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JACARANDA

HUMANITIES ALIVE 7

AUSTRALIAN CURRICULUM | THIRD EDITION

AUSTRALIAN CURRICULUM v9.0

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HUMANITIES ALIVE 7

AUSTRALIAN CURRICULUM | THIRD EDITION

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This suite of resources may include references to (including names, images, footage or voices of) people of Aboriginal and/or Torres Strait Islander heritage who are deceased. These images and references have been included to help Australian students from all cultural backgrounds develop a better understanding of Aboriginal and Torres Strait Islander Peoples' history, culture and lived experience.

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The Publisher acknowledges ongoing discussions related to gender-based population data. At the time of publishing, there was insufficient data available to allow for the meaningful analysis of trends and patterns to broaden our discussion of demographics beyond male and female gender identification.

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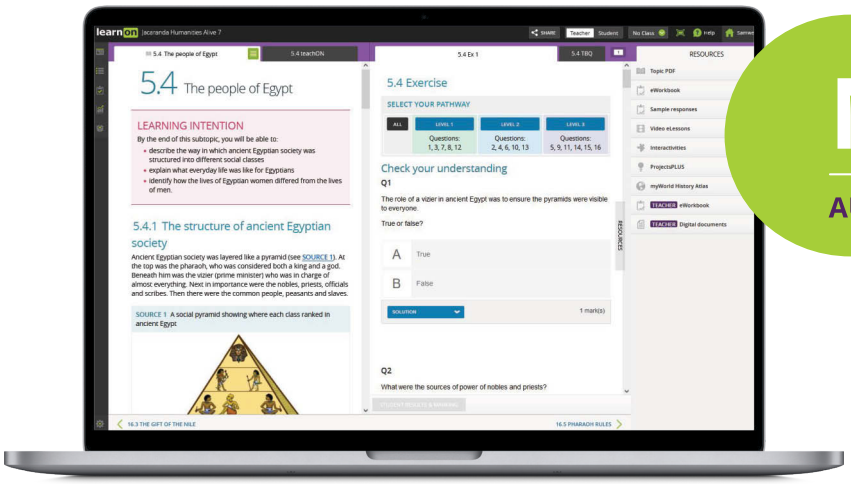

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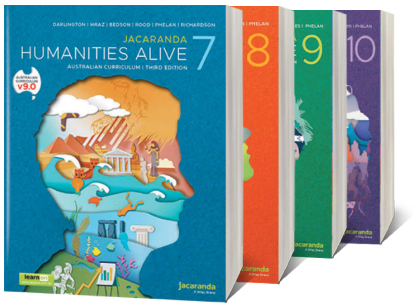


JACARANDA

HUMANITIES ALIVE 7

AUSTRALIAN CURRICULUM
THIRD EDITION

Developed by teachers for students

Tried, tested and trusted. Every lesson in the new *Jacaranda Humanities Alive* series has been carefully designed to support teachers and help students evoke curiosity through inquiry-based learning while developing key skills.

Because both what and how students learn matter

Learning is personal

Whether students need a challenge or a helping hand, you'll find what you need to create engaging lessons.

Whether in class or at home, students can access carefully scaffolded lessons with in-depth skills development while engaging with multi-modal content designed to spark curiosity. Automatically marked, differentiated question sets are all supported by detailed sample responses – so students can get unstuck and progress!

Learning is effortful

Learning happens when students push themselves. With learnON, Australia's most powerful online learning platform, students can challenge themselves, build confidence and ultimately achieve success.

Learning is rewarding

Through real-time results data, students can track and monitor their own progress and easily identify areas of strength and weakness.

And for teachers, Learning Analytics provide valuable insights to support student growth and drive informed intervention strategies.

