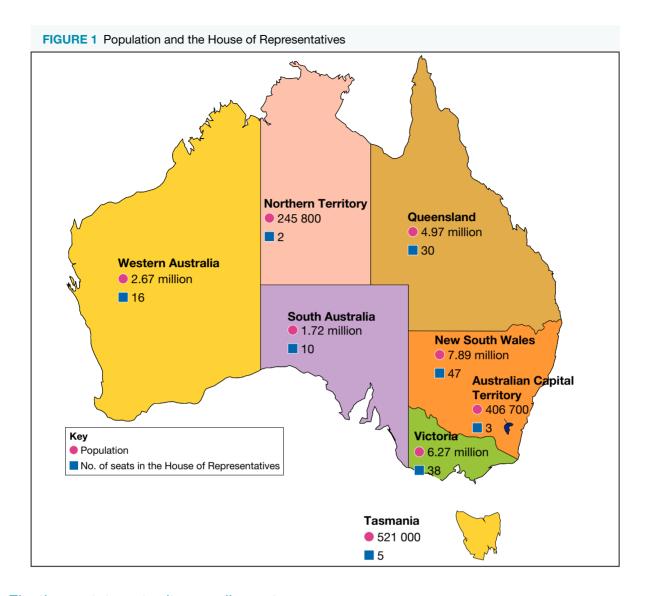
Voting is compulsory in Australia, and all Australian citizens aged 18 years or over are legally required to enrol to vote. You can actually enrol any time after your sixteenth birthday, and you can do so online or by filling in a paper form. Go to the **Voting enrolment form** weblink in the Resources tab to view the paperwork you need to complete in order to register to vote.



Electing a Commonwealth Parliament

The Australian parliament is bicameral, which means it consists of two 'houses' — the House of Representatives (the lower house) and the Senate (the upper house). Elections for both houses are usually held at the same time, but members of the two houses are elected in a different way:

- The House of Representatives has 151 members, each elected for three years. Each member represents an electorate or 'seat' that covers a particular geographic area. All electorates have roughly the same number of electors, about 90 000 each. States with larger populations, such as New South Wales and Victoria, elect the largest number of members. States with smaller populations, such as Tasmania and South Australia, elect much smaller numbers.
- The Senate has 76 members. Each of the six states elects twelve senators regardless of size or population, and the Northern Territory and ACT each elect two senators. In contrast, the members of the lower house are elected on the basis of population. Because there are so many representatives from New South Wales and Victoria, they could out-vote all the other members combined. The Senate was therefore created with equal numbers from each state to act as a safeguard against this happening in the upper house.



Electing a state or territory parliament

Five of the six states also have bicameral parliaments, while the Queensland and two territory parliaments each have only one house. Each parliament has its own electoral system, but the basic principle remains similar to that of the Commonwealth Parliament: representatives are elected to reflect the wishes of the voters. If the voters do not believe that their representatives are doing a good job, they can vote them out at the next election.

Because Australia has a democratic form of government, the most basic way in which we participate is by exercising our right to vote. Recent figures have suggested that as many as 25 per cent of young people aged 18 to 24 have not enrolled to vote. This means they are missing out on an opportunity to participate, and are allowing other people to make decisions for them.

FIGURE 2 Many young people have not registered to vote, so they are allowing others to make decisions for them.



21.6.3 Social media

In today's world, it seems that millions of people are almost constantly connected. Your ability to access websites, emails and social media from almost anywhere through your smartphone means that you can express an opinion on any issue, to almost anyone, anytime, anywhere. In the same way, you can access the opinions of others or seek information almost continuously if you wish. Social media has allowed individuals and groups to participate in the democratic processes in a variety of ways. Here are some examples:

- The activist group GetUp! has conducted online campaigns on political issues including the indefinite detention of refugees on Nauru and Manus Island, climate change, and the Adani coal mine in Queensland. GetUp! uses its website as a means by which its members and followers can express their opinions and call for changes in the law.
- The online organisation Change.org allows people to create petitions and get others to sign them on its website.
- On 30 November 2018, over 15 000 school students went on strike from school in cities and towns all over Australia. They were protesting against what they saw as insufficient government action to address the issue of climate change. The impetus for the action came originally from a 15-year-old student in Sweden who protested outside her country's parliament building on the same issue. News of her action spread through social media, and was picked up by two students from Castlemaine in Victoria. These two students travelled to Bendigo, to protest outside the office of a federal member of parliament. News of these protests soon spread, and a group called 'School Strike 4 Climate Australia' was soon set up to plan a nationwide student strike. Students made use of a website (www.schoolstrike4climate.com), Facebook, Twitter and Instagram to publicise the strike. A second, larger strike took place on 15 March 2019, to continue to pressure politicians into taking stronger action on climate change.





 Almost every member of parliament in Australia today has a Twitter account. Every Prime Minister since Kevin Rudd in 2007 has had a Twitter account, and they have all made extensive use of it to promote their political messages on a daily basis.

Members of parliament, supporters of particular political parties, opponents of the same political parties, as well as people campaigning for new laws can all use social media to get their message across. While the use of social media can be positive in the spread of news and information, recent events have suggested that the effects are not all positive. In the American presidential and congressional elections in 2016, there is evidence to suggest that social media, such as Facebook, was used to spread false information, deliberately aimed at influencing the way people voted. Without thorough fact-checking by the administrators of social media platforms, there is always a risk that this could happen in other countries and future elections. Such activity would seriously undermine democracy and democratic institutions.

FIGURE 4 Everyone can use social media to get his or her message across.





Weblinks GetUp!
Change.org

21.6.4 Opinion polls

Opinion polls are surveys of people from all over Australia and all walks of life. They are conducted by a number of different polling companies. Most of these companies conduct their surveys by phoning people and asking them a series of questions. While conducting their surveys, the polling companies often also ask the people being surveyed their age and level of income in order to make sure the survey includes a broad range of people.

Polling companies conduct many different surveys in their attempts to measure people's opinions. They can be hired by businesses to survey what potential customers think about new products. They can also conduct surveys to find out whether

FIGURE 5 Opinion polling companies conduct surveys by phoning large numbers of people.



a particular advertising campaign has been effective by asking people about their awareness of certain advertisements shown on television.

A small but important part of their business is to conduct surveys on people's attitudes to government policies and actions. To achieve this, they will survey people to find out whether they support or oppose a proposed law or other government action. When an election is close, they will also conduct surveys to find out who people intend voting for. Such opinion polls play an important role in our democratic processes.

The major polling companies often have an arrangement with the daily newspapers in Australia's capital cities to provide information about the popularity of political parties and their leaders. Polling company Ipsos has such an arrangement with the Age in Melbourne and the Sydney Morning Herald. These newspapers publish poll results conducted by Ipsos. Melbourne's *Herald-Sun*, Sydney's Daily Telegraph, Brisbane's Courier-Mail, Adelaide's Advertiser and Hobart's *Mercury* all publish political polling carried out by Galaxy Research. The slightly different method used by each company means they sometimes get different results, but they can still be a valuable way for people to participate in the democratic process.

FIGURE 6 Daily newspapers regularly publish the results of opinion polls.



Effectiveness of opinion polls

Opinion poll results can tell members of parliament whether or not the decisions they have made, and the laws they have introduced, are acceptable to voters. Polling companies regularly survey people to find out who they would vote for if an election were to be held immediately. In the months leading up to an election, they carry out surveys every week. These will often tell both the politicians and the public whether the government is likely to be re-elected or whether a change of government is likely. They are also a good way of finding out what the average citizen would like a government to do in the future.

21.6 ACTIVITIES

- 1. Use the **GetUp!** weblink in the Resources tab to answer these questions.
 - (a) Describe one issue the organisation has been campaigning on recently.
 - (b) Identify an issue that the organisation claims to have campaigned successfully on in the past.

Examining, analysing, interpreting

- 2. Use internet resources to find a newspaper report of an opinion poll.
 - (a) Which newspaper published the report?
 - (b) Which polling company conducted the poll?
 - (c) When was the poll conducted, and how many people were surveyed?
 - (d) What were the results of the poll?

Examining, analysing, interpreting

21.6 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.6 Exercise 1: Check your understanding

- 1. **CS1** What is an electorate?
- 2. CS1 What is the estimated percentage of people aged between 18 and 24 who have not registered to vote?
- 3. CS1 How do opinion polling companies carry out surveys of people's opinions?
- 4. CS1 Why do polling companies ask about age and level of income?
- 5. CS1 Why do the major newspapers have close relationships with particular polling companies?

21.6 Exercise 2: Apply your understanding

- 1. CS1 What particular right do Australians have that makes this country a democracy?
- 2. CS1 Why is the Senate elected in a different way from the House of Representatives?
- 3. CS2 Explain one way in which social media has been used to influence political debate in Australia.
- 4. CS6 Opinion polls on people's voting intentions are sometimes believed to influence the way people vote. One influence is called the 'bandwagon effect'. It suggests that if undecided voters see an opinion poll showing that a particular person or party is more popular, they will 'jump on the bandwagon' and decide to vote for that person or party. Another influence is called the 'underdog effect'. This suggests that if some people see a poll showing that a particular person or party is likely to lose an election, they will feel sorry for this 'underdog' and will therefore vote for that person or party.

Which of these effects do you think is likely to be the most powerful? Give reasons for your answer. Compare your answers with others in your class.

5. CS6 At election time political parties engage in extensive marketing and advertising campaigns, often using the same methods used to advertise products to consumers. Identify and explain two possible risks in this approach that may undermine the main principles of democracy.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.7 The role of members of parliament

21.7.1 Members of parliament in the local community

Members of parliament sit in the parliamentary chamber, debating legislation and voting to pass or reject it. However, this is only a small part of their work. As representatives of a particular electorate, they have an important role in the local community that is represented by that electorate. In this community role, they can often be approached by ordinary citizens requesting them to take some action and work to make improvements in that community.

Federal parliament sits for only about 18 to 20 weeks per year, so many members of parliament can often spend as much as 30 weeks of each year in their local electorates. It is during this time that a member will be engaged in a variety of electorate activities.

FIGURE 1 Members of parliament often perform official opening ceremonies in their electorates.



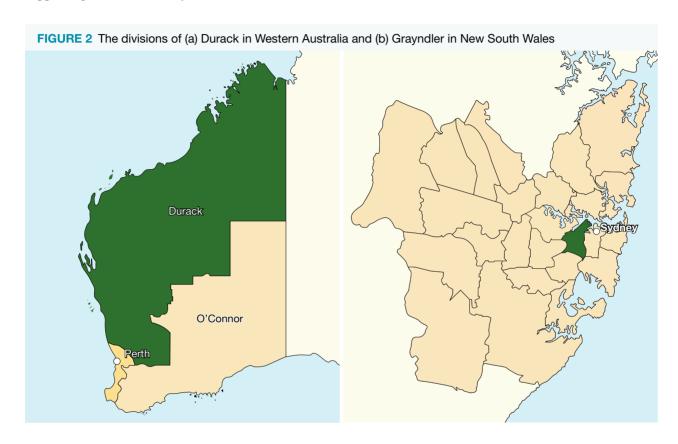
Helping the community

Because each electorate has a similar number of voters, the electorates can vary in geographical size depending on how densely populated they are. This means that an inner-city electorate will be smaller in area than a rural electorate because the population in the country is more thinly spread. For example, the smallest Australian electorate in terms of geographical size is Grayndler, which is in the south-eastern suburbs of Sydney. It has a total area of 32 square kilometres. The largest in area is Durack, which takes up most of country Western Australia. It covers more than 1.6 million square kilometres. This is approximately 60 per cent of the total area of Western Australia, equivalent to more than 20 per cent of the total landmass of Australia. Its voters are spread out on cattle stations, mining towns and remote Indigenous communities. As you can imagine, it is much harder for the member for Durack to maintain contact with the voters than it is for the member for Grayndler. Nevertheless, both members will attempt to perform similar duties in relation to their respective communities.

Every member of parliament maintains an office in his or her electorate. Members representing very large electorates such as Durack will probably have electorate offices in more than one town. Those in large electorates also spend a great deal of time travelling around the electorate. Members are regularly called on

to visit schools, sporting clubs and various other community groups. They often have the task of making presentations to individuals and groups, and performing opening ceremonies for new community facilities.

Members also take up issues on behalf of their electorates as a whole. An example would be a local project, such as the construction of a major road or the provision of some other community facility. The local member will often take up the case with the relevant government minister. Local members also campaign to improve community facilities such as hospitals, community health centres, aged care services and childcare within their electorates. They also often provide support to local sporting clubs and other community recreational organisations. Most voters would wish to see their local member active in supporting their community.



Ultimately, it is the voters in each electorate who judge the performance of their local members of parliament at every election. Members need to maintain strong links with their local communities and to publicly support the interests of their electorates if they want to be re-elected.

Helping individual voters

When they are in their electorates, members of parliament spend much of their time helping individual voters. They have a small staff in their electorate offices to help them do this. Voters may have problems dealing with Centrelink or some other government department. Or they may be seeking assistance with immigration or taxation issues, or dealing with problems concerning health or education matters.

FIGURE 3 A member of parliament can often help individual voters.

The member can intervene personally in the issue and may write to the relevant minister or telephone a contact within the government department concerned. Members of parliament are influential people and usually have lots of contacts, including those in community groups as well as in government departments. If a member personally intervenes on behalf of someone in his or her electorate, this will usually get high priority attention from the government department.

Providing a direct link to parliament

Voters can sometimes raise issues that have significance beyond the electorate. When several members are approached on a similar issue, this may become a matter for the government to investigate further. In many country areas, farmers have expressed concern about the possible impact of coal seam gas mining on their farms. They are concerned that the extraction of coal seam gas may pollute water supplies and have other serious effects on agricultural land. As a result of citizens raising this issue with their local members, inquiries have been initiated by the Commonwealth Parliament as well as state parliaments in New South Wales, Victoria and Queensland. Some of these parliaments have introduced new laws to regulate the coal seam gas industry.

Members of parliament often make themselves available to meet people from their electorate who are visiting Parliament House in Canberra. This often happens when groups of people contact the member's office before travelling to Canberra. Members also regularly meet school groups from their electorates and will take the time to show them around the parliament. There is an education centre in Parliament House where visiting school groups can meet their federal members and learn all about the operation of parliament.

Helping with petitions to the House of Representatives

An important way in which voters can bring an issue to the attention of the parliament is to organise a petition. Members of parliament can provide advice on the preparation of petitions to be presented to the House of Representatives. Members will also make sure the petition goes through the formal processes that are necessary for the petition to be dealt with. The House of Representatives has a Petitions Committee to deal with all petitions to be presented to the lower house. The local member will ensure that the petition is passed on to the Petitions Committee.

How effective are petitions?

Parliament receives hundreds of petitions each year and not all will result in action from the government. Petitions alone are usually not enough to force a government to take action, but they can be successful in drawing parliament's attention to an issue. Petitions can gain support because they are a peaceful means of effecting change. Any citizen can organise a petition, but petitions that gain more signatures are more likely to bring about change. Two of the most famous petitions presented to parliament were prepared in 1963 by the Yolngu people of Yirrkala, in the Northern Territory, raising issues relating to their dispossession from their traditional lands. These petitions were made on pieces of bark, with traditional designs painted around the outside and typed petitions glued in the centre. These are now on display at Parliament House in Canberra (see **FIGURE 4**).

FIGURE 4 The famous Yirrkala petitions were presented on bark, with traditional paintings around the outside.







Weblinks Petitions

Change.org

21.7 ACTIVITIES

- 1. Use the Change.org weblink in the Resources tab to identify a petition on the Change.org website that you believe is worth supporting. Prepare a one-minute speech to convince the rest of your class to support that Reasoning, creating, proposing
- 2. Use internet sources to learn the name of the member for Durack, how many electorate offices that member has and where those offices are located. Examining, analysing, interpreting
- 3. Who is your local member of federal parliament? Where is his or her office located?

Examining, analysing, interpreting

4. Who is your local member of state parliament? Where is his or her office located?

Examining, analysing, interpreting

21.7 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.7 Exercise 1: Check your understanding

- 1. CS1 Roughly how many weeks per year are members of parliament likely to spend in their electorates?
- 2. CS1 What is the smallest federal electorate in Australia in terms of area?
- 3. CS2 Describe three ways in which members of parliament can assist people in their local community.
- 4. CS1 What is a petition?
- 5. CS1 Why do electorates vary so much in geographical size?

21.7 Exercise 2: Apply your understanding

- 1. CS1 How are petitions dealt with once they reach parliament?
- 2. CS5 Suggest some ways that a local member of parliament might be able to help you and your family.
- 3. CS5 Imagine you wanted to present a petition to parliament. Identify and explain three things that you might need to do if you wanted to increase the chances of that petition being successful.
- 4. CS4 Members of the Commonwealth Parliament are paid over \$200 000 per year. Some people argue that, as they spend less than half the year in Canberra, and only four days a week in Parliament when they are there, they are overpaid. Is this a fair assessment of a member's work? Give two reasons for your opinion.
- 5. CS5 Technological developments mean that the opinions of ordinary people can be expressed through online methods such as social media. Does this make the parliamentary system of one member representing everyone in an electorate obsolete in today's world? Could it be replaced with a system where everyone can go online to vote in favour or against proposed legislation? Identify two possible strengths and two possible weaknesses of such a system, when compared to our present system.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.8 Lobby and pressure groups

21.8.1 What do lobby and pressure groups do?

While individuals and community groups may approach their local member of parliament to promote a particular issue, there are organisations set up to carry out this activity in a more professional manner. Known as lobby groups and pressure groups, they operate with the aim of influencing the decisions that governments make.

21.8.2 Lobby groups

Lobbying is a process of approaching members of parliament to argue a case for change in the law. Many organisations seek meetings with their local member or the relevant government minister to put forward a case for change. In recent years, lobbying has become a professional activity. Businesses have been set up to carry out lobbying on behalf of various clients, who pay the lobbying business a fee.

The Commonwealth Government has established a special **code of conduct** for lobbyists, as well as a register of lobbying businesses and their clients. Approximately 250 lobbying businesses are registered, employing more than 550 lobbyists. Over 1800 organisations are registered as clients of these lobbyists, including businesses such as the major banks, and major manufacturing and mining companies; sporting bodies such as the Australian Football League and National Rugby League; educational organisations such as universities; and community organisations as diverse as the Salvation Army and the Wilderness Society. All are prepared to pay a fee to have a lobbyist present their views to members of parliament.

FIGURE 1 The big four Australian banks are all clients of lobbying businesses.









Employing the services of an expert to lobby for your cause can be effective because many lobbyists are former members of parliament or former government officials. These people know the workings of government and have personal contact with many serving members of parliament. The downside of using an organisation to lobby for your cause is that you must pay a fee for this service.

21.8.3 Pressure groups

A pressure group is any group that attempts to influence public opinion on particular issues. Like lobby groups, pressure groups also try to convince governments to make or change laws to help achieve their aims. Examples of pressure groups include environmental groups, as well as groups formed to campaign for improvements in particular community facilities. Organisations representing the interests of employers and employees also operate as pressure groups.

Environmental groups

Organisations campaigning to protect the natural environment have been active in Australia since the 1960s. Generally, they aim to prevent the actions of business or government from damaging areas of environmental importance. Organisations such as the Australian Conservation Foundation (ACF) and the Wilderness Society engage in fundraising to help them pay for these campaigns. The ACF began by campaigning for the protection of the Great Barrier Reef in the 1960s, and has run many other successful campaigns since then. The Wilderness Society came to national attention in 1982, when it led the campaign to save the Franklin River in southwest Tasmania from being flooded by a new dam. Since then it has campaigned to protect native forests in Tasmania and Victoria, and areas of natural beauty as widespread as the Ningaloo Reef in Western Australia and the Arkaroola Wilderness Sanctuary in South Australia.

Great Barrier Reef. Queensland



At the G20 summit in Brisbane in 2014, Barak Obama called for Australians to protect this world heritage listed site, which is under threat.

Franklin River, Tasmania



Environmentalists successfully campaigned to save this beautiful river from being destroyed. In late 1982, protests were growing against the construction of a dam in southwest Tasmania that would have flooded the Franklin River. At that time, a federal by-election was held for the federal electorate of Flinders in Victoria. Voters were encouraged to write the words 'No dams' on their ballot papers, and around 42 per cent of voters did so.

Ningaloo Reef, Western Australia



In 2011, Ningaloo Reef in Western Australia was added to the World Heritage list.

Great Barrier Reef. Queensland



There are government proposals to dump dredge spoils into the Great Barrier Reef marine park, leading to further erosion of the fragile reef, which has already lost 50 per cent of its coral cover over the last several decades. The World Heritage Committee is considering whether to put the reef's heritage listing on the 'in danger' list.

Franklin River, Tasmania



This action taken by voters is credited with encouraging both major parties to promise to intervene in the Franklin Dam issue during the federal election that was held in March 1983.

Ningaloo Reef, Western Australia



Ningaloo Reef was saved from a marina development plan, which would have brought pollution, erosion and destruction to this pristine area.

Employee and employer groups

Traditionally, employee groups such as **trade unions** have been set up to protect the interests of workers in a particular industry or workplace. Examples include organisations such as the Australian Workers' Union; the Shop, Distributive and Allied Employees' Association; and the Australian Services Union. Unions often conduct campaigns on issues that affect their members.



In the same way, employers in many industries have set up organisations to help them when they are negotiating wage and conditions agreements with their employees. Examples include Master Builders Australia and the Australian Retailers Association.

Both employer organisations and unions have also set up national organisations to protect their larger interests and to campaign on broad issues. The Australian Council of Trade Unions (ACTU) operates as a pressure group, campaigning on issues that affect all employees. The Australian Chamber of Commerce and Industry (ACCI) performs a similar function for employers.

An example of the way in which these organisations operate can be seen in the issue of penalty rates. Penalty rates are higher wages paid to employees who work on weekends or public holidays, or at other times outside traditional weekday hours. They were originally established to compensate employees for having to work at these more difficult times. Many people argue that, since so many businesses now operate seven days a week, having special rates of pay for weekends is out of date.

FIGURE 4 Unions and employer organisations represent the interests of their members.



FIGURE 5 National union and employer bodies operate as pressure groups to further the interests of their members.



In early 2014, the federal government set up an inquiry to examine the operation of the laws that govern wages and working conditions. One of the areas to be looked at was the issue of penalty rates. The ACCI argued that penalty rates should be abolished because they impose an unfair cost on employers in restaurants, cafés and shops that operate seven days a week. The ACTU argued that penalty rates should be retained because they compensate people for having to work on weekends when they could be spending time with their families.





In campaigns like this, both sides try to influence the government in relation to any possible changes to the law. They also run advertising and publicity campaigns to try and influence the general public, knowing that governments will take notice of what the voters want. If opinion polls show that most voters believe that penalty rates are a good thing, the government would be reluctant to remove them. If opinion polls

show that the majority of voters are opposed to penalty rates, the government would be more likely to change the law to abolish penalty rates. Pressure groups like the ACTU and the ACCI can have a strong influence on the final result.

In 2017, the Fair Work Commission, Australia's national workplace relations tribunal, reduced penalty rates on public holidays and Sundays in the retail, fast food, hospitality and pharmacy industries. The ACCI said that the decision delivered important reductions in excessive penalty rates. It claimed that this would help retail and hospitality businesses create more jobs and offer more hours, particularly for young people. By contrast, the ACTU said that the decision to cut Sunday and public holiday pay would give almost one million Australian workers a huge pay cut.

DISCUSS

'Lobby groups should not be able to charge fees to present the views of others to members of parliament.' What would be the different perspectives that the following groups of people would have on this issue?

- A member of an environmental group campaigning to protect the Great Barrier Reef
- A member of an employer group campaigning to reduce penalty rates
- An undecided voter. Discuss how their values and beliefs might be different or similar.

[Critical and Creative Thinking Capability]



Interactivity The road (int-5432)

Weblinks Environment organisation 1

Environment organisation 2

Commerce Trade unions

21.8 ACTIVITIES

- Use either of the Environment organisation weblinks in the Resources tab to identify two campaigns that your chosen organisation is focusing on.
 Examining, analysing, interpreting
- Use the Commerce weblink in the Resources tab to identify one campaign that the organisation is currently engaged in.
 Examining, analysing, interpreting
- Use the Trade unions weblink in the Resources tab to identify one campaign that the organisation is currently engaged in.
 Examining, analysing, interpreting
- 4. Use internet resources to investigate the activities of Greenpeace and the Sea Shepherd organisation. What are these groups trying to achieve? What activities do they undertake to achieve these aims?

Examining, analysing, interpreting

21.8 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.8 Exercise 1: Check your understanding

- 1. CS1 What is a lobby group?
- 2. CS1 List two different organisations that use lobby groups to present their views to members of parliament.
- **3. CS1** What is a pressure group?

- 4. CS1 What is the difference between the ACTU and the ACCI?
- 5. CS1 What are penalty rates?

21.8 Exercise 2: Apply your understanding

- 1. CS1 Why do lobby groups often employ former members of parliament?
- 2. CS2 Identify and explain two examples where pressure groups have been successful.
- 3. CS3 Identify two arguments in favour of people being paid penalty rates and two arguments against. Which arguments do you think are the stronger? Are you opposed to or in favour of penalty rates? Compare your views with the rest of the class.
- 4. CS4 Many powerful businesses and other organisations have plenty of money to employ lobbyists to influence government decisions, while ordinary citizens do not have this power. Outline two risks that this situation could bring to the principles of democracy.
- 5. CS5 Which is likely to produce the best result for the majority in society a law changed because of lobbying or a law changed as a result of the efforts of pressure groups? Explain reasons for your opinion.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.9 SkillBuilder: Communication and reflection

What is communication and reflection?

Most advertising we see is aimed at encouraging us to buy particular products, but advertising can also be used to encourage people to take action on a political issue.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it).



on line $\frac{1}{2}$

21.10 How parliaments make laws

21.10.1 The law-making process

A parliament consists of the law makers at the state and federal levels of government. Most laws in Australia are made by our federal and state parliaments. These laws are called statute laws. Most parliaments in Australia have a lower house and an upper house. Parliaments make laws by passing a Bill through both houses.

A law made by parliament is called **legislation**, a statute or an **Act**. Before any proposed laws can become Acts of Parliament, they have to be debated and passed by both houses of parliament and then approved by the Crown. During the debate in parliament, the government explains why the law is needed and why it will be good for Australia. The Opposition may try to argue why this is not the case. Let us see, step by step, how all of this might happen in federal parliament.

FIGURE 1 How laws are made in Parliament



A proposed new law, or changed law, is discussed in Cabinet. Often, people in Australia put pressure on the government to change something. A decision is then made on what to do.



If the government decides to proceed, government lawyers are asked to draft a Bill. A Bill is basically a 'first draft' of an Act of Parliament.



Copies of the Bill

are given to all members of the lower house (House of Represen tatives). The members read the their own time. This is known as the 'First Reading'



The Bill goes through a 'Second Reading'.

During this stage, the responsible minister (for example the Minister for Immigration if the Bill is to do with is to do with migrants) describes the main purpose and likely benefits of the Bill. Speakers from the government and opposition say what they think about it. Debates may take unacke may take weeks. Then there is a vote If the majority vote in favour, the Bill moves to the next stage in the process.



The Bill is debated

again, this time bit by bit. This stage is known as Consideration in Detail as each part of the bill is discussed in detail. Changes to the Bill may be made.



The Bill. including any changes made during step 5, goes through a 'Third Reading' in the house A vote is taken. If the majority vote for it,

the Bill is passed through to

the Senate.



STEP 7 The upper house (the Senate) goes through similar processes to those outlined in steps 3 to 6. If the Senate decides to change something, the Bill is referred back to the House

of Representatives for another debate and vote. Sometimes the Senate may refuse to approve a Bill. If the Senate votes to approve the Bill, it is sent to the Governor-General for royal assent.



STEP 8 If the Governor-General approves and signs the Bill, it becomes an Act of Parliament It is proclaimed and legally binding for all Australians.

21.10.2 Executive law

When Parliament passes legislation, many of the clauses in the new law can be very general, and details of how the law is to be applied are not always included. The legislation will delegate power to the relevant government minister to make detailed rules and regulations, particularly to deal with new situations as they might arise. These rules and regulations make up what is known as executive law, or delegated law, because the power is delegated to the minister, who is a member of the executive, the Cabinet, to develop these regulations. Executive law also applies to the power the minister has to make appointments to particular positions in the government, such as ambassadors to overseas countries. Because such regulations and orders have to be made with the approval of the Governor-General at the federal level, or the state Governor, they are known as Governor-General in Council Regulations, or Governor in Council Regulations. These regulations also have to be tabled in Parliament, and can be removed or overruled by a majority vote in the Parliament.



Resources



Weblink Commonwealth Parliament

21.10 ACTIVITIES

- 1. Working in pairs, use the **Commonwealth Parliament** weblink in the Resources tab to find out about a new law that is going through parliament at the moment.
 - (a) Briefly describe the law you have found and explain what stage it has reached.
 - (b) In your opinion, will this proposed law be changed much on its way through parliament? Give reasons for your answer.
 - (c) Share your findings with another pair of students.

Questioning and evaluating

2. Use internet resources to help you discover which new or proposed laws your local member of parliament (MP) is involved with. Use this information to email your MP your ideas about this new or proposed law.

Communicating, reflecting

- 3. Propose a new school rule and debate it in class as follows:
 - (a) Brainstorm as a class five rules you think would be good for your school. Using a show of hands, vote to decide on a rule to debate. Call this your Bill.
 - (b) Divide the class in two, with government members on the right and the Opposition on the left. As part of the first reading of your Bill, debate the issues associated with introducing this proposed new law. Those on the government side should argue for the Bill and those on the Opposition side should argue against it. Appoint a Speaker to ensure that the debate is orderly. When debating, stand to speak, and obey any instructions given to you by the Speaker.
 - (c) At the end of the discussion, take a class vote on whether or not you think this proposed new law should be introduced. If you disagree with the decision of your side, you can 'cross the floor', moving from where you are to the right (yes) or the left (no) side of the classroom to register your vote. Did your proposed Bill pass its first reading?
 Reasoning, creating, proposing

21.10 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.10 Exercise 1: Check your understanding

- 1. CS1 What is statute law?
- 2. CS1 What is the difference between a Bill and an Act of Parliament?
- 3. CS1 What is meant by the term 'royal assent'?
- 4. CS2 Explain what is meant by the term 'executive law'.
- 5. CS1 Who is normally responsible for the development of executive laws?

21.10 Exercise 2: Apply your understanding

- 1. **CS5** Use a flowchart to explain how a law is made in parliament. Draw your flowchart using eight boxes joined by arrows. Number each box from step 1 to 8. In each box describe what happens to the proposed law in that step, using no more than ten words. For example: Step 1 government (in Cabinet) discusses the idea of a new law.
- 2. CS4 How can a piece of executive law be overruled? What does this tell us about the power of parliament compared with the powers of the executive?
- 3. CS6 In your view, is the process of law making in Australia fair? Does law making by parliament give ordinary people enough opportunity to have their say when new laws are being made? Explain your answer.
- **4. CS4** Since 1981, no party has had a majority in the Senate except for three years from 2005 to 2008. This means that a government may have to negotiate with non-government senators to have legislation passed. Identify one advantage and one disadvantage of this situation.
- **5. CS4** Queensland, the Northern Territory and the Australian Capital Territory only have one house of parliament, rather than a lower and upper house. This means there is no upper house review of legislation. Is this a good thing or a bad thing? Give reasons for your answer.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.11 How courts make laws

21.11.1 Common law

The main role of courts is to settle disputes, but courts also make laws. They do this as they interpret laws and make decisions to resolve the case they are hearing. This type of law is known as case law, judge-made law or **common law**.

Common law originated in England as judges travelled from village to village making decisions based on tradition, custom and **precedent**. The judges began to apply a law that was common to all people across the country, rather than using the customary law of each region. Common law is applied today when cases come to court where there is no legislation regulating that case. The judge needs to make a decision about the law on this type of matter. This process is illustrated in the following case study, 'Finders keepers'.

21.11.2 CASE STUDY: Finders keepers

The law relating to who has the right to own things that are found has changed over the years as judges have made new decisions. The judges in the following cases made decisions which became part of the common law because there was no existing law about possession that specifically applied to the cases.

Money found buried on private property

In 1964, a woman sold her New South Wales house to a couple. The couple hired a building company to work on the house. While digging, one of the owners of the building business found a tin with £8500 inside.

- The original owner claimed that she had buried the tin and therefore the money belonged to her.
- The couple who had bought the house claimed that the money was theirs as it was found on their land.
- The owner of the building business claimed the money belonged to him as he had found it.

No laws covered this dispute, so the judge hearing the case was required to make a decision that would create a new law. The judge decided that the couple who now owned the house were allowed to keep the money as they owned the land.

FIGURE 1 Does a gold ingot found on someone's property belong to the property owner or to the person finding it?



Gold found by the side of the road

In 1965, a Queensland police officer was walking to the place where he was going to direct traffic leaving a drive-in theatre. On the side of the road, on land belonging to the theatre, he found a gold ingot. The owner of the gold could not be found.

- The owner of the land claimed ownership.
- The police officer claimed ownership because he had found the ingot.
- The police officer's employer (the state) claimed ownership because the policeman worked for the state.

The judge hearing the case decided that the land was regularly accessed by the public and that the police officer could keep the gold ingot because his job was to direct traffic, not to find lost things. Any other member of the public might have found the ingot, and the fact that the officer was on duty was just a coincidence.

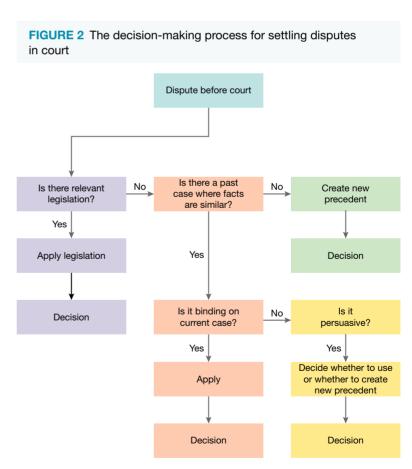
Bracelet found at the airport

In 1982 a traveller waiting in an airline lounge found a valuable gold bracelet. He handed it in to the manager of the lounge, and was told that the airline would attempt to locate the owner. If this attempt was unsuccessful, it would be handed over to the finder of the bracelet, who could then keep it. The finder left his contact details with the airline. After a period of time, when the bracelet had not been claimed, the airline sold it for a considerable sum of money, which it kept. The finder of the bracelet sued the airline, and the judge ruled that the proceeds of the sale of the bracelet should be handed over to the original finder, with an additional amount paid as interest on the money. The judge found the plaintiff in the case had 'finder's rights' that could not be removed by the fact that the bracelet was found on the airline's premises.

21.11.3 Precedent

Common law is developed through the legal principle of precedent. If your sister was given a car for her eighteenth birthday, you might expect your parents to do the same for you because your parents have set a precedent. Courts use the same idea. When a judge makes a decision in a court case, this decision will be recorded in a law report. Other judges hearing cases with similar facts will refer to these decisions. Just as you would expect your parents to follow their precedent, the people involved in legal cases expect the judge to follow the precedent of similar cases and therefore come to the same decision.

Precedent works because of our court hierarchy.



21.11.4 Australia's court hierarchy

Australia's court system is made up of many different courts, which are arranged in levels in order of importance (a hierarchy). The higher courts, which hear the most serious matters, are at the top of the hierarchy. The lower courts, which hear less serious matters, are at the bottom of the hierarchy.

At the bottom of the court hierarchy are the magistrates courts (called the Local Court in New South Wales, the Magistrates' Court in Victoria and the Magistrates Court elsewhere). These courts hear more than 90 per cent of the cases that go to court, and they have a large number of courthouses. There is probably one in your local area. The District Court (called the County Court in Victoria) exists in most states and sits only in the main cities. There is only one Supreme Court in the capital city of each state, and only one High Court in Australia (in Canberra).

When superior courts (such as the High Court and each state's Supreme Court) settle disputes, they can create new legal principles that must be followed by the lower courts in their own hierarchy. Judges in each state have to follow only those decisions made in the higher courts in their state, and those made in the High Court. For example, a decision made by a judge in the Victorian Supreme Court does not have to be followed by judges in the District Court of New South Wales. However, the New South Wales judges could use the decision as a guide.

FIGURE 3 The Australian court system

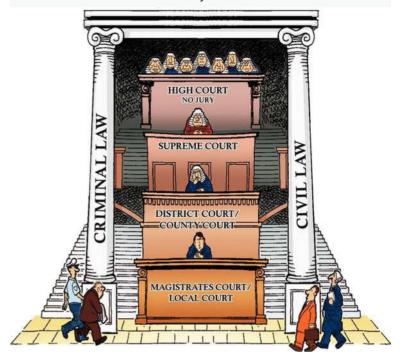


FIGURE 4 If there is no existing relevant law, judges can create a new rule to settle a dispute.





DISCUSS

'Judges use common law processes to bring greater fairness and consistency to the law by adapting decisions to suit the new facts before them.' Discuss arguments supporting this case and then counterarguments to represent an opposing point of view. Which point of view do you support?

[Critical and Creative Thinking Capability]

21.11 ACTIVITY

Using the internet or newspapers, find an article that reports on a new principle of law being made through a landmark court case. Investigate how this case proceeded through the courts.

Examining, analysing, interpreting

21.11 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.11 Exercise 1: Check your understanding

- 1. CS1 What is common law?
- 2. CS1 What is precedent?
- 3. CS1 List the courts in your state's court hierarchy, from highest to lowest.
- 4. CS1 From where did common law originate?
- 5. CS2 Outline the similarities and differences between the cases in the case study, 'Finders keepers'.

21.11 Exercise 2: Apply your understanding

- 1. CS2 Explain how the judges in the case study 'Finders keepers' made changes to the law.
- 2. CS2 What would happen if a judge decided to ignore a precedent and make a completely new decision?
- 3. CS3 Consider the following cases:
 - Case 1 a former barmaid sues the hotel where she used to work. She contracted throat cancer
 caused by breathing environmental tobacco smoke during the course of her employment. The
 court awards her compensation of more than \$400 000.
 - Case 2 a former pie-seller sues the sports stadium where he used to work. He contracted throat cancer caused by breathing environmental tobacco smoke during the course of his employment. The court uses case 1 as a precedent.
 - Case 3 a waitress sues the restaurant where she works. She contracted throat cancer caused by smoking cigarettes for 30 years.
 - Case 4 a former miner sues the mining company he used to work for. He was injured in a fall.
 - (a) In case 2, should the former pie-seller receive compensation? Explain your answer.
 - (b) In case 3, should the court use the first two cases as precedents and provide compensation? Explain your answer.
 - (c) In case 4, are any of the first three cases a precedent for this situation? Should the court provide compensation? Explain your answer.
- **4. CS5** Many people argue that judges should not make law because they are not democratically elected as members of parliament are. Identify and explain one positive and one negative effect of judges making law through precedent.
- 5. **CS2** The doctrine of precedent states that judges must apply a precedent established in a higher court in the same court hierarchy, but occasionally judges apply a precedent from a court in a different state or different country. Explain when and why this might occur.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.12 Criminal law and civil law

21.12.1 Criminal vs. civil

There are two main types of law in Australia:

- · criminal law, which protects us and punishes offenders
- civil law, which protects our rights and property.

We have no choice over the use of criminal law because the state controls it, but individual citizens and groups decide how they will use civil law. The 'state' means society or the whole community, which is represented here by parliament, the judiciary and the police.

21.12.2 Criminal law

Criminal law protects innocent individuals from wrongdoers. It outlines the way people should act — what they can and cannot do. Some of the most common crimes are robbery, **homicide** (**manslaughter** and murder), rape, assault, theft and drug offences.

If a person commits a crime, this is treated very differently from other legal issues. For example, if you rob a bank, it does not remain a dispute between the bank and yourself. The bank does not have to try to catch you. Instead, your action is regarded as an offence against the state. It is the state that organises its police to catch offenders. In criminal law, the bank does not take you to court — the police or representatives of the government do. They will also be the ones who **prosecute** you. It is up to the prosecution to take legal action against an accused person in order to establish the guilt of the accused because the prosecution has the **burden of proof**. This means that the prosecution must prove that the accused is guilty of the crime. It is not up to the accused person to prove his or her innocence.

During the court case, you as the accused will have the opportunity to tell your side of the story. If you are found guilty, you will be punished with a fine, imprisonment, some form of community service order or a combination of these punishments.

FIGURE 1 A criminal act is treated as an offence against the state, which deploys the police and courts to apprehend, prosecute and imprison the wrongdoer.

In criminal cases ...the police prosecute ...and the courts impose a penalty on a guilty party.

BANK

Indictable offences

Serious crimes (such as homicide, child abuse and rape) are called indictable offences. These offences are usually heard in a higher court such as the District or County Court, or the Supreme Court. For these offences, the guilt of the **accused** is determined by a jury.

In a criminal case, the jury must be satisfied of the guilt of the accused 'beyond reasonable doubt'. This means that the jury cannot have any reasonable doubt that the person accused of the crime is guilty. The level of certainty that must be established before a legal case can be won is known as the **standard of proof**. It is up to the prosecution in criminal cases to prove that the accused is guilty beyond reasonable doubt. If a magistrate or jury is not convinced beyond reasonable doubt of the accused's guilt, the accused should be given the benefit of the doubt and found not guilty.

Summary offences

Less serious crimes (such as minor assaults, petty theft and traffic infringements) are called summary offences. These are dealt with relatively quickly and cheaply by a **magistrate** in a magistrates court.

21.12.3 Civil law

Civil law deals with non-criminal matters. It allows a person to bring actions against other people for a civil wrong done to him or her. Civil law involves such matters as disputes between friends, business partners, consumers and retailers, neighbours or an individual and a government department. Examples of civil wrongs include **negligence**, **trespass**, **defamation**, **nuisance** and **breach of contract**. Where a civil wrong is successfully proven in court, the wronged party will usually seek damages (money) as compensation. In such a case, the **defendant** will be found to have been **liable**.

For example, imagine you discover half a decomposed snail at the bottom of a soft-drink bottle from which you have just drunk. You are then violently sick and suffer serious stomach illness. You decide to sue the manufacturer for negligence — meaning that the manufacturer did not take enough care to prevent an injury. You, the **plaintiff**, go to court to prove your case. You ask a judge to order the soft-drink manufacturer, the defendant, to pay you compensation. The plaintiff does not always win such cases. Sometimes the judge decides that the plaintiff's rights were not breached and can order him or her to pay the defendant's legal costs. As the case study 'Civil v. criminal law' later in this section illustrates, sometimes civil law is required to deal with a wide range of unusual circumstances.

FIGURE 2 A civil wrongdoing is treated as a private matter between the disputing parties, and the losing side is ordered by the judge to pay compensation or rectify the wrong done.



There is a lower standard of proof in civil cases. The plaintiff has to show that the defendant was 'more likely than not' to have committed the breach. This is known as the 'balance of probabilities'.

21.12.4 CASE STUDY: Civil v. criminal law

Case 1

A grape grower was awarded \$7 million in damages by the Supreme Court of Victoria in August 2017, after his neighbour's spraying of chemicals destroyed his vineyard. The grape grower had spent four years fighting for compensation after he had noticed damage to the leaves of his vines in 2013. At first he thought the vines had been affected by frost, but later discovered that his neighbour had been attempting to rid his own property of pests by spraying the chemicals 2,4-D, glyphosate and metsulfuron-methyl. The Supreme Court heard that these chemicals are all deadly to grapevines and should never be used anywhere near vineyards. The court found the neighbour negligent in his use of the chemicals and awarded damages of over \$7 million. This included the cost of rehabilitating the land, the grower's loss of grape sales, costs involved in re-establishing the vineyard, and future loss of sales during the time the vines take to re-grow.

Case 2

In November 2018, a man was found guilty of manslaughter after killing a heart surgeon in a one-punch attack at Box Hill Hospital in Melbourne's eastern suburbs. Joseph Esmaili had punched the surgeon, Patrick Pritzwald-Stegmann, in the head after the doctor had asked him and his friends to stop smoking in non-smoking area outside the hospital doors. The surgeon fell backwards and hit his head on the floor, knocking him unconscious. He spent the next month in a coma, and died after his family agreed to have his life-support system switched off.

During the trial, Esmaili's defence barrister argued that Esmaili had believed that the surgeon was about to hit him, and so he acted in self-defence when he punched the surgeon. The defence also argued that Mr Pritzwald-Stegmann's death was actually caused by the family's decision to turn off the life support system, not by the punch. The jury did not appear to accept either of these lines of defence, and found Esmaili guilty of manslaughter.





Interactivity Time out — civil and criminal law (int-1402)

21.12 ACTIVITY

Select a partner and cut out three newspaper articles describing civil law cases and three describing criminal law cases. Paste these on a large sheet, then discuss and list the laws being broken in each case.

Examining, analysing, interpreting

21.12 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.12 Exercise 1: Check your understanding

- 1. CS1 Define civil law and criminal law.
- 2. CS1 List four common crimes.
- 3. CS1 List four civil wrongs.
- 4. CS2 What is the difference between:
 - (a) plaintiff and defendant (or accused)
 - (b) indictable offences and summary offences
 - (c) burden of proof and standard of proof
 - (d) beyond reasonable doubt and balance of probabilities?
- 5. CS2 Outline the differences between civil law and criminal law.

21.12 Exercise 2: Apply your understanding

- 1. CS3 Use the case study 'Civil v. criminal law' earlier in this section to outline the differences between criminal law and civil law.
- 2. CS4 Do the following cases involve criminal law, civil law, or both?
 - (a) You are held up at knifepoint and your purse or wallet is stolen.
 - (b) A woman slips on a wet supermarket floor and breaks an ankle.
 - (c) A man is convicted of driving with a blood alcohol content of 0.08.
 - (d) You find maggots in a tuna sandwich you just bought from a café.
 - (e) A neighbour's loud music at 3 am is disturbing you.
- 3. CS4 Think of a case that might involve both criminal law and civil law. What part of the case is criminal law? What part of the case is civil law?
- 4. CS5 In a civil case the victim can sue for compensation, but in criminal cases the wrongdoer is punished and the victim is frequently not compensated for the harm done to them. Limited victim compensation is available in some cases but not in every case. Should the law be changed to provide for compensation in every criminal case? Identify one advantage and one disadvantage of such a change.
- 5. CS5 Criminal cases are dealt with by the courts because the state prosecutes the wrongdoer. Only around 20 per cent of civil cases come before the courts because they are resolved out of court by negotiation between the parties, or because one party does not have the money to fight the case. This can mean that the wealthiest or most powerful party wins. Suggest a reform to the law that could help resolve this situation.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.13 SkillBuilder: Group consensus

What is group consensus?

A group consensus is when a collection of people work together to make a decision that is agreeable to everyone in the group. Consensus is reached by using a democratic process.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- · an activity to allow you to practise the skill (Let me do it).



21.14 Customary law in Indigenous communities

21.14.1 What is customary law?

Customary law refers to the guidelines for behaviour that have been developed by Aboriginal and Torres Strait Islander peoples. These laws are passed on by word of mouth and have not been written down. In what way is customary law significant to Indigenous Australian peoples? We will explore the answer to this question throughout the rest of this section.

The Dreaming

Indigenous Australian peoples believe that their customary laws originated in the Dreaming. The Dreaming explains how the ancestors of Indigenous Australian peoples created the landscape and its features, as well



as the laws necessary to survive in the harsh Australian environment. Aboriginal and Torres Strait Islander peoples have a very strong relationship with the Australian land. They believe that they do not own the land — the land owns them, so it is their responsibility to take care of it. The stories, songs and dances told about the Dreaming reveal the many ways in which Indigenous Australian peoples are connected to the land.

FIGURE 1 Indigenous Australian people believe that the Australian landscape and all its features were created by their Dreaming ancestors.



Dreaming stories

Elders passed on customary laws by telling Dreaming stories to other members of their community or language group. The stories provide guidance or instructions about how to behave and the right way to live. Indigenous people expect that the younger ones will listen to the old people, be obedient, and not be greedy or steal. Other customary laws concern what foods can be eaten, what rules apply to families, requirements for marriage, and spiritual responsibilities. Songs and dances were also used to pass down customary law.

Dispute resolution

Aboriginal and Torres Strait Island societies did not have governments, police or courts. Disputes were resolved by the elders, who would meet to discuss the incident or dispute and then agree on an appropriate solution or consequence. Punishments might include shaming or public ridicule for less serious offences, or exile or spearing for more serious cases. Spearing involved stabbing a spear into the thigh of a person who had committed an offence. The scar left behind would always remind the offender of the wrong act they had carried out.

21.14.2 Recording customary law

Customary law has not been **codified**. It is not easy to record. This is because it is not always the same throughout Australia. Different language groups and communities have their own customary laws, languages, beliefs and traditions. The laws that apply to one group do not necessarily apply to another group. The different groups can be seen in the map in **FIGURE 2**. How many language groups can you see?

OCEV or descriptions may be culturally sensitive and may be considered inappropriate today, but may have reflected the creator's attitude or the period in which they were STATE LIBRARY
NEW SOUTH WALES written. Borders and terminology used may be contested in contemporary contexts. E SHOWING THE DISTRIBUTION OF THE ABORIGINAL TRIBES Mitchell Library M3 804eca/1788/1 A L D N

FIGURE 2 Map Showing the Distribution of the Aboriginal Tribes of Australia, Norman B. Tindale, 1940. Users of this map should be aware that certain words, terms

21.14.3 Customary laws and Australian law

Some state and territory laws have been amended to specifically refer to customary law — the Northern Territory's Sentencing Act recognises customary law. Many courts have also taken customary law into account when considering sentences. Refer to the case study 'Court imposes customary punishment' in this section for an example.

21.14.4 CASE STUDY: Court imposes customary punishment

The 1993 case of Wilson Jagamara Walker was the first in Australia to include a customary punishment as part of a sentence. Walker was a 23-year-old Aboriginal man from central Australia who pleaded guilty to manslaughter. He had been walking home when he heard a cry for help from a person being attacked by a group. Walker went to assist, and ended up killing one of the attackers by stabbing him near the neck. The judge, Chief Justice Martin, initially sentenced Walker to three years' imprisonment. The sentence was then suspended and Walker was released on a two-year good behaviour bond with conditions, including that he be speared in the thigh by relatives of the victim.

In describing the customary punishment, Chief Justice Martin said that:

When you return to Yuendumu, you will be called upon to face tribal punishment ... by getting speared in each of your legs a couple of times in such a way that you will be pained for at least a couple of weeks ... A hunting spear would be used. The punishment would be administered by the brother of the dead man.

Martin ordered police officers to witness the spearing so that they could verify that the sentence had been carried out. Walker was told to return to the court to have the sentence reviewed if this did not occur.

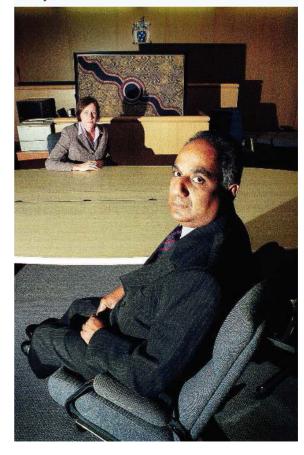
21.14.5 Alternative sentencing for Indigenous offenders

If found guilty of an offence, Aboriginal and Torres Strait Islander defendants have alternatives to having a sentence imposed by the court. One initiative is circle sentencing, a scheme operating in New South Wales that tries to avoid imprisonment for Aboriginal offenders. This is where a circle of people — including Aboriginal elders, the victim, the offender, the offender's lawyer, the prosecutor or police and a magistrate — will sit together to attempt to decide an appropriate sentence. The Indigenous offender must have pleaded guilty or have been found guilty of the offence.

FIGURE 3 Wilson Jagamara Walker's case was the first in Australia to include a customary punishment as part of a sentence.



FIGURE 4 The Broadmeadows Koori Court in Victoria provides a more informal environment for Aboriginal offenders, who must plead guilty if they wish to be sentenced here.



The offence is considered first, and then the offender and his or her background is discussed as well as the effect of the wrongdoing on the victim and the community. The elders decide the sentence, which must be approved by the magistrate. The circle will often hand down a good behaviour bond with conditions attached, such as counselling or community service.

Other states have different names for similar programs. Victoria has Koori Courts, South Australia has Nunga Courts and Western Australia has Aboriginal Community Courts. The territories also have circle or community courts. All of these courts involve Aboriginal and Torres Strait Islander community members in the sentencing process, and the proceedings are less formal than in a traditional courtroom.

21.14 ACTIVITIES

- Use the internet or a newspaper to find a recent case where a court has recognised customary law when sentencing an Indigenous Australian.
 Examining, analysing, interpreting
- 2. Work in groups to investigate one of the circle sentencing courts.
 - (a) How does the court work and what sort of cases does it sentence?
 - (b) Identify one case that has been resolved by a circle sentencing court. Prepare a summary of the facts of the case and the judgement made by the court.

 Examining, analysing, interpreting

21.14 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

21.14 Exercise 1: Check your understanding

- 1. CS1 What is meant by the term 'customary law'?
- 2. CS1 What is the Dreaming?
- **3. CS1** In the absence of police and courts in traditional Indigenous communities, how were punishments imposed on wrongdoers and disputes resolved?
- 4. CS2 Explain how Aboriginal elders have been involved in the administration of justice in cases involving young Indigenous offenders in Victoria.
- 5. CS1 Give an example of legislation that recognises customary law in Australia.

21.14 Exercise 2: Apply your understanding

- **1. CS3** Read the case study 'Court imposes customary punishment'. Outline the way in which the judge incorporated customary law into the sentence imposed on Mr Walker.
- 2. CS4 Create a list of pros and cons for recognising customary law as part of Australia's legal system. Do you think that customary law should be recognised?
- 3. CS6 Consider whether new courts should be established to reflect the traditional laws of other ethnic or religious groups in Australia. For example, should an Islamic court be established so that Muslim offenders could be sentenced according to Sharia law?
- **4. CS2** List as many reasons as you can to explain why Aboriginal and Torres Strait Islanders find customary laws significant. Compare your reasons with other class members. Write down any new ideas.
- **5. CS5** If there is a conflict between traditional Indigenous law and laws legislated by parliament, which should apply? Give reasons for your response.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

21.15 Thinking Big research project: A bill of rights for Australia?

on line }

SCENARIO

The government is considering creating a bill of rights for Australia but many citizens don't know what that means. Your task is to find out what a bill or charter of rights is, and how it protects people's rights and freedoms. You should then present your findings in an informative way to help people understand what a bill of rights will mean for Australia.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- resources to guide your project work
- an assessment rubric.





Resources



projectsPLUS Thinking Big research project: A bill of rights for Australia? (pro-0176)

21.16 Review



21.16.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

21.16.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31360)

Crossword (doc-31361)



Interactivity Rights, freedoms, democracy and the law crossword (int-7603)

KEY TERMS

accused the party in a criminal trial against whom an action has been brought

Act a law passed by Parliament

Bill a proposed law that has not yet been agreed to by parliament or received royal assent

breach of contract a situation where a legally binding agreement is not honoured by one or more of the parties to the contract

burden of proof the legal principle describing who has to prove a case in court. In a criminal trial, this burden is on the prosecution.

code of conduct a set of standards of behaviour that all participants are expected to follow

codified refers to laws that have been collected and organised, usually in written form

common law law developed by judges through the decisions of courts

conscription a process by which people are required to join the armed forces, even if they do not wish to do so constitution a set of rules that determines the structure of government and its law-making powers

Crown the Queen's authority in the Australian parliament, represented by the Governor-General at the federal level and a Governor at the state level

customary law guidelines for behaviour developed by and for Aboriginal and Torres Strait Islander peoples **defamation** unlawful damage to a person's good reputation through written or verbal statements **defendant** the party in a civil trial against whom an action has been brought

democracy a form of government in which the people determine how they will be governed

democratic supporting democracy, or the system of government where supreme power is vested in the people and exercised directly by them or by their elected representatives under a free electoral system

electorate an area of Australia that elects one member to parliament

homicide the killing of one person by another person

jury in a criminal trial, a randomly selected group of people who decide the guilt or innocence of an accused person

laws the system of rules that Australia recognises as regulating the actions of its citizens, which it may enforce by the imposition of penalties and sanctions

legislation a law made by Parliament

liable legally responsible for a civil wrong

lobbying a process of approaching members of parliament to argue a case for change in the law

magistrate a court official who hears cases in the lowest court in the legal system

manslaughter the accidental or unintentional killing of one person by another person

negligence a situation where a person breaches a duty to exercise reasonable care to avoid a foreseeable risk, resulting in another person being injured or suffering a risk of injury

nuisance interference with someone's enjoyment of public or private property

Opposition the main political party in the lower house of parliament not in power

plaintiff the person who commences a legal action in civil law

precedent a legal principle developed by a court in the process of resolving a dispute

prosecute to take legal action against another person for a criminal offence

referendum a process of allowing the people to vote on an important issue, such as a proposed change to the Constitution

repeal to remove a law so that it no longer applies

right an entitlement to be treated in a particular way. A legal right is a right that can be enforced by law.

standard of proof the level of proof required to establish a case. In criminal law, the prosecution must prove that the accused is quilty beyond reasonable doubt.

statute laws laws made by parliament

trade union an organisation of employees formed for mutual support, and to seek improvements in pay and working conditions for its members

transportation the process of sending convicts to a penal colony

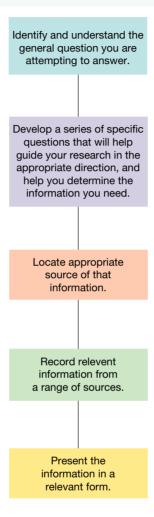
trespass a tort (civil wrong) involving direct and intentional interference with a person, or a person's land or goods

21.5 SkillBuilder: Questioning and research

21.5.1 Tell me

When carrying out your own research, the steps in **FIGURE 1** can provide a useful guide.

FIGURE 1 How to carry out your own research



21.5.2 Show me

Many countries throughout the world have a 'bill of rights' or 'charter of rights' to protect the rights and freedoms of their citizens. Imagine you have been asked to find out what a bill or charter of rights is, and how it protects people's rights and freedoms.

Your first step is to clearly identify the essential key questions. These could be expressed as follows: 'What is a bill or charter of rights? What is a good example of a bill or charter of rights? What rights does it actually protect? How does it protect these rights?'

It is now necessary to break this down into a series of more specific questions. These could include:

- 1. What is a bill of rights?
- 2. What is a charter of rights?
- 3. Is there any difference between a bill of rights and a charter of rights?
- 4. What is one major country that has a bill or charter of rights?
- 5. How did that country get a bill or charter of rights?

- 6. What rights or freedoms does that bill or charter protect (for example, freedom of speech; freedom of association)?
- 7. Can those rights be easily taken away by a government repealing them? Or are they like the rights protected by the Australian Constitution, and need a referendum to be changed?
- 8. What can people do if they think their rights under that bill or charter have been affected by the actions of the government or someone else?
- 9. How well does the bill or charter work? Are there any examples of occasions when someone has successfully taken legal action to protect his or her rights?

The next step is to locate appropriate sources. By entering the search term 'bill of rights' or 'charter of rights' in your favourite search engine, you will be presented with a number of sources. A Wikipedia entry is often found at or near the top of the list of sources found, and many students will be familiar with this resource. There is no problem in using Wikipedia as one of your sources — so long as you remember that it is not always reliable, and any information gathered from Wikipedia should always be checked against another source to make sure it is accurate. To help ensure that your information is correct, it is a good idea to use at least two sources to answer each question.

Keep your questions beside you as you read each source, and note the location of material that provides answers. You can select and print some text, and then highlight those sentences or paragraphs that provide answers to your questions. Sometimes a complete answer to a question may be found in several places in a piece of text. Be sure to highlight all relevant text, and indicate with a number which question the information answers.

When you are satisfied that you have found the answers to all the questions, you need to write the answers in order, making sure to use your own words as much as possible. You can then use the answers to present your information in the required form. This may be a report to the rest of the class, an essay to be marked by your teacher, a PowerPoint or Keynote presentation, or any other format that is appropriate.

21.5.3 Let me do it

Complete the following activities to practise this skill.

21.5 ACTIVITIES

- 1. Using the process modelled in **FIGURE 1**, devise a series of questions and carry out the research to produce a report on the following two key questions: 'In Australia, the state of Victoria has brought in a Charter of Human Rights and Responsibilities, and the Australian Capital Territory has a bill of rights known as the Human Rights Act. Select one of these and prepare a report explaining (1) what rights are protected by the bill or charter you have selected; and (2) what actions can be taken by a person to protect his or her rights under that bill or charter.'
- 2. Did you follow the steps in the research process? Discuss how segmenting the problem assisted you in solving the problem.

21.9 SkillBuilder: Communication and reflection

21.9.1 Tell me

An advertisement is designed to convince individuals or groups of people to take particular action. Most advertising we see is aimed at encouraging us to buy particular products, but advertising can also be used to encourage people to take action on a political issue.

A good advertisement:

- is designed to attract attention
- uses bold colours and simple images
- provides key information in bold print
- uses recognisable symbols and logos
- provides reasons for action
- makes use of simple, easy-to-read language.

An advertisement that aims to encourage participation in a democratic activity should include all these features.

21.9.2 Show me

On 23 October 2018, over 150 000 unionists and their supporters rallied in Melbourne in support of the ACTU 'Change the Rules' campaign. The campaign is aimed at improving pay and conditions for workers, specifically:

- a fair minimum wage
- the protection of penalty rates
- pay rises that reflect the cost of living
- equal pay for equal work
- better job security.

Several streets in the centre of the city were closed to traffic, and trams were diverted from Swanston St as protesters marched from the Trades Hall in Lygon St, Carlton to Flinders St Station. The ACTU vowed to continue to organise rallies and to make workers' pay and conditions an issue in the 2019 federal election.



The below poster was used to encourage workers and others to join the ACTU's 'Change the rules' campaign.

FIGURE 2 An advertisement to encourage people to support the ACTU 'Change the Rules' campaign



The advertisement has these features:

- The mood is very sombre, with dark colours in the background and an atmosphere of unhappiness. The
 mood of any advertisement can be serious and sombre, or very positive, depending on the nature of the
 message.
- The mother is attempting to comfort her child. Both are clearly very unhappy, and appear as victims. The mood of people in a poster or advertisement is significant. Happiness or sadness can be used, depending on the desired message.
- The clear message is that this is part of a family suffering because of poverty, resulting from low wages. It is important to use the image to relate to the campaign message.
- The white text in the middle stands out and conveys a simple message.
- The slogan 'Change the rules' reinforces the ACTU campaign message. Simple slogans can be very powerful campaign tools.
- The organisation behind the campaign, the trade union movement, is clearly identified at the bottom.

21.9.3 Let me do it

Complete the following activity to practise this skill.

21.9 ACTIVITY

Using the above model, design an advertisement to encourage more young people to enrol to vote before they turn 18. Your advertisement should contain the features discussed above.

21.13 SkillBuilder: Group consensus

21.13.1 Tell me

What is a group consensus?

A group consensus is when a collection of people work together to make a decision that is agreeable to everyone in the group. Consensus is reached by using a **democratic** process where every group member's perspective is listened to and understood. A decision is made after evaluating all options and respecting everyone's different perspectives.

Why is a group consensus useful in civics and citizenship?

Decisions made by a group of people are usually better than decisions made by someone working alone. Reaching a group consensus helps us to problem solve and appreciate different points of view. Consensus is used in many areas of civics and citizenship. In parliament, consensus is reached when a Bill is passed through both houses. In a legal trial, jurors will need to reach consensus when they decide on the facts of a case.

21.13.2 Show me

How to reach a group consensus

You will need:

- a sheet of lined paper
- a pen
- three to four people
- a problem or an issue to solve.

Procedure

Step 1

Form a team of three or four people. Decide how your group will finalise a decision. Will you require unanimous support for a decision or will you vote? If you vote, is a simple majority all that is required?

Step 2

Outline what needs to be decided. Clearly state the issue so that everyone in the group understands it.

Step 3

Discuss the problem with the group. Allow everyone to express his or her opinion and make suggestions.

Step 4

Make a list of solutions that include everyone's suggestions.

Step 5

Discuss the advantages and disadvantages of each solution.

Step 6

Select the best solution, based on the discussion. This could be a unanimous decision or a vote. Consensus does not necessarily mean that everyone agrees with the final decision, but that everyone feels they can support the group's decision.

Step 7

Implement the group's decision. This might mean writing it down and presenting it to the rest of the class.

CASE STUDY: Find the crime

Yohan was caught by the police after he allegedly broke into an antique store. The owners of the store, who live next door, were woken up by loud banging to discover a man trying to open their safe. They chased him away and called the police. A police dog tracked the man down in a nearby park after police surrounded the area. Yohan was arrested and taken away for questioning. He has been charged and summoned to appear in court.

FIGURE 1 What crime has been committed?

Decide if a crime was committed

A group might look at this case study and decide that it involves a criminal action. Discussion might focus on what crime was actually committed. Was it breaking and entering, trespass or robbery? Someone in the group might point out that nothing was actually stolen. Yohan was trespassing, however, and he did break into the shop. The group might agree that Yohan could be charged with trespass and breaking and entering, or they might vote on each charge.

Decide if the defendant is guilty or not guilty

The group will now need to come to an agreement about whether or not they think the defendant is guilty or not guilty. A discussion would be held looking at the facts of the case. Someone in the group might claim that the fact that Yohan was found in the park after the police dog tracked his scent there is proof that he is guilty. Someone else might argue that this could easily be a case of mistaken identity. After discussing all possible solutions, the group will make a decision either by unanimous agreement (where everyone is in agreement) or by taking a vote. The group might decide that Yohan is guilty of both trespass and of breaking and entering. One person in the group might disagree with the final decision, believing that Yohan should be charged with robbery and not with breaking and entering, but everyone else believes that they can live with the decision.

Elements of a good group consensus

A good group consensus:

- clearly identifies what needs to be decided
- allows everyone to express his or her opinion and make suggestions
- discusses the advantages and disadvantages of possible solutions
- chooses a solution that everyone can support.

21.13.3 Let me do it

Complete the following activities to practise this skill.

21.13 ACTIVITY

Consider the following case studies:

- Case 1 Fred is talking to Bob over the back fence about his tomatoes and calls him a silly old fool.
 No-one else hears the comment.
- Case 2 Phil is found asleep in the driver's seat of his parked car by a police patrol. He has been drinking heavily.
- Case 3 Masako holds a black belt in karate. When stopped by a would-be mugger intent on robbery, she
 kicks the robber and breaks his arm.

- Case 4 Petros likes to take a shortcut to work by cutting through Karen's vacant corner block of land. He
 has been doing this for over five years.
- Case 5 Wayne is a spectator at a football match. On seeing a bad error of judgement by umpire Thompson, he verbally abuses Thompson in a loud and clear voice.
- Case 6 Daniel gets involved in an argument with Martin. He becomes so angry that he threatens to punch Martin on the nose. Martin believes that he means it.
- Case 7 While digging a garden in her backyard, Rachel breaks a water pipe and floods Mrs Paize's henhouse next door, drowning her prize rooster.
- Case 8 Nerida's house has been burgled several times. She sets a trap and shoots Tom as he enters
 with the intent to burgle again.
 - (a) Working in groups of three or four, choose one of the case studies. Decide whether the case involves a criminal action, a civil action (or perhaps both), or even no action at all. State the crime or the civil wrong that you think is involved. (Use the crimes and civil wrongs listed in subtopic 21.12 as a guide.)
 - (b) As a group, come to an agreement about whether or not you think the defendant is guilty or not guilty, or liable or not liable.
 - (c) Explain your decisions to the rest of the class, outlining how you reached a consensus on those decisions.
 - (d) How did you make decisions in your group? Did everyone contribute equally?
 - (e) How democratic were your group decisions? Did someone take charge while others stayed silent? Did everyone start by contributing ideas before someone with a more dominant personality won out?
 - (f) In your opinion, what does reaching a consensus mean?
 - (g) How easy was it to come to consensus in your group? Discuss what your group did well and what could have been done to improve decision making in your group. Examine the values and beliefs of members of your group; were they different or similar to those of your own?

21.15 Thinking Big research project: A bill of rights for Australia?

Scenario

Many countries throughout the world have a bill of rights or charter of rights to protect the human rights and freedoms of their citizens. In fact, Australia is one of the few western democracies that does not have such a bill or charter. Britain, the United States, Canada and New Zealand are countries we would say have similar democratic systems to us, and all have this type of protection. A bill of rights can be part of a country's constitution, in which case it can be quite difficult to change; or it can be legislation passed by a parliament, which can be changed by that



parliament at any time, provided the changes are supported by a majority of members of that parliament. The United States Bill of Rights became part of that country's constitution in 1791. Most people say that a constitutional bill of rights would better protect the rights of citizens because it cannot be changed by politicians. The Australian states of Victoria and Queensland, as well as the Australian Capital Territory have all introduced legislated charters of rights.

Task

The government is considering creating a bill of rights for Australia, but many citizens don't know what that means. Your task is to find out what a bill or charter of rights is, and how it protects people's rights and freedoms. This will involve investigating bills or charters of rights in one or more overseas countries, as well as examining Australian state versions. You should then present your findings in an informative way to help people understand what a bill of rights will mean for Australia.

Follow the steps detailed in the **Process** section to complete this task.





Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in pairs or small groups will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the **Media centre** you will find an assessment rubric to guide your work.
- You should research the bill or charter of rights from one of the below countries:
 - Britain
 - The United states
 - Canada
 - New Zealand.
- Gather information to answer the following questions:
 - 1. What is a bill of rights?
 - 2. What is a charter of rights?
 - 3. What are the main differences between a bill of rights and a charter of rights?
 - 4. What is one major country that has a bill or charter of rights?
 - 5. How did that country get a bill or charter of rights?
 - 6. What rights or freedoms does that bill or charter protect (for example, freedom of speech; freedom of association)?
 - 7. Can those rights be easily taken away by a government repealing them? Or are they rights protected by a constitution, and need a more difficult process to be changed?

- 8. What can people do if they think their rights under that bill or charter have been affected by the actions of the government or someone else?
- 9. How well does the bill or charter work? Are there any examples of occasions when someone has successfully taken legal action to protect his or her rights?
- 10. In Australia, the state of Victoria has brought in a Charter of Human Rights and Responsibilities. Explain what rights are protected by that charter.
- 11. What actions can be taken by a person to protect his or her rights under that charter?
- You can easily find information about bills and charters of rights in different countries through the usual search engines. Make use of more than one source for each area of research and list all sources at the end of your report.
- Present your report using a layout and language that will be easily understood by Australians of all ages and backgrounds. Images can help to add interest and context to your report.
- Submit your report to your teacher for assessment and feedback.



Resources



ProjectsPLUS A bill of rights for Australia? (pro-0176)

21.16 Review

21.16.1 Key knowledge summary

21.2 Protecting our rights and freedoms

- The Constitution guarantees certain democratic rights, such as the right to directly elect members of parliament, and a requirement that elections must be held every three years.
- The Constitution also contains five express rights, including freedom of religion and a right of free trade between the states.
- Federal and state parliaments have also passed laws to promote equal opportunity and to make it illegal to discriminate against individuals.

21.3 Freedom of speech and other democratic freedoms

- The right of free speech is an important right but it is limited by the bounds of law.
- Freedom of association, freedom of assembly, freedom of movement and freedom of conscience are all important freedoms enjoyed in Australia. These are also limited by the bounds of law.

21.4 Dissent in a democracy and taking direct action

- In a democracy such as Australia, we all have the right to dissent against laws passed by parliament. We can express our dissent publicly and vote for political parties that promise to change those laws.
- Some groups and individuals attempt to influence parliament by taking direct action. This can include demonstrations and protest marches, as well as defiance of the law.

21.6 Taking part in the democratic process

- All citizens over the age of 18 have the right to vote in Australian elections, although they need to register to take full advantage of this right.
- Social media can be used to spread ideas and opinions, and to gain support for changes in the law.
- Participating in opinion polls allows us to have our views communicated to our members of parliament, and may influence some of their decisions.

21.7 The role of members of parliament

• Local members of parliament can assist individuals in their electorates, and can ensure that petitions from the voters are tabled in parliament.

21.8 Lobby and pressure groups

- Lobby groups attempt to influence members of parliament on behalf of businesses and other groups. They aim to have laws passed that favour the group they represent, or have laws changed if they disadvantage that group.
- Pressure groups are groups of people who try to influence public opinion on particular issues. They include groups such as environmental campaigners and trade unions.

21.10 How parliaments make laws

• Statute law (or an Act or legislation) must be passed through both houses of parliament in the form of a Bill, which must then be approved by the Crown.

21.11 How courts make laws

• Courts make laws because they interpret laws and make decisions to resolve the cases they are hearing, and in doing so create precedents that will be followed by other courts.

21.12 Criminal law and civil law

Criminal law protects the community as a whole. It incorporates crimes including robbery,
manslaughter and murder. The police or a representative of the government (the prosecution) takes the
accused (the defendant) to court. There, a consequence, such as a fine or imprisonment, may be
imposed.

• Civil law protects the private rights of individuals. It incorporates civil wrongs including negligence, defamation and breach of contract. A person who feels that a civil wrong has been done to him or herself (the plaintiff) will sue the other party (the defendant) in court to repair the harm caused, often seeking damages.

21.14 Customary law in Indigenous communities

Aboriginal and Torres Strait Islander customary law originated in the Dreaming and provides guidance
for how to behave and live. Disputes or incidents are resolved by the elders, who agree on an
appropriate solution or consequence.

21.16.2 Reflection

Complete the following to reflect on your learning.

21.16 ACTIVITIES

Revisit the inquiry question posed in the Overview:

How should Australians behave? Who made those rules and why should we follow them?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



Resources



eWorkbook Reflection (doc-31360)

Crossword (doc-31361)



Interactivity Rights, freedoms, democracy and the law crossword (int-7603)

KEY TERMS

accused the party in a criminal trial against whom an action has been brought

Act a law passed by Parliament

Bill a proposed law that has not yet been agreed to by parliament or received royal assent

breach of contract a situation where a legally binding agreement is not honoured by one or more of the parties to the contract

burden of proof the legal principle describing who has to prove a case in court. In a criminal trial, this burden is on the prosecution.

code of conduct a set of standards of behaviour that all participants are expected to follow

codified refers to laws that have been collected and organised, usually in written form

common law law developed by judges through the decisions of courts

conscription a process by which people are required to join the armed forces, even if they do not wish to do so **constitution** a set of rules that determines the structure of government and its law-making powers

Crown the Queen's authority in the Australian parliament, represented by the Governor-General at the federal level and a Governor at the state level

customary law guidelines for behaviour developed by and for Aboriginal and Torres Strait Islander peoples defamation unlawful damage to a person's good reputation through written or verbal statements

defendant the party in a civil trial against whom an action has been brought

democracy a form of government in which the people determine how they will be governed

democratic supporting democracy, or the system of government where supreme power is vested in the people and exercised directly by them or by their elected representatives under a free electoral system

electorate an area of Australia that elects one member to parliament

homicide the killing of one person by another person

jury in a criminal trial, a randomly selected group of people who decide the guilt or innocence of an accused person

laws the system of rules that Australia recognises as regulating the actions of its citizens, which it may enforce by the imposition of penalties and sanctions

legislation a law made by Parliament

liable legally responsible for a civil wrong

magistrate a court official who hears cases in the lowest court in the legal system

manslaughter the accidental or unintentional killing of one person by another person

negligence a situation where a person breaches a duty to exercise reasonable care to avoid a foreseeable risk, resulting in another person being injured or suffering a risk of injury

nuisance interference with someone's enjoyment of public or private property

Opposition the main political party in the lower house of parliament not in power

plaintiff the person who commences a legal action in civil law

precedent a legal principle developed by a court in the process of resolving a dispute

prosecute to take legal action against another person for a criminal offence

referendum a process of allowing the people to vote on an important issue, such as a proposed change to the Constitution

repeal to remove a law so that it no longer applies

right an entitlement to be treated in a particular way. A legal right is a right that can be enforced by law. standard of proof the level of proof required to establish a case. In criminal law, the prosecution must prove that the accused is guilty beyond reasonable doubt.

statute laws laws made by parliament

trade union an organisation of employees formed for mutual support, and to seek improvements in pay and working conditions for its members

transportation the process of sending convicts to a penal colony

trespass a tort (civil wrong) involving direct and intentional interference with a person, or a person's land or goods

22 Influences on Australian society and national identity

22.1 Overview

What does Australian society look like to the rest of the world? What events, people and beliefs shape our identity?

22.1.1 A diverse culture

Casual day is always an interesting event at a school. Given a day of freedom from their uniforms, students take the opportunity to demonstrate their identity through fashion. While many students simply choose their clothes for comfort or style, for others fashion is a deliberate statement. For these students, fashion indicates they are members of a particular social group. These groups provide students with a sense of belonging — a feeling that they are part of a larger community with shared values. A group's identity is how the members of that group present themselves to the rest of the world. In our casual day example, this representation occurs through fashion. If we extend this example of a group identity to an entire country, we will see many different representations of national identity.

In Australia, our national identity has always been complex. Our country is a diverse collection of nationalities and cultures. Because of this, isolating individual aspects of an Australian national identity is a challenging task. In this topic, we investigate Australia's national identity, how it was formed, how it continues to evolve and how it creates a sense of belonging for the people who call this country home. The diversity of religion, culture, values and traditions that people have brought to Australia has created a fascinating and intricate tapestry of identity.



LEARNING SEQUENCE 22.1 Overview 22.2 Traditional and changing views of Australian identity 22.3 Indigenous influences on Australian national identity 22.4 Belonging to a new country - migrant experiences online है 22.5 SkillBuilder: Delivering an oral presentation 22.6 Religion in Australia 22.7 The influence of religion on Australian society 22.8 SkillBuilder: Deconstruct/reconstruct method online ? on line है 22.9 Thinking Big research project: My family's identity online ? 22.10 Review To access a pre-test and starter questions and receive immediate, corrective feedback and sample responses to every question, select your learnON title at www.jacplus.com.au.

22.2 Traditional and changing views of Australian identity

22.2.1 What has influenced our national identity?

A singular Australian identity is hard to define. Since European settlement began, different countries have contributed aspects of their culture to form the multicultural identity we see in Australia today. Changes in Australian identity have been, and continue to be, reflected in our relationship with other countries. In colonial times, Australian identity closely mirrored that of Britain. When Australia moved away from British influence and towards the United States of America (directly after World War II), aspects of our national identity changed as well. Our identity now faces an interesting stage in its development as our focus turns toward our Asian neighbours. Australia's national identity continues to evolve as people from a vast array of nations make their contributions to our diverse multicultural nation.

22.2.2 'We don't like cricket, we love it'

Love it or hate it, cricket is big part of Australian culture. Every weekend in summer, thousands of men, women and children around Australia hone their skills with the bat and ball. Yet how did this strange game find its way into our country?

Like many other aspects of Australian identity, our country's love of cricket is a legacy of our British roots. This connection was forged by early British settlers who introduced elements of their existing identity and traditions to their new Australian home. The British failed to understand or recognise the longstanding cultures of Aboriginal and Torres Strait Islander peoples. They simply ignored Indigenous identity and replaced it with their own. The British did so because they felt no connection to Indigenous culture. Introducing their own culture made them feel more comfortable in the new surroundings and increased their sense of belonging.

FIGURE 1 Children playing cricket in 1925 (left) and 2019 (right)





22.2.3 The mother country

The close relationship between Britain and Australia continued well into the twentieth century, despite federation in 1901. Evidence of the British influence on Australian identity can be seen in the culture, fashion and even foods that were popular at the time. Perhaps the clearest piece of evidence, however, was Australia's willingness to follow the 'mother country' into World War I. When that war began in 1914, British Australia was still a relatively young country. Without an official **foreign policy** of its own, Australia adopted the policies of Great Britain and also declared war on Germany.

Australia's involvement in World War I had an enormous influence on our national identity. This conflict saw the birth of the Anzac legend with its values of determination, sacrifice and mateship. These values

have now become cornerstones of Australian national identity. The British influences on Australia can also been seen in our adoption of the British Westminster system of parliament, or in the simple fact that the Queen is still Australia's official head of state.

22.2.4 Diversity in Australia

After World War II, Australia's relationship with foreign countries changed as we lessened our political connections with Britain. Though formal ties with the mother country were maintained, Australia sought to strengthen its alliance with the United States of America. This new direction was shown in Australia's willingness to support America in a number of global conflicts including the Korean and Vietnam wars. American popular culture also began replacing that of the British, with new genres of music, fashion and cinema introduced into Australian society.

Changes in Australian identity are reflected in changes to our government's foreign policy. Australia's foreign policy has recently changed again, this time with a focus on closer relationships with China, Japan and other Asian countries. An example of this policy change was the removal of the White Australia policy, formally known as The Immigration Restriction Act of 1901. This policy blocked all non-European immigration to Australia. It was gradually phased out in the second half of the twentieth century. The gradual removal of Australia's White Australia policy has enabled these new relationships to develop. These changes can be seen in schools such as your own.





The option to study Asian languages in school is much more common now than it was in your parents' era. In their time, the study of languages still had a significant Eurocentric focus. You may study a language to allow you to communicate with people if you ever visit that country. However, knowing a language will also help you to communicate with people within your own country. In this way, the languages taught in schools say a lot about a country's identity and where it is heading. You may be learning Chinese at school, like many thousands of Australian students do today. Refer to FIGURE 4 to learn some new Chinese words, or review some you have already learned.



22.2 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

22.2 Exercise 1: Check your understanding

- 1. CS1 Why did the British feel the need to introduce their national identity to Australia?
- 2. CS1 Why is it so difficult to define Australian national identity?
- 3. CS2 During both the Korean and Vietnam wars, the people of Australia were under no direct threat or danger. Explain how Australia became involved in these conflicts.
- 4. CS1 List some aspects of Australian national identity that have British origins.
- 5. **CS1** What was the White Australia Policy?

22.2 Exercise 2: Apply your understanding

- 1. CS3 Look at FIGURE 2. Who do the lions in this poster represent?
- 2. CS5 How do you think Australian national identity will change in the next 50 years? For example, where do you think the next wave of immigration will come from?
- 3. CS6 Describe what being Australian means to you.
- 4. CS5 Do you think it is important for Australians to have one version of national identity?
- 5. CS2 Describe the ways that you demonstrate your own identity.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

22.3 Indigenous influences on Australian national identity

22.3.1 Making amends

The original inhabitants of Australia suffered greatly from the British colonisation of their country. Years of conflict, oppression, and injustice have caused ongoing pain and suffering for Indigenous peoples. In recent years, efforts have been made to mend the damage caused by previous governments. The **reconciliation** movement can be seen as an attempt to restore the importance of Indigenous culture in Australian society. Before we discuss how reconciliation contributes to Australian identity, we need to learn what reconciliation is and why it is necessary.

22.3.2 What went wrong?

Following the arrival of the British in 1788, the first interactions between Indigenous Australian peoples and the British were positive. However, relationships quickly deteriorated and conflict erupted. Using their vast resources and superior weaponry, the British expanded their settlements and violently pushed further into Aboriginal lands. The Indigenous owners of these lands saw these acts of aggression and defended themselves against the invasion of their lands and the killing of their people. A lack of understanding and respect for each other's culture fueled the Frontier Wars. However, this conflict was only the first event in a series of hardships inflicted on Indigenous Australian peoples by the British.

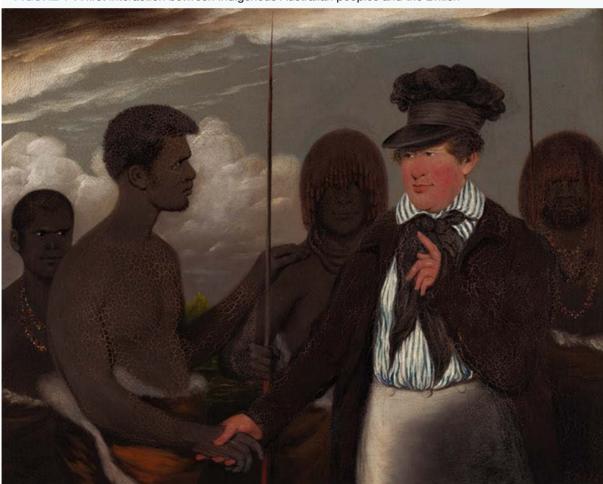


FIGURE 1 A first interaction between Indigenous Australian peoples and the British

The Stolen Generations

Can you imagine being forcibly taken from your parents as a young child, put into strange clothing, given strange food and told to never speak your language again? From as early as the 1860s, Indigenous and Torres Strait Islander children were forcibly removed from their homes and families by various Australian governments. Some historians argue that this program of removal had good intentions, and that the governments involved were motivated by the welfare of Aboriginal children. On the other side of the debate, historians claim child removal was a deliberate policy intended to weaken Aboriginal and Torres Strait Islander communities. Removed from their families, these children were also removed from their culture and identity. Children removed during this period of time have become known as the Stolen Generations.

Despite the reluctance of previous leaders, an official apology for this policy was eventually provided in 2008 by the then-prime minster, Kevin Rudd. It symbolised a major step in the journey towards reconciliation.

FIGURE 2 Homes were sought for these Aboriginal children after they were forcibly removed from their



Whose land is it?

One of the most important aspects of Indigenous culture and identity is their connection to the land. Representing the past, present and future of Indigenous Australian peoples, this relationship is deeply spiritual. Upon arriving in Australia, the British failed to officially recognise Indigenous land ownership. They claimed the land as their own using the concept of **terra nullius**. The subsequent battle for Indigenous land rights lasted more than 200 years. During this time, several legal actions were launched by Indigenous Australians with the goal of securing ownership of their traditional lands. This goal was finally reached in 1992 when the High Court of Australia officially rejected the concept of terra nullius, paving the way for Indigenous peoples to legally reclaim their land.

22.3.3 The path to reconciliation

As recently as the early twentieth century, Aboriginal people were not considered citizens of Australia. They could not vote in elections, and were not even counted in the population of the country when the census was taken. Over the next few decades, the rights of Indigenous people became increasingly important to all Australians. Their cause was assisted by other civil rights movements from around the world, which were also gaining popularity.

In 1948, Indigenous Australian people officially became British subjects and Australian citizens, although they were only granted

voting rights in 1962. Perhaps their most famous civil rights victory was the 1967 referendum, after which Indigenous Australian people were finally recognised as part of the population. The referendum was a

FIGURE 3 Indigenous land rights campaigner Eddie Mabo. In 1982, Mabo and four other Torres Strait Islander people took legal action claiming customary ownership of their lands on Murray Island.



formal statement announcing that Indigenous culture and Australian culture were one and the same. This event had a significant impact on Australian identity.

Reconciliation began as an official movement in 1991 with the formation of the Council for Aboriginal Reconciliation. The term 'reconciliation' refers to repairing the damage of past events through better understanding of, and respect for, Indigenous culture. Including 'Welcome to country' speeches and smoking ceremonies in public events are small-scale examples of what reconciliation looks like. Larger-scale examples include placing a higher priority on Indigenous health and education programs, and a focus on the welfare of Indigenous children. Symbolic acts such as the 2000 Sorry Day march, and the official apology to the Stolen Generations offered by former Prime Minister Kevin Rudd, are other significant steps along the path to reconciliation.