Learn online with Australia's most

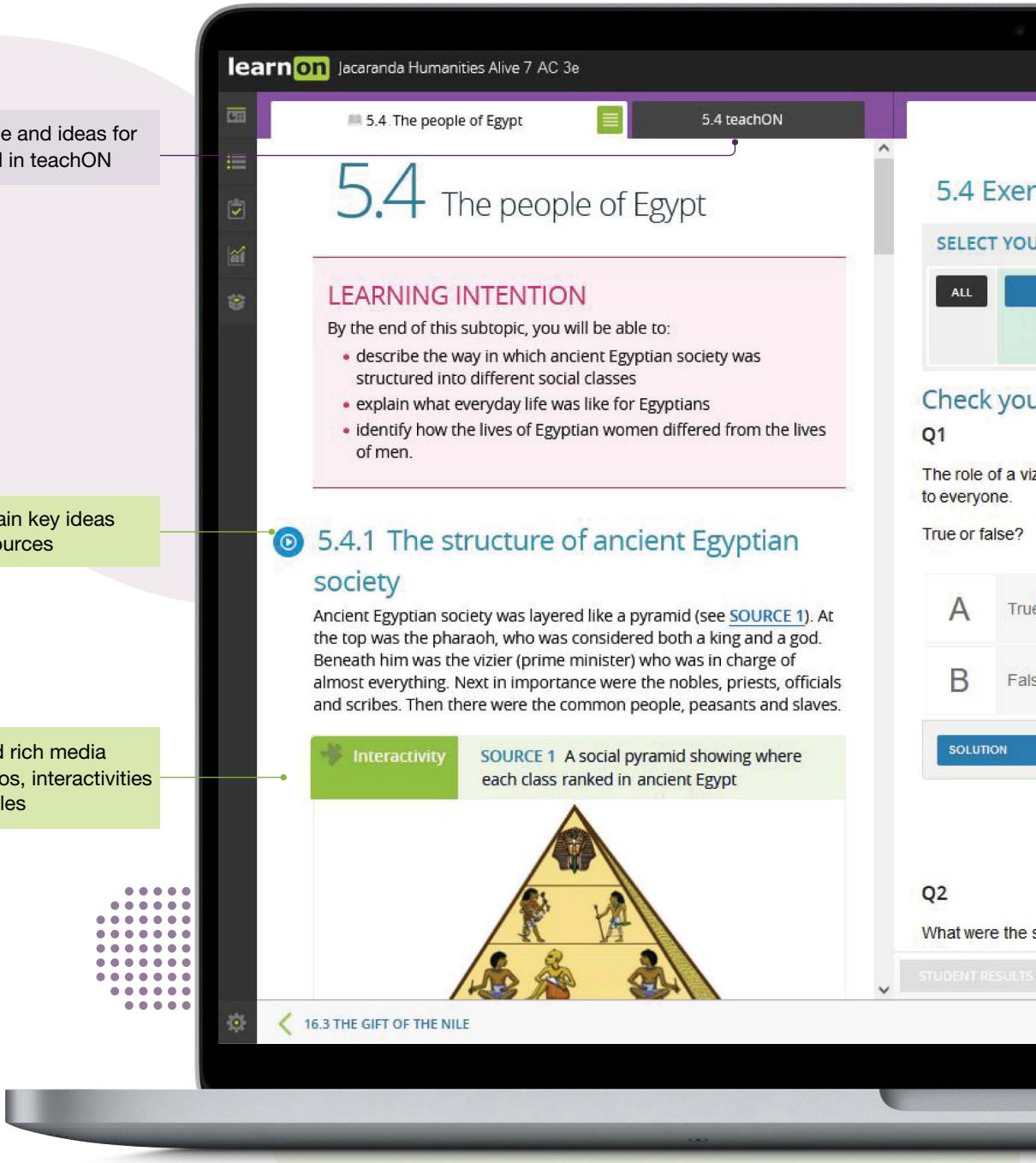
Everything you need for each of your lessons in one simple view

- **Trusted, curriculum-aligned content**
- **Engaging, rich multimedia**
- **All the teaching-support resources you need**
- **Deep insights into progress**
- **Immediate feedback for students**
- **Create custom assignments in just a few clicks.**