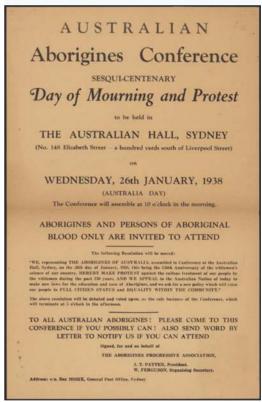
Serious offences were knowingly committed against Indigenous Australian peoples by a number of Australian governments. Our identity as Australians should not be shaped by our guilt for these actions. Instead, we should help mend the damage of the past by celebrating Indigenous culture and identity as our own. In doing so, we can also increase the sense of belonging felt by the Indigenous community.

22.3.4 Australia Day

The debate that surrounds the celebration of Australia Day provides another example of the complex nature of Australian national identity. Australia Day (currently celebrated on 26th January) is the official national day of Australia. This date commemorates the arrival of the ships of the First Fleet at Port Jackson, New South Wales in 1788. The first evidence of Australia Day celebrations comes from colonial New South Wales. Referred to as 'Foundation Day', Governor Lachlan Macquarie issued the first official observance of the date in 1818 – the thirtieth anniversary of the founding of the colony. Prior to 1888, the individual colonies celebrated their respective commemorative events on separate days. It was not until 1935 that all Australian states and territories officially adopted the term 'Australia Day' and it was only in 1994 that the date was marked by a national public holiday. As you can see, the celebration of this day is far from straightforward – even before we start to discuss the Indigenous perspective on Australia Day.

In modern Australia, our national day is celebrated in many different ways. Barbeques, concerts, community events and citizenship ceremonies are held on Australia day across the country. Some people argue that Australia Day is an opportunity to reflect on what makes our country unique and what it means to be Australian. Yet to many Australians, there is nothing about the 26th January that warrants celebration. To many Australians, this date marks the beginning of a brutal invasion.

FIGURE 4 On the sesquicentenary (150th anniversary) of British colonisation in 1938, the Australian Aboriginal Conference declared a 'national day of mourning'.



As we have just learned, the impacts of European settlement on the first peoples of this country were severe and long-lasting. For this reason, to Indigenous Australians the mere concept of celebrating Australia's official national day on the anniversary of European settlement is flawed. The first official Indigenous response to Australia Day celebrations occurred in 1938 with the National Day of Mourning. Organised by Indigenous rights groups, this event was heavily publicised and is seen by many historians as the beginnings of the Indigenous civil rights movement. Day of Mourning protests have been held ever since, with more recent events using the names Invasion Day or Survival Day.

In recent years, there have been calls from both Indigenous and non-Indigenous Australians to change the date of Australia Day. It is not that these people are against celebrating an Australian national day. Instead, they want to celebrate Australian culture and identity on a date that has a more positive meaning for all Australians

DISCUSS

As a class, discuss the issue of celebrating Australia Day on a different day of the year. How might different people around the country react? What would be any positives and negatives of making this change?

[Intercultural Capability]



Weblinks Indigenous rights movement timeline National apology

22.3 ACTIVITIES

1. Use the Indigenous rights movement timeline weblink in the Resources tab or your own internet research to create a timeline of the major events that occurred in the process of reconciliation.

Reasoning, creating, proposing

2. Use the National apology weblink in the Resources tab to watch the video of Prime Minister Kevin Rudd's apology to the Stolen Generations. Imagine you are the relative of a member of the Stolen Generations and write a brief response to this speech. Communicating, reflecting

22.3 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

22.3 Exercise 1: Check your understanding

- 1. CS1 Why did the relationship between British settlers and Indigenous Australians turn sour?
- 2. CS1 Who were the Stolen Generations?
- 3. CS1 How did declaring terra nullius allow the British to claim the land of Australia?
- 4. CS1 What is reconciliation?
- CS1 Explain the origins of Australia Day.

22.3 Exercise 2: Apply your understanding

- 1. CS2 Explain why Indigenous Australians oppose Australia Day being celebrated on the 26th of January.
- 2. CS4 Which of the following do you believe was most important to Indigenous Australians?
 - A. Becoming citizens in 1948
 - B. Being given federal voting rights in 1962
 - C. Being included in the population count in 1967
- 3. CS5 Suggest an alternative date for Australia Day. Explain why you chose that date and what significance it has in Australian history.
- 4. CS3 Compare the intentions of the government's child removal policy with the impacts that it caused.
- 5. CS3 Why was the High Court's rejection of terra nullius such a significant event for Indigenous Australians?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

22.4 Belonging to a new country — migrant experiences

22.4.1 Seeking a better life

Consider what you would do for the sake of your family. Now, consider what you wouldn't do for the sake of your family. It is a sad truth that, every day around the world, families encounter terrible problems. Some are faced with hunger, poverty and disease; others must deal with violence, brutality and fear; and some are confronted with all of these challenges. Many families in these situations choose to leave their countries or traditional homelands in favour of the peace and freedom offered in Australia. Throughout Australian history, people from nearly every nation in the world have relocated to this diverse country in search of new opportunities. The experiences of these migrants is discussed in this section.

FIGURE 1 A Vietnamese brother and sister arriving in Australia. 1974



22.4.2 Migrant identity

Migrants are forced to adapt to the national identity of their new homes quickly. This is something they need to do without losing their connection to their own identity. In this way, their sense of **belonging** is split in two. Migrant groups cannot live separately from the new laws, customs and language of their adopted country, but neither can they forget the elements of their original culture and identity. Australia's well-established tradition of acceptance and diversity makes balancing these identities easier for new migrants. As they celebrate their existing identity, migrant groups also reinforce Australia's multicultural

identity. This helps new migrants to feel a sense of belonging to both their old and new communities.

As well as feeling emotionally connected to their old and new countries, migrants can officially be part of both countries through dual citizenship, which is offered in Australia among many other countries. Holders of dual citizenship have legal and moral responsibilities in both countries. These responsibilities include voting in elections. For example, a person who lives in Australia can be both a citizen of Australia and Greece. This person is required to vote in both Australian and Greek elections.

The federal government does not have statistics regarding the number of dual citizens, although it estimates the figure to be around 4 million Australians. Dual citizenship is another way in which people can maintain a sense of belonging to two separate nations and cultures.

FIGURE 2 Migrants must balance two cultures: their own and that of their adopted country.



22.4 ACTIVITY

The best way to learn about the challenges faced by Australian migrants is to read and listen to their experiences. Many fascinating stories from a diverse range of migrants can be found online. Read articles and watch video clips to get a more complete understanding of the challenges migrants have faced. Have a pen and paper handy while looking at this material to note down any information you find interesting or any areas you want to investigate further.

[Intercultural Capability]

22.4 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

22.4 Exercise 1: Check your understanding

- 1. CS1 What is a migrant?
- 2. CS1 What is dual citizenship?
- 3. CS2 How can dual citizenship influence a person's sense of national identity?
- 4. CS2 Why is it important for people to feel a sense of belonging to their country?
- 5. CS1 What general responsibilities do citizens of a country have?

22.4 Exercise 2: Apply your understanding

- 1. CS5 'New migrants should abandon their existing national identity and adopt that of their new country.' Do you agree or disagree with this statement? Why?
- CS6 Do you believe all people, regardless of the reason, should be allowed to migrate to Australia? Justify your answer.
- 3. **CS5** Imagine you had migrated to Australia from another country and had dual citizenship. If you were forced to renounce your citizenship of one country, which one might you choose? List some of the factors you would have to consider for both sides.
- 4. CS2 What are the main reasons why people migrate to Australia?
- 5. CS6 What advice would you give to new Australian migrants?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

22.5 SkillBuilder: Delivering an oral presentation

What is an oral presentation?

An oral presentation involves giving a speech and using visual aids to deliver material on a particular subject to an audience.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it).



22.6 Religion in Australia

22.6.1 Religious influences in Australia

The place of religion in Australian society is complex. Our country is secular and by law, there is a distinction between religion and government. No government is allowed to actively promote a particular religion over another. Yet, the influence of religion in Australian society is significant. Religion has had, and continues to have, an influence on our culture, traditions and values.

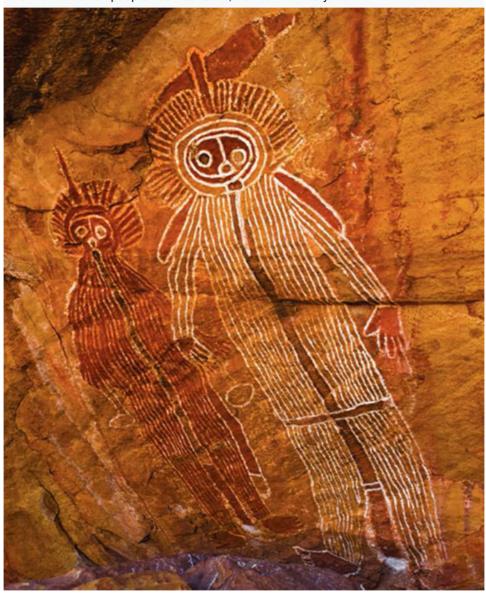


FIGURE 1 Aboriginal rock paintings for the *Lightning Brothers*, who are gods sacred to the Wardaman people near Katherine, Northern Territory

Since European settlement of Australia, Christianity has been the dominant religion of our country. Before this time, Indigenous Australian peoples worshipped various deities and had a deep spiritual connection to the natural world through their teachings from the Dreaming. As the European influence over Australia spread, so too did that of religion. In this subtopic, we will take a closer look at religion in Australia and how religious observance influences Australian various aspects of our society and culture.

22.6.2 Origins of Christianity in Australia

Unfortunately for historians, convict records did not document their religion. The information we do have about the religious affiliations of convicts and colonial Australians comes mainly from secondary sources. Despite this limitation, we can still use the information we have to discuss the origins of Judeo-Christian religion in Australia.

The vast majority of convicts and official members of the First Fleet identified themselves as Christian. Specifically, they were Anglican and therefore aligned with the Church of England. So strong was their connection to the Church that all public servants swore an oath to follow its doctrines. There was also a small number of Irish-Catholic convicts on the First Fleet and this **denomination** provided the main alternative to the Church of England. The popularity of Catholicism increased as transportation to the colonies continued. The First Fleet also contained **practitioners** of other religions such as Judaism.

FIGURE 2 St James' Church, Sydney (1856), was an Anglican Church built with convict labour.

FIGURE 3 A government jail gang (1830), by Augustus Earle. The vast majority of convicts were Christian.

AGOVERNMENT JAIL CANC.
Sydney N. S. Wales.

22.6.3 Immigration and religion

Many changes in Australian society and culture can be linked to immigration patterns. These may be superficial changes such as the rise in popularity of a particular cuisine, or they can be more meaningful such as the rise in popularity of a religion. Throughout Australia's immigration history, new migrants have brought with them the culture and religion of their homelands.

The intertwined relationship between immigration and religion can be seen throughout Australia's history. Since the first European

FIGURE 4 The *Hougoumont* was the last convict ship to land in Australia.



occupation in 1788, new migrant groups have influenced religious observance in Australia. As we have already learned, Christianity and its many denominations were first introduced to Australia by convicts and colonial settlers. Today, 52.1 per cent of Australians identify as being Christian.

The introduction of other religions to Australia has followed various immigration trends, which we will now examine.

Judaism

Together with Christianity, Judaism was one of the first religions practised in colonial Australia. Approximately 8 to 16 convicts on the First Fleet were Jewish, and the first Jewish free settlers arrived in the early nineteenth century. The number of Jewish immigrants continued to increase, with the majority initially coming from Britain and later from Germany. In 1844, the first Australian synagogue was built in Sydney (see FIGURE 5), with places of worship in Hobart, Melbourne and Adelaide soon to follow. As with many migrant groups, the Jewish population in Australia increased during the gold rush. However, the biggest period of Jewish immigration occurred during

FIGURE 5 The first synagogue in Australia, York Street, New South Wales (1844). It is shown in the far left of the painting.



and directly after World War II. Australia was one of the main destinations for Jews fleeing the atrocities of Nazi Germany. In fact, outside of Israel, Melbourne has the largest per capita population of Holocaust survivors in the world. Today, Australian Jewish communities are small yet vibrant; 0.4 per cent of all Australians identify themselves as Jewish.

Buddhism

The first Buddhists in Australia were Chinese immigrants who arrived during the gold rush. Although many of these people returned home after the mines were exhausted, some remained in Australia and continued to actively practise Buddhism. A second wave of early Buddhist immigration occurred in the 1870s with Sri Lankan nationals arriving to work in the sugar plantations of northern Queensland. Permanent Buddhist communities were established during this time, but it was not until nearly a hundred years later that the popularity of Buddhism began to explode. From the 1970s, Australia witnessed huge increases

FIGURE 6 The Nan Tien Temple in Wollongong, New South Wales



in Asian immigration and many of these new immigrants followed Buddhism. In contemporary Australia, Buddhism is our country's fastest-growing religion with 2.4 per cent of Australians practising this religion.

Islam

It is likely that Australia has been known to the Islamic world for hundreds of vears. There is evidence to suggest that Islamic scholars knew about Australia as early as 820 CE! We know for certain that Indigenous Australian peoples traded with the Macassans (from what is now Indonesia) who had converted to Islam in the seventeenth century. While there are records of a small number of Islamic convicts, the main period of Islamic immigration occurred with the arrival of the Afghan cameleers in the 1860s. With their expert knowledge of desert conditions, the cameleers were heavily involved in major construction projects across rural Australia. Despite its

FIGURE 7 A camel being lifted off a boat in Port Augusta, South Australia, in 1920



early success, Muslim immigration was severely restricted by the **White Australia** policy of the twentieth century. Since the official removal of this policy in 1973, Muslim immigration and the practice of Islam have steadily increased in Australia. Today, approximately 2.6 per cent of Australia's population is Muslim.

Hinduism

Hinduism is the oldest major religion in the world and has been practised for more than 5000 years. Hinduism in Australia, however, only began in the mid-nineteenth century. Although there is evidence of Hindu crews trading with the First Fleet, the first major period of Hindu immigration occurred well after the Australian colony was established. Hindu immigrants undertook several roles in early Australian society — as labourers, camel drivers, domestic staff and merchants. By 1911, there were over 1000 people in Australia who were affiliated with the Hindu faith. However, as with Islam, the growth of Hinduism in Australia was stalled by the White Australia policy. Today, Hinduism is a popular religion especially among Indian, Sri Lanka, Fijian and South African immigrants. According to the 2016 Australian census, Hindu practitioners accounted for 1.9 per cent of the population.

Atheism

Religion is not a significant part of life for all Australians. An atheist is someone who does not believe in the existence of god and, therefore, believes there is no need for religion. Approximately 30.1 per cent of Australians describe themselves as being atheists or as having no religion. It is interesting to note that this figure has nearly doubled since the last Australian census in 2011. This suggests that for many Australians, the importance of religion in everyday life is changing.

22.6 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

22.6 Exercise 1: Check your understanding

- 1. CS1 Before European settlement, what religion did Indigenous Australians follow?
- 2. **CS1** We know a lot about each individual convict from records that were kept. What piece of relevant information was not recorded?
- 3. CS1 When did the largest period of Jewish immigration take place?

- 4. CS1 There were two early waves of Buddhist immigration. During the first, Chinese migrants came to seek their fortune in the goldfields. Where did Sri Lankan Buddhists work upon their arrival?
- 5. CS2 How has the percentage of people who identify as atheist changed over time?

22.6 Exercise 2: Apply your understanding

- 1. CS2 Explain how the White Australia policy influenced the expansion of Islam and Hinduism in Australia.
- 2. CS5 In this subtopic you will find the percentage of Australians who follow the religion being discussed. (For example, 2.6 per cent of Australians identify as being Muslim.) Use these percentages to create a graph of your choice showing the main religions followed by Australians today.
- 3. CS5 The number of Australians who call themselves atheists is increasing. Why do you think this is occurrina?
- 4. CS5 Should there be any restrictions placed on the practice of religions in Australia? Explain your answer.
- 5. CS5 Using the information in this subtopic, predict which religions will have the largest followings in 50 years' time. Justify your prediction.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

22.7 The influence of religion on Australian society 22.7.1 Religious values

According to our Constitution, Australia is a secular country. This means that our governments are not allowed to officially promote religious observance or affiliations. Despite this, religion has had (and continues to have) a major influence on Australian people and culture. Unfortunately, this influence has not always been positive. In this section, we will investigate the influence of Christian traditions, and religions in general, on our society.

Values and religion can play a similar role in society. Both provide a set of moral and ethical guidelines for people to follow. It is therefore not surprising that strong links exist between Australia's Christian traditions and our shared values. The value of **compassion** is just one example of this relationship. Judaism and Christianity both contain strong references to compassion. For Jews, the 'thirteen attributes of compassion' are the ways in which God controls the world. According to Christianity, Jesus Christ was 'the father of compassion' and lived his life by demonstrating this value. Understanding the religious origins of compassion allows us to see how Judeo-Christian traditions have influenced modern Australian society.

22.7.2 Religion and the law

Religion and Australian law have always been closely linked according to former High Court Judge Michael Kirby, He argues that 'our law ... was influenced by notions which were shared by Christian churches and belief' (interview on ABC Radio, 16 May 2012). Although there are no direct references to Christianity or its religious customs in Australian law, our legal system has been shaped by Christian values. For example, our criminal law forbids murder and theft, crimes that are condemned in the Ten Commandments. Australia's legal system attempts to provide all its citizens with fair and equal access to human rights. Caring for people in this way is also an element of the Christian tradition. More recently and controversially, these traditions have influenced the debate surrounding same-sex marriage. Although there is no official reference to Christianity in the documentation of the Australian Liberal Party, the party remained opposed to same-sex marriage until it was finally legalised in 2018. This is further evidence of the power that Australia's religious traditions can have over our laws.

22.7.3 Religion in daily life

Australia's Christian traditions are represented in many elements of daily life. One of the best examples of these influences can be seen in the opening hours of shops and businesses. It was not too long ago that Sunday trading was completely banned in Australia. As Sunday was the traditional day of rest for Christians, most businesses were not officially allowed to open. Only relatively recently has the ban on Sunday trading been lifted in most Australian states and territories. Tight restrictions, however, remain in place for religious public holidays such as Good Friday, Easter Monday and Christmas Day. The way in which these holidays are celebrated also shows the influence of religion on Australian society. Christmas decorations begin appearing in supermarkets and shopping centres as early as October. As soon as Christmas is over, these are replaced by Easter eggs and hot cross buns. These cultural items are further evidence of how religious traditions influence Australian life.

22.7.4 In the name of religion

It is an unfortunate truth that Australia's Christian traditions are also responsible for some darker moments in our history. In 1837, the British Parliament launched an inquiry into the treatment

FIGURE 1 Some shops and businesses still close on Sundays, a tradition that originates from the Jewish observance of the Sabbath on the seventh day of the week. Christian religions adopted this concept, but Sunday rather than Saturday became their day of rest and worship.



of Indigenous Australian peoples in the colonies. The result of this inquiry was the establishment of 'protectors' whose role it was to manage the welfare of Aboriginal people and communities. These protectors were usually Christian missionaries who attempted to 'civilise' Indigenous culture. This was done directly by introducing religious education or indirectly by imposing European ways of life. Though the intentions of these missionaries may have been good, their actions proved otherwise. Christian missionaries were responsible for separating many Indigenous people from their land, culture and families. This example illustrates how the impacts of Australia's Christian traditions have not always been positive.

DISCUSS

The influence of Australia's Judeo-Christian tradition is still present in many aspects of our society today. For example, it can be seen in our legal system, trading hours and religious public holidays such as Christmas Day. Discuss how these traditions or cultural practices influence your life. Has the influence of any of these traditions changed over time? [Intercultural Capability]

22.7 EXERCISES

Civics and Citizenship skills key: CS1 Remembering and understanding CS2 Describing and explaining CS3 Examining, analysing, interpreting CS4 Questioning and evaluating CS5 Reasoning, creating, proposing CS6 Communicating, reflecting

22.7 Exercise 1: Check your understanding

- 1. CS1 How are religion and values similar?
- 2. CS2 Describe how Judeo-Christian traditions have influenced the Australian legal system.

- 3. CS1 Why is Sunday trading only a recent addition to Australian life?
- 4. CS2 'Australia is a secular country.' Explain what is meant by this statement.
- 5. CS1 What was the intention of Christian missionaries who were active in nineteenth-century Australia?

22.7 Exercise 2: Apply your understanding

- 1. CS5 What if our Constitution did not protect our right to freedom of religion? Do you think this would have a good or bad effect? Explain your answer in detail.
- 2. CS5 Do you think that the government should be secular? Provide a justification for your point of view.
- 3. CS5 Identify and explain two positive impacts that religion has had on Australian society.
- 4. CS5 There are several restrictions placed on business on religious holidays such as Easter. Since not everyone in Australia observes these holidays, do you think these restrictions are fair? Why or why not?
- **5. CS2** How are religious freedoms protected by the law?

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

22.8 SkillBuilder: Deconstruct/reconstruct method

What is the deconstruct/reconstruct method?

The deconstruct/reconstruct method allows you to read information and then use it appropriately in your own work without plagiarising.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it).



22.9 Thinking Big research project: My family's identity

SCENARIO

Your task is to research your family's migration history. By developing interview questions and then conducting an interview with an older family member, you will gain a better understanding of your family's heritage and what their identity means to them and to your family.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- resources to guide your project work
- an assessment rubric.





on line $\frac{1}{5}$



projectsPLUS Thinking Big research project: My family's identity (pro-0177)

22.10 Review



22.12.1 Key knowledge summary

Use this dot point summary to review the content covered in this topic.

22.12.2 Reflection

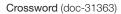
Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31362)





1 Interactivity Influences on Australian society and national identity crossword (int-7604)

KEY TERMS

affiliations close connections with a group or organisation

belonging the feeling of being part of a group or community with shared values

constitution a set of rules that determines the structure of government and its law-making powers

compassion feeling empathy towards someone in a less fortunate position

doctrine a collective teaching

denomination a separate branch of a religion. For example, Catholicism is a denomination of Christianity.

eurocentric a point of view that has a strong European focus

federation the process through which the six separate Australian colonies formed to join one united nation

foreign policy decisions made by governments concerning their relationships with other nations

Holocaust the destruction or loss of life on a large scale, usually referring to the death of 6 million Jews in Europe during World War II

land rights the rights of people (in this case Indigenous groups) to own the land their ancestors have lived on for generations

migrants people who leave one country to reside in another

practitioner in a religious sense, someone who actively participates in a religion

reconciliation the process of restoring and encouraging respect for Indigenous culture and identity

referendum a process of allowing the people to vote on an important issue, such as a proposed change to the Constitution

terra nullius 'land belonging to no-one'

transportation the process of sending convicts to a penal colony

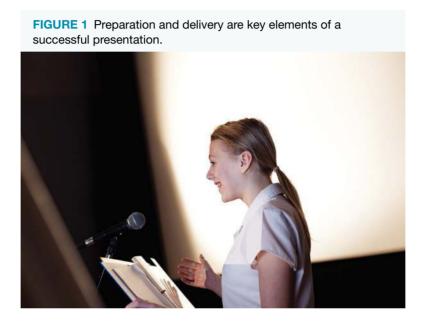
White Australia an immigration policy discriminating against non-white people which existed for much of the twentieth century

22.5 SkillBuilder: Delivering an oral presentation

22.5.1 Tell me

A successful oral presentation starts before a single word has been spoken:

- *Preparation*. You must research and plan your speech properly. Being organised and prepared will give you confidence in yourself and in your subject material.
- *Proper use of visual aids*. Are you going to use PowerPoint, Keynote or any other visual aids? If so, you need to consider how to use these tools properly. Avoid overloading your audience with a cluttered combination of visual and audio information.
- *Delivery*. The final key to a successful presentation is the delivery. Sustained eye contact and a confident, well-projected voice will help you deliver your intended message.



22.5.2 Show me

How to give an oral presentation

Preparation

The following table will help you plan the elements of your presentation:

| Purpose of presentation | To explain how to deliver successful oral presentations |
|-------------------------|--|
| | <u> </u> |
| Key message | That through proper practice and planning, students can overcome their potential fear of public speaking |
| Secondary message | Explain the elements of successful oral presentations: preparation — research and planning proper use of visual aids delivery — sustained eye contact and confident delivery of the speech. |

Proper use of visual aids

Visual information can add to your presentation. However, if used incorrectly, it can decrease the effectiveness and clarity of your message. Make sure that any visual aids serve a clear purpose. Do not commit any of the mistakes shown in the **How not to use PowerPoint** weblink in the Resources tab.

Delivery

The effectiveness of your speech often relates to the connection you make to your audience. Eye contact and a confident delivery of your speech are two ways to boost this connection. Sustained eye contact requires more than simply looking up from your notes every now and then. You need to make and hold eye contact with members of your audience. This will only be possible if you have practised your speech often and know the content extremely well. Sustained eye contact will also improve your delivery of the speech itself. Remember not to rush your speech, and be sure to explain your points clearly and carefully.

FIGURE 2 Speaking in public can be daunting, but try to connect with your audience even if you are feeling nervous.





Resources



Weblink How not to use PowerPoint

22.5.3 Let me do it

Complete the following activity to practise this skill.

22.5 ACTIVITY

You have just learned about the skills required to successfully deliver an oral presentation. Now it is time to put these skills into action by investigating the national identity of a nearby Asian country. Working either individually or in pairs, you will need to deliver a five-minute oral presentation in which you discuss your chosen country and how its national identity is displayed.

Draw up a table (similar to table 1) to help you prepare and plan your speech. Then use the procedure discussed in this SkillBuilder to ensure that your presentation is successful.

22.8 SkillBuilder: Deconstruct/reconstruct method

22.8.1 Tell me

Go on, admit it. At some stage in your school life, you've copied someone else's work. (Or if you haven't, you probably know someone who has.) Maybe it was just the answer to one question in a Science class, or perhaps it was part of a History assignment. Copying another person's work without acknowledging the author is plagiarism, whether it is copied from the student sitting next to you in class or from the article you found on the internet. For many students, the act of plagiarism occurs simply because they do not know how to read information and then use it appropriately in their own work. The deconstruct/reconstruct method teaches you how to do this.

22.8.2 Show me

The deconstruct/reconstruct method is a way to use existing information to create original work. This academic technique helps you better understand information and allows you to organise your thoughts more clearly. By implementing this strategy, you will create unique pieces

FIGURE 1 Copying someone else's work without acknowledging the author is plagiarism.



of writing that still have the same meaning as the articles and books you have read in your research.

There are three steps to the deconstruct/reconstruct method.

Step 1: Read

Make sure you read the entire source from start to end. There is no need to highlight or take notes during this stage. You want to simply read and take in the meaning of the author's work.

Step 2: Re-read

The more times you watch a movie, the better you can see the elements that the director wants you to see. Similarly, the more times you read a source, the better you can see the elements that the author wants you to see. When re-reading a source, you should use a table like the one shown below to help you collect information and organise your own thoughts. In the 'Quotes/facts' column, write only factual or statistical information. The 'Notes' section is for any ideas and questions that you might have after reading the quote. You can write this section in dot points or full sentences — whatever makes sense to you. You do not necessarily need to comment on each quote or fact you record; similarly, you may write notes that do not relate to a specific quote. Completing this section is crucial as these notes will form the basis of your writing.

| Quotes/facts | Notes |
|---|--|
| Factual informationDirect quotes from authors or other peopleStatistics | Ideas and questions you might think of while reading the source Dot points and/or whole sentences |

Let us use one of the paragraphs from this topic to practise the deconstruct/reconstruct method:

Hinduism is the oldest major religion in the world and has been practised for more than 5000 years. Hinduism in Australia, however, only began in the mid-nineteenth century. Although there is evidence of Hindu crews trading with the First Fleet, the first major period of Hindu immigration occurred well after the establishment of the Australian colonies. Hindu immigrants undertook several roles in early Australian

society — as labourers, camel drivers, domestic staff and merchants. By 1911, there were over 1000 people in Australia who were affiliated with the Hindu faith. However, as with Islam, the growth of Hinduism in Australia was negatively affected by the White Australia policy. Today, Hinduism is a popular religion especially among Indian, Sri Lanka, Fijian and South African immigrants. According to the 2016 Australian census, Hindu practitioners accounted for 1.9 per cent of the population.

This is what your table could look like:

| Quotes | Notes |
|---|--|
| Hinduism is 5000 years old. It began in Australia in the middle of the nineteenth century. | Hinduism was the world's first religion.Where did Hinduism begin?How old are the other religions mentioned in this section? |
| By 1911, there were over 1000 Hindus in Australia. | Australia had only a small Hindu population at the start of the twentieth century. Which state had the biggest population? Did they feel isolated in this small community? |
| Hindu immigrants undertook several roles in early Australian society. | Hindu immigrants had a number of different jobs in colonial Australia, many based on the environmental conditions of their home countries. |
| In 2016, 1.9 per cent of all Australians practised Hinduism. | How many people is this in total numbers? What factors have helped Hinduism grow so much in recent years? How does this growth rate compare to other religions? |

Step 3: Write

Put away the book, close the website page and rewrite what you have just read. The best way to do this is by using only the table that you created in step 2. The notes column should contain your own interpretation of what the author has said, and the quotes/facts column will provide the evidence you need to support your arguments and assumptions.

Once you have completed the table, you can use the information to create your original piece of writing. The paragraph below has been written using the information summarised in the practice table. Extra research has also been completed to answer some of the questions written in the notes column.

Some of the world's religions have been around for 5000 years. One of these long-standing religions is Hinduism. Although Hinduism is such an old religion, it began in Australia only during the mid-nineteenth century. Historically, Hindu communities have been small in size, with only about 1000 Australians identifying themselves as Hindu in 1911. Hindu immigrants had a number of different jobs in colonial Australia, many based on the environmental conditions of their home countries. At the most recent Australian census (2016), the total of Hindu practitioners was 440 300. This figure shows how much the religion has developed in Australia.

As you can see, the meaning of the paragraph created by the deconstruct/reconstruct method and the one upon which it is based is exactly the same. Both paragraphs discuss the early history of Hinduism in Australia, and both paragraphs use similar statistical information to support this discussion. However, because the deconstruct/reconstruct method has been used, the written text itself is completely different. The author has synthesised information and created an original piece of writing.

22.8.3 Let me do it

Complete the following activity to practise this skill.

22.8 ACTIVITY

Now that you have seen how the deconstruct/reconstruct method works, the time has come for you to practise this new skill. Choose any paragraph from this resource and apply the three steps of the process. Remember to set up the 'quotes and notes' table to help you record your own thoughts as well as any important information.

22.9 Thinking Big research project: My family's identity

Scenario

Modern Australia is characterised by multicultural composition of our population. According to the Australian Bureau of Statistics, our nation is now home to people from over 190 countries and 300 different ancestries. Migrants from other countries enrich Australian society by sharing their customs, traditions and beliefs. Australian identity is a complex combination of existing cultural practices and these new ways of life. In this way, migration is arguably the single most significant factor in the formation of the Australian nation and identity.



Task

Your task is to research your family's migration history. Unless your family has Aboriginal or Torres Strait Islander heritage, all Australians have been migrants to this country at some stage of their history (*Note:* if you do have Aboriginal or Torres Strait Islander heritage, you will still be able to complete this project). By developing interview questions and then conducting an interview with an older family member, you will gain a better understanding of your family's heritage and what their identity means to them and to your family.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project. Save your settings and the project will be launched.
- Navigate to the Research forum, where you will find starter topics loaded to guide your research. You
 can add further topics to the Research forum if you wish. When you have completed your research,
 you can print out the Research report in the Research forum to easily view all the information you
 have gathered.
- Your first step is to develop your interview questions. The best way to write an interview question is to think carefully about what it is that you want to discover. A basic list of questions could include:
 - Where does our family come from
 - Who were the first people in our family to migrate to Australia (and why did they come)?
 - When did our family arrive in Australia and how did they get here?
 - What was life like when you (they) first arrived in Australia?
 - How did you (they) demonstrate their identity then and how do you (they) demonstrate your identity now?

You can also add your own questions to this list.

Note: If your family does have Aboriginal and Torres Strait Islander heritage, then your interview could focus more on your own added questions.

- Once you have written your questions, organise a time to conduct your interview (this will have to be after school one day or on a weekend).
- Conduct your interview. Make sure you either record your interview or write comprehensive notes during the interview.

- Once you have completed your interview, you will need to present your findings to the class. The format you choose for this presentation is up to you. You can create a poster, Google Slide/PowerPoint or another form of multimedia presentation. Your presentation should provide a summary of your interview and should focus on the topic of Australian identity.
- As well as presenting the findings of your interview to the class, you will also need to submit your interview questions and notes to your teacher for feedback and assessment.





22.10 Review

22.10.1 Key knowledge summary

22.2 Traditional and changing views of Australian identity

- The diversity of Australian identity can be used to unify communities and create a sense of belonging.
- Religious traditions have influenced the society in which we live.

22.3 Indigenous influences on Australian national identity

- Proper understanding and respect for the culture and traditions of Indigenous Australians are important parts of modern Australian society.
- There is ongoing debate about the appropriateness of celebrating Australia's official national day on January 26, the anniversary of European settlement.

22.4 Belonging to a new country - migrant experiences

• Immigration has profoundly influenced the religious beliefs practised in Australia. Judaism, Buddhism, Islam, Hinduism and atheism are all practised in modern Australia.

22.6 Religion in Australia

• Australian society has been shaped by Christian traditions.

22.7 The influence of religion on Australian society

- Although section 116 of our Constitution prohibits the government from promoting or prohibiting religious activity, religious beliefs have shaped our laws and continue to do so.
- Religion in Australia continues to evolve and reflects demographic changes in Australian society.

22.10.2 Reflection

Complete the following to reflect on your learning.

22.10 ACTIVITIES

Revisit the inquiry question posed in the Overview:

What does Australian society look like to the rest of the world? What events, people and beliefs shape our identity?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.





eWorkbook Reflection (doc-31362)

Crossword (doc-31363)

Interactivity Influences on Australian society and national identity crossword (int-7604)

KEY TERMS

affiliations close connections with a group or organisation

belonging the feeling of being part of a group or community with shared values

constitution a set of rules that determines the structure of government and its law-making powers

compassion feeling empathy towards someone in a less fortunate position

doctrine a set of beliefs held and taught, usually by a religious group or political party

denomination a separate branch of a religion. For example, Catholicism is a denomination of Christianity.

eurocentric a point of view that has a strong European focus

federation the process through which the six separate Australian colonies formed to join one united nation **foreign policy** decisions made by governments concerning their relationships with other nations

Holocaust the destruction or loss of life on a large scale, usually referring to the death of 6 million Jews in Europe during World War II

land rights the rights of people (in this case Indigenous groups) to own the land their ancestors have lived on for generations

migrants people who leave one country to reside in another

practitioner in a religious sense, someone who actively participates in a religion

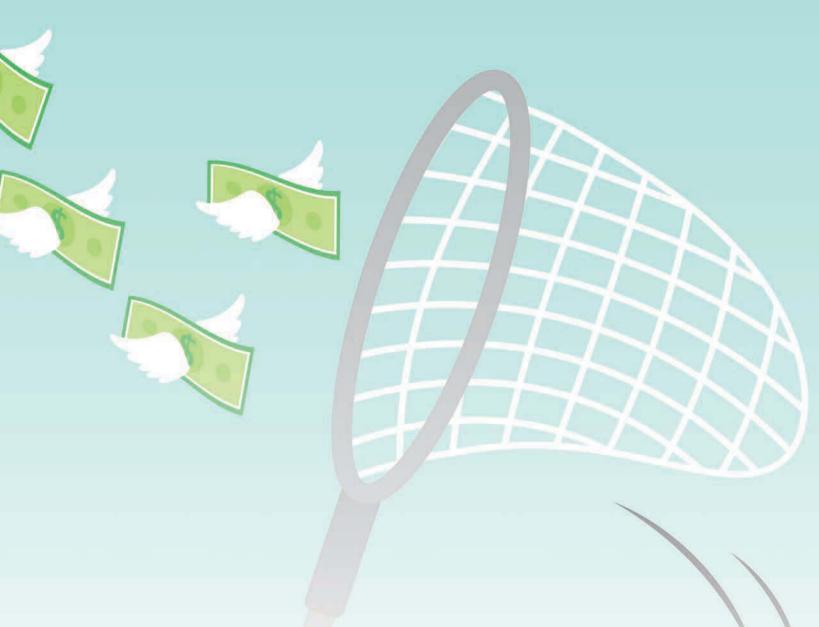
reconciliation the process of restoring and encouraging respect for Indigenous culture and identity **referendum** a process of allowing the people to vote on an important issue, such as a proposed change to the Constitution

terra nullius 'land belonging to no-one'

transportation the process of sending convicts to a penal colony

White Australia an immigration policy discriminating against non-white people which existed for much of the twentieth century

ECONOMICS AND BUSINESS



805

845

864

23 The market system, government, and consumer protection

Business decisions

The changing work environment

23 The market system, government, and consumer protection

23.1 Overview

We all play a part in the Australian economy. How do we ensure that everyone involved is getting a fair deal?

23.1.1 The Australian economy

The Australian economy is the total of all activities undertaken for the purpose of producing, distributing and consuming the goods and services we require to satisfy our needs and wants.

As consumers, we all hope to earn the income necessary to purchase our needs and many of our wants. We would like a fair go when dealing with businesses and we would like to know our rights, but we should recognise that some business owners and employees fail the fairness test when it comes to serving their customers. This is where we need the government to provide a legal and justice system so that buying and selling occurs within a set of rules that is fair to all participants.

In this topic, we will examine Australia's economic system, the activities of producing, distributing and consuming the goods and services we require to satisfy our needs and wants, and the protections available to consumers in their dealings with businesses.



LEARNING SEQUENCE 23.1 Overview 23.2 Participants in the market system 23.3 Different types of markets 23.4 Key economic questions for business 23.5 Government involvement in the market on line 23.6 SkillBuilder: Contesting and debating ideas 23.7 Legal protection of consumer rights 23.8 Business competition protects consumers 23.9 Keeping consumers safe on line 23.10 SkillBuilder: Questioning and research on line 23.11 Thinking Big research project: Please stop calling online है To access a pre-test and starter questions and receive immediate feedback and sample responses to every

question, select your learnON format at www.jacplus.com.au.

23.2 Participants in the market system

23.2.1 Consumers and producers

Markets refer to places where buyers (consumers) and sellers (producers) meet and exchange goods and services. Producers provide the goods and services and consumers purchase them. Markets need not have a physical location – online shopping have created markets in cyberspace but for most of us, the exchange of money for goods and services takes place in a physical setting – a shop or supermarket or market stall.

Consumers and producers are at the centre of Australia's market system. All of us are consumers, and those of us who are employed are also producers. We satisfy our needs and wants by working to earn money, and then buying goods and services from businesses that

FIGURE 1 People who are employed are considered to be producers.

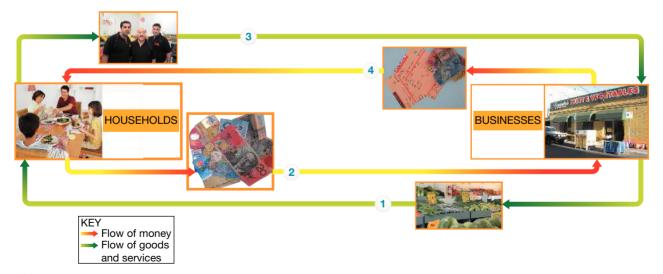


produce those goods and services. When we are working, we are providing our **labour** to contribute to the process of producing goods or services for other consumers to buy. When we are spending our money, we are consumers, purchasing goods and services that others have produced, in order to satisfy our needs and wants.

The total of all consumers in the economy is sometimes called the **household sector**. The total of all producers is sometimes known as the *business sector*.

We can examine the relationship between the business sector and the household sector by looking at the following model. It demonstrates how labour is exchanged for money, and how that money is used to purchase goods and services.

FIGURE 2 Model showing the flow of money, goods and services between households and businesses



- 1 Businesses are producers that make or supply goods and services that are distributed to customers.
- Consumers use money, credit cards and debit cards to purchase goods and services.
- 3 Consumers are usually also employees, who provide businesses with their labour in the production of goods and services.
- Employees receive money in the form of wages for their labour.

We can simplify this model by removing the flow of goods and services, and simply showing the flow of money between households and businesses. This tells us about the financial relationship between consumers and producers in our market system. Economists sometimes refer to this as the circular flow diagram, because it illustrates how money circulates in a simple market economy.

FIGURE 3 The circular flow of money between households and businesses in our market system

Payment of wages and salaries

Households

Businesses

Purchase of goods and services

23.2.2 The financial sector

Do you spend every cent you receive in pocket money or in return for any work you do, or do you set some aside as savings? While most people of your age don't save much, many others in the economy do put aside some of their income as savings. This money is usually deposited in a bank or similar **financial institution**.

Banks and other financial institutions receive deposits, and use this money to lend out to others who need to borrow money. Most businesses will borrow money, particularly when they need to expand the business. This may involve buying new equipment, or even moving to bigger premises. Money spent in this way is known as **investment**. Financial institutions collect the savings of thousands of depositors, and then have large sums available for businesses to invest in growth.

FIGURE 4 Financial institutions are able to direct savings into investment in the growth of businesses.



These financial institutions make up what we sometimes call the *financial sector* of the economy. They perform an important role in our market system because they enable accumulated savings to be directed towards business growth. As businesses grow, they are able to employ more people, who in turn have more money to spend on goods and services.

DISCUSS

Are you a saver or are you a spender? Would you like to be able to save more money? What advantages do people who save their money have over those who spend their money? [Personal and Social Capability]

Banks and other financial institutions also play an important role in providing credit for households. When consumers make large purchases, such as a house or a car, it is usually easier to borrow the money to pay for these than to save up for years to pay cash for them. When purchasing a house or land, most people take out a **mortgage loan**. This enables them to borrow to pay for the property, and pay back the loan over a relatively long period of time. The housing market depends on the amount of money available for mortgage loans. If more people are able to buy houses, more new houses are built, creating more jobs in the construction industry.

We can see how the financial sector plays its role in the market system by adding financial intermediaries to our basic circular flow diagram. As we can see in **FIGURE 5**, banks and other financial intermediaries receive savings from households. They use this money to lend to businesses for investment, and they lend back to households in the form of credit.

FIGURE 5 The circular flow of money between households, businesses and financial intermediaries in our market system

Payment of wages and salaries

Businesses

Purchase of goods and services

Financial intermediaries

Investment

23.2.3 The government sector

Another element involved in the market system is the government. In Australia this refers to the federal government based in Canberra, state and territory governments based in capital cities, and local councils. As well as spending money on consumption and investing in savings, households and businesses pay money to government in the form of taxes and rates, and receive particular types of goods and services back from government. A detailed examination of the role of government can be found in subtopic 23.5. Government plays an important role in the market system for a number of reasons:

1. The level of taxation taken by government can affect the amount of money consumers have available to spend on goods and services. High levels of taxation can mean that consumers

FIGURE 6 When a government pays businesses to construct roads it helps those businesses to grow and employ more people.



- spend less, businesses cannot grow as quickly, and cannot employ as many people.
- 2. Money collected in taxes can be spent on providing welfare payments. These payments, in the form of pensions and unemployment benefits, allow many people to purchase more as consumers, providing more income to businesses, and creating more jobs as businesses grow.
- 3. Government also provides services such as schools and hospitals and these are paid for from taxes collected from both households and businesses.

4. When government spends money on building roads, schools and hospitals, it is providing money to the businesses that do the actual building, helping those businesses to grow and employ more people.

The involvement of government in our market system can be illustrated by adding government to our circular flow diagram. We can see in **FIGURE 7** that both households and businesses pay taxes to government. Some of this comes back to households in the form of welfare payments such as pensions, or as services such as education and health care. Some of it is spent on buying goods and services from businesses, or paying businesses to build roads, schools or hospitals.

FIGURE 7 The circular flow of money between households, businesses, financial intermediaries and government in our market system Welfare & Government other Government spending services **Taxes Taxes** Payment of wages and salaries Households Businesses Purchase of goods and services Credit Financial sector Investment Savings

23.2.4 The overseas sector

Australia is an open economy, in that we trade goods and services with other countries. Australian businesses export goods and services to both consumers and producers in other countries. Australian consumers buy many products that have been manufactured in other parts of the world and imported into this country.

International trade can affect our market system in a number of ways:

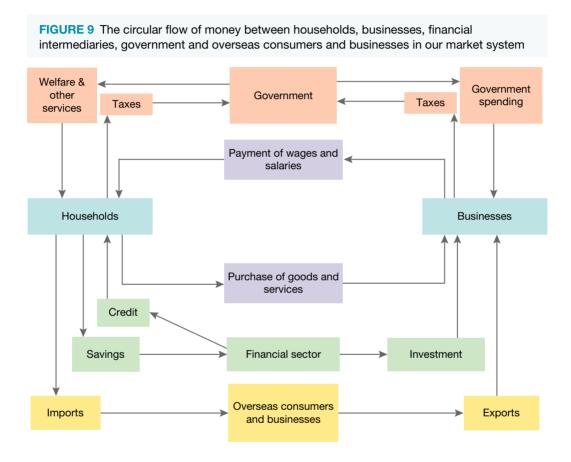
- 1. Australia has a relatively small population, so if overseas consumers are willing to buy the goods and services we produce, this can help our local businesses to grow and employ more people.
- 2. There are some products that we are unable to produce with the same efficiency as can be achieved in other countries. A lot of the highly sophisticated machinery used in factories is imported, helping the factory to produce goods more cheaply.

FIGURE 8 Australia imports many goods from overseas and exports to many other countries.



3. Imported goods are sometimes cheaper than locally produced goods, which can make it difficult for local producers to compete with the imported products. This can lead to local producers going out of business. The motor vehicle manufacturing industry is an example of an industry that has closed its Australian operations due to lower priced imported products. While local jobs are lost, consumers benefit from cheaper priced cars.

We can see the effects of overseas trade on the flow of money by adding overseas consumers and producers to our circular flow diagram. We can see in **FIGURE 9** that households spend money buying imports from overseas businesses, while businesses can earn money from exporting goods and services to overseas consumers. Exports are good for the Australian economy because they bring money into our market system, while imports take money out of the country and pay it to overseas businesses.



We can see that there are five main sectors involved in our market system: the household sector, business sector, financial sector, government sector and overseas sector. The circular flow diagram allows us to see the financial relationships between each of these sectors.

23.2 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

23.2 Exercise 1: Check your understanding

- **1. ES1** Define the following and provide an example of each:
 - (a) market

(b) labour

(c) household sector

- (d) business sector
- (e) financial sector
- (f) government sector

- (g) overseas sector.
- 2. ES2 Why is it possible for a person to be both a producer and a consumer?

- 3. ES2 How do financial institutions help markets to operate?
- 4. ES1 What is the difference between imports and exports?
- 5. ES2 Explain why taxes are considered a 'leakage' from our economic system.

23.2 Exercise 2: Apply your understanding

- 1. ES2 Explain one way in which a government can influence markets.
- 2. ES3 Examine the FIGURE 9 circular flow diagram and predict the impact that each of the following might have on the level of goods and services sold by Australian businesses.
 - (a) Households decide to save a larger proportion of their income.
 - (b) Financial institutions make it easier for consumers to acquire credit cards.
 - (c) Governments decide to increase the level of taxation for households.
 - (d) Governments increase the level of welfare payments.
 - (e) There is a large increase in the availability of cheaper imported goods.
- 3. ES2 Taxes and government spending are linked. Explain this relationship.
- 4. ES2 Exports and imports involve the overseas sector and trade. Explain why Australia needs to trade.
- 5. ES3 In 2019, interest rates were reduced to their lowest ever level. Analyse the impact this may have on investment by businesses and spending by consumers.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

23.3 Different types of markets

23.3.1 Retail, labour, financial and stock markets

As we have seen, a market exists in any situation where buyers and sellers come together to exchange goods and services for money. A market can exist in a single physical location, it can be spread across a number of locations, or can have no physical trading location at all, such as online retailing. It is the act of buying and selling, not the actual location, that creates the market. We will now look at a number of different markets that exist within the Australian economy: retail markets, labour markets, financial markets and stock markets.

23.3.2 Retail markets

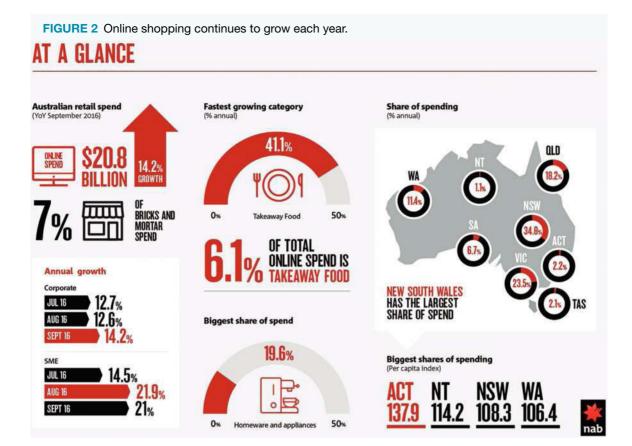
We are all very familiar with retail markets. These are the markets that allow us to buy most of our goods and services. They include:

- shopping areas in the central business districts (CBDs) of our large capital cities
- huge suburban shopping malls such as Chadstone in Melbourne, Westfield Parramatta in western Sydney and Chermside in northern Brisbane
- local shopping centres with a supermarket and a number of specialty stores
- shopping strips located along major roads and near public transport hubs
- the groups of shops gathered in the main streets of country towns and regional centres
- online shopping websites.

FIGURE 1 Large shopping malls provide a wide range of retail businesses.



Online shopping has become so popular that in 2016 it accounted for 7% of all household spending. It was valued at \$20.8 billion — a 14.2% increase on the previous year.

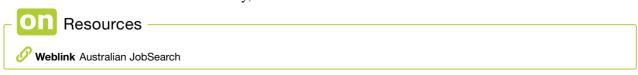


23.3.3 Labour markets

At any given time, there are people looking for a job. Some of them are unemployed and want to find work; while some of them already have a job but want to work for a new company or do different work. At the same time, many businesses are looking to employ people to work for them. Prospective employees are hoping to *sell* their labour to employers. Those employers wish to *buy* the skills and effort of suitable employees. This combination of buyers and sellers of labour constitutes the labour market.

Like many other markets, the labour market does not operate in a particular physical location. The labour market relies on a variety of means of communication between the sellers of labour (potential employees) and the buyers of labour (employers). These allow employers to advertise vacancies in their businesses, and potential employees to find out about job opportunities. The operation of the labour market can involve the following:

- The simple placement of a sign in a shop or café window indicating that the owner has a job vacancy
- Newspaper advertisements for job vacancies. This method has declined significantly in recent years, with relatively few vacancies advertised this way today.
- Online 'jobs boards' such as Seek, Indeed and Australian JobSearch. These are the fastest growing source of job advertisements, updated every day. Employers pay a fee to advertise their vacancies, and jobseekers can apply online for the vacancies advertised.
- Any person receiving **unemployment benefits** from the government is usually required to take an active role in looking for work. The government pays independent agencies to assist unemployed people to find work. Many of these are run by community organisations and a list of these, including Matchworks and the Salvation Army, can be found on the Australian JobSearch website.



The price the employer pays as a buyer of labour is known as a wage or salary. Wages and salaries are quite highly regulated in Australia. There is a minimum wage that must be paid to all employees over the age of 21 years. It is adjusted every year to account for rises in the cost of living. At 30 June 2019 this was set at \$18.93 per hour, or \$719.20 (before tax) for a standard working week. This figure is expected to be revised.

23.3.4 Financial markets

Just as there are a number of markets for goods and services throughout the economy, there is also an important

FIGURE 3 Online job boards such as SEEK are the fastest growing source of job advertisements.



market for money. While households earn money in the form of wages and salaries, they will often choose to borrow money to buy larger items such as cars or houses. Businesses make money from selling goods and services to consumers, and generally try to make a profit by doing so. Sometimes part of that profit will be invested in expanding the business, but if the profits are not large enough to do this, the business may also want to borrow money to help it grow.

The functions of money

Money performs four very important functions in our market system:

- 1. *Medium of exchange* Money allows us to exchange goods and services using a common means of exchange we all accept. Employees exchange their labour for money, and all businesses accept money in exchange for the goods and services they supply.
- 2. Measure of value We use money to put a price on the goods and services we exchange. The price is a measure of what we believe the goods or services to be worth, when compared with other goods and services.

FIGURE 4 Money performs important functions in our economy.



- 3. Store of value We are able to save our money to spend at a later date.
- 4. Standard of deferred payments Using money allows us to purchase goods and services on credit, with both buyer and seller knowing how much has to be paid at a later date.

The working of financial markets

Just as all goods and services have a price, so too does money. The price of having access to money that actually belongs to someone else is known as interest. When you deposit your money in a bank account, the bank will pay you interest on your savings. This is usually based on a percentage figure. If you deposit \$100 in your account, and the bank is paying 3 per cent per annum (per year), the bank will pay you three

dollars in interest after a year. Interest is often calculated monthly or even daily, so that if you withdraw your money before the year is up, you will be paid a lesser amount to cover the time the bank had the use of your money. Banks then lend out the money that they have deposited with them to other consumers or to businesses. They will usually charge a higher rate of interest to borrowers than they pay to their depositors. This is how they make a profit.

If you have money to deposit, it is often worth shopping around to get the best rate of interest. Sometimes it is possible to earn a higher rate of interest if you agree to leave the money in the

FIGURE 5 A bank account allows us to earn interest, while the bank can lend the money deposited to other individuals and businesses.



bank for a fixed period of time. This is known as a *term deposit*, because the money is deposited for a fixed *term*, or period of time. If you borrow money, you want to pay the lowest possible rate of interest, so it is worthwhile to shop around a number of lenders to get the best deal.

Financial markets operate like any other market, with sellers wanting to charge the highest price they can for their goods and services, and buyers wanting to pay the lowest price they can. If you are selling the use of your money (i.e. you are a depositor), you want to get the best price (interest earnings) you can for allowing someone else to use that money. If you are buying the use of someone else's money (i.e. you are a borrower), you want to pay the lowest price (interest payments) you can.

23.3.5 Stock market

Like other markets, the stock market (also called the share market) is simply a relationship between buyers and sellers. In this case it is shares in companies that are bought and sold. A share is a unit of ownership in a company. Large companies divide their ownership into millions of shares, which can be bought and sold through the stock market, known in Australia as the Australian Securities Exchange (ASX). The ASX was formed in 1987 by amalgamating the six capital-city stock exchanges. Today the ASX is based in Sydney, but also has offices in Melbourne and Perth.



Video eLesson Share market basics (eles-0256)

There are over 2000 companies listed on the ASX. These include large retailers such as Woolworths and Wesfarmers (owners of Coles); the four big banks — ANZ, CBA, NAB and Westpac; and large mining companies such as BHP Group Limited and Rio Tinto. The value of shares can go up and down, depending on the demand for those shares. When a company reports that it has had a successful year, many people may want to buy shares in that company. If there are more people wanting to buy than to sell, the price tends to rise. If the company appears to not be performing well, there may be more shareholders wanting to sell their shares than there are buyers, so the price is likely to go down.

As the price of a company's shares goes up or down, so too does the value of a shareholder's investment. The value of most shares tends to rise over time, even though the prices can fluctuate daily. People who

hold shares for long periods (generally more than 10 years) benefit from capital growth. Owning shares means you can also benefit when the company makes a profit, as profits can be distributed to shareholders as dividends or in extra shares.

FIGURE 6 Buying shares listed on the ASX enables you to become a shareholder in a variety of different businesses.



The buying and selling of shares is usually handled by stockbrokers. These are licensed agents who have access to the ASX, and who conduct share transactions on behalf of the general public in exchange for a small fee. Most stockbrokers will recommend that their clients buy shares in a variety of different companies. If you only buy shares in one company and that company experiences problems, the value of your shares can drop and you lose money. Buying shares in a number of different companies reduces your risk, as you have a better chance of having some shares that will perform well. You have probably heard the saying 'don't put all your eggs in one

FIGURE 7 Stockbrokers buy and sell shares on behalf of their clients.



basket', which means you should spread your risks among a number of ventures.

However, as with retail, it is possible for individuals to buy shares in companies themselves, online, by creating their own account, usually through their bank. Commsec and ANZ Etrade are examples of online trading platforms that allow consumers to buy shares if they have an account with that bank and have a minimum amount of money available — usually \$600.



23.3 ACTIVITIES

- 1. Watch the **Share market basics** eLesson and then answer the following questions:
 - (a) What are you buying when you buy shares?
 - (b) What would be the situation if you owned 100 per cent of the shares in a company?
 - (c) What is the role of a stockbroker?
 - (d) When is the stock market report published?

(e) Copy the following table into your workbook and explain the meaning of each term as found in the stock market report.

| Stock | |
|---------------|------|
| Close | |
| Move | |
| Turnover (100 | s) |
| Quotation | Buy |
| | Sell |
| 52-week | High |
| | Low |

Analysing and interpreting

- 2. Examine the stock market report in a daily newspaper or use the ASX weblink, and answer the following:
 - (a) Identify two companies that experienced an increase in share price in the previous day's trading.
 - (b) By how much did each increase in price?
 - (c) How many shares were bought and sold for each company?
 - (d) What is the highest and lowest price each company's shares reached during the last year?
 - (e) Is the current price closer to the highest or lowest experienced during the past year?
 - (f) From what you can see of the shares in these two companies, do you think they would be good value to buy right now? Explain your answer.

Analysing and interpreting

- 3. Use online resources to investigate a 'job board' website and search for each of the following jobs in your local area: nurse, bricklayer, hairdresser, taxi driver.
 - (a) How many vacancies were available for each type of job?
 - (b) What sort of information is provided about each job?
 - (c) Explain the process for applying for one of these jobs online.

Questioning and evaluating

- 4. Use online resources (such as the **Fair Work** weblink in the Resources tab) to answer the following questions.
 - (a) What is the current rate of the minimum wage for workers over the age of 21?
 - (b) By how much has the minimum wage increased from the previous year?

Questioning and evaluating

23.3 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

23.3 Exercise 1: Check your understanding

- 1. ES2 Describe three examples of retail markets.
- 2. ES1 What is the ASX?
- 3. ES1 Define each of the following in your own words:
 - (a) unemployment benefits
- (b) interest

(c) award

- (d) capital growth
- (e) enterprise bargaining
- (f) dividend.
- 4. ES1 What is being bought and sold on the labour market?
- 5. ES1 What is being bought and sold on financial markets?

23.3 Exercise 2: Apply your understanding

- 1. ES2 Explain each of the four functions of money.
- 2. ES1 Distinguish between money as a measure of value and a store of value.
- **3. ES2** Explain what is meant by a 'market' and provide reasons why markets don't need to have a physical presence.

- 4. ES2 All markets are affected by specific factors. Explain a common factor that impacts the retail market and the financial market.
- 5. **ES2** Explain the relationship between the labour market and the retail market.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

23.4 Key economic questions for business

23.4.1 Market forces

A key factor in any market is the price charged for the goods and services sold in that market. Sellers will generally decide how much they wish to charge for the goods or services they are supplying, but they cannot do this in isolation. They must take into account the price that consumers are willing to pay. If there are a large number of sellers in any market, prices will tend to be lower because these sellers have to compete with each other to attract customers. When prices are influenced by the interaction between buyers and sellers, they are said to be influenced by market forces. These market forces can also affect what goods and services producers choose to supply and the methods they choose to produce them. Market forces can also determine who the ultimate buyers of these goods and services will be.

23.4.2 Influencing prices

The prices paid for goods and services can be influenced by both sellers and buyers. Sellers can adopt a number of strategies to determine prices, including:

- applying a retail price recommended by the manufacturer of the goods being sold. Although it is illegal for a manufacturer to enforce such a price, it can provide a useful guide for the seller.
- following the prices set by other sellers in the same market. This may involve matching those prices, or setting a slightly lower price to attempt to attract more customers.
- adding a percentage mark-up to the cost of the goods to the business. The seller may calculate a sale price by adding a fixed percentage to the price that they paid for the goods.

The selling price needs to be enough to help cover all the business expenses, and also provide a profit.

Whatever method a seller uses, it is a general rule in all markets that sellers will attempt to charge as high a price as possible, while buyers will look for the lowest price they can find. A seller who attempts to charge too high a price will find that buyers will not buy

FIGURE 1 Sellers must set a price that will not turn customers away.



from their business. The seller must cover the business's expenses and make a reasonable profit, but cannot afford to charge too high a price if competitors are selling the same product at a lower price. A buyer who expects to pay too low a price may find that there are no sellers willing to sell at that rate, so has to be realistic about what constitutes a fair price.

A good example of the way in which markets operate can be found at large fruit and vegetable markets such as Paddy's Markets in Sydney, or the Queen Victoria Market in Melbourne. In these marketplaces, there are large numbers of different fruit and vegetable stalls, all competing with each other. Sellers can see what their competitors are charging for their stock, while buyers can move easily around the different stalls to compare the quality and prices of produce on sale.

We can see how the interaction between buyers and sellers can influence prices by taking an example from one of these markets. Imagine each fruit and vegetable stall sells apples, and most sellers agree that if they could charge \$10 per kilogram (kg), they would happily supply 100 kg of apples for sale each day. If they could only charge \$5 per kg, they would only be prepared to provide 50 kg a day. If they could only charge \$2 per kg, they would only supply 20 kg for sale, and concentrate instead on selling other fruit

FIGURE 2 Buyers can easily compare prices at a fruit and vegetable market.



and vegetables that would make a bigger profit.

Buyers have a different point of view. They want to purchase at the cheapest price possible. If apples cost \$10 per kg, only a small number of people would buy them, and then only in small quantities — a total of 20 kg on any given day. If the price dropped to \$8 per kg, buyers might be prepared to purchase a total of 30 kg a day. If the price fell to \$6, they might buy 40 kg, at \$4 they would buy 60 kg, and at \$2 they would buy 80 kg.

How will the interaction of the different preferences of buyers and sellers help produce a price and a quantity for sale that is acceptable to both groups? We can start to answer this by putting the above data into tables.

TABLE 1 Sellers' preferences

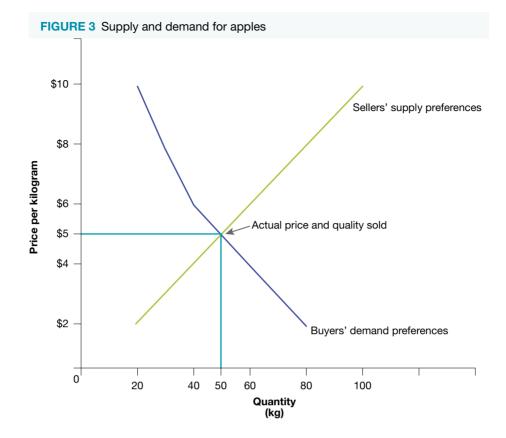
| Price per kg | Quantity supplied |
|--------------|-------------------|
| \$2 | 20 kg |
| \$5 | 50 kg |
| \$10 | 100 kg |

TABLE 2 Buyers' preferences

| Price per kg | Quantity purchased |
|--------------|--------------------|
| \$10 | 20 kg |
| \$8 | 30 kg |
| \$6 | 40 kg |
| \$4 | 60 kg |
| \$2 | 80 kg |

We can now enter the data from these tables into a graph. If we place the different prices along the vertical axis, and the different quantities along the horizontal axis, we can plot the preferences of both buyers and sellers on the graph (see **FIGURE 3**). The sellers' preferences are shown by the blue line, while the buyers' preferences are shown by the red line. The point at which the two lines intersect will give us the price and quantity at which the preferences of both buyers and sellers are matched.

The market for apples will settle at a point where 50 kg of apples will be sold each day at a price of \$5 per kg. Sellers know that if they have 50 kg of apples in stock on any given day, they will be able to sell them all at this price. If one seller decides to sell below this price, he or she will be likely to sell out his or her stock more quickly, but will make a smaller profit. If he or she wants to cover costs and make a profit, it is unlikely that the lower price will be maintained for long. A seller attempting to sell above the price of \$5 per kg will be likely to sell less and so will be forced to bring the price down.



The interaction between the different quantities sellers are willing to supply and buyers are likely to demand at various prices can have an impact on a range of markets for many different goods and services.

23.4.3 The key economic guestions

The aim of any economy is to provide goods and services to consumers in as efficient a manner as possible. We would expect consumers to buy goods and services that will satisfy their needs and wants, and that producers will want to make a profit by selling them those goods and services. In order for both consumers and producers to be satisfied, the economy has to answer three basic questions:

- 1. What to produce? What goods and services should be produced, and in what quantities?
- 2. How to produce? What methods should be used to provide those goods and services?
- 3. For whom to produce? To whom should those goods and services be distributed? Because the Australian economy operates largely as a market system, we would expect the interaction between buyers and sellers in a variety of different markets to answer these questions.

What to produce?

How does our market system help producers to decide exactly what goods and services to supply, and in what quantities to supply them? Up to a point, the market system operates largely by trial and error. A producer may make certain goods or services available to consumers and hope that these will satisfy the needs and wants of those consumers. If the goods or services fail to sell, the producer will probably go out of business. In Australia more than 60 per cent of small businesses close within their first three years, while one in three fail in their first year. This means that a lot of potential producers are entering the marketplace, but not selling the goods or services necessary to satisfy the needs and wants of consumers.

The market largely determines which businesses are likely to be successful. Some factors that can influence markets include:

• Established habits and experience — Producers know from people's existing behaviour that there will always be a demand for certain types of goods or services. Families need to buy food on a regular

basis, so a supermarket in a new suburb may well be successful. In any new shopping centre, businesses such as cafés and hairdressers will probably meet a demand from consumers if there are no similar businesses nearby. If a second or third café or hairdressing salon is established in the same shopping centre, the success of these businesses will depend on whether the level of demand from consumers is sufficient for all of them to survive. If not, then one or more will close. The operation of the market for those goods and services will determine how many similar businesses can survive in the same marketplace.

Changing tastes and preferences — An example of this is the market for Australian-made cars. For
many years, family sedans and wagons such as the Holden Commodore and Ford Falcon were
Australia's best-selling cars. Car manufacturing was so successful that other manufacturers such as
Toyota also set up factories in Australia. Over time, consumers' preferences have changed, and smaller
imported cars and larger SUVs have become more popular. This led to a decline in car manufacturing
in Australia. As a result, Holden, Toyota and Ford all ceased motor vehicle production in Australia
in 2017.

FIGURE 4 Changes in the market saw the closure of Toyota, Ford and Holden car manufacturing plants.



- Marketing and advertising Any business introducing a new product or service into the market needs
 to ensure that consumers are aware of its availability. For many years, businesses have used television,
 newspaper and radio advertising to persuade consumers to buy their goods and services. In addition,
 online advertising has increased dramatically, and today an online presence is essential for almost all
 businesses.
- Technological change As a society we have become very enthusiastic about new technology.
 Whenever a new model iPhone is released, consumers queue up outside their nearest Apple store to be one of the first to buy it. Consumers monitor new developments in technology, and many will quickly replace outdated products with newer models. Producers can be quite confident that improvements in technology will quickly attract buyers to new goods and services.

How to produce?

Producing goods and services generally involves a combination of labour, equipment and raw materials. These are known as **inputs**, and any production process will involve different types and combinations of these three inputs. A factory producing frozen vegetables will be set up with different types of equipment, such as freezers to keep the vegetables cold, machines to chop them, and machines to pack and seal them in plastic packaging. The same factory will employ workers to control those machines, and perhaps carry out some other tasks, such managing the whole process. The raw materials are the vegetables that are processed.

FIGURE 5 Improvements in technology soon attract consumers.

At different times, the managers of the factory will have to make decisions about the best methods to produce their final product, and the operation of the market can influence these decisions. Competition from rival frozen food companies will mean that the business will wish to keep its costs as low as possible. If efficient new equipment becomes available, it may be worth changing the methods of production to take advantage of this new machinery.

Automated production lines and robotics-based equipment are technologies that have improved factory production. In most cases, automation enables a factory to employ fewer workers, saving wage costs and allowing the prices of products to be kept at a level where they can compete in the marketplace. When one

FIGURE 6 The use of robotics has changed the way manufacturers produce goods.



business in a particular market is able to cut costs by changing its methods of production, other businesses in the same market will usually make changes also, to remain competitive.

For whom to produce?

A business owner will make some decisions about who he or she intends to supply with goods and services. The market can also influence who receives these goods and services because purchasing will be affected by the level of prices when compared with the income of consumers. As seen in the **FIGURE 7** circular flow diagram in subtopic 23.2, household income can consist of wages and some government welfare payments. Households can also gain access to credit to purchase some goods and services. Taxes and desired levels of savings result in a reduced amount available for spending.

The amount actually available for households to spend is known as **disposable income** (income less tax). All consumers make decisions about what to buy by comparing their disposable income with the prices they

FIGURE 7 Luxury motor vehicles cost much more to produce, but the manufacturers are not attempting to sell to the mass market.



will have to pay for the goods and services they want. The prices of different products can influence who buys them. Luxury motor vehicles cost much more to produce, but the manufacturers are not attempting to sell to the mass market. Their product is aimed at those with a high enough level of disposable income to be able to afford such a vehicle. On the other hand, fast-food restaurants such as McDonald's and KFC provide relatively cheap meals designed to appeal to large numbers of consumers. Other, more exclusive restaurants, charging \$100 or \$200 per meal, are providing a service for a completely different market.

23.4 ACTIVITY

In a fruit and vegetable market, bananas are subject to the following buyer and seller preferences.

- Sellers agree that if they could charge \$14 per kg, they would happily supply 140 kg of bananas for sale each day. If they could only charge \$7 per kg, they would only provide 70 kg a day. If they could only charge \$3 per kg, they would only supply 30 kg for sale.
- If bananas cost \$14 per kg, buyers would demand a total of 30 kg in any given day. If the price dropped to \$10 per kg, buyers might be prepared to buy 40 kg a day. If the price fell to \$8, buyers might purchase 60 kg, at \$6 they would buy 80 kg, and at \$4 they would buy 100 kg. Based on this information, complete the following tasks.

- a. Draw up a table showing the different quantities of bananas that sellers would be prepared to supply at each price level.
- b. Draw up a table showing the quantities of bananas that consumers would demand at each price level.
- c. Use the data from these tables to construct a graph that shows both sellers' supply preferences, and consumers' demand preferences.
- d. State the price per kilogram at which buyers' and sellers' preferences would be matched. What quantity would be sold at that price?
 Reasoning, creating, proposing

23.4 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

23.4 Exercise 1: Check your understanding

- 1. ES1 Define each of the following in your own words:
 - (a) percentage mark-up
 - (b) disposable income.
- 2. ES2 Outline two methods a business might use to determine the prices for the goods or services it sells.
- 3. ES1 What are the three different types of inputs that go into any production process?
- 4. ES2 Explain two factors that could influence which goods and services businesses decide to produce.
- 5. ES1 How do businesses aim to keep their production costs as low as possible?

23.4 Exercise 2: Apply your understanding

- 1. ES2 Explain how markets can influence to whom different goods and services are distributed.
- 2. ES2 Explain the three economic questions.
- 3. ES2 Explain two methods that can impact how businesses produce goods.
- 4. ES2 Explain what is meant by demand and supply.
- 5. ES2 Explain what is meant by equilibrium in reference to the preferences of buyers and sellers.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

23.5 Government involvement in the market

23.5.1 Welfare

The government provides financial and other support to disadvantaged members of the community. The aged pension supports those who are beyond retirement age and no longer working. Unemployment benefits are designed to support those who cannot find work. The National Disability Insurance Scheme (NDIS) provides people with a permanent and significant disability with money to access support and services.

Not only are welfare payments designed to provide fairness and support to those who need help, but the payments can also have a positive economic effect on markets. Those receiving welfare are likely to spend most of their money

FIGURE 1 Welfare payments help those who are not able to earn an income.



and so their spending adds to the circular flow of income throughout the economy. Businesses gain revenue from selling additional goods and services. This, in turn, allows them to employ more people, who also spend their money buying goods and services.

23.5.2 Provision of infrastructure

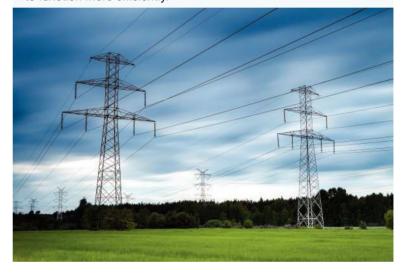
Government has a major responsibility for providing the **infrastructure** for the country. This includes roads, railways and ports, and has traditionally included other means of communication, as well as energy supplies. Roads and railways are essential if goods are to be transported from place of manufacture to the shops where they are sold. Ports are not only required to allow for the import and export of goods in and out of Australia, but also for the transport of goods within Australia. Tasmania relies on shipping across Bass Strait to bring goods from mainland Australia, and to transport goods produced within the state to consumers in other states.

The government provides a postal service that supports correspondence between businesses, as well as the delivery of goods through a parcel delivery service. The telephone service was originally provided by government before Telstra was privatised and other providers were permitted to enter the market for telephone services. Even today, the national broadband network is an important infrastructure project being

funded by government. Markets cannot operate without efficient systems of communication between consumers and businesses.

Traditionally, energy supplies such as electricity and gas also have been provided by government. These are not only essential for the domestic uses we are all accustomed to, but also for the functioning of businesses. In some states of Australia, electricity and gas supplies have been privatised and are now run by businesses rather than by government. Even where this has occurred, the original infrastructure was usually built by government before being sold to the business sector.

FIGURE 2 Government provides infrastructure to enable markets to function more efficiently.



DISCUSS

Privatisation of essential industries, such as electricity and gas supplies, can lead to increased prices as the companies that provide these services seek to make larger profits. Do you think these essentials should be sold for profit? [Ethical Capability]

23.5.3 Economic management

Government has a responsibility to ensure that Australia experiences a sustainable level of economic growth from year to year. Growth is important because, as the population increases, it is necessary to ensure there are sufficient goods and services for all consumers to buy. There also needs to be an increase in the number of jobs available to provide employment for a growing population.

Governments can encourage economic growth by spending money, which increases funds into the circular flow. This can provide more for consumers to spend, encouraging business to increase the supply of goods and services, and thus provide more job opportunities. However, if too much money is injected into the economy there may not be enough goods and services readily available to meet the increased demand. This is likely to force prices up, leading to **inflation**.

When excess inflation occurs, governments will usually cut back on spending, which removes money from the economy, which hopefully slows down the rise in prices. Governments use their annual **budgets** to influence the flow of money in the economy. They will aim to encourage growth, while trying to avoid the risk of too much inflation. Governments can use statistics gathered by the **Australian Bureau of Statistics** to assist them in their decision making. These statistics can include figures relating to the levels of employment in the economy, as well as those tracking price rises.

statistics to assist with decision making.

FIGURE 3 Governments will use a variety of



Weblink Australian Bureau of Statistics

23.5.4 Wages and employee relations

As we have discussed, there is a market for labour in which workers offer their skills and experience for sale to businesses and businesses buy that labour by paying wages and salaries. In order to ensure that the labour market functions fairly, it is regulated by laws passed by governments. The major law dealing with wages and working conditions in Australia is the *Fair Work Act*, a federal government law.

State governments provide regulations to ensure safe workplaces through Occupational Health and Safety laws. Both federal and state governments have also sought to prevent discrimination in the workplace by passing laws supporting equal employment opportunity. These make it illegal to discriminate against someone in any workplace on the basis of gender, race, age or ethnicity. Victoria also has laws to deal with bullying in the workplace.

FIGURE 4 Occupational Health and Safety laws are designed to prevent injuries at work.





23.5.5 Provision of goods and services

Governments can also become involved in the marketplace as actual suppliers of goods and services. For example, every state and territory government provides an education system. In addition, state governments provide hospitals and other health services. Although other organisations also provide many of these services, such as private schools and private hospitals, most people consider it a responsibility of government to ensure that everyone has access to education and health services. Ambulance services and firefighting and emergency services are similarly considered to be the responsibility of state governments.

Public transport systems also are mostly provided by state governments, and those public transport systems that are provided by nongovernment businesses usually receive large amounts of money from government to assist in their running. Public transport does not make a profit, so no business would want to run it without such funding. Further, without this government assistance, for public transport to be profitable fares would have to be so expensive that many people could not afford to use it. Public transport is recognised as an essential service, so governments either provide it themselves or pay businesses to provide it at a reasonable price.

FIGURE 5 It is a responsibility of governments to provide hospitals and health services.



23.5.6 Planning and the environment

State governments and local councils have powers to control the type of buildings and other developments that are built within their borders. Governments establish building standards to ensure that all buildings are structurally sound, and not likely to fall down or cause a hazard in any other way. Anyone wishing to build a house or other structure on vacant land must gain a building approval. This is to ensure that the building conforms with certain standards. Councils and the state government can also determine whether or not a particular type of building is appropriate in a particular area. For example, it would usually be considered inappropriate to build a large factory in the middle of a residential area.

Since the early 1970s, state governments have also introduced laws to protect the environment. These place restrictions on both businesses and individuals in relation to what they can release into the atmosphere

and waterways. These laws can affect markets because they can increase costs for some businesses. Businesses that may once have simply released waste material into a creek, river or drain now have to dispose of it in an environmentally responsible manner. Smoke and fumes have to be properly filtered before being released into the atmosphere. Motor vehicles have emission controls to limit the levels of harmful chemicals in exhaust fumes.

Environmental laws have also created new business opportunities, with waste management and recycling businesses providing services for a variety of different customers. As with most government involvement in the economy, while some businesses may appear to be disadvantaged, opportunities are often created for new and different businesses to grow.

FIGURE 6 Governments have introduced laws to prevent businesses from polluting the environment.



23.5.7 International trade policies

Governments have the power to regulate what comes into and goes out of the country. Customs and quarantine laws can have an influence on the markets for a number of products. Until 2011, Australia banned apples from New Zealand because of fears the apples may spread a disease known as fire blight. Such a regulation would obviously have an impact on the market for apples throughout Australia.

Traditionally governments have also attempted to protect goods produced by local industries by imposing special taxes on similar goods imported from other countries. These taxes are known as **tariffs**. The clothing and textile industries were once protected in this way. In the early 1980s, there was a 28 per cent tariff on all imported clothing. This made these imported goods more expensive than locally produced clothing, thus encouraging consumers to buy the Australian-manufactured product. Over the next thirty years this tariff was reduced, making imported clothing much cheaper than the local product.

As a result of reduced tariffs, many local clothing manufacturers have been unable to compete with cheaper imported clothing and consequently have

FIGURE 7 A reduction in tariffs has increased the quantity of imported clothing sold in Australia.



had to close. A similar program of tariff reduction occurred in the motor vehicle industry. While this has been a negative for the Australian clothing and motor vehicle industries, the positive impact for Australian consumers is clothing and motor vehicles being much cheaper. Since the 1980s, Australian governments have also negotiated trade agreements with other countries. We agree to reduce tariffs on imports from those countries, and in return they agree to reduce tariffs on goods they import from us. Although this can make it difficult for some local manufacturers who have to compete against cheaper imported products, it can be good for our export industries and for consumers paying lower prices.

23.5.8 Immigration policies

As well as controlling the goods that come into and go out of Australia, governments can regulate the movement of people. This particularly applies to immigration into the country. Immigration allows the population to rise faster than would occur through natural increases in the birth rate. Rapid population increases can provide more consumers for businesses to supply with goods and services. Further, new arrivals add to the workforce, providing businesses with new employees who may have new skills to help the business grow.

Governments can also affect the market for particular goods and services through decisions made about who is encouraged to migrate here. If particular skills are required in certain industries

FIGURE 8 Australia has become a major provider of tertiary education for fee-paying students from Asian countries.



and not enough people in Australia have the required qualifications, governments can allow employers to bring in migrants with the necessary skills. This can affect the labour market in that industry. Australia has also become a major provider of tertiary education for our region. Encouraging international students to come here provides additional income for our universities, as these students pay fees to study here.



Weblink Australian Bureau of Statistics

23.5 ACTIVITY

Use the Australian Bureau of Statistics weblink in the Resources tab to complete the following tasks.

- a. Find out the current estimated population of Australia.
- b. Explain how this estimate is calculated.
- c. Select two headlines or media releases, and for each one, describe:
 - (i) three significant facts or figures included in the report
 - (ii) the trends or changes that have occurred in recent years in the facts or figures reported.

Investigating and evaluating

23.5 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

23.5 Exercise 1: Check your understanding

- 1. ES1 Define each of the following in your own words:
 - (a) infrastructure
 - (b) inflation
 - (c) government budget.
- 2. ES1 Why does government usually have to provide funding for public transport to operate?
- 3. ES1 How can government welfare payments have an impact on the market for goods and services?
- 4. ES2 Explain what happens when a service provided by government is privatised.
- 5. **ES1** What are tariffs?

23.5 Exercise 2: Apply your understanding

- 1. ES2 How can a government budget influence economic growth?
- 2. ES2 Why might it be important for government to be involved in the regulation of wages and working conditions for employees?
- 3. ES2 What effect might environmental laws have on the costs experienced by businesses in managing waste from their production processes?
- 4. ES2 Explain two ways in which government immigration policies can have an influence on markets.
- **5. ES2** Explain why it is important for the government to regulate trade.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

23.6 SkillBuilder: Contesting and debating ideas

What is contesting and debating?

When studying business issues, it is important to be able to contest and debate different ideas related to each issue. Contesting means coming up with opposing ideas on an issue. Debating is the process of communicating about these opposing ideas with others.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example
- an activity to allow you to practise the skill (Let me do it).





23.7 Legal protection of consumer rights

23.7.1 Law and justice

Governments at all levels involve themselves in the market in a variety of ways. Politicians, commentators and the media often refer to the issue of 'economic management' as a responsibility of government. People expect the government to take action to encourage growth in the economy and to avoid high unemployment. Government activity within a market economy goes well beyond these aims. The successful operation of markets often depends on the level of government involvement.

Government provides a legal framework that allows buying and selling in the marketplace to occur within a set of rules that should be fair to all participants. Australian Consumer Law protects consumers from unscrupulous businesses that could try to cheat them. Laws relating to the enforcement of legal contracts ensure that all buyers and sellers will be able to enforce their rights before the courts. The criminal law aims to provide protection from threats and intimidation in any business dealings. Our court system gives everyone the right to take legal action to enforce their rights.

FIGURE 1 Australian Consumer Law protects consumers from unscrupulous businesses that could try to cheat them.





23.7.2 Fair transactions

As a consumer, you can often be at a disadvantage when it comes to buying goods and services. Even though you may have a good idea of what you wish to buy, you will often rely on the advice of a salesperson to help you with your purchase. You want to be assured that this person will be showing appropriate respect for your interests, not trying to 'con' you. The Australian Consumer Law aims to make sure that every transaction between buyers and sellers is fair to both parties.

23.7.3 Honesty is the best policy

The Australian Consumer Law makes it clear that sellers are expected to advertise and promote their products honestly. It is illegal to do anything that might mislead the customer, or trick them into buying something they might not have bought if they had known all the facts. The following are some examples of behaviour that is illegal under this law.

- 1. Misleading or deceptive conduct Advertisements must not use words that make claims about a product that are not true. This includes claims about low prices, or goods being 'on special'.
- 2. *Unconscionable conduct* This is any business conduct that is unfair or unreasonable.
- 3. Offering gifts and prizes in connection with the supply of goods and services and then not providing
- 4. Conduct that may mislead the public For example, using a brand name similar to a well-known brand, or using an Australian-made logo when the product was made overseas.
- 5. Bait advertising This refers to a business attempting to attract customers by advertising some products at lower prices, but stocking very few of those products. When the advertised products quickly run out, customers are then directed to higher-priced items.
- 6. Referral selling This occurs when a business offers a customer a special deal or special price if the customer refers other potential customers to the seller and those customers make a purchase.



FIGURE 2 Any discounts, special offers or specials offered by sellers must be genuine.

23.7.4 Treating consumers fairly

Consumers wish to satisfy their needs and wants, and when they go looking for goods and services they are usually eager to make a purchase. This means that an unscrupulous seller could take advantage of them. Consumer law makes it compulsory for sellers to provide all available information to consumers, and to ensure that buyers and sellers have equal rights in any purchase. Some of these rights are:

- 1. Any contract or agreement that a consumer enters into must be fair and balanced. It must be written in clear language that is easy to understand. It should not contain any provisions that allow the seller to change the conditions of the agreement without informing the buyer. For example, it would be illegal for a mobile phone contract to allow the service provider to make changes to their prices and charges without notifying the customer. However, the consumer is responsible for reading the contract carefully to make sure they understand it.
- 2. A consumer has the right to ask for a receipt for any transaction, no matter how small the amount involved. For all transactions over \$75, a receipt is compulsory.
- 3. Anyone attempting to sell goods or services door-to-door or over the phone can only do so between 9 am and 6 pm on weekdays, and from 9 am to 5 pm on Saturdays. These types of sales are not permitted on Sundays or public holidays. This rule does not apply when consumers have agreed in advance to an appointment time for the seller to visit their home. A salesperson must leave immediately if requested and must not contact the consumer again for at least thirty days (with that same product). If a consumer agrees to purchase goods or services from a door-to-door salesperson, or over the phone, the Australian Consumer Law allows for a ten-day 'cooling off period'. This means that the consumer has the right to cancel the agreement within ten days, without having to pay anything.
- 4. Lay-by agreements must be in writing and must be expressed in plain language that is clear and easy to understand. The agreement must include all terms and conditions.
- 5. Businesses that display 'No refunds' signs are breaking the law. If a product is faulty or is unfit for its usual purpose a refund must be offered to the buyer. However, a business may refuse to provide a refund if consumers simply change their minds and there is nothing wrong with the product.

23.7.5 Guarantees for consumers

You may have heard of manufacturers or sellers offering guarantees or warranties. These are promises that if anything goes wrong with the product, it will be replaced or repaired free of charge. Even if a manufacturer or seller does not provide such a written warranty, the Australian Consumer Law makes it compulsory for all suppliers and manufacturers to automatically provide a basic set of guarantees on all products they sell to consumers. A business cannot remove consumer rights under these guarantees, but they can improve these basic rights if they wish to do so. The Australian Consumer Law provides the following guaranteed rights:

FIGURE 3 A door-to-door salesperson must leave immediately if requested.



FIGURE 4 Goods must be of acceptable quality; if a shoe heel broke after only a couple of wears, the shoes would not be considered of acceptable quality.



- The consumer will gain clear legal ownership to goods; that is, the seller actually owns the goods being sold and can legally transfer ownership to the buyer.
- Goods must match any sample, demonstration model or description provided to the buyer.
- Goods must be of acceptable quality; that is, they must be safe, long-lasting, free from defects, acceptable in appearance and finish, and do all the things that the goods are normally used for. For example, if a consumer purchased a pair of jeans and found some of the stitching was coming apart after a week, the jeans would not be considered of acceptable quality.
- Products must be fit for a particular purpose. Fitness of purpose means the product will perform as the instructions or advertisements imply. A bottle of shampoo that failed to properly wash hair would be a breach of this condition.
- Repairs and spare parts must be available for a reasonable time after manufacture and sale.
- Any necessary servicing must be carried out with reasonable care and skill and must be completed within a reasonable time.

23.7.6 When the law is broken

Although the Australian Consumer Law is a law of the Commonwealth parliament, enforcement of the laws protecting consumers is usually carried out by the relevant state or territory Office of Fair Trading or Consumer Affairs Office. When a consumer has a complaint against a seller, these offices will usually recommend that the consumer attempt to sort out the problem directly with the seller. If direct contact with the business does not produce a result, the Fair Trading or Consumer Affairs Office may contact the business on the consumer's behalf and attempt to resolve the matter.

If the business fails to resolve the problem, Fair Trading or Consumer Affairs Offices can take legal action on behalf of the consumer. If the legal action is successful, the seller may be required to compensate the consumer or to replace or repair any faulty goods. The business can also be fined for failing to comply with the Australian Consumer Law.

FIGURE 6 Fair Trading and Consumer Protection offices will usually recommend that the consumer attempt to sort out a problem directly with the seller.



FIGURE 5 The following steps may help a consumer resolve an issue when they feel a business has breached consumer laws. If a consumer has a complaint, they should first try to resolve it directly with the seller.

If the above fails, the consumer should contact the relevant authority (e.g. Consumer Affairs Victoria).

Organisations such as Consumer Affairs Victoria may contact businesses on behalf of a consumer to try to resolve the problem.

If the business still does not resolve the problem, the organisation may take legal action on behalf of the consumer.

If the legal action is successful, the business may be forced to compensate the consumer, and they may also be fined for breaching consumer laws.

23.7.7 Responsibilities as well as rights!

What is an ethical consumer or producer?

While the Australian Consumer Law contains a strong emphasis on protecting the rights of consumers and enforcing the responsibilities of sellers, consumers also have responsibilities in the marketplace. Some of these responsibilities are:

- Whenever you buy goods or services, you are entering into a legally binding contract. You might believe that a contract is a written document that you sign, but this is not always the case. If you are buying a house or a car, there are particular types of written documents that are required by law, but any agreement between a buyer and a seller is a legally binding contract, even if you don't sign anything. As a buyer you have a responsibility to pay the required amount for the goods or services you purchase. This is particularly relevant if you purchase goods or services on credit, with an expectation that you will pay by instalments, such as the purchase of a mobile phone with an accompanying payment plan.
- Consumers who borrow money or who use a credit card to make purchases have a responsibility to
 make repayments. Failure to do so can leave the consumer with a poor credit rating. This remains
 active for five years, and if you need to apply for a loan during that time, you may have that loan
 refused.
- A consumer cannot return goods and claim a refund if the goods have been used other than for the
 purposes for which they were intended. If you damage a product by using it inappropriately, or even
 injure yourself while doing so, you have very little chance of being compensated. Consumers have a
 responsibility to use goods in the way the manufacturer intended.

FIGURE 7 Consumers who borrow money must repay it in full. Failure to do so can leave the

consumer with a poor credit rating.



Video eLesson What is an ethical consumer or producer? (eles-0255)

23.7 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

23.7 Exercise 1: Check your understanding

- 1. ES1 What is the purpose of Australian Consumer Law?
- 2. ES2 Provide a brief description of each of the following:
 - (a) misleading conduct
 - (b) bait advertising
 - (c) referral selling.
- 3. ES1 Outline one responsibility that consumers have in relation to goods or services they purchase.
- 4. ES2 Explain the rules that apply to phone sales and door-to-door selling.
- 5. ES1 In what circumstances is a seller allowed to refuse a refund?

23.7 Exercise 2: Apply your understanding

- 1. ES2 Explain two guaranteed rights that consumers have in relation to goods they purchase.
- 2. ES2 What powers does a Consumer Protection or Fair Trading authority have to enforce Australian Consumer Law?
- 3. ES5 In each of the following examples, explain why there has been a breach of the Competition and Consumer Act.
 - (a) An electrical goods business advertises a particular brand of television and states that it is at a cheaper price than that offered by a competitor. This statement is false.
 - (b) A clothing store advertises t-shirts and claims that they are made in Australia when in fact they are made in Hong Kong.
 - (c) A take-away food outlet advertises that a special deal is only for one week when in fact it plans to extend it for two months.
 - (d) A garden maintenance business offers some its customers a 10 per cent discount if they provide the names and addresses of five potential customers for the business.
- 4. ES2 Explain what is meant by a 'lay-by' and why consumers may use this method of purchasing goods.
- 5. ES4 'Most businesses are concerned about maximising their profits and so we need consumer protection laws to regulate their behaviour.' Discuss this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

23.8 Business competition protects consumers

23.8.1 The benefits of competition

One of the best protections consumers can have is a market with a large number of sellers, all competing with each other to attract customers. Competition can help keep prices lower, and if one business treats consumers badly, there are plenty of alternatives available. As the name suggests, the Competition and Consumer Act is concerned with encouraging fair competition between businesses in all markets. The Act makes it illegal to engage in business practices that interfere with competition, or that give some businesses an unfair advantage over others. The Australian Competition and Consumer Commission (ACCC) has the power to enforce the law to encourage greater competition in the marketplace.

23.8.2 Banned anti-competitive practices

The Competition and Consumer Act lists a number of business practices that are prohibited or that are regulated by the ACCC. These include price fixing, misuse of market power, predatory pricing, exclusive dealing, resale price maintenance, and mergers and take-overs. Each of these practices are outlined in the following subsections.

Price fixing

It is illegal for two businesses in competition with each other to agree to set identical prices for their products. Businesses will probably have similar prices for similar products because of market forces, but they cannot actively work together to raise or lower prices by an exact amount. This has been an issue over the years with petrol pricing. Many service stations lower their prices in the middle of the week, and then raise them at the weekend. There have been accusations that service stations that are close to each other have agreed to raise or lower their prices by the same amount at the same time. If it could be proved that they had done so, they would be deemed to be acting illegally, because this action would prevent consumers from taking advantage of genuine competition.

FIGURE 1 Any agreement by service stations to raise or lower prices at the same time and at the same rate would be an example of price fixing.



DISCUSS

As opposed to being involved in price fixing, large supermarket chains have been involved in a price war with items such as milk and roast chickens being sold at reduced prices. The squeeze on the profit margins of these items comes back to the farmers, who are paid less for supplying the goods to the supermarkets. Is this practice by the supermarkets ethical, or should they be paying more for these supplies? **[Ethical Capability]**

Misuse of market power

Not all businesses are the same size, and there is a risk that larger businesses may use their power unfairly to drive smaller competitors out of business. The Act bans any action aimed at damaging or getting rid of a competitor or preventing another business from entering the market. Some years ago, retailer Woolworths was fined \$7 million for attempting to prevent some restaurants and bars from selling packaged liquor in competition with its own liquor outlets. When these other businesses applied for liquor licences, Woolworths lodged objections with the government licensing authority. They then proposed to withdraw the objections if the other businesses agreed not to sell take-away alcohol products to their customers. A court found that Woolworths was in breach of the law.

Predatory pricing

Predatory pricing occurs when a business deliberately sets its prices at such a low level that its competitors cannot match them. In such cases, the business actually decides that it is prepared to lose money for a while until it has forced its competitors out of the market. This leaves the business with less competition so that it can then disregard market forces, raise prices and exploit consumers. A recent example is from in 2011 where both major supermarket chains (Coles and Woolworths) decided to sell milk at \$1 per litre. This was aimed at encouraging consumers to shop at their outlets rather than at another supermarket or with their competitors Aldi and IGA.

FIGURE 2 Woolworths was fined for attempting to misuse its market power to restrict the operations of competing liquor outlets.



The Coles and Woolworths could afford to make a loss on milk sales because they were making a good profit on other products. Other supermarkets and smaller shops, such as milk bars and convenience stores, may not be able to lower prices as much and so could lose many customers. If the other businesses selling milk were forced out of the market, the supermarket could then raise its prices and there would be no competition to prevent it from doing so.

Exclusive dealing

Exclusive dealing involves one business trading with another while FIGURE 3 It would be illegal for a supermarket to use predatory pricing to try to put other milk retailers out of business.



imposing restrictions on that other business's freedom to deal with its competitors. An example is when a hair products supplier will only sell to a hairdresser on the condition that the hairdresser does not purchase hair products from any other supplier. This can be legal in some circumstances if it is not seen to lessen competition in the market for the products in question. For example, McDonald's sells Coca-Cola products but not Pepsi, and they are permitted to do so. This is because KFC sells Pepsi and not Coke, so the overall market for soft drinks is still competitive. Businesses that wish to enter such an arrangement must notify the ACCC of the proposed agreement. The ACCC will then examine the details before either approving or disallowing the arrangement.

FIGURE 4 McDonald's is permitted to have an exclusive deal with Coca-Cola, and KFC can have an exclusive deal with Pepsi, because the market for soft drinks is still competitive.



Resale price maintenance

Suppliers cannot set the prices at which retailers will sell the products. Suppliers can recommend a retail price for the sale of their goods, but it is illegal to attempt to force a retailer to sell at that price. Retailers must be free to compete on price with other retailers selling the same products. It is also illegal for suppliers to set a minimum price that retailers must not sell below, or to force a retailer not to discount goods. On the other hand, it is quite legal for a supplier to set a maximum price for its products. This is to prevent any retailer that has no competitors in a particular location from unfairly overcharging customers.

FIGURE 5 Retailers must be free to compete on price with other retailers selling the same products.



Mergers and take-overs

When two or more businesses decide to join together, this is known as a *merger*. When one business decides to buy out a

competitor, this is known as a *take-over* or an *acquisition*. Sometimes a merger or take-over in a particular market may lead to reduced competition in that market. The Act prohibits mergers and take-overs between one or more businesses if they result in the competition being substantially reduced. Businesses proposing a merger or acquisition can ask the ACCC for permission. The ACCC may permit a merger or acquisition if it will not substantially limit competition. If businesses proceed without seeking permission, the ACCC can investigate and has the power to take action against them if it finds that the merger or acquisition has substantially limited competition.

Mergers and acquisitions occur regularly in the banking industry. In 2008, Bendigo Bank and Adelaide Bank merged; the Commonwealth Bank took over Bankwest; and Westpac acquired St George Bank. However, the big four banks, ANZ, NAB, Westpac and the Commonwealth Bank are specifically banned from merging with each other as this would reduce competition too much.

FIGURE 6 Australia's four big banks are prohibited from merging because this would severely reduce competition in the banking industry.









23.8.3 The role of the Australian Competition and Consumer Commission (ACCC)

The ACCC has wide powers to investigate possible breaches of the Competition and Consumer Act, and can take legal action against any person or organisation suspected of such a breach. It will sometimes be granted a court order to seize confidential documents from businesses suspected of anti-competitive behaviour.

Only a court can determine whether a breach of the Act has occurred and make orders against offenders. The ACCC's role is to bring matters before the courts to have criminal penalties imposed and to gain compensation for anyone who may have been harmed by the breach. Courts can impose penalties of up to \$10 million for companies and \$500 000 for individuals found guilty of anti-competitive behaviour.

FIGURE 7 ACCC officials may seize documents from businesses suspected of anti-competitive behaviour.



The ACCC has the power to authorise behaviour which might appear to be anti-competitive if it considers that behaviour to be in the public interest. It can also actively monitor prices and approve price rises in markets where competition is limited. As described above, businesses wishing to engage in mergers or take-overs can seek advice from the ACCC as to whether the proposed action is likely to breach the Act, and then proceed according to that advice. The ACCC aims to encourage compliance with the Act rather than simply to punish wrongdoers.



Resources



Weblink ACCC

23.8 ACTIVITY

The ACCC website contains details of recent cases dealt with by the ACCC. Use the ACCC weblink in the Resources tab to visit the site, select and read one story, and then answer the following:

- a. What was the issue in question?
- **b.** How did the matter come to the attention of the ACCC?
- c. What decisions, actions or recommendations did the ACC make in relation to the issue?

Investigating and evaluating

23.8 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

23.8 Exercise 1: Check your understanding

- 1. ES1 Provide a brief description of each of the following:
 - (a) price fixing
 - (b) predatory pricing
 - (c) exclusive dealing
 - (d) resale price maintenance.
- 2. ES2 Why is competition between businesses beneficial for consumers?
- 3. ES2 Explain the circumstances under which a merger or acquisition would be acceptable to the ACCC.
- 4. ES1 What does ACCC stand for?
- 5. ES1 Identify the Act of Parliament designed to provide fair competition between businesses.

23.8 Exercise 2: Apply your understanding

- ES1 Outline the actions that can be taken by the ACCC when dealing with a breach of the Competition and Consumer Act.
- 2. ES5 How would you expect the ACCC to deal with each of the following situations?
 - (a) The only two garden maintenance businesses in a country town decide to merge and form one business.
 - (b) The owners of five petrol retailers along a major stretch of road met each week to determine how much they would all charge on each day of the week.
 - (c) The manufacturer of a range of electrical goods provides all retail outlets selling its products with a list of recommended retail prices for each of its products, and then refuses to supply the products unless the retailers stick to those prices.
 - (d) A branch of a major supermarket chain, located in the same shopping centre as an independent supermarket, consistently prices all its products five per cent below those of the independent supermarket. When the independent business lowers its prices to try to match its competitor, the major supermarket lowers its prices even further.
- 3. ES1 Distinguish between a merger and a take-over.
- **4. ES5** In 2011 through to 2019, Coles and Woolworths sold milk for \$1 per litre. Why do you think they did this and do you think it should have been allowed?
- ES5 'If businesses compete fairly then consumers and businesses are both winners.' Discuss this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

23.9 Keeping consumers safe

23.9.1 When purchases go wrong

Every now and again we hear stories in the news of a particular model of car being 'recalled' to have some fault fixed. Other stories come to light of people suffering from food poisoning after visiting a certain restaurant or café. We hope that every purchase we make will be safe, but this is not always the case. Just as it is important to protect consumers from dishonest behaviour, it is even more important to ensure that the products we buy will not harm us.

23.9.2 Who keeps us safe?

A number of different bodies are responsible for ensuring that the goods and services we buy are not going to cause us harm. These bodies include government regulators, as well as other groups, such as Choice. The roles of these different entities are discussed briefly below.

Government regulators

Governments at federal, state, territory and local level have established a number of bodies to ensure product safety.

- The ACCC the Australian Competition and Consumer Commission includes issues of product safety among its various roles.
- State and territory Consumer Affairs and Fair Trading authorities have a major role within their respective states.
- Customs and quarantine bodies are able to monitor goods coming in from overseas, and can identify any products that may be dangerous.
- Specific industry regulators are organisations that have particular powers in relation to certain types of products.
 For example, the Therapeutic Goods Administration has a role in regulating medicines, as well as devices such as wheelchairs.

FIGURE 1 Customs officers check containers of goods from overseas to prevent dangerous goods from entering the Australian market.



• Local government health authorities carry out inspections on food premises such as restaurants, cafés and school canteens to make sure cleanliness and hygiene regulations are followed.

Other groups

Responsibility for product safety is spread quite broadly across the community, with a number of organisations involved.

- Businesses manufacturers and sellers take responsibility to ensure their products are safe. A business selling a product that causes harm to one or more consumers can be sued by those affected. It makes sense to avoid legal action by closely controlling the production process to keep products safe.
- Technical bodies worldwide organisations such as the International Organisation for Standardisation (ISO) set acceptable standards for all types of products. Any product that conforms to those standards is entitled to display an ISO number, so consumers know it conforms to the highest quality.
- Consumers buyers and their representatives also have a responsibility for safety. Choice,

FIGURE 2 Consumers can be assured that any product carrying ISO certification will be safe and will conform to the highest standards of quality.



formerly the Australian Consumers' Association, publishes a magazine and a website called *Choice*, which examines and tests all types of products. Individual consumers also have a responsibility to maintain items to keep them safe, such as checking electrical cords and enabling safety features on motor vehicles.

23.9.3 What do the government regulators do?

Federal, state and territory bodies have wide-ranging powers and responsibilities to ensure product safety. They carry out a variety of different activities in exercising these responsibilities.

General market monitoring

Government regulatory bodies examine all areas of all markets to detect possibly unsafe products. They monitor the media for any death or injury reports that may suggest a particular product could be dangerous. They examine and arrange testing of new types of products coming onto the market. They also respond to consumer complaints and monitor information on new products from around the world.

Encouraging safe practices

Regulatory bodies encourage safe practices through various measures:

- 1. Negotiating product removal. This involves gaining agreement from suppliers to remove dangerous goods from sale in their stores or outlets, including online outlets.
- 2. Removing unsafe goods. This can often involve a product recall. Anyone who may have bought a product that is found to be dangerous is expected to return it to the place of purchase. If the fault can be repaired, it will be returned to the manufacturer to be fixed. If the product cannot be made safe, the

purchaser will be entitled to a refund. Product recalls must be widely publicised through the media. In newspapers, recall notices appear with a special striped border. When suppliers have records of who their purchasers are, they also will contact them directly to arrange a recall. This often happens when identified faults need to be repaired in motor vehicles. A current example is the ongoing government recall on Takata airbags, which were installed in a variety of makes and models of cars. These airbags are potentially fatal if they activate at the wrong time.



3. Promotion of safety management. Government regulators encourage manufacturers and other suppliers to comply with sets of standards. These can include mandatory standards or voluntary standards. Mandatory standards are compulsory and must be observed by suppliers. For example, there are very strict standards for electrical goods, and consumers must be supplied with instructions and warnings about their appropriate use and any possible hazards. All packaged food must list ingredients and nutritional information on packaging, and clothing items must have washing and care instructions provided. Voluntary standards are those that have been agreed to by groups of suppliers or other organisations. They are not compulsory, but any supplier that complies with them can use this fact when promoting its products. Voluntary standards do not usually relate to issues of safety, they are more likely to deal with issues of quality.

FIGURE 3 Manufacturers that discover a fault in any of their products are expected to recall these products for repair, replacement or refund.



FIGURE 4 All packaged food must provide nutritional information on the packaging.



4. *Publicity and education*. Government regulators aim to make sure that all necessary information relating to product safety in general, and particular hazards when they occur, is circulated as widely as possible throughout the community. They often issue statements to the media about particular safety issues. These are sometimes reported in the media. The ACCC administers a product safety website, which provides regular updates on safety hazards. State and territory Consumer Affairs and Fair Trading authorities regularly conduct education and publicity programs to inform the public on broad product safety issues.

Solving safety problems and enforcing standards

Government regulators usually try to support businesses to do the right thing, rather than simply punishing them for doing the wrong thing. Where possible, they will work with industry, support technical investigation and concentrate on educating suppliers and consumers about product safety. New regulations can be created where necessary, and warning notices will be issued when dangerous products are identified.

Sometimes a product is clearly so risky that it has to be banned. This has happened on numerous occasions with toys sold to young children. If a toy contains small parts that could come loose and be swallowed by a small child, the toy may be banned from sale. Many other toys carry

FIGURE 5 This toy wooden alphabet train was removed from sale because it contained dangerous small parts.



clear indications of the age group for which they are designed, and possible risks to younger children.

If a manufacturer or other supplier fails to comply with safety standards or bans, government regulators can take legal action. Fines of more than \$1 million can be applied to any business failing to meet mandatory standards, or continuing to sell a product after it has been banned. A court can also order businesses to provide compensation to any customers harmed by products the business has sold. A business that becomes aware of any harm caused by a product or service that it has sold must inform the appropriate government regulator within two days. Failure to do so can also result in a fine.

DISCUSS

- 1. Do you think the potential fines and bans for failing to meet safety standards are appropriate?
- 2. Should government regulators be doing more or less to enforce these standards?

[Ethical Capability]



Weblink ISO standards

ACCC Product Safety Recalls

23.9 ACTIVITIES

- Use the ISO standards weblink in the Resources tab to visit the International Organisation for Standardisation (ISO) website. Watch the video provided and answer the following questions.
 - (a) What are ISO standards?
 - (b) Outline two benefits of these standards.

Investigating and evaluating

- 2. Use the ACCC Product Safety Recalls weblink in the Resources tab to visit this section of the ACCC website and select three 'Recall categories'. From each of these three categories, select one product that has been recalled and answer the following:
 - (a) What was the name of the product?
 - (b) What was the defect in the product?
 - (c) Why was that defect dangerous?
 - (d) What advice is given to consumers?

Investigating and evaluating

23.9 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

23.9 Exercise 1: Check your understanding

- 1. **ES2** Describe the role of each of the following in ensuring product safety:
 - (a) industry regulators
 - (b) customs and quarantine
 - (c) local government authorities.
- 2. **ES1** What action can government regulators take if a person is injured after a supplier fails to remove a banned product from sale?
- 3. **ES1** Identify two bodies established to maintain product safety.
- 4. ES2 Explain how consumers can play a role in product safety.
- 5. ES2 Explain the role of education in product safety.

23.9 Exercise 2: Apply your understanding

- 1. ES1 What responsibilities do consumers have in relation to product safety?
- **2. ES2** Explain the difference between mandatory standards and voluntary standards.
- 3. ES1 Give details of two of the methods used by government regulators to encourage safe practices.
- 4. ES2 Explain two practices encouraged by regulatory bodies.
- 5. ES2 Explain what is meant by ISO and how this body contributes to product safety.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

23.10 SkillBuilder: Questioning and research

What is questioning and research?

Using questioning and research involves identifying and understanding the task you are undertaking and developing a series of specific questions to help guide your research.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it).





23.11 Thinking Big research project: Please stop calling

on line §

SCENARIO

Call centres are one way businesses get in touch with current and potential customers but they can sometimes irritate people. The government has called for the creation of new guidelines to help regulate the call centre industry. Your task is to assist the government in developing a set of guidelines for how call centres should conduct themselves in their dealings with consumers.

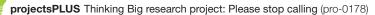
Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources



23.12 Review



23.12.1 Key knowledge summary

Use this dot-point summary to review the content covered in this topic.

23.12.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31364)

Crossword (doc-31365)



Interactivity Market system and consumer protection crossword (int-7605)

KEY TERMS

Australian Bureau of Statistics a government-owned agency that gathers and publishes a range of statistics to assist government, business and the community with decision making

budget estimates of all government income to be raised by taxes and other charges, and the planned spending of that income, within any given year

capital growth an increase in the value of shares or property over time

cost of living the level of prices paid by consumers for goods and services

disposable income the amount of money that households have available for spending and saving after income taxes have been accounted for

dividends company profits paid to shareholders, either in cash or as more shares

export goods and services sold by local businesses to overseas consumers

financial institution any organisation that takes deposits from those with surplus funds, and makes those funds available to borrowers

household sector a term used by economists to refer to the total of all consumers in the economy

imports goods and services purchased by local consumers from overseas businesses

inflation a general rise in prices across all sectors of the economy

infrastructure the facilities, services and installations needed for a society to function, such as transportation and communications systems, water and power lines

inputs those things that contribute to the production process

interest a charge made for the use of money that has been deposited or borrowed

investment the direction of money into the purchase of equipment or premises for the establishment of a new business, or the expansion of an existing business

labour the human skills and effort required to produce goods and services

minimum wage the legally binding minimum that must be paid to any employee over the age of 21 years mortgage loan a loan advanced to allow a person to buy a house or other property, with the property itself as security for the loan. This means the bank or other lender can take possession of the property if the borrower fails to make the regular payments.

percentage mark-up a fixed percentage increase to the price paid by a business for goods, to determine the selling price of those goods

privatise to sell a government-owned provider of goods or services to private investors

profit what remains after all business expenses have been deducted from the money that has been collected from selling goods or services

tariff a tax on goods imported from a foreign country

unemployment benefits welfare payments by government to people who are unemployed and looking for work. Such payments in Australia are generally known as the Newstart Allowance.

23.6 SkillBuilder: Contesting and debating ideas

23.6.1 Tell me

When you open a newspaper or watch the news on television, you are exposed to many economic and business issues. These issues are complex and diverse in nature. A study of such issues may require you to examine a range of things including:

- events such as the Global Financial Crisis (GFC)
- individuals such as famous entrepreneurs or world leaders
- policies of Australian governments or overseas governments
- business decisions of either Australian or overseas businesses
- agreements such as free trade agreements between Australia and other countries.

When studying such issues, it is important to be able to *contest* and *debate* different ideas related to each issue. These important skills are defined as:

- contesting coming up with opposing ideas on an issue
- debating the process of communicating about these opposing ideas with others.

In order to *contest* an idea, you must examine an issue from many different perspectives, not just from your own point of view. You must also consider the impacts of an issue on all stakeholders.

For example, if a business was considering moving their factories from Australia to Indonesia, you would have to consider the impact of this decision on each of the following stakeholders:

- owners/shareholders
- employees both in Australia and Indonesia
- suppliers
- the Australian federal government
- the Indonesian government
- · consumers.

Each of the above stakeholders may have a different view on the planned relocation. They may engage in *debate* in order to *contest* or challenge the perspective of the other stakeholders.

As a student of economics and business, it is important for you to be able to *contest* and *debate* issues and to express your own ideas clearly, in written, verbal and multimedia form.

23.6.2 Show me

Read the following case study.

Case study: Car manufacturing in Australia

For over ninety years, cars have been manufactured in Australia. The car manufacturing industry has been an important source of employment for Australian people and has contributed to Australia's export earnings. However, in 2017 Toyota, Holden and Ford ceased motor vehicle production in Australia.

There are two main perspectives on this issue:

- Perspective 1: Some people have argued that the federal government should have provided more money to the car manufacturers to help keep them in Australia. These people worry that many thousands of jobs were lost and that the suppliers of these businesses were also negatively affected.
- Perspective 2: Others argue that the car manufacturers in Australia are inefficient and therefore should not be propped up (supported) by the government. These people believe that the high production costs in Australia mean that it would never have been viable to produce cars in Australia.

Consider the facts in **TABLE 1**.

TABLE 1 Key facts relating to the exit of car manufacturers from Australia

| Toyota | Holden | Ford |
|---|---|--|
| Started manufacturing in Australia in 1963 Closed its Australian operations in 2017 Employed more than 4000 people Australia-wide | Began as an Australian saddlery business in 1856 Closed its Australian operations in 2017 Almost 3000 people in Australia lost their jobs | Opened in Australia in 1925 Closed its Australian operations in 2016 Closure of its operations cost 1200 jobs in Australia |

Source: Chris Uhlmann and Emma Griffiths, Car industry funding, ABC News, 10 March 2015.

The case study relates to a *contested* business and economic issue. Different stakeholders involved in this issue have very different perspectives. The two major political parties in Australia also engaged in lengthy *debate* in relation to this issue.

The following questions allow for a close examination of the case study so that issues can be contested and debated.

- 1. What are the main issues/ideas relating to this economic or business issue?
 - Why did car manufacturers choose to close their Australian operations?
 - Should the Australian Government have provided assistance to the car manufacturers?
 - How were different stakeholders affected by the Australian operations closures?
- 2. Who are the major stakeholders involved in this issue?
 - Employees of Toyota, Holden and Ford
 - Shareholders of Toyota, Holden and Ford
 - Consumers
 - The federal government
 - Suppliers of parts and materials
- 3. What are the interests/perspectives of each of the stakeholders involved in this issue?

| Stakeholder | Interest/perspective of this stakeholder |
|------------------------|--|
| Employees | The main interest of employees is job security and well-paying, challenging work. They wanted production to stay in Australia. |
| Shareholders | The main interest of shareholders is maximising the return on their investment. Therefore, they may be happy about the closures if they resulted in increased profit for the business. |
| Consumers | Consumers want good-quality and reasonably priced cars. They may support the closures if it resulted in cheaper cars. |
| The federal government | The federal government wants businesses to be competitive so would not want to keep providing financial support to inefficient businesses. However, the government would be very concerned about the job losses that resulted from the closures. |
| Suppliers | Suppliers want to keep their customers, and the closures will have forced them to find new customers or move into new markets. |

- 4. What is your view on this issue?
 - Consider where you stand on the issue. Try to consider all the facts that are available before deciding on your view.

- 5. How does your view compare with the views of others?
 - Compare your view on the issue with that of others. Are there any stakeholders who share or oppose your view?
- 6. How can you communicate your perspective to other people interested in this issue?
 - It is often useful to debate your ideas and perspectives with friends, family members or as a whole class. Consider whether or not your perspective is influenced by the opinions of others.

23.6.3 Let me do it

Complete the following activity to practise this skill.

23.6 ACTIVITY

Using the example above as a model, select another economic or business issue to investigate. Some examples of issues that you may consider include:

- · Australia's involvement in a free trade agreement
- Penalty rates are they still necessary in our current economy?
- Has technology ruined our 'work-life balance'?
- Any other economic or business issue you are interested in.

In relation to your chosen economic or business issue, answer the following questions (refer to the previous example if you are unsure how to answer any of the questions):

- a. What are the main issues or ideas relating to your chosen economic or business issue?
- b. Who are the major stakeholders involved in this issue?
- c. What are the interests and perspectives of each of the stakeholders involved in this issue?
- d. What is your view on this issue?
- e. How does your view compare with the views of others?
- f. How can you communicate your perspective to other people interested in this issue?

 Once you have conducted your research, you could communicate your findings in a number of ways:
- Conduct a class debate so that you and your classmates can challenge and contest each other's ideas.
- Prepare a written report which examines your perspective and other perspectives on the issue.
- Use a multimedia platform (such as iMovie) to create a *Q&A*-style program. This would allow for debate and contesting of ideas.

23.10 SkillBuilder: Questioning and research

23.10.1 Tell me

The following steps provide a useful guide to carrying out research:

- Identify and understand the general task you are attempting to complete.
- Develop a series of specific questions that will help guide your research in the appropriate direction, and help you determine the information you need.
- Locate appropriate sources of that information.
- Record relevant information from a range of sources.
- Present the information in an appropriate form.

23.10.2 Show me

Imagine you have been asked to investigate the role of your state Consumer Protection or Fair Trading authority's website in providing advice for consumers and businesses.

Your first step is to clearly identify the key task. This could be expressed as follows:

'Prepare a report on the type of advice the state Consumer Protection or Fair Trading authority website provides for consumers and businesses, with examples.'

It is now necessary to break this down into a series of more specific questions. These could include:

- 1. How is the website organised to provide advice?
- 2. What types of headings or categories of information are used?
- 3. How is the material broken down (types of industries, types of products etc.)?
- 4. If a consumer has a specific problem with a particular product or supplier, what does the website advise them to do?
- 5. What sort of advice is provided to businesses?
- 6. What are some relevant examples?

The next step is to locate your sources. Each state authority has a website, so you simply need to use a search engine to find the name and website of your home state's Consumer Protection or Fair Trading authority.

Keep your questions beside you as you navigate through the site, and note the location of material that provides answers. You can select and print some text, and then highlight those sentences or paragraphs that provide answers to your questions. Sometimes a complete answer to a question may be found in several places in a piece of text. Be sure to highlight all relevant text, and indicate with a number which question the information answers.

When you are satisfied you have found the answers to all the questions, you need to write the answers in order, making sure you use your own words as much as possible. You can then use the answers to present your information in the required form. For example, this may be an oral report to the rest of the class, an essay to be marked by your teacher, a PowerPoint presentation, or any other format that is appropriate.

23.10.3 Let me do it

Complete the following activity to practise this skill.

23.10 ACTIVITY

Using the above process as a model, carry out the following research task:

Prepare a report on the type of advice the ACCC gives to consumers in relation to internet and phone usage, including examples.

23.11 Thinking Big research project: Please stop calling

Scenario

Australia is a market economy and businesses and consumers should be free to pursue their goals without too much interference. However, we can't always rely on businesses to operate ethically and so the government assists with the protection of consumers. Call centres are one way that businesses get in touch with current and potential customers, but they can sometimes irritate people. The government has called for the creation of new guidelines to help regulate the call centre industry.



Task

Your task is to assist the government in developing a set of guidelines for how call centres should conduct themselves in their dealings with consumers.

This set of guidelines should consider:

- the rights of consumers
- the rights of call centre operators
- the responsibilities of consumers
- the responsibilities of call centre operators.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to set up your project group. Working in pairs will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.

One student will develop the guidelines for call centre operators and the other student will develop the guidelines for consumers.

- In the **Media centre** you will find an assessment rubric to guide your work.
- Research how call centres operate and the reasons why they operate as they do. Use the weblink in the Media centre to watch a video about a call centre.
- Identify some Australian businesses that use call centres and some of the issues people have with the way they operate.
- Using your research, develop your set of guidelines with clear and direct language.
- Submit your completed guidelines to your teacher for assessment and feedback.





ProjectsPLUS Please stop calling (pro-0178)

23.12 Review

23.12.1 Key knowledge summary

23.2 Participants in the market system

- Consumers satisfy their needs and wants by working to earn money, and then buying goods and services from businesses that produce those goods and services.
- The basic circular flow of money is between the household sector and the business sector.
- Financial intermediaries, government and the overseas sector are all involved in the operation of the market system in Australia.

23.3 Different types of markets

• There are a large number of different types of markets that make up the Australian economy. These include the retail market, the labour market, financial markets and the stock market.

23.4 Key economic questions for business

- The interaction between buyers and sellers in the marketplace can influence prices charged for goods and services.
- Markets can also help determine what goods should be produced and in what quantities; how those goods and services are produced; and to whom they are distributed.

23.5 Government involvement in the market

- Government performs a number of roles in the Australian market system including:
 - the provision of welfare and infrastructure
 - · economic management
 - regulation of wages and employment conditions
 - provision of some goods and services
 - management of planning and the environment
 - regulation of international trade
 - setting of immigration policies and targets.

23.7 Legal protection of consumer rights

- The Australian Consumer Law prohibits a range of practices that could mislead consumers.
- It is compulsory for sellers to provide all available information to consumers, and to ensure that buyers and sellers have equal rights in any purchase.
- Consumer Law also provides a number of basic guarantees in relation to the quality of goods purchased.

23.8 Business competition protects consumers

- Practices that would lessen fair and open competition between businesses are banned under the Act.
- The ACCC has the power to take legal action through the courts to deal with businesses that fail to comply with the provisions of the Act.

23.9 Keeping consumers safe

- A number of different government regulators monitor product safety throughout Australia.
- These regulators encourage the development of safety standards, and seek to educate suppliers and the public on product safety.
- The regulators can ban dangerous products, or order the recall of products to ensure they are made safe.

23.12.2 Reflection

Complete the following to reflect on your learning.

23.12 ACTIVITIES

Revisit the inquiry question posed in the Overview:

We all play a part in the Australian economy. How do we ensure that everyone involved is getting a fair deal?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



Resources



eWorkbook Reflection (doc-31364)

Crossword (doc-31365)



Interactivity Market system and consumer protection crossword (int-7605)

KEY TERMS

Australian Bureau of Statistics a government-owned agency that gathers and publishes a range of statistics to assist government, business and the community with decision making

budget estimates of all government income to be raised by taxes and other charges, and the planned spending of that income, within any given year

capital growth an increase in the value of shares or property over time

cost of living the level of prices paid by consumers for goods and services

disposable income the amount of money that households have available for spending and saving after income taxes have been accounted for

dividends company profits paid to shareholders, either in cash or as more shares

export goods and services sold by local businesses to overseas consumers

financial institution any organisation that takes deposits from those with surplus funds, and makes those funds available to borrowers

household sector a term used by economists to refer to the total of all consumers in the economy

imports goods and services purchased by local consumers from overseas businesses

inflation a general rise in prices across all sectors of the economy

infrastructure the facilities, services and installations needed for a society to function, such as transportation and communications systems, water and power lines

inputs those things that contribute to the production process

interest a charge made for the use of money that has been deposited or borrowed

investment the direction of money into the purchase of equipment or premises for the establishment of a new business, or the expansion of an existing business

labour the human skills and effort required to produce goods and services

minimum wage the legally binding minimum that must be paid to any employee over the age of 21 years mortgage loan a loan advanced to allow a person to buy a house or other property, with the property itself as security for the loan. This means the bank or other lender can take possession of the property if the borrower fails to make the regular payments.

percentage mark-up a fixed percentage increase to the price paid by a business for goods, to determine the selling price of those goods

privatise to sell a government-owned provider of goods or services to private investors

profit what remains after all business expenses have been deducted from the money that has been collected from selling goods or services

tariff a tax on goods imported from a foreign country

unemployment benefits welfare payments by government to people who are unemployed and looking for work. Such payments in Australia are generally known as the Newstart Allowance.

24 Business decisions

24.1 Overview

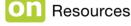
Awesome name. Check. Cool website. Check. Is there more to running a successful business?

24.1.1 Cosmetics entrepreneur

Jellaine Ross started her business Cherry Blooms at the age of 24. The Brisbane-based company sells cosmetic products, particularly brush-on eyelash extensions. Ms Ross started selling the brush-on eyelash extensions after seeing them used when she was on holiday in Korea. She thought the idea would work in Australia so she repackaged and remarketed the product and created her own brand. Her business earned \$100 000 in its first year and now sells close to \$10 million worth of product a year both online and in retail stores across the world.

In this topic we will look at the different ways to own and run a business and how to recognise and respond to opportunities.





Video eLesson Different forms of business ownership (eles-1813)

LEARNING SEQUENCE

- 24.1 Overview
- 24.2 The three main ways to own a business
- 24.3 Alternative ways to own a business
- 24.4 Opportunities for businesses
- 24.5 Responding to opportunities in the market
- 24.6 SkillBuilder: Cost-benefit analysis
- 24.7 Thinking Big research project: Pitch a business idea
- 24.8 Review

online ? on line online ?

To access a pre-test and starter questions and receive immediate feedback and sample responses to every question, select your learnON format at www.jacplus.com.au.

24.2 The three main ways to own a business

24.2.1 Structures of business ownership

There are a number of structures, or forms of ownership, that a business owner can choose from when starting a business. The three most common forms of ownership are **sole proprietorship**, where an individual runs a business on their own, a **partnership**, where a group of people will run a business together, and a **corporation**, which is owned by shareholders. Each form is discussed below.

24.2.2 Sole proprietorship

A sole proprietorship, or sole trader, is a business that is owned and operated by one person. A sole proprietor business can operate in almost any field. Usually, however, they are small businesses such as cafés, newsagents and hairdressers and trades such as plumbers and electricians. A sole proprietor may employ other people to work for the business, or to operate and manage the business.

The sole proprietor receives all the **profit** that the business makes, but is also responsible for any losses. He or she has **unlimited liability**. This means he or she can be forced to sell personal assets such as a house or car to pay off business debts. A sole proprietor business usually has only one person's name in the business name; for example, *Maria's Café*.

Individuals who establish a sole proprietor business are often referred to as entrepreneurs. Entrepreneurs are those people who assume the financial and personal risk of establishing a business with the hope of making a profit. These people normally exhibit enterprising behaviours.

You may know somebody or you yourself may be the kind of person who demonstrates enterprising behaviours. Some of these enterprising behaviours and characteristics include:

- demonstrating initiative
- having good problem-solving abilities
- being creative and innovative
- being able to plan and complete complex tasks
- being a reflective thinker
- being willing to take measured risks
- predicting the consequences of a decision
- communicating clearly and effectively with different types of people
- analysing alternatives and selecting appropriate courses of action.

FIGURE 1 A sole trader is a business that is owned by one person, even though it may employ other people to operate and manage the business.



Advantages and disadvantages of sole proprietorship

A sole proprietorship is a good form of ownership for a person who is just starting a business because it is a simple and low-cost way to start. It allows the owner to maintain full control of the business, make all the decisions, set the tone for the business and to keep all the profits. There will be no disputes with any partners and there are minimal government regulations. However, the owner does have unlimited liability. It can be difficult for the sole trader to find finance to start or expand the business and the owner must perform a wider variety of tasks. The owner also often works long hours, as they may have no-one else working for them.

24.2.3 Partnership

A partnership is a business usually owned and operated by two or more people, called partners. The partners share their profits and losses, usually equally. Together they decide how best to operate the business. It is common for people with similar skills, such as doctors, accountants, solicitors and dentists, to form a partnership. Partnerships tend to have the names of the partners in the business name; for example, Kennedy & Lee Lawyers. As with sole proprietors, partnerships also have unlimited liability.

A partnership can be formed with a verbal agreement, but using a formal written partnership agreement is worthwhile. This usually outlines who is in the partnership, how profits will be shared, how decisions will be made, how disputes will be settled and what will happen when the partnership ends.

FIGURE 2 A partnership is a business usually owned and operated by two or more people, called partners.



Advantages and disadvantages of partnership

A partnership is an inexpensive and simple form of ownership. It allows the partners to share the responsibility for decision-making, the risks and the workload. The partners can pool their finances and their expertise and there is minimal government regulation. On the other hand, a partnership has unlimited liability. It can be difficult to find suitable partners and disputes between the partners can arise. If one partner decides to leave the business, the future of the business can become complicated.

24.2.4 Corporation

A corporation, or company, is owned by shareholders. In Australia, all corporations undergo a process known as incorporation. This involves creating a business as a legal entity in its own right and treating it as a separate entity from its shareholders. In other words, the corporation (rather than individual shareholders) is liable for the debts created through its operation.

Corporations have **limited liability**. This means that if the business cannot pay its debts, a shareholder loses only the money she or he has invested in the business. A shareholder cannot be forced to sell personal assets to pay the corporation's debts.

However, there are some exceptions to this situation. In some instances, the directors of the corporation will be asked to give a personal guarantee when seeking a loan from a financial institution. In such cases, the person who offered the personal guarantee might lose their own assets to pay the debts of the business.

If directors of the corporation engage in misleading behaviour or recklessly borrow money, they can be held personally responsible. Criminal charges may follow, and lawsuits may also be brought under the code of civil law.

Corporations can be organised as either public or private. The general public may buy and sell shares in public corporations and these corporations may be listed on the Australian Securities Exchange (ASX). Private corporations cannot be listed on the stock exchange and tend to be family-owned businesses. They have restrictions on who can buy their shares. A public corporation must have the word 'Limited', or the abbreviation 'Ltd', after its name. A private corporation must have the words 'Proprietary Limited', or the abbreviation 'Pty Ltd', after its name.

Advantages and disadvantages of a corporation

A corporation is a good form of ownership to attract finances, also known as capital. Corporations can obtain capital by selling shares. Corporations have limited liability, which means that the owners can only lose the value of their investment if the corporation goes into debt. The life of a corporation can continue if an owner of the business sells their shares. However, corporations are very complex and expensive to set up. There are very strict laws regulating corporations including how they are registered, how they need to report their financial results and how they are closed down. Corporations can grow very large, resulting in inefficiencies.

DISCUSS

In the aftermath of the Global Financial Crisis (GFC) of 2008, many large corporations in the banking industry were 'bailed out' by their governments, with large amounts of taxpayers' money helping them to stay afloat. Some people have argued that these companies should not be 'too big to fail', and that by bailing them out it could encourage more reckless behaviour in the future. What do you think? **[Ethical Capability]**

FIGURE 3 A corporation is owned by shareholders and can be structured as either a public or private company.



24.2 ACTIVITIES

1. Working with a partner or by yourself, visit a shopping centre. Record information about the businesses you find there in a chart like the one below.

| Name of business | Nature of business activity | Form of business ownership |
|------------------|-----------------------------|----------------------------|
| Carol's Café | Meals, tea, coffee, snacks | Sole proprietorship |
| | | |
| | | |
| | | |
| | | |
| | | |

Collect data for at least ten different businesses. Analyse your results to find out the most common form of business ownership. Use a bar graph or a pie chart to present your results. Suggest reasons why this form of ownership is the most popular.

Investigating and evaluating

- 2. Work in groups for this activity. Choose a business that interests you it may be a local, national or international business. Use research techniques to find out as much as you can about it on the internet and through other means. Share your findings with your group.
 - What type of business is it, and how is it structured?
 - What are some of the business's key products or services?
 - What else about this business is of particular interest?

Investigating and evaluating

24.2 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

24.2 Exercise 1: Check your understanding

- 1. ES1 Define the following terms in your own words:
 - (a) unlimited liability
 - (b) limited liability
 - (c) shareholder.
- 2. ES1 Identify the correct form of business ownership for the following businesses:
 - (a) National Australia Bank Ltd
 - (b) Dinah's Mobile Dog-washing
 - (c) McCartney and Daughters
 - (d) Visy Industries Australia Pty Ltd.
- 3. **ES1** Outline the difference between a sole proprietorship and a partnership.
- 4. ES1 In what ways does a private corporation differ from a public corporation?
- 5. ES2 If someone wants to buy out a corporation, what will they need to do?

24.2 Exercise 2: Apply your understanding

- 1. ES6 List the possible consequences of the partners of a business having a dispute.
- 2. ES5 Summarise the advantages and disadvantages of each form of business ownership using a table such as the one below.

| Form of ownership | Advantages | Disadvantages |
|-------------------|------------|---------------|
| Sole proprietor | | |
| Partnership | | |
| Corporation | | |

- 3. ES5 Suggest an appropriate form of business ownership for the following people. Explain why you made your suggestion.
 - (a) Brynn is very interested in setting up a manufacturing business to sell coffee to supermarkets around Australia, and possibly internationally.
 - (b) Gemma wants to start a new pet shop business where she is responsible for making all of the decisions.
 - (c) Muhamed is considering whether he should open a fish-and-chip shop. He is worried that he has very little finance, and would like to invite other people to help him start the business.
- 4. ES6 'Public corporations allow access to greater finance but can lead to a loss of control of a business.' Discuss this statement.
- 5. ES2 Operating as a sole trader allows a business owner to set the tone for the business. Explain what this means.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

24.3 Alternative ways to own a business

24.3.1 Are there other ways to own or operate a business?

Sole proprietorship, partnership or corporation are not the only forms available to create a business. A business can also be structured as a **cooperative** — a business owned and controlled by the group of people it serves, and a **trust**, where another person or company holds property or carries out business on behalf of the members of the trust. Additionally, after choosing a form of ownership, a business owner may decide to run their business as a **franchise**.

24.3.2 Cooperative

In a cooperative, a number of people combine resources for a particular purpose. Typical cooperatives involve farmers, community education centres and credit unions.

The benefit of a cooperative is that people who work in one industry can join together to manage their own affairs, drawing on their combined expert knowledge of the specialist aspects of their work. They also reduce costs by streamlining their operations to ensure maximum efficiency in delivering goods and services.

An example of a cooperative is the Best Western International hotel chain whose members are hotel operators. The members own and operate their own businesses but work together and pool funds and

resources through Best Western, which operates as a non-profit organisation. Pooled funds are used to advertise their businesses and the Best Western brand, and to generate greater buying power.

Many different types of cooperatives can be used for many purposes, including cooperatives for housing, building, consumers, workers and credit unions. Retailers' cooperatives buy in bulk on behalf of their members to obtain discounts from manufacturers and to pool marketing. This type of cooperative is common for locally owned grocery stores, hardware stores and pharmacies. However, their members are businesses rather than individuals.

FIGURE 1 The Best Western hotel chain is an example of a cooperative.



24.3.3 Trust

A trust is a form of business ownership where a trustee holds property or assets for the benefit of another person or a group of people. These other people are known as beneficiaries. They are often members of a family. Setting up a trust can be expensive and complex because a formal deed needs to be created and there are administrative tasks that the trustee is required to complete annually. Trusts are often used to preserve family assets and to reduce tax. Family businesses can be set up as trusts so that every family member can be made a beneficiary without having direct involvement in the running of the business.

FIGURE 2 A family business can be set up as a trust so that family members can be made beneficiaries.



24.3.4 Franchise

While it is not actually a form of business ownership, operating a business as a franchise is becoming increasingly popular. A **franchisor** is the individual or organisation that grants, under certain conditions, the

right to use a business name and the right to produce or distribute the franchisor's product. The **franchisee** is the person who purchases the franchise, usually by paying a fee to the franchisor. Franchisees can operate their business as a sole proprietorship, partnership, corporation or trust.

The benefit to the franchisee is that he or she is granted an instantly recognisable business name; for example, Subway or Hungry Jack's. The business owner can immediately start to benefit from the reputation of the franchise. The franchisee also receives training in the technical aspects of operating the business from the franchisor, as well as assistance with business management principles. In return, the franchisee provides the start-up fees and labour, and agrees to uphold the terms and conditions of the franchise agreement. This can mean, for example, that a franchisee is obliged to market and sell the products specified under the franchise agreement. The franchisee may also need to conform with any required production and distribution processes and requirements.

Just as there are many advantages for businesses operating as franchises, there are also disadvantages for both the franchisee and franchisor.

Operating a business as a franchise limits the freedom of the franchisee. The franchisor controls the operations, the product and the marketing. For example, when you enter a McDonald's restaurant, the décor looks the same, the staff wear the same uniform and the food tastes the same as in any other McDonald's anywhere in Australia. Operating a franchise limits the owner's ability to innovate and individualise their stores.

All advertising and promotional campaigns are determined by a centralised office and must be run in all franchise stores in exactly the same way. An owner of a franchise may not agree with a particular advertisement or a 'Scratch and Win' promotion, but they must do what the franchisor tells them.

The responsibility is on the franchisee to follow the instructions set by the franchisor or they may be reprimanded, receive a fine or even lose the rights to their business.

FIGURE 3 Some franchise operations in Australia include Pie Face, a café and bakery business specialising in pies, and Harvey Norman, which sells products for the home and office.





DISCUSS

In 2016 Nando's Australia Pty Ltd used security guards to take over two of the company's largest franchise stores. A Supreme Court battle has followed with the franchisor arguing franchisees are breaking their franchise agreement by not refurbishing their stores as required by head office.

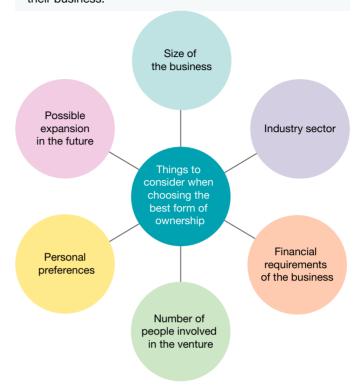
The company wants the franchisees to spend almost \$1.2 million to refurbish the Narre Warren, Wareca and Braeside businesses, to keep them in line with current company standards.

The case has become a key test in head office's ability to force franchisees to invest in their business. As yet this case has not been resolved. Who do you think is doing the right thing here? [Ethical Capability]

24.3.5 Choosing the best form of ownership

As we have seen, a business owner can choose from several structures, or forms of ownership. when starting a business. When choosing the most suitable structure, the business owner needs to consider their personal preferences, as well as the advantages and disadvantages of each type of business. For example, someone who prefers to work alone and is wishing to start a business that is easy to set up might choose a sole proprietorship. A person who wants to raise the finance to grow a business selling products around Australia, and perhaps overseas, might consider a company structure. A person wishing to preserve the assets of their family and reduce tax might choose a trust. The form of ownership used by the business can change over time. It is quite possible that after a business is started, it will grow. As the business grows, its goals might change, which means the owner might need to review the most appropriate structure as well.

FIGURE 4 Business owners must consider a range of factors when deciding which form of ownership best suits their business.





Weblink Business structures

24.3 ACTIVITY

Use the **Business structures** weblink in the Resources tab to find out more about different types of business ownership. Choose two business structures and write down two new things that you did not already know about these structures.

Investigating and evaluating

24.3 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

24.3 Exercise 1: Check your understanding

- 1. ES1 In what ways is a cooperative different to other forms of business ownership?
- 2. ES1 Why do people create trusts?
- 3. ES3 List five different franchises that operate in your area.
- 4. **ES1** Answer the following questions.
 - (a) What do the franchisor and the franchisee receive under a franchise agreement?
 - (b) What is each party required to provide?
- 5. **ES2** What are the benefits to farmers of joining a cooperative?

24.3 Exercise 2: Apply your understanding

- 1. ES2 Outline the main advantages and disadvantages in establishing a business through a franchise agreement.
- 2. ES3 Consider the following businesses that are just starting up. What form of business ownership would be the most appropriate? For each case, explain why a person or group of people would choose to establish that form of ownership rather than another.
 - (a) An accounting practice providing financial and taxation services
 - (b) A café offering freshly baked breads and cakes, and specialty coffee
 - (c) A milk processing plant owned and operated by a group of one hundred dairy farmers
 - (d) A fashion retailer aiming to expand nationally within twelve months
 - (e) A family that has property held in trust by another person
 - (f) A business selling phone and internet connections hoping to raise \$250 million in capital to commence
- 3. ES2 Outline two key factors to consider when choosing the best form of business ownership.
- 4. ES5 Suggest whether other groups (other than farmers, community education centres and credit unions) could benefit from operating as a cooperative.
- 5. **ES4** Provide one benefit and one disadvantage of operating as a trust.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

24.4 Opportunities for businesses

24.4.1 Factors influencing opportunities

Businesses are always searching for opportunities, including ideas for new products, ways to attract new customers and more efficient methods of running the business. Many factors influence opportunities for businesses, including demographics, competition, location and target market. Successful businesses seize opportunities quickly.

24.4.2 Demographics

Being aware of demographics can create opportunities for businesses. Demographics are characteristics or statistics relating to the population, including age, gender, ethnicity, employment, income and education. Businesses can use this information to work out what products consumers prefer or to determine their buying behaviours. Let's have a closer look at some of these characteristics.

The age of a country's population can influence business opportunities. The products that a business sells will usually appeal to a certain age group. The Australian population is ageing, which means that there is more demand for, for example, health services, further education and training, and travel. Some businesses may choose to focus on these opportunities or to target their products at younger consumers. People aged under 35 are more likely to be the first to purchase the latest versions of technologies such as mobile phones, games consoles and televisions.

Gender

Men and women demand different products. Businesses sell different hygiene and clothing products based on the gender of consumers. Women make the majority of the buying decisions in Australian households. This presents an opportunity for businesses. For example, businesses might target women with new homeimprovement products.

Income

Income can affect business opportunities. The products that a business sells will usually appeal to a certain income group. A premium product, such as designer clothing, will normally appeal to higher income groups. Lower income groups tend to purchase discount products. A business owner may decide to focus on higher income groups by starting a fashion boutique, or focus on lower income groups by opening a discount fashion store.

FIGURE 1 Demographics are the characteristics or statistics relating to population, including age and gender.

24.4.3 Target market

By focusing its efforts on the most appropriate demographic, the business can begin to determine its target market. This is a specific group of customers with similar characteristics, that a business will produce goods and services for. A business working out its target market will do so by 'segmenting the market'. People can be grouped according to demographic characteristics, geographical characteristics (where people live; for example, in urban, rural or suburban areas, or the country they are located in), behavioural characteristics (the way that customers purchase products; for example, are they a regular user or a first-time user of a product, do they have loyalty to a brand?) and psychographic characteristics (people's personalities, values, attitudes, interests, and lifestyles).

A business selling car products may determine that its target market is males, aged 30-50 and living in urban areas, who like cars and who have time and money to spend

FIGURE 2 By identifying a target market, a business may be better able to satisfy the demands of its customers.



working on them. A business selling make-up may have a target market of customers who are female, aged 25-50, living in the city and who like to buy 'brand name' products. Defining a target market allows a business to decide who will demand their products, what products they want, and if there are actually enough potential customers to make the business profitable.

24.4.4 Competition

Competition can make life difficult for a business. Depending on the market the business is operating in, they may have several competitors or very few competitors. Competition can drive prices down and can restrict the opportunity to make profit.

However, competition can also create opportunities for businesses. It can force a business to improve the way they do things or to innovate, either through using technology, altering the product or by improving customer service. Competition can force a business to examine their target market closely to make sure that they are selling to the right consumers and perhaps to change the group of customers they are attempting to sell to.

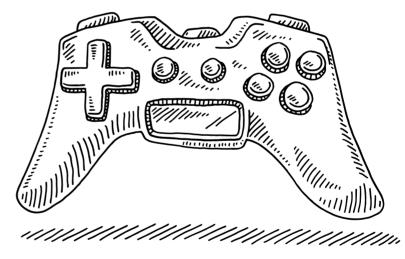
24.4.5 Location

The location a business chooses can create opportunities or restrict them, according to the nature of the business. A business needs to consider how important passing trade will be, whether visibility is important, how important access to resources will be, or whether cost will be the most important factor. For example, a business that is hoping to sell to young people or young families would find limited opportunities if it was located in an area whose population has an average age of over 60, a boutique fashion store would struggle to find customers if it was located in an industrial area and a business that manufactures goods might encounter difficulties if it was in an area that its suppliers could not access easily.

24.4.6 CASE STUDY: GameZone

Two friends, Jake and Ashley, decided to start a small business, GameZone. They didn't have much money of their own, but they managed to convince their parents to lend them enough to get started.

Their first problem was the location. Rents were very high in the local shopping centre. They opted for a disused shop in a local street. Next door was an abandoned warehouse, and on the other side was the Pensioner World shop. They thought they might do all right in the



area though, because another computer games store, eGames, was located just around the corner.

Ashley thought it would be best to sell to anyone and everyone who would buy their games. He put a couple of advertisements in the local newspapers, and left some leaflets in the Pensioner World shop.

On the opening day, the stock had arrived and games were piled high on the shelves. One elderly customer walked up to the counter.

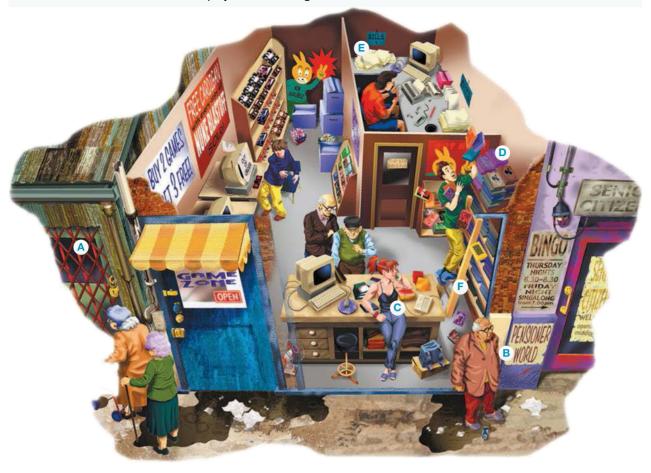
'Do you have any touch-typing programs please?' asked the customer.

'Dunno about that,' said Mez, the shop assistant. Jake emerged from the back office and stubbed out a cigarette on the counter. He told the customer that the store sold games, not computer programs.

'Well then, could you please order a copy for me?' asked the customer.

'Maybe, but until our internet is fixed, nothing's happening. Sorry,' replied Jake.

GameZone in action — how not to play the business game!



- A Bad location for business
- B Wrong demographic for products
- Uninterested staff

- Inappropriate store layout
- E Disorganised paperwork
- F Workplace hazard

24.4 ACTIVITY

In a magazine, newspaper or online, find images that show examples of target market characteristics. Paste the pictures onto a page under appropriate headings (demographic, geographic, behavioural and psychographic) and add labels explaining why each picture represents that characteristic.

Investigating and evaluating

24.4 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

24.4 Exercise 1: Check your understanding

- 1. ES1 Briefly outline the four characteristics of a target market.
- 2. ES6 List some business opportunities.

- 3. **ES2** Explain how the following factors influence business opportunities:
 - (a) target market
 - (b) competition
 - (c) location.
- 4. ES6 What would happen to a business that fails to seize opportunities?
- 5. **ES2** Explain how a competitor can create opportunities for a business.

24.4 Exercise 2: Apply your understanding

- 1. ES6 For each of the target market groups below, think of an opportunity (a product or a business idea) that would cater for their needs.
 - (a) High income earners
 - (b) New parents
 - (c) Diet-conscious consumers
 - (d) Well-educated people
 - (e) Young and active students
- 2. ES5 Select a business in your local area. Describe whether the business has an advantage or disadvantage in its location in regard to:
 - (a) how visible it is to potential customers
 - (b) cost (including the likely rent or costs of transportation)
 - (c) how close it is to suppliers and customers
 - (d) how close it is to competitors.
- 3. ES5 Answer these questions about the GameZone case study.
 - (a) What evidence is there that Jake and Ashley did not spend enough time carefully locating their business for its target market?
 - (b) How will competition affect GameZone? Did Jake and Ashley make the right decision in locating it close to a competitor? Why or why not?
 - (c) Give three examples of poor customer service at GameZone.
 - (d) The business has not enjoyed the start the owners wanted. If they called you in as a manager, what steps would you take to improve operations? Explain.
- 4. ES2 Explain what is meant by demographics and how they can create opportunities for a business.
- 5. ES2 'Business location opportunities have changed due to the development of technology.' Explain this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

24.5 Responding to opportunities in the market 24.5.1 Developing a new product

After identifying opportunities in the market, a business owner will need to respond to those opportunities in some way. This may involve developing new products to satisfy demand or changing the way the business delivers its products or services to consumers.

A business might respond to opportunities in the market by developing a new product to satisfy demand. **Product development** can involve modifying an existing product or the way in which it is presented, or creating an entirely new product that meets the demands of a newly defined customer or market. Starting with an idea for a new product, or an idea to modify a product, a business will go through a series of steps to bring the product to market.

The product will need to undergo a design process and then a prototype or mock-up will need to be created. The product will then go through beta and market testing. The testing will confirm if the product is on the right track or if improvements need to be made. After the technical needs of the product are planned for, including materials needed, suppliers sourced, and final production requirements met, the product will be launched onto the market.

FIGURE 1 The process for new product development.

Idea for a Design Create Beta and Plan for new product Design prototype/ market technical Launch mock-up testing needs product

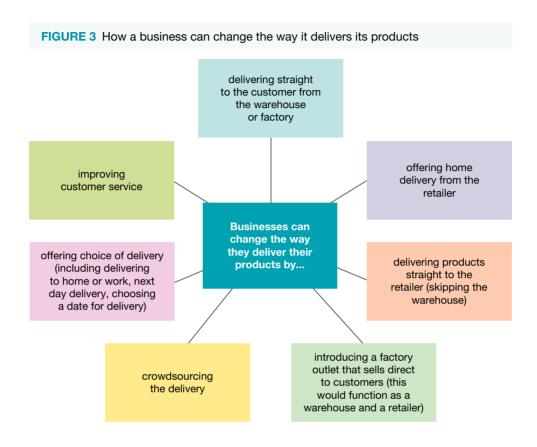
FIGURE 2 Gelato Messina, a Sydney-based gelato maker, introduced a 'whitebait' flavour — a combination of salmon and white chocolate with lemon cream cheese, dill and caper jelly. Co-owner Donato Toce said that the business would not have introduced the flavour if they did not think it would work.



24.5.2 Changing the way products are delivered to consumers

A business might respond to opportunities in the market by changing the way they deliver their products to customers. Products can be delivered in many ways, including by road, rail, ship, pipelines, power lines and computer networks. Most goods are produced at a point of production, for example a farm or factory. They are then distributed to warehouses and moved to points of sale, such as retail stores, where customers will then purchase them. A business can change the way it delivers products to customers by modifying this process.

Online shops have drastically altered the way that products are delivered to customers. Instead of going to a physical store, millions of customers around the world visit businesses such as Amazon and eBay. After purchasing a product, customers can specify delivery, often direct to their home. Some of the ways in which a business can change the way in which it delivers its products can be seen in the interactivity.



Crowdsourced delivery

Online networks and marketplaces, including Zipments and Deliv in the USA and PluckNGo in Australia, connect couriers with customers who want to have goods delivered. A business owner wanting deliveries can make the request on the **crowdshipping** service's site or app. Those wanting to deliver products can browse available delivery orders, then pick up and make the delivery. Couriers range from professionals to students to people looking for some extra income.

Improving customer service

A business can improve its customer service by seeking feedback from customers, such as via a survey, and responding to their

FIGURE 4 Blake Davies, a barista employed by Casualties Espresso in Port Macquarie, delivers coffee and food to customers on his skateboard.



suggestions. Another way businesses improve their service is to use customer loyalty programs, providing discounts and giveaways to reward loyal customers. Loyalty programs also allow businesses to build a database of their customers and to stay in contact with them. Another way that businesses can improve their service is by ensuring staff are trained to provide helpful and responsive customer service.

24.5.3 CASE STUDY: Apple responds to an opportunity

Apple pioneered a hands-on, immersive in-store technology experience when it first opened a retail store in 2001. When the first store opened, people were skeptical. The US economy was in recession and Apple had been reporting losses. But Apple saw an opportunity to improve its relationship with its customers and better present its brand. Led by then Chief Executive Officer (CEO) Steve Jobs, Apple took a risk in opening Apple Stores. It now has more than 400 retail stores located around the world, and rivals including Microsoft and Samsung have since emulated the retail stores.

Apple's stores allow the company to connect with customers in ways that other technology companies cannot. Customers, both new and existing, can experiment with Mac and iOS products. Apple learns lessons **FIGURE 5** Apple saw a business opportunity to improve its relationship with customers and build its brand by launching Apple Stores.



from what customers do in their stores and applies these lessons to its product development, including its iTunes and Mac OS applications stores, as well as its hardware. Having retail stores allows Apple to take further risks with its products. It knows that if its products break down, customers can simply pop into an Apple Store and have the fault repaired or replaced by a technician. This excellent customer service builds a positive relationship between the consumer and Apple so that customers keep coming back and tell other people about their products. Apple also uses its retail stores to support the launch of its new products, so that they become events. The launch of a new iPhone or iPad becomes a media frenzy because of the lines of people waiting outside Apple Stores.





24.5 ACTIVITIES

- 1. Use the product development process to launch an imaginary new product. Complete a report by responding to the following questions.
 - (a) Outline your idea. What is your product and who do you think would be interested in buying it?
 - (b) Design your product. Draw or sketch rough plans for your new product.
 - (c) Create a prototype or mock-up. You could draw a final sketch, make a model or produce a video or animation showing what the product will look like.
 - (d) If you were to test the product on the market, what would be the results? Write a paragraph suggesting what beta and market testing might reveal about your product.
 - (e) What technical needs will your product have? Write a paragraph outlining what will be needed to manufacture your product, including materials, employees, factory, plant or warehouse, transport, packaging and any other needs.
 - Launch your product by presenting your report to the class. You could do this in the form of a PowerPoint, Keynote, video or a combination of presentation technologies. **Constructing and proposing**
- 2. Use the Business innovation weblink in the Resources tab to find out more about businesses that have responded to market opportunities. Choose one business case study and read it. Write down one innovation that the business has introduced in response to a business opportunity.
 Investigating and evaluating

24.5 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

24.5 Exercise 1: Check your understanding

- 1. ES1 Define the term 'product development'.
- 2. ES1 List the steps in the product development process.
- 3. **ES6** Suggest five ways that a business can change the way in which it delivers its products.
- 4. ES5 Read the case study 'Apple responds to an opportunity' and answer the following:
 - (a) What business opportunities was Apple responding to?
 - (b) In what ways did Apple respond to these opportunities in the market?
 - (c) How did the introduction of Apple Stores improve Apple's products and customer service?
- 5. **ES2** Explain one stage of product development.

24.5 Exercise 2: Apply your understanding

- 1. ES6 List the possible consequences of the decisions that the following small business owners are making:
 - (a) Charlie runs a plant nursery and has decided to sell his products online to expand locally and overseas. He intends using crowdsourced delivery to make sure that the products get to customers.
 - (b) Customer surveys at Bulete Ltd, a transport and logistics corporation, have revealed that customer satisfaction is very poor. The CEO, Murgon Conray, has decided that all staff will be trained in customer service.
 - (c) Karley is planning to introduce a new product line to her swimwear importing business. She has sent her designs to the manufacturer in Asia which produces her products and she has promoted the new fashions on her website.
- 2. ES6 Imagine that one of the shop spaces in your local shopping centre has become vacant. Recommend a new business idea that could be located in that space and explain the new product or products that it might sell. Draw the new shopfront and label the ways that the store has provided a new product to satisfy demand or changed the way that its products are delivered to consumers.
- 3. **ES2** Explain what is meant by crowdsourcing.
- 4. ES5 'Customer service is almost as important as price.' Discuss this statement.
- 5. ES3 'Businesses that don't develop their products can get left behind.' Analyse this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

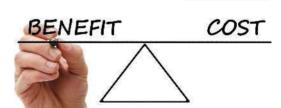
24.6 SkillBuilder: Cost-benefit analysis

What is a cost-benefit analysis?

A cost-benefit analysis is a detailed examination of the strengths and weaknesses of different alternatives in order to see whether the benefits outweigh the costs. A cost-benefit analysis helps to determine if an option will be a good decision or investment.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it).



24.7 Thinking Big research project: Pitch a business idea

on line $\frac{2}{5}$

SCENARIO

New businesses start every day. Some of them end up being very successful while others don't fare quite as well. Often, businesses fail because poor decisions have been made in the initial planning stage. Careful planning can avoid mistakes, prepare a business for hard times and allow a business to take advantage of unexpected opportunities. Your task is to plan a unique business and then prepare a business pitch.

Select your learnON format to access:

- the full project scenario
- · details of the project task
- · resources to guide your project work
- · an assessment rubric.





Resources



ProjectsPLUS Thinking Big research project: Pitch a business idea (pro-0179)

24.8 Review



24.8.1 Key knowledge summary

Use this dot-point summary to review the content covered in this topic.

24.8.2 Reflection

Reflect on your learning using the activities and resources provided.



Resources



eWorkbook Reflection (doc-31366)

Crossword (doc-31367)



Interactivity Business decisions crossword (int-7606)

KEY TERMS

beneficiaries the people who are entitled to the benefit of any trust arrangement

competition the outcome of two or more businesses attempting to supply their products to the same group of customers

cooperative a business that is owned and operated by the group of people that it serves

corporation a business owned by shareholders

crowdshipping a method of delivery where couriers are obtained from a large group of people, especially from online communities, and connected with customers

demographics characteristics relating to population, especially age, gender, ethnicity, employment, income and education

franchise the situation where a business sells the rights to distribute its products under its name to other individuals or businesses

franchisee the individual or organisation that purchases a franchise

franchisor an individual or organisation that grants the right to use a franchise

limited liability where shareholders cannot lose more than their investment in the event of the failure of the business

partnership a business owned and operated by two or more people

product development the creation of products with new or different characteristics that offer new or additional benefits to customers

profit what remains after all business expenses have been deducted from the money that has been collected from selling goods or services

shareholders the part-owners of a corporation

sole proprietorship a business that is owned and operated by one person

target market a group of customers with similar characteristics towards which a business has decided to aim its marketing efforts and its products

trust a business created to hold property or assets for the benefit of another person or a group of people trustee a person or company that holds property or assets for the benefit of another

unlimited liability where a business owner is personally responsible for all the debts of their business

24.6 SkillBuilder: Cost-benefit analysis

24.6.1 Tell me

Using a cost-benefit analysis

A cost—benefit analysis is a detailed examination of the strengths and weaknesses of different alternatives in order to see whether the benefits outweigh the costs. The principle behind a cost—benefit analysis is that you should only decide to act on an alternative if the benefit from taking it is greater than the cost.

Why is a cost-benefit analysis useful in economics and business?

A cost-benefit analysis helps to determine if an option will be a good decision or investment. It is also useful for comparing alternatives or projects, as well as estimating the resources needed to complete the alternative or project.

A good cost-benefit analysis:

- identifies opportunities
- proposes alternative ways to take advantage of these opportunities
- calculates the costs and benefits
- compares the costs and benefits to determine if the benefits outweigh the costs
- makes a decision about the best alternative to recommend.

24.6.2 Show me

We can apply the five elements of a good cost-benefit analysis to a case study, to see how this works in practice.

CASE STUDY: Olando's opportunity

Step 1

Identify opportunities in the market.

Olando is the general manager of a large soft-drink manufacturer. He and his team are looking at the market to identify opportunities.

The manufacturer has spent a great deal of time looking closely at its business and the local market it sells to. By asking a wide range of questions they have determined there are two business strategies that could meet the changing needs of the soft-drink market.

Olando's team believes that there is an unmet need in the Australian market for



low-sugar alternatives to cola flavours. There are currently some products available, but customer feedback suggests some frustration with the lack of widespread access to these options. These options also suffer from poor quality.

Step 2

Propose alternative ways to take advantage of these opportunities.

The company thinks that there are two possible alternatives. Firstly, they can introduce a new range of low-sugar soft drinks based on the unmet need. The other alternative is to select suitable products that other companies are selling overseas and offer these, or copies of these, to local customers. This would involve buying the rights to distribute these soft drinks.

Step 3

Calculate the costs and benefits of each alternative.

Olando's team conducts a cost—benefit analysis of the alternatives proposed. This means that they add up all the costs and all the benefits of each alternative, and then they compare them to decide if the benefits outweigh the costs. A summary of the costs and benefits of each alternative can be seen in **TABLE 1** and **TABLE 2**.

TABLE 1 A summary of costs and benefits for a new range of low-sugar soft drinks

| | Costs | Benefits |
|------------------|---|--|
| Monetary | Total (including raw materials, factory overheads, transportation, packaging, research and development, salaries): \$20 million | Total (including sales): \$30 million |
| Non- monetary | Extra workload for staff | New research and development that could benefit the business in the future A positive image built up among customers and potential customers |

TABLE 2 A summary of costs and benefits for selling or imitating overseas products

| | Costs | Benefits |
|------------------|--|--|
| Monetary | Total (including raw materials, factory overheads, transportation, packaging, salaries): \$15 million | Total (including sales): \$20 million |
| Non- monetary | Staff dissatisfaction with using ideas from overseas; customer dissatisfaction with using products designed for overseas markets | Research and development team will be free to look at other products |

Step 4

Compare the costs and benefits to determine if the benefits outweigh the costs.

The team calculates that the benefits outweigh the costs when analysing the first alternative, introducing a new range of low-sugar soft drinks. The monetary costs are \$20 million, while the monetary benefits are \$30 million. This means that the monetary benefits outweigh the monetary costs by \$10 million. They also consider that the non-monetary benefits considerably outweigh the non-monetary costs.

When analysing the second alternative, selecting or imitating overseas products and selling these to local customers, the team calculates that the monetary benefits outweigh the monetary costs by \$5 million. The team feels that, even though the non-monetary costs of this alternative are high, the non-monetary benefits still outweigh the non-monetary costs.

Step 5

Choose the best alternative.

The team determines that the best alternative is the first one, introducing a new range of low-sugar soft drinks. This is because they believe that the benefits of this alternative far outweigh the costs when compared to the second alternative.

24.6.3 Let me do it

Complete the following activities to practise this skill.

24.6 ACTIVITIES

You can now carry out this five-step process to complete a cost-benefit analysis using the case study below.

CASE STUDY: Uncle Bill's

Uncle Bill's is a global manufacturer of cereal products and snacks. Its marketing department recommends that the business should respond to opportunities in the Australian market to produce products that meet different dietary needs, including low-salt, yeast-free and gluten-free products. It has proposed two alternatives. The first alternative is to introduce a new range of gluten-free cereals. The second alternative is to modify existing products already being used in other markets and sell these in the Australian market.

Bridie is the Australian regional manager for Uncle Bill's. She has asked you to be part of the team that will undertake a cost–benefit analysis of the alternatives proposed. Bridie has provided the team with a breakdown of the costs and benefits of each alternative (see **TABLE 3** and **TABLE 4**).

TABLE 3 A breakdown of costs and benefits for Uncle Bill's: Alternative 1 — new gluten-free products

| | Costs | Benefits |
|--------------|--|---|
| Monetary | Raw materials (ingredients): \$12 million; factory overheads — salaries, insurance, power, repairs and maintenance: \$8 million; transportation: \$1 million; packaging/labelling: \$2 million; selling/distribution: \$3 million; research and development — salaries, other overheads: \$4 million | Improve market share by 5%; sales of \$50 million |
| Non-monetary | Extra workload for staff | New research and development that could benefit the business in the future; building a positive image among customers and potential customers; empower staff (as they are involved in the development of the new product) and improve corporate culture |

TABLE 4 A breakdown of costs and benefits for Uncle Bill's: Alternative 2 — modifying existing products

| | Costs | Benefits |
|--------------|---|--|
| Monetary | Raw materials (ingredients): \$12 million; factory overheads — salaries, insurance, power, repairs and maintenance: \$8 million; transportation: \$1 million; packaging/labelling: \$2 million; selling/distribution: \$3 million | Improve market share by 4%; sales of \$40 million |
| Non-monetary | Some staff may be dissatisfied with using ideas from other countries when local ideas could have been used. Loss of customers who may be dissatisfied with products that are designed for overseas markets | Research and development team will be free to look at other products |

- 1. Construct your cost-benefit analysis by completing the following steps:
 - Step 1: Identify the opportunities for Uncle Bill's.
 - **Step 2**: Identify the alternatives proposed to take advantage of these opportunities.
 - **Step 3**: Add up the costs and benefits of each alternative. Write down the total costs and benefits for alternative 1 and the total costs and benefits for alternative 2.
 - **Step 4**: Compare the costs and benefits for each alternative. Do the benefits outweigh the costs for one alternative or both? In your opinion, which alternative has more benefits than costs?
 - **Step 5**: Make a decision about which alternative to recommend.
- 2. Complete the following questions.
 - (a) How did you decide which alternative to recommend?
 - (b) Compare your decisions to the decisions made by other people in your class. How do the decisions differ? Can you explain the variation in decisions?
 - (c) What aspect of completing a cost-benefit analysis did you find relatively easy and what did you find more challenging?
 - (d) Reading the Olando's opportunity case study, identify the opportunities in the market for Olando's soft-drink manufacturer.
 - (e) How did Olando's company respond to opportunities in the Australian market?

24.7 Thinking Big research project: Pitch a business idea

Scenario

New businesses start every day. Some of them end up being very successful while others don't fare quite as well. Many businesses fail within the first three years.

Often, businesses fail because poor decisions have been made in the initial planning stage. Careful planning can avoid mistakes, prepare a business for hard times and allow a business to take advantage of unexpected opportunities.

Task

Your task is to plan a unique business using the parameters provided below and then prepare a business pitch. You will be able to work by yourself or with a group. Your teacher will determine the maximum and minimum group sizes.

To determine the business you will run, consider the following people to work with:

- One of your friends or family members is a very good tennis player. They have always wanted to work in that area.
- One of your friends or family members has a passion for gardening.
- One of your friends or family members is a talented musician and currently is studying to be a teacher.
- One of your friends or family members is a talented artist and has undertaken courses in art, signwriting, spray painting and other similar types of courses.
- One of your friends is really good at computers and another friend is a very talented gamer.
- One of your friends is talented in some other area not shown on this list the talent you choose must be approved by your teacher.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and to set up your project group if you wish. Working in groups will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the Research forum, where you will find starter topics loaded to guide your research. You
 can add further topics to the Research forum if you wish. When you have completed your research,
 you can print out the Research report in the Research forum to easily view all the information you
 have gathered.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- You are to prepare a 'pitch' to the friend and/or family member. The 'pitch' is to convince them to go into business with you, using your business knowledge and skills and their specific talent. The pitch should convince them to join you in a unique business venture something that is new or innovative or needed in your area. Your pitch could include:
 - name of the business
 - · business logo
 - · description of what the business will do
 - type of business ownership
 - · location of business
 - target market information.
- Provide a list and explanation of the qualities you possess and that your partner may possess that will make your business a success.
- In addition, you will provide explanations and justifications for each of the decisions you have made.
- Source any images that may help illustrate your points and make your pitch enticing.
- The pitch should be delivered as a written report but could also be given as an oral presentation.
- Submit your business pitch to your teacher for assessment and feedback.





24.8 Review

24.8.1 Summary

24.2 The three main ways to own a business

- Entrepreneurs assume the financial and personal risk of establishing a business with the hope of making a profit. These people demonstrate abilities such as risk-taking, initiative, problem-solving, creativity, innovation, communication and planning.
- A sole proprietorship is a business that is owned and operated by one person.
- A partnership is a business owned and operated by two or more people.
- A corporation is a business owned by shareholders.

24.3 Alternative ways to own a business

- A cooperative is a business that is owned and operated by the group of people that it serves.
- A trust is a business created to hold property or assets for the benefit of another person or a group of people.
- A franchise is the situation in which a business sells the right to distribute its products under its name to other individuals or businesses.

24.4 Opportunities for business

 Business opportunities are influenced by factors including demographics, target market, competition and location.

24.5 Responding to opportunities in the market

• A business can respond to opportunities by following a process to develop new products to satisfy demand or by changing the way products are delivered to consumers.

24.8.2 Reflection

Complete the following to reflect on your learning.

24.8 ACTIVITIES

Revisit the inquiry question posed in the Overview:

Awesome name. Check. Cool website. Check. Is there more to running a successful business?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



eWorkbook Reflection (doc-31366)

Crossword (doc-31367)

Interactivity Business decisions crossword (int-7606)

KEY TERMS

beneficiaries the people who are entitled to the benefit of any trust arrangement

competition the outcome of two or more businesses attempting to supply their products to the same group of customers

cooperative a business that is owned and operated by the group of people that it serves

corporation a business owned by shareholders

crowdshipping a method of delivery where couriers are obtained from a large group of people, especially from online communities, and connected with customers

demographics characteristics relating to population, especially age, gender, ethnicity, employment, income and education

franchise the situation where a business sells the rights to distribute its products under its name to other individuals or businesses

franchisee the individual or organisation that purchases a franchise

franchisor an individual or organisation that grants the right to use a franchise

limited liability where shareholders cannot lose more than their investment in the event of the failure of

partnership a business owned and operated by two or more people

product development the creation of products with new or different characteristics that offer new or additional benefits to customers

profit what remains after all business expenses have been deducted from the money that has been collected from selling goods or services

shareholders the part-owners of a corporation

sole proprietorship a business that is owned and operated by one person

target market a group of customers with similar characteristics towards which a business has decided to aim its marketing efforts and its products

trust a business created to hold property or assets for the benefit of another person or a group of people **trustee** a person or company that holds property or assets for the benefit of another **unlimited liability** where a business owner is personally responsible for all the debts of their business

25 The changing work environment

25.1 Overview

Go to work. Go home. Get paid. Repeat. The way we work hasn't changed at all. Has it?

25.1.1 The rapidly changing world of work

In many **industries**, the routine of a working day starting at 9 am and finishing at 5 pm is long gone. This routine has been replaced with almost 24/7 access to everything and everyone. Computers, the internet and smart phones have made it possible for people to stay connected with their social and work networks no matter what the time. With increased connectedness comes benefits such as greater flexibility to **work** the hours that suit individuals' lifestyles and the possibility of working remotely, such as from home or while travelling. However, it is also not uncommon for **employers** to expect workers to be available to deal with work matters outside of their normal working hours. In some fields there appears to be an **employer expectation** that employees will work harder and longer than they have done in the past.

For the Australian **labour force**, like many places throughout the world, **employment** for life is a thing of the past. Employment is becoming less secure, and low-skilled work is less common. It is being replaced by work that requires a greater level of skill and knowledge, especially in light of the rapid technological advances that continue to shape the modern work environment. Technology is just one of the key factors that influence the world of work. Other influences include the health of the economy, employer and employee expectations, consumer demands, and **globalisation**. In this topic, we will explore these various influences on the way people work today and how they may work in the future.



LEARNING SEQUENCE

- 25.1 Overview
- 25.2 Influences on work today
- 25.3 The significance of technology
- 25.4 Changes to the workforce
- 25.5 Work in the future
- 25.6 SkillBuilder: Analysis and interpretation of data
- 25.7 Thinking Big research project: Impacts of technology poster
- 25.8 Review



To access a pre-test and starter questions and receive **immediate feedback** and **sample responses** to every question go to your learnON title at www.jacplus.com.au.

25.2 Influences on work today

25.2.1 Modern technology

The Australian labour market has undergone significant change compared to when your grandparents started working. In part, these changes may be attributed to the changing expectations of workers and employers: employers expect that employees will work harder and longer hours, while employees want a greater balance between their work and their non-working lives (work-life balance). Arguably, though, the greatest influence on today's world of work has been the rapid development of technology a development that has changed the way in which not only Australians, but the people of the entire world, work. We will explore the impact of modern technological advances in subtopic 25.3, but it is important to note that long before the age of computers, the silicon chip and the internet, another significant technological advance began the process of change in the way people work.

25.2.2 Past influences

Before the late eighteenth century, the type of available work was mainly in **primary production**, in areas such as farming crops, fishing or raising livestock. Life was very different to that of today's developed societies. People produced the bulk of their own food, clothes and other needs. Manufacturing was fairly small-scale and done in people's homes using hand tools or basic machines. From the late 1700s to the mid 1800s, technological advances associated with the Industrial Revolution — in particular the development of steam power and the steam engine, the mechanised cotton mill and loom and the use of processed fuel to

fire and heat the furnaces in iron ore production in England — changed the way that people lived and worked. People who previously worked in the **primary industries** outlined above moved to towns and cities to work in factories (secondary industries). The working conditions in these early factories were harsh. Men, women and children had few rights. They were forced to work long hours in noisy, dirty and dangerous workplaces. Accidents often happened around machinery, but there was no compensation or sick leave. If a person was injured, someone else took their job and there were no unemployment benefits provided to those who could not find work.

Substantial workplace reforms in the many decades since this time have greatly improved job conditions for most workers in industrialised, developed countries such as Australia. But in some countries, harsh and unsafe work environments still exist, with workers paid poorly for long hours of labour in difficult conditions. This is one of the ethical challenges of globalisation, discussed further in the sections that follow.

treated.

FIGURE 1 Children provided cheap labour in factories and

mills. As this 1853 illustration shows, they were often badly

25.2.3 Present influences

In looking at the historical perspective of work, it is evident that the advancement of new ideas, the need for improvements in daily living conditions, new manufacturing processes, and the development of new ways of using resources such as coal, gas and oil, have all had major effects on how people live and work. In modern times, in addition to technological advances, numerous other factors may influence the ways in which people work. These include:

- the health of the local economy and the level of unemployment
- government regulations and workers' unions
- the impact of globalisation, the decreasing cost of distance, and the **outsourcing** and **offshoring** of jobs
- the decline of employment opportunities in some industries and the growth of others.

The health of the economy

When an economy is healthy, business tends to thrive, which means work is generally more readily available and unemployment levels are low. Consumers feel more able to afford the products and services they require, and their spending, in turn, feeds business growth. However, during times of economic hardship this is not the case. Businesses that are struggling to keep afloat are less likely to hire staff and, in fact, may attempt to cut business costs through making particular positions redundant and retrenching some of their workers. Thus, when the economy is in a period of decline, it may be difficult for workers to find employment.

Sometimes employers will attempt to weather a period of economic downturn by reducing employees' work hours rather than retrenching **FIGURE 2** The health of the economy is an important influence on the world of work — a healthy economy generally means more available jobs and lower unemployment rates.



their workers. This can be an effective way of maintaining jobs while allowing a business to continue to operate at a lower cost, but any such changes can only be made in consultation with employees, if they are on permanent work contracts.

Government and workers' union influences

Industrial relations laws govern the relationship between employers and employees and have a significant impact on the ways people work in Australia. These laws have undergone many changes since the inception of the industrial relations system in the early 1900s. Many of these changes have occurred as a result of different government policies over time, and also as a result of the work of *unions* — formal organisations that negotiate with employers and government on behalf of the workers in a particular industry to ensure that their **conditions of employment** are fair and reasonable. Conditions of employment are the arrangements made between an employer and employee; that is, what the employer agrees to give an employee in return for their work. These conditions are usually outlined in a formal agreement, which covers issues such as the number of hours an employee is expected to work, annual leave and other entitlements such as sick leave and long service or maternity leave.

Government also affects the world of work through decisions regarding taxation and import tariffs, which can affect the ability of certain industries to remain competitive (see subtopic 23.5), and through changes to laws in relation to issues such as retail trading hours and liquor licensing. For example, where it was once illegal for shops to trade on Sundays, this has now become the norm. In Victoria from the time of World War I until 1966, pubs had to close at 6 pm; in 1966 this was changed to 10 pm, and since changes to liquor licensing laws in the late 1980s, many venues that serve alcohol are now able to stay open until the early hours of the morning. Clearly, such changes

FIGURE 3 Conditions of employment are set out in a formal agreement. In Australia, there are three different types of agreement: awards, enterprise agreements and individual employment contracts.



have had a significant impact on the working hours of people employed in hospitality (hotels, clubs and restaurants) and in retail trade. Changes to work hours are discussed further in subtopic 25.4.

The impact of globalisation

Advances in technology, in particular communications technology; more effective, lower cost methods of transportation; and largely unrestricted trade between countries have allowed the whole world to become a single, integrated marketplace. The term globalisation refers to this ever-increasing international cultural and economic interaction.

In Australia, globalisation has had, and continues to have, a significant effect on work opportunities and the way people work. One of the key ways in which this effect has been felt is through the increasing practice of outsourcing.

Outsourcing involves engaging individuals or businesses outside of an organisation to fulfil functions previously carried out within the organisation itself. In an attempt to improve productivity, cut costs and increase their ability to compete on a global scale, many Australian businesses now outsource some of their non-core functions. Some functions that are commonly

FIGURE 4 Rapid technological advances have facilitated the process of globalisation - allowing the interaction of economies throughout the world.



outsourced include recruiting new staff, marketing and advertising, management of finances, and production of goods. Some businesses have taken this a step further, and outsource various functions to workers and organisations overseas — some have even moved their entire production process overseas. This practice is known as offshoring.

Offshoring provides a business with the ability to cut labour costs, which can be as much as ten times cheaper in a developing country such as China, India or Sri Lanka than in a developed country such as Australia. For example, many companies have outsourced their call centres to India or the Philippines; similarly, an increasing number of companies are taking their legal or accounting needs offshore, having work completed in countries where labour costs are cheaper but skill levels remain high. Offshoring can also improve the ability of a business to stay competitive and to develop an overseas presence by entering new markets.

We can examine the impact of globalisation on the Australian working environment in relation to the consumer, the worker and the business owner in the table below.

TABLE 1 Examining the impact of globalisation on Australian consumers, employers and employees

Impact on consumers · Ability to choose from a wide range of goods, some of which are imported into the country, e.g. tinned tomatoes, electrical goods, clothing, wine Access to goods at lower prices Ability to browse and buy online and have purchases delivered to the door, eliminating the need to travel to stores Impact on employers Ability to reduce the costs of manufacturing or providing a service by employing cheaper overseas-based labour Access to new markets overseas Increased ability to access new technologies from overseas Ability to generate greater income through selling more products to a global market, allowing the potential to further build and develop the business through investment in improvements in technology, productivity and quality Pressure to become more competitive and produce goods and services more cheaply than overseas competitors Impact on employees Loss of jobs as some roles are moved to overseas providers Potential for individuals to travel, work and/or study overseas: taking skills. knowledge and capabilities with them Potential to work for international companies that bring their business to Australia New jobs created as a result of business growth through exporting products such as wine, cars, gas and minerals to other countries

Decline and growth of industries

With many companies moving part or all of their operations overseas, the employment opportunities in some industries have decreased. For example, the closure of production plants of the three major car manufacturers in Australia (Ford, Holden and Toyota) meant that workers in this industry had to seek employment in other fields. While ongoing technological advances can lead to job losses in some cases, where tasks that were once carried out by people are now able to be done by machines, they can also present opportunities for new businesses to develop; for example, in areas such as telecommunications and digital technologies. In the 1980s, jobs such as website designers, social media managers, e-commerce consultants and app developers didn't exist. Thirty years later, they are a common part of the business world. Many of the jobs that will exist in the future may be roles that we cannot even imagine today.

FIGURE 5 Just as 'app development' was unheard of in the 1980s, many of the jobs of the future may be in fields that are yet to be developed.





25.2 ACTIVITY

Use the Industrial Revolution weblink in your Resources tab to watch a video examining how the Industrial Revolution changed the nature of work. Take some notes while watching the video, then write one or two paragraphs explaining how working conditions have changed from the Industrial Revolution to today.

Describing and explaining

25.2 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

25.2 Exercise 1: Check your understanding

- 1. ES2 Describe what work was like before the Industrial Revolution.
- 2. ES2 Explain the difference between primary and secondary industries.
- 3. ES1 What is outsourcing?
- 4. ES1 What is offshoring?
- 5. ES1 Explain what is meant by retrenchment.

25.2 Exercise 2: Apply your understanding

- 1. ES3 Examine FIGURE 1. What do you think working conditions were like for young people then?
- 2. ES6 What impact do you think globalisation, outsourcing and offshoring will have on the Australian economy?
- 3. ES6 What might be some of the ethical challenges of globalisation and, in particular, the practice of offshoring?
- 4. ES2 Technology changes can impact jobs. With reference to Ford, Holden or Toyota, explain this statement.
- 5. ES2 Explain the concept of 'work-life balance' and why it is important for workers to seek this balance and employers to encourage it.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

25.3 The significance of technology

25.3.1 Significant technological change

The Australian work environment has changed significantly. Much of this change can be attributed to rapid advances in technology and communications that have altered the way the world does business.

When the desktop computer was developed in the 1980s, the world of work changed dramatically; however, it was arguably the widespread adoption of the internet in the 1990s that has brought the greatest change to the world of work since the Industrial Revolution. The internet, computers and devices such as smart phones and tablets are now part of our everyday life and, for most workers, are integrated into the way that they undertake and complete their work. The ability to communicate virtually instantaneously with anyone almost anywhere in the world has changed the way people do business and has been a major factor in the process of globalisation.

Types of new technology

Technological advances have changed many aspects of business, from administration tasks to internal and external communications and service provision and manufacturing processes. The list of technological advances that have changed the way we work is enormous. It includes:

- video conferencing and webinars using technology to meet or conduct information and training sessions, rather than needing to have face-to-face interactions
- smart technology (smart phones) enabling 24/7 communication through phone, email, SMS and MMS

- *e-commerce* internet banking, online shopping, microchip credit cards, EFTPOS, PayPal, BPay, PayPass and PayWave
- *software developments* word processing, spreadsheets, database, accounting and other software programs that streamline administrative tasks
- robotics their use in manufacturing, especially in assembly lines
- computer-aided design (CAD) using computers to design new products, buildings and so on.
- computer-aided manufacturing (CAM) using computers to assist with the manufacturing process of goods and services
- cloud computing external data storage away from the organisation, allowing access to information from anywhere
- communication discussion forums, blogs and social networking creating new ways to reach potential customers.



How technology has changed working lives

The impact of technological advances has been felt significantly in the workplace. For example, where once it was necessary to post documents (taking several days or even weeks to be delivered, depending on the distances involved), email now makes it possible for correspondence to be sent and delivered within the same minute! Computer software enables once tedious administrative, accounting and other processes to be completed in a fraction of the time that they once required. And computer-operated machines now perform many manufacturing line tasks that once required meticulous human involvement. Similarly, in many cases where once manual labour was the norm, computers and robots now control the lifting and movement of heavy objects. Interestingly, the law has followed this process and various requirements have been introduced that seek to protect workers and ensure that employers provide a safe environment for them. Work (Occupational) Health and Safety laws cover issues such as manual handling, machine operation, safety guards and shut-off mechanisms, acceptable noise levels, and other hazard management of technology in the workplace.

Manufacturing

The use of computers in production has sped up the manufacturing process significantly and, in turn,

productivity levels have increased. Assembly lines, computer-aided designs, and computer-driven manufacturing processes (in which computers control and direct the machinery and equipment) have meant that fewer workers are needed to undertake the manual aspects of production. However, the increase in production output, combined with access to new markets through globalised trade opportunities, has allowed the growth of some businesses and a need for increased numbers of workers to meet the demands of expansion. Furthermore, the nature of many roles in computer-assisted manufacturing operations has changed, with workers gaining higher level skills as they are trained to be able to monitor equipment and carry out any adjustments or even repairs that may be required.

FIGURE 2 The types of machinery used in manufacturing processes are constantly changing the way employees work as well as the work that they do.



Rapid communication changes

Technology has changed the concept of communication. For example, the growth of the internet has meant that news events, when they occur, can be instantly disseminated and shared through instant messaging, blogs, emails and websites. This change has had a huge impact on print media such as newspapers. Many people no longer buy the printed newspaper but will instead read the news online — and it is not just local newspapers that they can access, but also newspapers from around the world.

In the workplace, these rapid changes have led to enormous shifts in the way people communicate and work. No longer do people need 'face time' to meet and discuss business. As FIGURE 1 depicts, face-to-face meetings have been replaced by 'virtual meetings'. Smart devices allow for instant communication and access to workers, employers, suppliers and producers.

Similarly, where once distance may have been a prohibitive factor in applying for and obtaining a job, this is no longer the case. In many fields of work, employees increasingly have the opportunity to work remotely, based from their own homes. The use of technology — such as teleconferencing or videoconferencing, email, cloud computing and so on — effectively eliminates the distance between people, and creates opportunities for more flexible work arrangements that are beneficial for both the employee and the employer.

Staying connected or switching off?

The developments that have occurred in communications technology make it difficult to 'switch off'. For example, how many people in your class have a smart phone? Do you check your phone or device as soon as an instant message, email or Facebook post hits your inbox? If you do, you are not alone. Many of us are obsessed with our smart phones, tablets, laptops and other devices, along with the social media so easily accessed on them. And while such technologies allow us unprecedented opportunities for social connection and access to information, they also play a role in the gradual blurring of the boundaries

FIGURE 3 You can have access to your working life no matter where you are.



between work and home life. It is now easy to stay connected with the office or work while at home, on holidays, or even while sleeping! Many people now work beyond traditional office hours, using laptops and other devices to access work networks remotely, checking work emails while they have breakfast or during their commute to work on the train, or perhaps, while at home, teleconferencing colleagues working in a different time zone.

DISCUSS

Having 24/7 access to work emails and being able to work in any location has led to many people feeling that they need to work more than the 38 hours a week (for a full-time job) that the federal government recommends. Should more be done to ensure that this 38-hour limit is adhered to? **[Ethical Capability]**

25.3 ACTIVITY

Conduct research on the development of the internet. There are many interesting videos online that will provide you with this information. Examine them and then write a short story or cartoon about how the internet was developed.

Reasoning, creating, proposing

25.3 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

25.3 Exercise 1: Check your understanding

- 1. **ES1** List three technological advances that have altered the way people work, and outline how they have changed the workplace.
- ES2 The use of technology in work has a range of consequences. Discuss one positive and one negative consequence.
- 3. ES2 Discuss how technology can stop people from 'switching off' and the impact this may have on a person's wellbeing.
- 4. ES1 Distinguish between computer-aided design (CAD) and computer-aided manufacturing (CAM).
- 5. ES1 Explain what is meant by a virtual meeting.

25.3 Exercise 2: Apply your understanding

- 1. ES3 What forms of technology do you use every day? What effect does this have on your life?
- ES4 Technology in the workplace can help workers achieve a work-life balance by changing the way people work. Explain how this can occur.
- 3. ES2 'Technology can cost jobs but it can also improve skills'. Explain both points made in the statement.
- **4. ES5** Social networking sites allow customers to provide feedback to businesses almost instantaneously. Do you think this is a good thing or a bad thing? Justify your answer.
- 5. ES6 'Technology has made work easier and less complicated.' Discuss this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

25.4 Changes to the workforce

25.4.1 The changing roles of women and men

When your grandparents worked, the majority of the Australian workforce was male. Most of these men were the 'breadwinners' — supporting their wives and families until retiring in their sixties. Women often 'retired' from the workforce when they married, and it was relatively uncommon for a woman to work if she had young children. Today, the two-income family is more common, with women continuing to work throughout the period of having dependent children. Employment is more likely to be part-time or casual

and there have been significant changes in the types of jobs in which people are employed. People are less likely to do the one job for their entire working lives, instead moving not just from one role to another in the same field, but also undertaking complete career changes, possibly several times, in a bid to find work that continues to provide a sense of purpose and satisfaction in their lives.

With this shift in the way people approach their careers, human resources management has become increasingly important within the business world — emphasising the value placed on finding the right person for a particular role. In this subtopic, we will explore these and other changes to the Australian workforce.

25.4.2 Participation rates

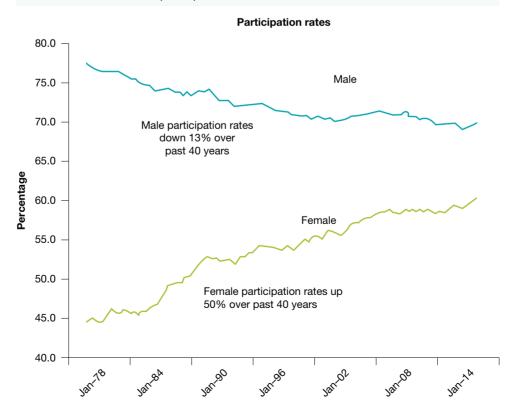
One of the most significant changes seen in the Australian workforce has been the increased participation of women. As mentioned above, in the past it was common for women to leave the workforce when they had children, and often they never returned to paid work. This is no longer the case. FIGURE 2 shows the change in workforce participation rates from 1978 to 2014 (the most recent data available at the time of publishing).

On average, the labour force participation rate of women is still lower than that of males, but the gap has narrowed slightly over the years 2002–12.

FIGURE 1 The increased participation of women in the workforce has created the need for formal childcare.



FIGURE 2 Labour force participation rates for men and women



As women have entered the workforce in greater numbers and continued to work after having children, the need for formal childcare has increased. This has led to the growth of the childcare industry and has created significant new job opportunities in early childhood development and childcare. Another significant change has been an increase in flexible work options, offering benefits such as parental leave (for both women and men) and part-time work, which allows greater flexibility to juggle the demands of work and parenthood.

All employees in May 2018

Females

51.1%

Average weekly earnings = \$1053.30

FIGURE 3 Proportion of males and females in the paid workforce in 2018, and their average weekly earnings

Source: Australian Bureau of Statistics, www.abs.gov.au/ausstats/abs@.nsf/mf/6306.0

FIGURE 3 shows female employees actually slightly outnumber males; however, as can clearly be seen, women's average weekly earnings are significantly lower than that of men. This can be explained to some extent by looking at the differences in full-time and part-time participation rates.

Full-time and part-time participation rates

Males

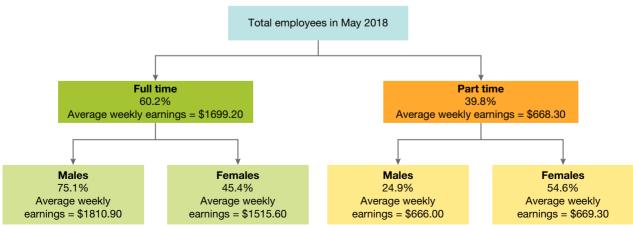
49 9%

Average weekly earnings = \$1525.40

An employee is considered to work full-time if their hours of work equate to 35 hours or more per week, or they work the agreed upon or award hours for a person in their occupation or industry, and the work is ongoing. An employee is considered to work part-time if they work less than 35 hours a week in ongoing employment, where the number of hours they work is either fixed or variable.

FIGURE 4 shows that in May 2018 there were more full-time employees (60.2%) than part-time employees (39.8%), and that, as would be expected, average full-time earnings (\$1699.20/week) were significantly higher than average part-time earnings (\$668.30/week). However, 54.6% of females were employed on a part-time basis, compared with only 24.9% of males; that is, the vast majority of male workers (75.1%) were employed full-time, which accounts for much of the disparity in average weekly earnings between men and women.

FIGURE 4 The proportion of full-time and part-time employees in May 2018, and their average weekly earnings

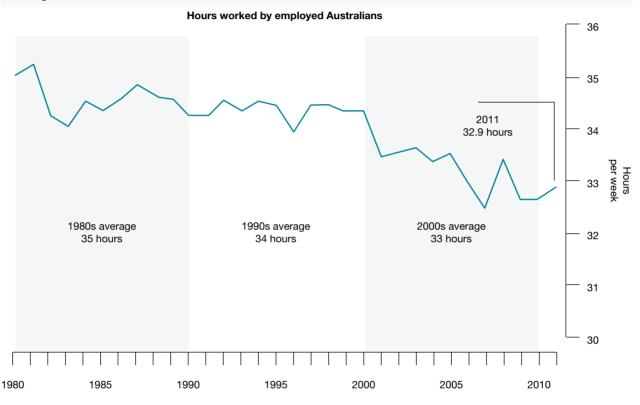


Source: Australian Bureau of Statistics, www.abs.gov.au/ausstats/abs@.nsf/mf/6306.0

25.4.3 Hours of work

In today's work environment, there is a perception that people will be available outside of traditional work hours due to technology-enabled connectivity, and that they are generally working longer hours than ever before. While in some industries this may indeed be the case, Australian Bureau of Statistics figures show that since the 1980s there has actually been a decline in the average hours worked by Australians — from 35 hours average in the 1980s, to 32.9 hours average in 2011. FIGURE 5 depicts this change.

FIGURE 5 The average number of hours worked by employed Australians shows an overall decrease from 1980 through to 2011.



Source: Adapted from Australian Bureau of Statistics, As a Matter of Fact, 2012 (cat. no. 1393.0); most recent data available at time of publishing

The change in average work hours can at least in part be attributed to the significant increase in parttime employment during this period. Part-time roles now exist in almost all industries, and are particularly prevalent in the retail and hospitality sectors.

Apart from the change in the number of hours worked, there has also been a significant shift in the times that people work. Where once the world of work was largely framed around the 9-to-5 workday, this is no longer the case. For example, changes to retailing regulations have created a demand for employees to work vastly different hours to those of the past, with weekend and late-night trading now allowing businesses to operate well outside 9-to-5, Monday-to-Friday

FIGURE 6 Changes to trading hours have had a significant impact on the hours of work for many Australians.



hours. Similarly, venues such as bars, restaurants and nightclubs are now able to stay open much later, creating a need for staff who are willing and able to work shifts into the early hours of the morning.

Consumer demand has also created a need to provide call centre staff in certain industries from early in the morning until late in the evening. Thus, employees working in such fields may work a range of hours that are significantly different to what was once the case.

25.4.4 Availability of jobs

In the late 1960s, almost half of Australia's labour force was employed in production industries such as mining, manufacturing, construction, electricity, gas and water, agriculture, forestry and fishing. In 1997, some thirty years later, that proportion had decreased to 28 per cent. During the same period, service industries grew substantially. These include property and business services, accommodation, cafés and restaurants, culture and recreational services, personal and other services, health and community services, retail, education, transport and communication, trade and finance, and insurance. This trend continues today, and is a major factor in shaping the ongoing changes seen in the Australian workforce. We will look at the changes in Australian work industries in more detail in subtopic 25.5.

25.4.5 Career lengths

Recent studies in the United States of America, based on US labour statistics, indicate that the average US worker stays in a job for a period of 4.6 years. In Australia, the national average tenure in a job is 3.3 years.

Anecdotal evidence suggests that members of **Generation X** are likely to change jobs about 11 times during their working life. It is anticipated that this figure may double for **Generation Y** or **Generation Z** and increase even further for **Generation Alpha**.

Research has found that the reason for changing jobs varies from person to person, but may include:

- social reasons response to life events, such as having children
- economic reasons wanting to obtain better working arrangements
- career-related reasons wanting to gain further career experience
- other personal reasons a desire to gain new experiences.

It is interesting to note that for many workers, there is a reluctance to change. Possible reasons why some workers choose to stay in the same job may include:

- a lack of opportunity to change jobs
- security
- convenience
- feeling valued in a role
- they like the people they work with
- a fast commute (quick to get to and from work)
- the need to build/consolidate retirement (superannuation) funds.

Even for people who do not change jobs, the workplace continues to evolve. In the Career Experience Survey, which was last conducted in November 2002 by the Australian Bureau of Statistics, a number of significant issues regarding the changing nature of work were noted. Approximately 77 per cent of all employees surveyed had been with the same employer for a year or more. Of these, almost 57 per cent reported significant changes to their working life over the past year. The types of change reported are summarised in **TABLE 2**.

TABLE 1 Job tenure by age group in Australia

| Age group | Average job tenure |
|-----------|--------------------|
| Under 25 | 1 year, 8 months |
| 25–34 | 2 years, 8 months |
| 35–44 | 4 years |
| 45+ | 6 years, 8 months |
| Average | 3 years, 4 months |

Source: The Household, Income and Labour Dynamics in Australia (HILDA) Survey, Department of Employment

FIGURE 7 Workers change jobs more often than they did in the past. This trend is expected to continue.



TABLE 2 Types of workplace change experienced

| Type of change | Percentage of employees who experienced the change | Experienced by whom |
|--|---|--------------------------------------|
| Promotion: receiving an increase in wages or salary due to an increase in responsibility or the complexity of the work that is undertaken | 8.7% | Permanent and full-time workers |
| Transfer: where a person is moved from their current position into another one without a change in wage, salary, level of responsibility or complexity of task | 6.8% | Permanent and full-time workers |
| Change in hours: this can be either a reduction or an increase in the amount of hours to be worked in a week | 31.7% | Part-time workers and casual workers |
| Changed location: movement involving a change in terms of either work building, or geographical location such as a suburb, state or even country | 8.5% | Permanent and full-time workers |
| New, different or extra duties: where there has been a change in the scope (the range) of activities that need to be completed | 40.2% | Permanent and full-time workers |
| More responsibility: an increase in the level of responsibility you have in terms of your experience and what is expected of you | 42.7% | Permanent and full-time workers |

Source: Adapted from Australian Bureau of Statistics, Career experience, Australia, November 2002 (cat. no. 6254.0); most recent data available at time of publishing

TABLE 2 shows that in the majority of cases, the changes did not mean that employees were actually changing their positions. More often, the change involved taking on additional tasks or more responsibility, perhaps as experience is gained in a role.

25.4.6 Human resource management

The term **human resources** refers to the people who work within an organisation. In any business, the human resources are one of the most vital elements. With the world of work undergoing such rapid and ongoing changes, the effective management of a business's employees — human **resource management** — has become increasingly important. Human resource management involves many aspects, such as staff recruitment, negotiation of employment conditions, training, professional development, and carrying out staff performance reviews. The goal of successful human resource management is to ensure an organisation has the right people with the skills and knowledge necessary to meet the needs of the business.

Finding the best employees with the most appropriate skills and other attributes that will suit

FIGURE 8 A business's human resources are among its most important features.



the organisation and its culture is an important part of the human resource manager's role. This recruitment process has changed significantly as a result of technological advances including software development and, of course, the internet.

Online sites that act as repositories of potential workers' résumés, such as SEEK.com.au, allow people in search of work to place their details online, enabling employers to find them more quickly and easily. Job ads are posted in these online forums and many employers require prospective employees to complete the application process online, which can significantly streamline the whole recruitment process compared to traditional paper-based job applications.

However, a possible downside for potential employees is the way in which the online environment has also made it easier for employers to 'background check' job applicants. It has become increasingly common for an employer to look on social media sites to find information about the employee they are considering hiring. Applicants need therefore to be mindful of their 'online presence' in order that it does not potentially limit their employment opportunities.

The internet has provided a new way for people to advertise and search for work roles. Employers are now able to reach a whole world of potential employees easily and in a

FIGURE 9 Through advances in technology, employers can now easily access potential employees from around the world.



cost-effective manner; and job hunters are able to browse the thousands of jobs advertised around the world in their search for a role that fulfils their needs and ambitions.

FIGURE 10 Human resource managers have become very important to the success of a business. The tasks that they perform can be grouped into the four categories below.

Acquisition

- The main tasks related to acquisition include advertising available jobs, interviewing people and selecting the best person for each job.
- Human resource staff may keep a database of all employees and skills, qualifications and experience that they have.

Training

- Training involves providing employees with the skills needed to perform their job. It begins with an induction process when a person is employed.
- Employees continue to receive training throughout their working life.

Maintenance

- Maintenance relates to all the processes/strategies undertaken to keep workers motivated and wanting to remain at the business.
- It may include carrying out performance reviews, changing pay rates, offering promotions, flexible work arrangements, further training and providing challenging work.

Separation

- When employees leave (or separate) from a business, human resource managers need to gather information about why people leave.
- This information may inform them about the changes they may need to make to their acquisition, training and maintenance of current staff.

25.4.7 The value of work

The value one places on work can be linked to one of the four reasons why people work:

1. To obtain self-satisfaction

It is never easy to separate the work you do from who you are. Many workers try to complete their tasks to a very high standard and this reflects the attitude they have towards their work and their employers. These workers take pride in the work they do and this in turn raises their level of work satisfaction. When workers have ownership of their work and are proud of their achievements, they are more likely to work harder and longer to achieve the objectives of the organisation. For example, 200 employees of a factory were asked to write down the most important aspect of their work. Their responses revealed that it was not money that motivated them. Sixty-seven per cent of the employees said that knowing they had done the job well and received some praise from the supervisor were the most rewarding aspects. Thus recognition of a job well done increases the value of the work itself.

2. To gain status and prestige

The type of work a person does is often used to measure that person's status and prestige within our society. In other words, their status comes from their occupation. The value we place on a person's job determines his or her income. For example, a heart surgeon's highly skilled work is valued more than a labourer's, so the surgeon receives a higher income. This is partly because of the education and training needed to become a surgeon as well as their high skill level and specialisation.

Historically, society has tended to place a lower value on work in what are referred to as the 'caring professions', such as childcare, nursing and aged care. For this reason, salaries for people who work in these areas have generally been lower than in many other fields. These roles have traditionally been filled by women, and this provides another reason for the disparity that is often seen between the relative wages of men and women in Australia. This attitude is slowly changing, with wage rises being fought for and won in many of these areas. Interestingly, in a 2016 survey that asked Australians to rate professions in terms of their perceived ethics and honesty, nursing emerged as the number one ranked profession. This was the 22nd year in a row that nurses were recognised as number one in ethics and honesty. Doctors were ranked second in the survey and school teachers ranked fifth.

3. To enjoy social interactions with others

The social aspects of work increase its value. On average, employees spend more time at work with their co-workers than they do at home with their families (not including sleep time). Work provides the opportunity to meet other people and make friends. Some workplaces have social clubs that employees

can join, to participate in organised activities aimed at increasing the sense of staff connectedness and satisfaction.

4. To help others

For many people the need to make a difference and contribute to society is an important part of why they work. This may be particularly so in the case of those who work in the 'caring professions', or who choose to work for not-for-profit organisations. Some people place such a high value on the desire to help others that they are prepared to offer their time and skills through volunteer work, seeking no payment for the work they do.

FIGURE 11 Social interaction is one of the key reasons that people work.





Resources



Weblink Hours of work

25.4 ACTIVITY

Use online resources (such as the **Hours of work** weblink in the Resources tab) to find and examine information on average hours worked by Australians. Describe the changes in working hours from the 1980s to today. Have they increased, decreased or remained the same?

Questioning and evaluating

25.4 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

25.4 Exercise 1: Check your understanding

- 1. ES2 Describe one significant change that has occurred in the Australian workforce in the last 50 years.
- 2. ES1 List three reasons why people value work.
- 3. ES2 Discuss the statement: 'The value of work is a personal thing'.
- 4. ES1 Define the phrase 'participation rate'.
- 5. **ES1** Distinguish between full-time and part-time work.

25.4 Exercise 2: Apply your understanding

- 1. ES3 Examine FIGURE 2. Discuss how participation rates of women have changed since 1978.
- 2. ES5 Review FIGURES 3 and 4. Consider the information shown in these figures with other factors discussed in this subtopic and explain why the average weekly earnings for women are lower than they are for men.
- 3. **ES2** Explain why you think there has been a growth in people working part-time.
- 4. ES3 Analyse why you think women have a lower participation rate than men.
- 5. ES3 Analyse the role of human resource management in the modern workplace.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

25.5 Work in the future

25.5.1 Predicting future changes to work and possible outcomes

Can you imagine what work will be like in the year 2050? Will new jobs exist that are like the ones we see in sci-fi movies, or will they be much the same as they are now? Although it is very difficult to predict how work will change, what form it will take, what activities will need to be performed and what skills, knowledge and abilities workers will need to have, it is worth noting that one of the challenges of government is to do just that — to attempt to predict some of these changes and to make policies and economic plans that will support the future world of work in Australia.

Work as we know it will slowly change. Exactly how it will change is unknown, but it is likely to depend on a range of factors, which in turn could have particular outcomes. **TABLE 1** summarises some of these potential factors and outcomes.



DISCUSS

Many of the jobs that you may hold in your career do not currently exist. How can you prepare for a job that does not exist? Are there transferable skills that are applicable to all jobs, regardless of how the future develops? Should we focus more on developing these skills than traditional skills?

[Personal and Social Capability]

TABLE 1 Potential changes and outcomes in the future world of work

| Factor | Outcome |
|--|--|
| Skills required in the future workplace | Future employees will require more education and higher skills development to participate in the workforce. |
| Changes in the gender segregation of the workforce | More equal representation of men and women in all types of work across all industries; the gender gap in average wages will continue to decrease |
| More employment in certain sectors of industry (service) and decreased employment opportunities in other sectors of industry (manufacturing) | More service-oriented roles; more focus on case work that follows a customer from start to finish, multi-skilling of the workforce, to enable the same employee to assist a customer throughout their entire customer experience |
| Further advances and increased use of technology in the workplace | Employees will need to continue to learn how to operate new equipment and software in order to perform their jobs. Some roles may become obsolete as new technology provides more efficient ways of completing particular tasks. |
| Changing employee attitudes and the desire for work-life balance | The provision of more flexible work arrangements to accommodate employees' needs, increase satisfaction and productivity, and retain staff |
| Changing workplace environments | Creation of more creative, ideas-driven environments that encourage workers to think independently and problem-solve creatively Greater focus on having healthy and happy employees who will work longer and stay with an organisation, rather than frequently changing jobs; employees supported through benefits such as an onsite gym, canteen or café, childcare facilities etc. |

Increased education and skill levels

Two interrelated service areas that are experiencing distinct growth and an increase in employment opportunities are professional, scientific and technical services; and education and training. In the future, these areas will continue to grow as the need for high-skilled workers increases. Workers need to be multiskilled, educated and more technically-oriented to enable them to work with the newest technological advances.

Without appropriate, accessible training and education opportunities, it will be difficult to meet Australia's future workplace requirements. Thus, the need to provide such opportunities is a constant focus for government.

Changing attitudes to gender segregation

Another possible change is in the area of gender segregation. This is where one gender, male or female, is more likely to be employed in a particular area than the other gender. Gender segregation is common in some industries. This is particularly evident in construction and mining. In 2018, only 17 per cent of employees in the mining industry and 16.7 per cent of employees in the construction industry were women. However, in more traditionally female-dominated occupations such as health care, social assistance, education and training, women continue to occupy the vast majority of roles. What might be the outcome if more men started to work in these typically female-dominated occupations and more women started working in typically male-dominated professions?

Certainly, it would have an impact on the gender gap that still exists in average wages of men and women. It might also lead to an increase in the perceived value (and the higher wages that go with it) of the traditionally lower paid female-dominated industries. Would it also change the way that we view the genders, or perhaps the industries? Or might it simply be a natural progression that comes as part of an ever-changing work environment?

Declining industries and growth industries

Over the past hundred years, the work people do has changed significantly. This is clearly demonstrated by looking at the industries in which they work. The three main employment industries are the primary, secondary and **tertiary industries**. In the past, much of the workforce was involved in the primary and secondary industries. However, in recent years there has been a shift towards greater participation in the tertiary industry, and in what have now been termed the **quaternary** and **quinary** industries. **FIGURE 2** outlines the various features of each of these industry types.



In Australia, there are numerous sub-industries into which people's work can be classified. These include agriculture, mining, manufacturing, retail, construction, accommodation and food services, transport, education, health and others. **TABLE 2** examines the four main employing industries and compares the proportion of people employed in 2000–01 with the proportion employed in those same industries for the period 2016–17.

TABLE 2 The proportion of people employed in 2000-01 compared to 2016-17, by industry, in Australia

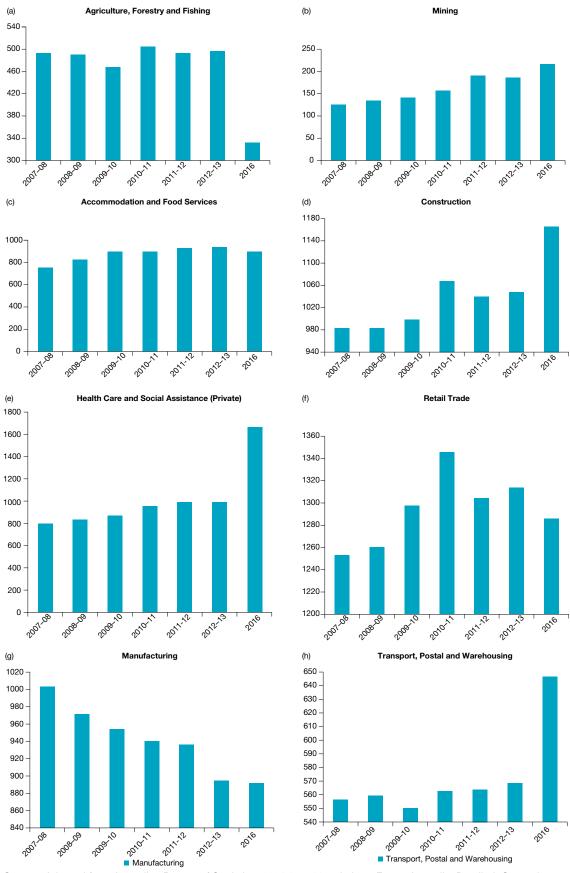
| Industry | Proportion of all employed, 2000–01 | Proportion of all employed, 2016–17 |
|-----------------------------------|--|--|
| Health care and social assistance | 10% | 13.4% |
| Retail trade | 11% | 10.4% |
| Construction | 7% | 9.4% |
| Manufacturing | 12% | 7.1% |

Source: Adapted from Australian Bureau of Statistics, *Year Book Australia, 2012* (cat. no. 1301.0) and Department of Employment, *Australian Jobs 2016*.

As **TABLE 2** details, during this 16-year period, while retail trade remained relatively steady as the second-highest employing industry, the health care and social assistance industry and the construction industry saw strong increases in the percentage of people employed in those fields, while the manufacturing industry saw a decrease of 5 per cent. This is representative of the growth and decline of these particular fields of employment.

FIGURE 3 provides another view of the employment figures in certain industries from 2007 to 2014.

FIGURE 3 A series of graphs showing changes in various industry sectors



Source: Adapted from Australian Bureau of Statistics, 6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, May 2014

These graphs clearly show the significant growth in a number of industries, such as retail trade, construction and mining, and the distinct decline of the manufacturing industry in Australia during this period.

Further advances in technology

With ongoing technological developments comes the need for workers to continue to up-skill to be able to use new equipment and technology to its full potential. But in some instances, technological advances and automation may cause a decrease in the number of jobs available in particular fields. Many laborious tasks have been made simpler and quicker through the use of technology. Such increased efficiencies mean less people are required to complete the same amount of work; hence, fewer work positions are available.

It is difficult to know how far the impact of technology will reach in the workplace — which jobs of today may become obsolete in the future as a result of new technological developments. But equally, the new areas of work that will emerge through technological development are largely unknown. It is hoped that these new fields will open up increasing opportunities that will be more than adequate to replace the roles that are lost.

Changing attitudes, the desire for work–life balance and changing workplace environments

As new generations fill the workforce, we may see a shift in the style of environments within which people work. Employers may need to create a new style of workplace, one that encourages workers to stay, rather than changing jobs on a regular basis, as is the tendency of younger generations. Flexible working arrangements and benefits that promote staff satisfaction and increase productivity may become an increasingly common feature of the future world of work. An example of this kind of workplace is provided by American company Google, and is described in case study 25.5.2.

25.5.2 CASE STUDY: Google work environment inspires creativity

Google is leading the way in terms of balancing life and work. The company offers its employees a wide range of extra activities such as volleyball, roller hockey, bicycles, yoga classes, sharing spaces (couches and comfy chairs where workers can discuss whatever topic they want), weights rooms, workout rooms, washers and dryers for workers to wash their clothes, massage rooms, ping pong and pool tables, outdoor

seating for sunny days, and a wide variety of lunch and dinner places — all free or for only a small charge to its workers.

Google provides its employees with a work environment that has interesting décor to encourage them to be more creative. Even sleeping pods are provided, so employees can catch up on sleep and feel refreshed to continue working. The company also encourages employees to take up to 20 per cent of their work time to develop their own ideas they think might benefit the company. This promotes creativity and encourages new ideas, which can lead to new products, better solutions and a happier workplace.

FIGURE 4 Google is often identified in surveys as the business that people would most like to work for.



FIGURE 5 Another reason the work environment is important!



"We feel it's important to provide our employees with an extremely comfortable work-place environment. Primarily because we don't allow them to ever go home."



25.5 ACTIVITY

Use the GooglePlex weblink in your Resources section to watch a clip that shows various features of the Google work environment. Then write a paragraph describing how Google treats its workers.

Investigating and evaluating

25.5 EXERCISES

Economics and Business skills key: ES1 Remembering and understanding ES2 Describing and explaining ES3 Examining, analysing, interpreting ES4 Questioning and evaluating ES5 Reasoning, creating, proposing ES6 Communicating, reflecting

25.5 Exercise 1: Check your understanding

- 1. ES1 Identify the four main industries referred to in TABLE 2.
- 2. ES1 Which of the four main employing industries in Australia has experienced gradual decline over the past 25 years?
- 3. ES2 Explain what is meant by gender segregation and identify how this factor may change in the future.
- 4. ES2 Explain why work-life balance has become more important to workers.
- 5. ES1 Provide one reason why there is a growing need for improving workers' skills.

25.5 Exercise 2: Apply your understanding

- 1. ES5 Examine TABLE 2 and answer the guestions below.
 - (a) What was the percentage change for the following industries?
 - i. Health care and social assistance
 - ii. Retail trade
 - iii. Construction
 - iv. Manufacturing
 - (b) Which industry had a negative change (decline) from 2000-01 to 2016-17?
- 2. ES5 Examine FIGURE 3 and describe the trends you notice in the industries.
- 3. ES5 Examine TABLE 3 below and answer the following questions.
 - (a) Which industry employs the most people?
 - (b) Which industry employs the least people?
 - (c) Which industry had the biggest positive percentage change?
 - (d) Which industry had the biggest negative percentage change?

TABLE 3 Employment by industry, Victoria

| Occupation | Employment Nov 2017 | | ar change Nov 2017 |
|--|------------------------|-------|-----------------------|
| | '000 | '000 | % |
| Accounting, banking and financial services | 771.9 | 23.4 | 3.1% |
| Administration and human resources | 1194 | 26.8 | 2.3% |
| Advertising, public relations, media and arts | 451.8 | 59.4 | 15.1% |
| Agriculture, animal and horticulture | 411 | 24.5 | 6.3% |
| Automotive, transport and logistics | 892.2 | 110.7 | 14.2% |
| Construction, architecture and design | 985.8 | 138.2 | 16.3% |
| Education and training | 687.9 | 39.1 | 6.0% |
| Electrical and electronics | 256.1 | 7.0 | 2.8% |
| Engineers and engineering trades | 367.4 | -23.8 | -6.1% |
| Executive and general management | 115.3 | -38.4 | -25.0% |
| Government, defence and protective services | 221.3 | 18.9 | 9.3% |
| Health and community services | 1393.1 | 285.8 | 25.8% |
| Hospitality, food services and tourism | 847.3 | 119.7 | 16.5% |
| Information and communication technology (ICT) | 448.2 | 55.9 | 14.2% |
| Legal and insurance | 138.1 | 15.1 | 12.3% |
| Manufacturing | 365.6 | -19.1 | -5.0% |
| Mining and energy | 91.6 | 6.3 | 7.4% |
| Personal services | 472.5 | 15.5 | 3.4% |
| Sales, retail, wholesale and real estate | 1699.6 | 93.7 | 5.8% |
| Science | 114.7 | 1.9 | 1.7% |
| Sports and recreation | 130.3 | 18.7 | 16.8% |

Source: Australian Government, Department of Education, Employment and Workplace Relations, *Australian Jobs 2013*, p. 7 (last modified 14 May 2019)

- 4. ES3 Examine the information relating to Google. Explain why encouraging creativity is beneficial for both workers and employers.
- 5. ES6 'The work environment of the future is so hard to imagine it is not possible to train for it today.' Discuss this statement.

Try these questions in learnON for instant, corrective feedback. Go to www.jacplus.com.au.

25.6 SkillBuilder: Analysis and interpretation of data

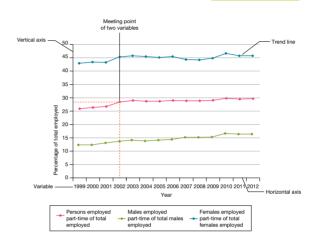
on line है

What is analysis and interpretation of data?

Tables and graphs can provide a wealth of information in a clear and concise way; to get the most from them, it is important to analyse them closely.

Select your learnON format to access:

- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- · an activity to allow you to practise the skill (Let me do it).



25.7 Thinking Big research project: Impacts of technology poster

SCENARIO

Technology has changed nearly every area of our lives. One key area where technological change has had an impact is in the area of work. Over the last 30 years some jobs have disappeared, some have changed and some have been created as a result of technology. Your task is to investigate the changing nature of technology and its impact on jobs.

Select your learnON format to access:

- the full project scenario
- details of the project task
- · resources to guide your project work
- an assessment rubric.





Resources

ProjectsPLUS Thinking Big research project: Impacts of technology poster (pro-0180)

25.8 Review



25.8.1 Key knowledge summary

Use this dot-point summary to review the content covered in this topic.

25.8.2 Reflection

Reflect on your learning using the activities and resources provided.



eWorkbook Reflection (doc-31368)

Crossword (doc-31369)

Interactivity The changing work environment crossword (int-7607)

KEY TERMS

conditions of employment the arrangements made between an employer and the employee in terms of work requirements and employee benefits

employer the person or business that pays workers for the work they do

employer expectation what the employer expects to receive from employees in return for the money that they pay them

employment working in return for a wage or salary

Generation Alpha people born from 2010 onwards

Generation X people born between 1965 and 1979

Generation Y people born between 1980 and 1994

Generation Z people born between 1995 and 2009

globalisation the process of interacting with markets in other countries around the world, as part of an integrated global economic system

human resource management the process of managing the people who work within an organisation human resources the people who work within an organisation

industry the way that different parts of the economy are grouped; for example, manufacturing, mining etc.

labour force people aged 15 and over who are able to work and are either employed or unemployed

labour market the availability and the ability of employees to work and for employers to hire them offshoring moving certain work processes to be performed overseas

outsourcing contracting a person or people outside an organisation to perform certain work tasks (that previously might have been performed by workers within the organisation)

primary industry the group involved in the production of raw materials; for example, farming, mining, forestry primary production the production of crops, livestock or other basic materials that may then be used by other branches of industry

quaternary service industries involved in the processing and transfer of information and knowledge; for example, IT consultants, education services

quinary domestic service providers; for example, cleaning, childcare, home maintenance

redundant a situation in which a job is no longer required to be performed by anyone; this may be as a result of the reorganisation of a business, the introduction of new technology or a decline in business sales or production

retrenching losing one's job as a result of the position being made redundant

secondary industry the group involved in the processing of primary resources to manufacture other goods tertiary industry the group involved in the provision of services to others; for example, doctors, accountants,

work human labour that can be paid or unpaid including voluntary labour

work-life balance a feeling of having an appropriate balance between work and non-working time and activities

25.6 SkillBuilder: Analysis and interpretation of data 25.6.1 Tell me

Tables and graphs can provide a wealth of information clearly and concisely; to get the most from them, it is important to analyse them closely.

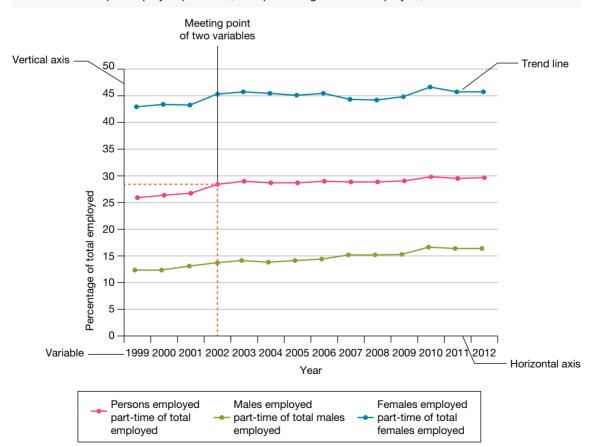
Line graphs are very useful for showing trends (patterns of change over time) and comparing data. When analysing a line graph, first examine the heading — what does it tell you about the data contained in the graph? Examine the key, which identifies what each of the lines on the graph represents. Then look closely at the vertical and horizontal axes, they show you the variables as numbers, percentages, years and so on. When reading line graphs, find points on the graph where two variables meet to obtain specific information. For example, in **FIGURE 1** below, we can see that 28 per cent of all people employed in 2002 worked in part-time roles.

The trend lines on a line graph show an overall picture of what is happening; that is, whether a particular variable has increased, decreased or remained steady over time. Examine these lines closely — what changes do you see? If there has been change over time, has it been steady and gradual, or perhaps sudden and erratic? When examining a line graph, note down any patterns that you identify. You will then be ready to complete your interpretation, which involves writing a paragraph or two to summarise the information you have found in your analysis of the data.

25.6.2 Show me

Examine FIGURE 1.

FIGURE 1 People employed part-time, as a percentage of total employed, 1999–2012



Source: Adapted from Australian Bureau of Statistics, Australian social trends data cube, February, 2013, Work, National summary 1999–2012 (cat. no. 4102.0).

The graph's title tells us that the data we are looking at relates to the proportion of all employed people who were employed on a part-time basis during the period 1999–2012. Looking at the key, we can see that there is information provided about men, women and the total employed population. The red line on the graph shows the percentage of all employed people who were employed part-time; the purple line shows the percentage of all employed men who were employed part-time; and the green line shows the percentage of all employed women who were employed part-time. Looking at these lines on the graph, we can clearly see that the percentage of women employed part-time is significantly higher than that of men.

Looking at specific points on the graph, we can see that there has been a gradual increase in the percentage of all people employed part-time from around 26 per cent in 1999 to 30 per cent in 2012. The percentage of women employed part-time was steady at around 43 per cent from 1999—2001, then increased slightly to around 45 per cent, where it remained through to 2012. The percentage of males employed part-time increased from around 12.5 per cent in 1999—2000 to around 15 per cent by 2003. It remained at this level until 2009 and then rose again slightly to around 16 per cent for the 2010—12 period.

The trend lines show an overall gradual increase (around 3.5 per cent) in the percentage of people who were employed part-time over the period 1999–2012. The increase for females was around 2 per cent and for males around 3.5 per cent. To summarise what we have learned from this graph, we could write a brief paragraph such as:

'The percentage of Australians employed on a part-time basis has gradually increased in recent years. Overall, this figure grew from approximately 26 per cent of the total employed workforce in 1999 to around 30 per cent in 2012. The proportion of women employed on a part-time basis is significantly higher than that of men, and this remained constant throughout the 1999–2012 period. The increase in female part-time employment over this period was around 2 per cent, while a slightly more pronounced change — an increase of around 3.5 per cent — was observed in male part-time participation rates'.

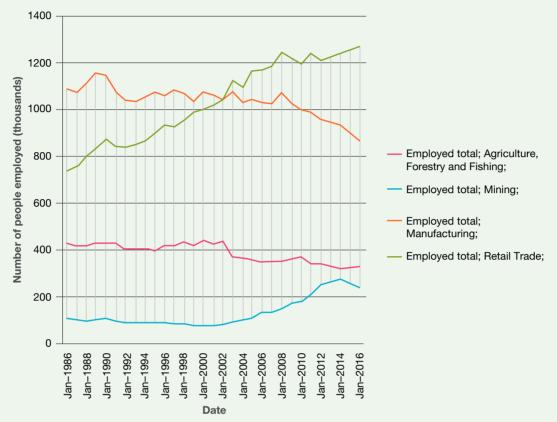
25.6.3 Let me do it

Complete the following activities to practise this skill.

25.6 ACTIVITY

Practise your skills by analysing and interpreting the Figure 2 line graph. Write a paragraph describing the trends shown.

FIGURE 2 Number of people employed in agriculture, forestry and fishing, mining, manufacturing and retail trade, 1986–2016



Source: Adapted from Australian Bureau of Statistics, Labour Force, Australia, Detailed, Quarterly, May 2016 (cat. no. 6291.0.55.003).

25.7 Thinking Big research project: Impacts of technology poster

Scenario

Technology has changed nearly every area of our lives. One key area where technological change has had an impact is in the area of work. Over the last 30 years some jobs have disappeared, some have changed, and some have been created as a result of technology.



Task

Your task is to investigate the changing nature of technology and its impact on jobs. There are three components to this task:

• Historical – develop a list of technological changes that have potentially impacted jobs. This list should include a minimum of 10 technological changes. Prepare a table such as the one below (the first technological change and job affected has been completed for you).

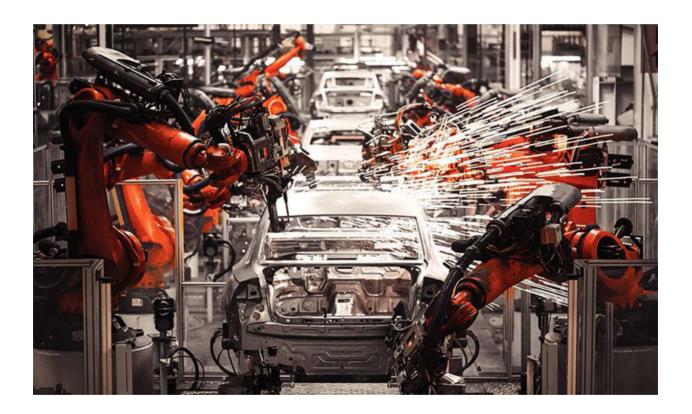
| Technological change | Job affected |
|----------------------------------|--------------|
| Automated teller machines (ATMs) | Bank teller |
| | |
| | |
| | |
| | |

• Teaching – look around your classroom. Prepare a list of the technologies in your classroom and explain what other 'technology' they have replaced. Again the table below is one means of presenting the information (the first technological change has been completed for you).

| New technology | Old technology |
|------------------------|-----------------------|
| Interactive whiteboard | Chalkboard/blackboard |
| | |
| | |
| | |
| | |

• Future – consider a job that is currently undertaken by humans. Consider how that job may change or disappear in the future due to technology. Prepare a brief report describing the job you have selected and how technology might operate to change or remove that job.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in groups will enable you to share responsibility for the project but your teacher may want you to work individually. Save your settings and the project will be launched.
- Navigate to the Research forum, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the Research report in the Research forum to easily view all the information you have gathered.

- Interview your parents, grandparents and teachers to fill in the tables.
- Conduct internet research on how technology affects jobs. Weblinks are provided in the **Media centre** to help you get started.
- Create a poster using catchy headings and relevant images. Be sure to list your sources.
- Submit your poster to your teacher for assessment and feedback.





• Resources

ProjectsPLUS Impacts of technology poster (pro-0180)

25.8 Review

25.8.1 Key knowledge summary

25.2 Influences on work today

• Globalisation, offshoring and outsourcing will continue to have an impact on the Australian labour market.

25.3 The significance of technology

- There will be further advances in technology and this will affect the type of work people do, when they do it and where they do it.
- Distance will not be a barrier to obtaining a job in the future.

25.4 Changes to the workforce

- Technology will significantly impact organisations' future human resources needs, and the way in which they find and retain employees.
- The need for training and development will only increase with time.

25.5 Work in the future

- The next generation of workers will need to be more highly skilled and educated, and more focused on technology.
- Employee relations and agreements will need to change even further to enable greater flexibility.
- Changing work environments and the need for work–life balance will be a key feature of the future world of work.

25.8.2 Reflection

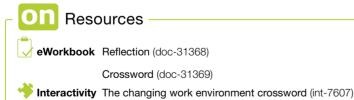
Complete the following to reflect on your learning.

25.8 INQUIRY ACTIVITIES

Revisit the inquiry question posed in the Overview:

Go to work. Go home. Get paid. Repeat. The way we work hasn't changed at all. Has it?

- 1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
- 2. Write a paragraph in response to the inquiry question, outlining your views.



KEY TERMS

conditions of employment the arrangements made between an employer and the employee in terms of work requirements and employee benefits

employer the person or business that pays workers for the work they do

employer expectation what the employer expects to receive from employees in return for the money that they pay them

employment working in return for a wage or salary

Generation Alpha people born from 2010 onwards

Generation X people born between 1965 and 1979

Generation Y people born between 1980 and 1994

Generation Z people born between 1995 and 2009

globalisation the process of interacting with markets in other countries around the world, as part of an integrated global economic system

human resource management the process of managing the people who work within an organisation **human resources** the people who work within an organisation

industry the way that different parts of the economy are grouped; for example, manufacturing, mining etc.

labour force people aged 15 and over who are able to work and are either employed or unemployed labour market the availability and the ability of employees to work and for employers to hire them offshoring moving certain work processes to be performed overseas

outsourcing contracting a person or people outside an organisation to perform certain work tasks (that previously might have been performed by workers within the organisation)

primary industry the group involved in producing raw materials; for example, farming, mining, forestry **primary production** the production of crops, livestock or other basic materials that may then be used by other branches of industry

quaternary service industries involved in the processing and transfer of information and knowledge; for example, IT consultants, education services

quinary domestic service providers; for example, cleaning, childcare, home maintenance

redundant a situation in which a job is no longer required to be performed by anyone; this may be as a result of the reorganisation of a business, the introduction of new technology or a decline in business sales or production

retrenching losing one's job as a result of the position being made redundant

secondary industry the group involved in the processing of primary resources to manufacture other goods **tertiary industry** the group involved in the provision of services to others; for example, doctors, accountants, retailers

work human labour that can be paid or unpaid including voluntary labour

work-life balance a feeling of having an appropriate balance between work and non-working time and activities

GLOSSARY

abbess chief nun in a convent abbey monastery or convent run by an abbot or abbess abbot chief monk in a monastery absolute dating techniques methods used to assess the age of something (e.g. radiocarbon dating, tree-ring dating) Act a law passed by Parliament affiliations close connections with a group or organisation affordability the quality of being affordable — priced so that people can buy an item without inconvenience Althing Iceland's parliament; Icelandic governing national assembly formed during the Viking Age, which met once a year altitude height above sea level ambassador an authorised messenger or representative amber yellow fossil resin found in countries around the Baltic Sea and valued as precious stones in the manufacture of jewellery anatomical drawings drawings showing the workings of organs and systems of the body **anatomy** the scientific study of the structure of the body anno Domini Latin for 'in the year of our Lord' anthropologist a person who studies the culture and beliefs of different groups of people aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater **arable** land that can be ploughed for crops archaeological concerning the study of past civilisations and cultures by examining the evidence left behind, such as graves, tools, weapons, buildings and pottery archbishop head bishop archipelago a group of islands arsenalotti craftsmen who built ships in Venice artefact an object made or changed by humans artillery large mounted firearms such as the cannon **artisan** a skilled worker who produces handmade items atoll a circular coral island often enclosing a lagoon **Australian Bureau of Statistics** a government-owned agency that gathers and publishes a range of statistics to assist government, business and the community with decision making avalanche a sudden downhill movement of material, especially snow and ice backwash the movement of water from a broken wave as it runs down a beach returning to the ocean barbarian uncultured and uncivilised; not Christian barge a long flat-bottomed boat used for transporting goods belonging the feeling of being part of a group or community with shared values beneficiaries the people who are entitled to the benefit of any trust arrangement beri-beri a disease caused by a lack of vitamin B berserker Viking warrior who fought naked or near-naked and rushed wildly into battle. The word 'berserk' is derived from this. bi-articulated bus an extension of an articulated bus, with three passenger sections instead of two biased one-sided or prejudiced, seeing something from just one point of view Bill a proposed law that has not yet been agreed to by parliament or received royal assent biological warfare method of warfare based on infecting the enemy with deadly disease **bishop** clergyman who governs a diocese, a large church district

blizzard a strong and very cold wind containing particles of ice and snow that have been whipped up from the ground

blockade the shutting off of a location to prevent entry or exit

biwa a four-stringed Japanese musical instrument

booth small, temporary shelter for participants at things and the Icelandic Althing

boss metal bulge used as reinforcement in the centre of a shield

breach of contract a situation where a legally binding agreement is not honoured by one or more of the parties to the contract

brocade a rich silk fabric with a raised pattern

bronze metal alloy mainly of copper and tin

Buddha Siddhartha Gautama who founded Buddhism in the sixth century BCE

Buddhist to do with Buddhism; a follower of Buddhism

budget estimates of all government income to be raised by taxes and other charges, and the planned spending of that income, within any given year

burden of proof the legal principle describing who has to prove a case in court. In a criminal trial, this burden is on the prosecution.

bushido the way of the warrior; the rules that prescribed correct behaviour for all samurai

caliph in Islamic countries, the chief civil and religious ruler and a successor to the Prophet Mohammed **calligraphy** the art of beautiful handwriting

cannibalism the practice of eating human flesh

capital growth an increase in the value of shares or property over time

caravel a type of light, fast ship, used mainly by the Portuguese and Spanish between the fifteenth century and seventeenth century

cardinal leading clergyman who is a member of the Pope's Council, or Sacred College, and who has the power to elect the Pope from among his own group

catastrophe a disaster on a vast scale

catchment area of land that drains into a river

cathedral main church of a diocese; contains the bishop's throne

Caucasus the region where Europe meets Asia between the Black Sea and the Caspian Sea

cause and effect the concept that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences

cavalry a unit of the army mounted on horseback

centralised control of a country from one central location

chador a dark dress or cloak that covers the body and face below the eyes

chastity choosing not to have sexual relationships

chronology a record of past events in order of time, from Latin chronos meaning time and logos, meaning to work out

circumnavigate to sail around the world

civil servant a person who works for the public

civil war a war between two competing groups within one country

civilian an ordinary citizen

civilisations term used to describe societies that have towns and features such as complex forms of government and religion

clan a large group of closely related people

clearfelling a forestry practice in which most or all trees and forested areas are cut down

clergy officials of the Church

clinometer an instrument used for measuring the angle or elevation of slopes

clockwork the inner workings of a mechanical clock or a machine that operates in a similar way

cloister a covered walkway surrounding a quadrangle

code of conduct a set of standards of behaviour that all participants are expected to follow

codex a pictorial book

codified refers to laws that have been collected and organised, usually in written form

coexist live together at the same time in the same place

colony an area of a country that is ruled by a different country

common law law developed by judges through the decisions of courts

compass navigation instrument that shows the direction of north

compassion feeling empathy towards someone in a less fortunate position

competition the outcome of two or more businesses attempting to supply their products to the same group of customers

compost a mixture of various types of decaying organic matter such as dung and dead leaves

concentric having a common centre

concubine a secondary wife, but usually of a lower social status and so not legally able to be married to a man in a position of power

conditions of employment the arrangements made between an employer and the employee in terms of work requirements and employee benefits

congestion the state of being overfilled or overcrowded

conquistador one of the Spanish conquerors of Mexico in the sixteenth century

conscript a person ordered by the government to do compulsory military duty

conscription a process by which people are required to join the armed forces, even if they do not wish to do so

constitution a set of rules that determines the structure of government and its law-making powers **contagion** the spreading of disease

contestability when particular interpretations of the past are open to debate

contiguous adjoining, where its parts are not separated by other states or oceans

continuity and change the concept that while many changes occur over time, some things remain constant **convection current** a current created when a fluid is heated, making it less dense, and causing it to rise

through surrounding fluid and to sink if it is cooled; a steady source of heat can start a continuous current flow

convent community of nuns

converging plates a tectonic boundary where two plates are moving towards each other

cooperative a business that is owned and operated by the group of people that it serves

coral atoll a coral reef that partially or completely encircles a lagoon

corporation a business owned by shareholders

cost of living the level of prices paid by consumers for goods and services

country the area of land, river and sea that is the traditional land of each Aboriginal language group or community; the place where they live

courier a messenger, often carrying important government documents

crowdshipping a method of delivery where couriers are obtained from a large group of people, especially from online communities, and connected with customers

Crown the Queen's authority in the Australian parliament, represented by the Governor-General at the federal level and a Governor at the state level

Crusader during the Middle Ages, someone who took part in a Crusade, an armed expedition against those believed to be enemies of the Church

cult a system of religious worship

cultural relating to the ideas, customs and social behaviour of a society

curtain wall outer wall surrounding an inner wall in a castle

customary law guidelines for behaviour developed by and for Aboriginal and Torres Strait Islander peoples

daimyo great feudal lord of Japan during the Classical and shogunate periods

dauphin name given to the oldest son of the French king

defamation unlawful damage to a person's good reputation through written or verbal statements

defendant the party in a civil trial against whom an action has been brought

deliberative having the power to make decisions

democracy a form of government in which the people determine how they will be governed

democratic supporting democracy, or the system of government where supreme power is vested in the people and exercised directly by them or by their elected representatives under a free electoral system

demographics characteristics relating to population, especially age, gender, ethnicity, employment, income and education

denomination a religious group, especially an established church

deposed removed from a position of authority

deposition the laying down of material carried by rivers, wind, ice and ocean currents or waves

destructive wave a large powerful storm wave that has a strong backwash

development corridor area set aside for urban growth or development

dhow a traditional Arab sailing vessel

diet the name given to a law-making assembly in some countries

disposable income the amount of money that households have available for spending and saving after income taxes have been accounted for

distillation the purification or concentration of a substance

divergent plates a tectonic boundary where two plates are moving away from each other and new continental crust is forming from magma that rises to the Earth's surface between the two

dividends company profits paid to shareholders, either in cash or as more shares

doctrine a collective teaching

doctrine of Mahomet the religion of Islam; the Muslim faith, which follows the teachings of Mohammed

domain the territory ruled by a daimyo, including the farming and fishing villages within it

double-hulled canoe a canoe with two connected parallel hulls — a feature that made it light, fast and stable

downstream nearer the mouth of a river, or going in the same direction as the current

dowry a payment of money or goods as part of a marriage agreement

drainage basin an area of land that feeds a river with water; or the whole area of land drained by a river and its tributaries

duchy dukedom; a small state ruled by a duke, a nobleman whose rank is just below that of a prince

Duke in England, a lord whose status placed him just below that of a prince; elsewhere in Europe, a ruler of a small state called a duchy or dukedom

dyke a barrier or bank of earth for controlling water of the sea or river

dynasty a sequence of rulers from the same family

dysentery a severe, infectious bowel disease

ecological footprint the amount of productive land needed on average by each person in a selected area for food, water, transport, housing and waste management

ecosystem an interconnected community of plants, animals and other organisms that depend on each other and on the non-living things in their environment

ecotourist a tourist who travels to threatened ecosystems in order to help preserve them

edict order issued by a monarch or other person in authority

electorate an area of Australia that elects one member to parliament

employer the person or business that pays workers for the work they do

employer expectation what the employer expects to receive from employees in return for the money that they pay them

employment working in return for a wage or salary

epic a long story in verse narrating the deeds of its hero

epicentre the point on the Earth's surface directly above the focus of an earthquake

erosion the wearing away and removal of soil and rock by natural elements, such as wind and water, and by human activity

escarpment a steep slope or long cliff formed by erosion or vertical movement of the Earth's crust along a fault line

estuary the wide part of a river at the place where it joins the sea

ethnic minority a group that has different national or cultural traditions from the main population

eunuch a castrated man, especially one formerly employed by Oriental rulers as a harem guard or palace official

eurocentric a point of view that has a strong European focus

evapotranspiration the process by which water is transferred to the atmosphere from surfaces such as the soil and plants

evidence information that indicates whether something is true or really happened

exploit use dishonestly to one's own advantage

export goods and services sold by local businesses to overseas consumers

Faith religious belief and practice

family household two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step-relationship or fostering

fault an area on the Earth's surface that has a fracture, along which the rocks have been displaced

federation the process through which the six separate Australian colonies formed to join one united nation **feudalism** social order in medieval Europe

fief a gift, usually land, given by a lord to a vassal (or tenant) in exchange for loyalty and service

field sketch a diagram with geographical features labelled or annotated

filigree a type of delicate ornament made from fine threads of metal

financial institution any organisation that takes deposits from those with surplus funds, and makes those funds available to borrowers

fjord long, narrow inlet flanked by high cliffs and slopes

flash flood a flood that occurs very quickly, often without advance warning

flax plant cultivated for its seeds and fibres, which can be used to produce many things such as textiles **floodplain** an area of low-lying ground adjacent to a river, formed mainly of river sediments and subject to flooding

fly-in, fly-out (FIFO) a system in which workers fly to work, in places such as remote mines, and after a week or more fly back to their home elsewhere

focus the point where the sudden movement of an earthquake begins

food miles the distance food is transported from the time it is produced until it reaches the consumer

foreign policy decisions made by governments concerning their relationships with other nations

franchise the situation where a business sells the rights to distribute its products under its name to other individuals or businesses

franchisee the individual or organisation that purchases a franchise

franchisor an individual or organisation that grants the right to use a franchise

franklin in the fourteenth century, one who was a landowner but not a member of the nobility

Franks people of a group of a Germanic nation who ruled in western Europe from the sixth century CE

fresco a picture painted on a freshly plastered wall or ceiling

friar a member of a Catholic order who was supposed to live in poverty

Gaul most of present-day France and Belgium

geld a form of land tax

genealogy the study of the past and present members of a family

Generation Alpha people born from 2010 onwards

Generation X people born between 1965 and 1979

Generation Y people born between 1980 and 1994

Generation Z people born between 1995 and 2009

geographical factors reasons for spatial patterns, including patterns noticeable in the landscape, topography, climate and population

geothermal energy energy derived from the heat in the Earth's interior

geyser a hot spring sending a jet of steam and boiling water into the air

glacier a large body of ice, formed by an accumulation of snow, which flows downhill under the pressure of its own weight

glaze a substance fused onto pottery to give it a glass-like appearance

globalisation the process of interacting with markets in other countries around the world, as part of an integrated global economic system

gorge narrow valley with steep rocky walls

gourd an edible fruit with a shell that can be dried and used for storage

granary a storehouse for grain

groundwater water that seeps into soil and gaps in rocks

guild an association of people engaged in a particular trade or craft for the mutual benefit of its members
 Gulf Stream great warm current of water flowing from the Caribbean Sea all the way to northern Europe
 habitat the total environment where a particular plant or animal lives, including shelter, access to food and water, and all of the right conditions for breeding

hard engineering a coastal management technique that involves using physical structures to control the effects of natural processes

harem the women in a Muslim household, including the mother, sisters, wives, concubines, daughters, entertainers and servants

heathen one who is neither Christian, nor Jewish nor Muslim, and is often seen as therefore being uncivilized

hemp plant favoured for its tough fibre, useful in the making of rope

hereditary passed from parent to a child

heresy any religious opinion that differed from that of the Roman Catholic Church

heretics a Christian who holds views that conflict with official Church teachings

heritage everything that has come down to us from the past

high-density housing residential developments with more than 50 dwellings per hectare

hilt the handle of a sword or dagger

Hindu the most ancient of all the main world religions; originated in India

Holocaust the destruction or loss of life on a large scale, usually referring to the death of 6 million Jews in Europe during World War II

Holy Land land in the Middle East which has significant importance for Christians, Muslims and Jews

holy relic the physical remains of someone or something very significant to a religious tradition

homage pledging duties and loyalty to someone of superior rank in the feudal system

homicide the killing of one person by another person

host an organism that supports another organism

hostage a person kept for security

hotspot an area on the Earth's surface where the crust is quite thin, and volcanic activity can sometimes occur, even though it is not at a plate margin

household sector a term used by economists to refer to the total of all consumers in the economy **human features** structures built by people

human resource management the process of managing the people who work within an organisation

human resources the people who work within an organisation

humidity the amount of water vapour in the atmosphere

Hundred Years' War a series of campaigns and battles over territory between the English and the French, and between warring French princes

hunter–gatherers people who collect wild plants and hunt wild animals rather than obtaining their food by growing crops or keeping domestic livestock

hypothesis (plural: **hypotheses**) a theory or possible explanation

hydroelectric dam a dam that harnesses the energy of falling or flowing water to generate electricity

ice ages historical periods during which the Earth is colder, glaciers and ice sheets expand and sea levels fall **idolatry** worship of idols

illumination hand-painted illustration in a medieval book

imperial the rule of an emperor or something belonging to an empire

imports goods and services purchased by local consumers from overseas businesses

incarnation the representation of a spirit or quality in a living human

incentive something that motivates or encourages a person to do something

indigenous native to or belonging to a particular region or country

indigenous peoples the descendants of those who inhabited a country or region before people of different cultures or ethnic origins colonised the area

industry the way that different parts of the economy are grouped; for example, manufacturing, mining etc.

inflation a general rise in prices across all sectors of the economy

infrastructure the facilities, services and installations needed for a society to function, such as transportation and communications systems, water and power lines

inputs those things that contribute to the production process

interest a charge made for the use of money that has been deposited or borrowed

intermittent describes a stream that does not always flow

intermittent creek a creek that flows for only part of the year following rainfall

investment the direction of money into the purchase of equipment or premises for the establishment of a new business, or the expansion of an existing business

islet a very small island

joust combat between two mounted knights using blunted lances

Judaism the religion of the Jewish people

jujutsu a traditional Japanese system of physical training and unarmed combat

jury in a criminal trial, a randomly selected group of people who decide the guilt or innocence of an accused person

kabuki a colourful form of theatre combining play-acting, dance and music

kana a writing system that represents Japanese syllables

katabatic wind very strong winds that blow downhill

keel lowest timber running along the length of a vessel, and upon which the framework of the whole boat is built

keep innermost tower of a castle

khaghan title equivalent to emperor; Great Khan

khan title of rulers in Central Asia; 'king', 'chief'

khanate territory ruled by a khan

Khmer the Cambodian people

kiln an oven used at high temperatures to heat and harden ceramic items

kinship sharing a blood relation

knarr a Viking trading ship

kumara sweet potato

labour the human skills and effort required to produce goods and services

labour force people aged 15 and over who are able to work and are either employed or unemployed

labour market the availability and the ability of employees to work and for employers to hire them

lagoon a shallow body of water separated by islands or reefs from a larger body of water, such as a sea

lamellar made up of overlapping metal plates or scales

lance a long wooden shaft with steel point used as a weapon by mounted knights

lancers mounted troops armed with lances (spear-like weapons used when charging)

land rights the rights of people (in this case Indigenous groups) to own the land their ancestors have lived on for generations

landslide a rapid movement of rocks, soil and vegetation down a slope, sometimes caused by an earthquake or by excessive rain

lateen sail a triangular sail rigged at 45 degrees to the mast of a boat or ship

Latin the language of ancient Rome

Latin America the part of the Americas that was colonised by the Spanish and Portuguese

laws the system of rules that Australia recognises as regulating the actions of its citizens, which it may enforce by the imposition of penalties and sanctions

leaching a process that occurs in areas of high rainfall, where water runs through the soil, dissolving minerals and carrying them into the subsoil. The process can be compared to a coffee pot in which the water drips through the coffee grounds.

legislation a law made by Parliament

legitimate lawful or proper

leper person stricken with leprosy, a bacterial disease that causes ulceration of the skin, deformities and a loss of sensation

liable legally responsible for a civil wrong

limited liability where shareholders cannot lose more than their investment in the event of the failure of the business

linen cloth made from flax

linga a phallic symbol that would have originally been a feature of most Hindu temples

liquefaction transformation of soil into a fluid, which occurs when vibrations created by an earthquake, or water pressure in a soil mass, cause the soil particles to lose contact with one another and become unstable; for this to happen, the spaces between soil particles must be saturated or near saturated

literacy the ability to read and write

lithosphere the crust and upper mantle of the Earth

livelihood job or skill that supports a person's existence, so that they can have the necessities of life

lobbying a process of approaching members of parliament to argue a case for change in the law

longhouse a Viking farmhouse with a curved shape like an upturned boat. Particularly large longhouses meant for 30–50 people are often called halls.

longphort a fortified base

longshore drift a process by which material is moved along a beach in the same direction as the prevailing wind

lord chief position in the feudal system below the monarch

low-density housing residential developments with around 12–15 dwellings per hectare, usually located in outer suburbs

mace iron-headed club

magistrate a court official who hears cases in the lowest court in the legal system

Mahayana Buddhism one of the two main forms of Buddhism that influenced mainland South-East Asia mail armour comprising chain links

mandate a command or order from a superior power

manslaughter the accidental or unintentional killing of one person by another person

mantle the layer of the Earth between the crust and the core

mariner's astrolabe a medieval instrument used to navigate while sailing. It was used to find a ship's latitude by measuring the altitude of the Sun or a star.

maritime trade trade by sea

martyred killed or made to suffer because of religious beliefs

Mass roman Catholic church service

mausoleum a huge tomb

meander a winding curve or bend in a river

medium-density housing residential developments with around 20-50 dwellings per hectare

megacity city with more than 10 million inhabitants

megaregion area where two or more megacities become connected as increasing numbers of towns and ghettos develop between them

mercenary a soldier who fights for money rather than for patriotic reasons

merchant a person who buys and sells goods for profit

metre arrangement of words in measured, patterned or rhythmic lines or verses

metropolitan region an urban area that consists of the inner urban zone and the surrounding built-up area and outer commuter zones of a city

microclimate specific atmospheric conditions within a small area

Middle Ages or medieval history the period from the end of the Roman Empire in the West in the fifth century CE to the end of the Renaissance around 1500 CE

middle class a social class between the privileged nobility and the poor peasants. It typically comprised merchants and wealthier craftspeople.

migrant a person who leaves their own country to go and live in another

migration the movement of people (or animals) from one location to another

minimum wage the legally binding minimum that must be paid to any employee over the age of 21 years

moat water-filled defensive ditch surrounding a castle

monastery a place where Christian monks lived

monochrome varying tones of a single colour, usually black and grey

monopoly an organisation or group that has complete control of something

Moor a member of a north-west African Muslim people of mixed Berber and Arab descent

moraine rocks of all shapes and sizes carried by a glacier

mortgage loan a loan advanced to allow a person to buy a house or other property, with the property itself as security for the loan. This means the bank or other lender can take possession of the property if the borrower fails to make the regular payments.

motte a mound upon which a castle was built

musket a muzzle-loading gun with a long barrel

mutton the flesh of a mature sheep used as food

negligence a situation where a person breaches a duty to exercise reasonable care to avoid a foreseeable risk, resulting in another person being injured or suffering a risk of injury

New World a term used to describe the Americas

nirvana in Buddhism, the perfect state; free of suffering and desire

nobles the aristocracy; hereditary privileged class

nomadic describes a group that moves from place to place depending on the food supply, or pastures for animals

Normandy now a French province, in the Middle Ages it was a dukedom in northern France

nuisance interference with someone's enjoyment of public or private property

nun member of a closed community of women living under religious vows and rules

oath breaker someone who goes back on their word

obsidian a type of rock that is almost like glass

occupation invasion, conquest, and control of a nation or territory by foreign armed forces

ochre a natural earthy pigment of various colours used for painting

offshoring moving certain work processes to be performed overseas

Opposition the main political party in the lower house of parliament not in power

orb globe with a cross, symbolising a Christian monarch's rule

orient a historical term referring to Asia

origami the art of folding paper into different shapes and designs

outsourcing contracting a person or people outside an organisation to perform certain work tasks (that previously might have been performed by workers within the organisation)

pagan someone who is not a Christian, Jew or Muslim, but who worships many gods

palanquin a sort of couch for transporting passengers, with long poles on each side so that servants could carry it on their shoulders

palisade tall fence made of pointed timber stakes driven into the ground

Pangaea the name given to all the landmass of the Earth before it split into Laurasia and Gondwana

partnership a business owned and operated by two or more people

patron a person or institution who pays for a work to be created

peat vegetable matter, decomposed by water and partially turned to carbon, frequently forming a bog **peninsula** land jutting out into the sea

per capita income average income per person; calculated as a country's total income (earned by all people) divided by the number of people in the country

percentage mark-up a fixed percentage increase to the price paid by a business for goods, to determine the selling price of those goods

perennial describes a stream that flows all year

permafrost a layer beneath the surface of the soil where the ground is permanently frozen

perspective point of view or attitude

pestilence fatal epidemic disease

phalanx body of foot soldiers in close battle order

philosophy the study of the principles underlying all knowledge

physical process continuing and naturally occurring actions such as wind and rain

piety religious devotion

pike long spear-like weapon carried by foot soldiers

pilgrim one who travels to a sacred place to show devotion to his or her faith

pillage to steal or plunder using force, especially during war

pious devout, very religious

plague fatal epidemic disease; usually used in reference to the bubonic plague

plaintiff the person who commences a legal action in civil law

plateau an extensive area of flat land that is higher than the land around it. Plateaus are sometimes referred to as tablelands

Poll Tax a tax levied on every person, regardless of age, sex or income

polytheistic the worship of numerous gods

pommel rounded knob at the end of a sword hilt

population density the number of people living within one square kilometre of land; it identifies the intensity of land use or how crowded a place is

population distribution the pattern of where people live; population distribution is not even — cities have high population densities and remote places such as deserts usually have low population densities

porter a person who carries luggage and heavy loads

practitioner in a religious sense, someone who actively participates in a religion

precedent a legal principle developed by a court in the process of resolving a dispute

pre-empted took possession before others could

prevailing wind the main direction from which the wind blows

primary industry the group involved in the production of raw materials; for example, farming, mining, forestry

primary production the production of crops, livestock or other basic materials that may then be used by other branches of industry

primary sources objects and documents that were created or written in the period of time that the historian is investigating

privatise to sell a government-owned provider of goods or services to private investors

product development the creation of products with new or different characteristics that offer new or additional benefits to customers **profit** what remains after all business expenses have been deducted from the money that has been collected from selling goods or services

prosecute to take legal action against another person for a criminal offence

protectorate when stronger states protect and control weaker states

prow front part of a boat or ship

pull factor favourable quality or attribute that attracts people to a particular location

push factor unfavourable quality or attribute of a person's current location that drives them to move elsewhere

quaternary service industries involved in the processing and transfer of information and knowledge; for example, IT consultants, education services

quinary domestic service providers; for example, cleaning, childcare, home maintenance

rafter sloping timbers supporting the outer covering of a roof

rain shadow the drier side of a mountain range, cut off from rain-bearing winds

rebate a partial refund on something that has been bought or paid for

recant to take back a former opinion, usually with a confession that you were wrong

reconciliation the process of restoring and encouraging respect for Indigenous culture and identity **reconnaissance** a search made to gain military information

reconstruction rebuilding or re-making: in archaeology, rebuilding an artefact using archaeological remains as a guide

redundant a situation in which a job is no longer required to be performed by anyone; this may be as a result of the reorganisation of a business, the introduction of new technology or a decline in business sales or production

Reeve a magistrate administering law in a village

referendum a process of allowing the people to vote on an important issue, such as a proposed change to the Constitution

regent a person appointed to rule a country if a monarch is too young or ill to do so

reincarnation being continuously born and reborn in other lives

relative dating techniques methods used to assess whether something is older than something else (e.g. stratigraphy, fluorine dating)

Renaissance meaning 'rebirth', it refers to the flowering of the arts and sciences in late medieval Italy and later in north-western Europe

repeal to remove a law so that it no longer applies

republic a state in which the head of the government is not a ruler who inherits his position as might a king or emperor

retrenching losing one's job as a result of the position being made redundant

retrofitting adding a component or accessory to something that did not have it when it was originally built or manufactured

revelation a communication or message from God

rickshaw a small two-wheeled vehicle pulled by a man

rift zone a large area of the Earth in which plates of the Earth's crust are moving away from each other, forming an extensive system of fractures and faults

right an entitlement to be treated in a particular way. A legal right is a right that can be enforced by law.

river delta a landform created by deposition of sediment that is carried by a river as the flow leaves its mouth and enters slower-moving or stagnant water. Can take three main shapes: fan shaped, arrow shaped and bird-foot shaped.

Roman Inquisition a system of tribunals set up by the Catholic Church during the sixteenth century to censor literature and prosecute people accused of heresy and other crimes

ronin a wandering samurai who had no lord or master

rudder broad wooden or metal piece at the end of a boat used for steering; on a longship, it was a broad oar attached to the tiller

ruling class kings, nobles and high officials

runes letters of the Scandinavian alphabet based on Roman or Greek letters but modified to be easily carved on wood or stone

sacrament sacred Christian ceremony; in the Catholic Church, for example, baptism and marriage **saga** a medieval Scandinavian tale about exploits and adventures in the life of a hero or his family

Sake a Japanese alcoholic drink made from fermented rice; sometimes known as rice wine

samurai the warrior class in Japan during the Classical and shogunate periods

sanitation facilities provided to remove waste such as sewage and household or business rubbish Sanskrit ancient and sacred language of India

sastrugi parallel wave-like ridges caused by winds on the surface of hard snow, especially in polar regions **sceptre** rod symbolising royal authority of the monarch

scurvy a painful and often fatal disease caused by lack of vitamin C

sea change movement of people from major cities to live near the coast to achieve a change of lifestyle
 secondary industry the group involved in the processing of primary resources to manufacture other goods
 secondary sources reconstructions of the past written or created by people living at a time after the period that the historian is studying

sediment material carried by water

seismic waves waves of energy that travel through the Earth as a result of an earthquake, explosion or volcanic eruption

selective logging a forestry practice in which only selected trees are cut down

self-sufficient able to provide for its own needs

seppuku a form of ritual suicide, carried out by disembowelling oneself (cutting open the abdomen) with a sword

serfdom the position of peasants who were not free to leave the land they worked

sermon moral or religious lecture delivered by a priest

shaman a person who claims to communicate with evil spirits through mystic rituals

shamanism central Asian religion based on a belief in many gods in the natural world and the power of shamans (priests) to influence these gods

shareholders the part-owners of a corporation

shell middens Indigenous archaeological sites where the debris associated with eating shellfish and similar foods has accumulated over time

shifting agriculture process of moving gardens or crops every couple of years because the soils are too poor to support repeated sowing

Shinto an ancient Japanese religion that believes in nature spirits and ancestor worship

shogun literally 'barbarian-conquering great general'; the Japanese emperor's chief military adviser and hereditary commander-in-chief, with the duty to protect Japan from foreign invasion

siege capturing a protected place by surrounding it and cutting off supplies

significance the importance assigned to particular aspects of the past, for example, events, developments, movements and historical sites.

slash and burn agriculture a nomadic form of farming in which people clear part of a forest, grow crops, harvest them and then move on to repeat this in another place

slum a run-down area of a city characterised by poor housing and poverty

soft engineering a coastal management technique where the natural environment is used to help reduce coastal erosion and river flooding

sole proprietorship a business that is owned and operated by one person

soluble able to be dissolved in water

species a biological group of individuals having the same common characteristics and being able to breed with each other

stalactite a feature made of minerals, which forms from the ceiling of limestone caves, like an icicle. They are formed when water containing dissolved limestone drips from the roof of a cave, leaving a small amount of calcium carbonate behind.

stalagmite a feature made of minerals found on the floor of limestone caves. They are formed when water containing dissolved limestone deposits on the cave floor and builds up.

standard of proof the level of proof required to establish a case. In criminal law, the prosecution must prove that the accused is guilty beyond reasonable doubt.

statute laws laws made by parliament

steppe a vast plain without trees

sternpost rudder a heavy board hung from the centre of the back of a ship that makes it easier to steer **stirrup** foot supports suspended from a saddle by straps

strata (singular: stratum) distinct layers of material beneath the ground, built up over time, that provide information for archaeologists and geologists

subjective based on personal feelings rather than on facts

subjugate subdue and control

subsistence producing only enough crops and raising only enough animals to feed yourself and your family or community

Sultan the king or sovereign of an Islamic country

superstition a belief based on custom or fear rather than knowledge or reason

supremacy domination, being at the top

sustainable development economic development that causes a minimum of environmental damage, thereby protecting the interest of future generations

swash the movement of water in a wave as it breaks onto a beach

Tai ethnic groups that migrated from southern China into northern mainland South-East Asia from the tenth century

tapestry carpet-like wall-hanging

target market a group of customers with similar characteristics towards which a business has decided to aim its marketing efforts and its products

tariff a tax on goods imported from a foreign country

taro the root of a plant that is made edible through boiling

Tatars another name for Mongols. Also known as Tartars.

tea ceremony an ancient Japanese ritual of serving and drinking tea

tectonic plate one of the slow-moving plates that make up the Earth's crust. Volcanoes and earthquakes often occur at the edges of plates.

temperate describes the relatively mild climate experienced in the zones between the tropics and the polar circles

terra nullius 'land belonging to no-one'

tertiary industry the group involved in the provision of services to others; for example, doctors, accountants, retailers

thatch straw used for making roofs

theologian a person who is considered to be an expert in religious matters

Theravada Buddhism one of the two main forms of Buddhism that influenced mainland South-East Asia **thermal** relating to heat or temperature

thing regional meeting held to decide local issues in Norway and Iceland during the Viking Age

Thingvellir meeting place of the Althing in Iceland during the Viking Age

timeline a diagrammatic tool representing a period of time, on which events are placed in chronological order

tithe barn a barn where peasants' produce is stored as a form of taxation

Tonle Sap the largest freshwater lake in South-East Asia

trade union an organisation of employees formed for mutual support, and to seek improvements in pay and working conditions for its members

transportation (in nature) the movement of eroded materials to a new location by elements such as wind and water

transportation (historical) the process of sending convicts to a penal colony

treaty a formal agreement between two or more countries

trebuchet heavy medieval siege machine that uses a sling to hurl large missiles

tree change movement of people from major cities to live near the forest to achieve a change of lifestyletrespass a tort (civil wrong) involving direct and intentional interference with a person, or a person's land or goods

tributary (in nature) a river or stream that flows into a larger river or lake

tributary (in politics) a state that gives payment to another state or ruler

tribute a tax or regular payment given to ensure protection or peace

triple bottom line an accounting term for measuring the success of a city, country or organisation by the health of its environment, its society and its economy

trust a business created to hold property or assets for the benefit of another person or a group of people **trustee** a person or company that holds property or assets for the benefit of another

tuberculosis a serious and infectious disease that affects the lungs

typhoon name given to big tropical storms in the Pacific or Indian ocean

unemployment benefits welfare payments by government to people who are unemployed and looking for work. Such payments in Australia are generally known as the Newstart Allowance.

unlimited liability where a business owner is personally responsible for all the debts of their business
 urban relating to a city or town; the definition of an urban area varies from one country to another depending on population size and density

urban sprawl the spreading of urban areas into surrounding rural areas to accommodate an expanding population

urbanisation the growth and expansion of urban areas

utilities services provided to a population, such as water, natural gas, electricity and communication facilities

vassal a person who holds land for a lord, and in return pledges loyalty and service to him

vassal state a state whose ruler acknowledges a foreign ruler as his overlord

vernacular everyday language spoken by a particular group or class

viable capable of working successfully

volcanic loam a volcanic soil composed mostly of basalt, which has developed a crumbly mixtureward a district in a city or town

washi handmade paper created from the bark or fibre of various shrubs, grasses or trees

watershed an area or ridge of land that separates waters flowing to different rivers, basins or seas

weathering the breaking down of bare rock (mainly by water freezing and cooling as a result of temperature change) and the effects of climate

White Australia an immigration policy discriminating against non-white people which existed for much of the twentieth century

work human labour that can be paid or unpaid including voluntary labour

work—life balance a feeling of having an appropriate balance between work and non-working time and activities

yam a potato-like tropical plant used as food

INDFX

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