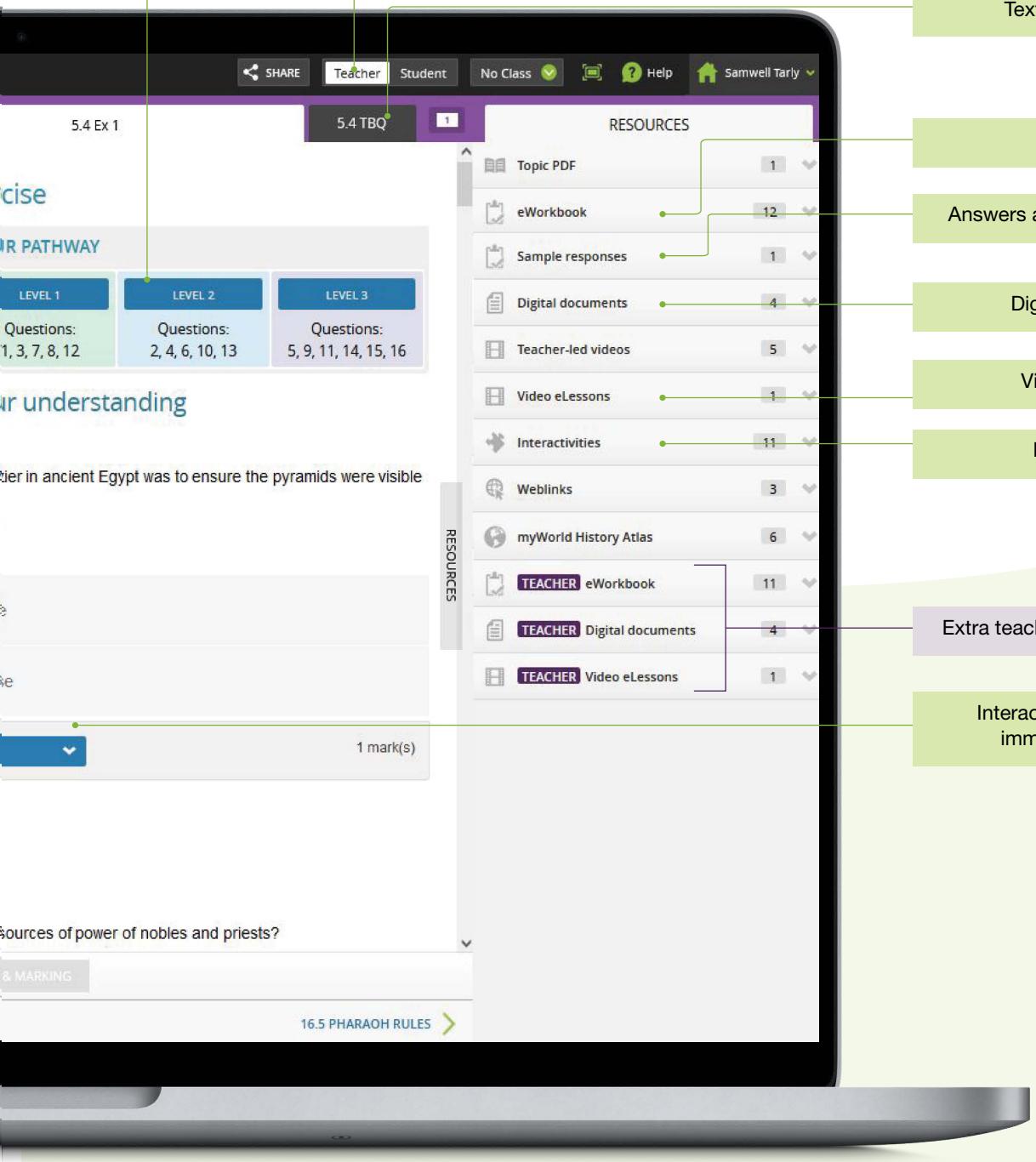
Practical teaching advice and ideas for each lesson provided in teachON

Teaching videos explain key ideas and analyse sources

Reading content and rich media including embedded videos, interactivities and audio files



powerful learning tool, learnON



Differentiated question sets

Teacher and student views

Textbook questions

eWorkbook

Answers and sample responses

Digital documents

Video eLessons

Interactivities

Extra teaching support resources

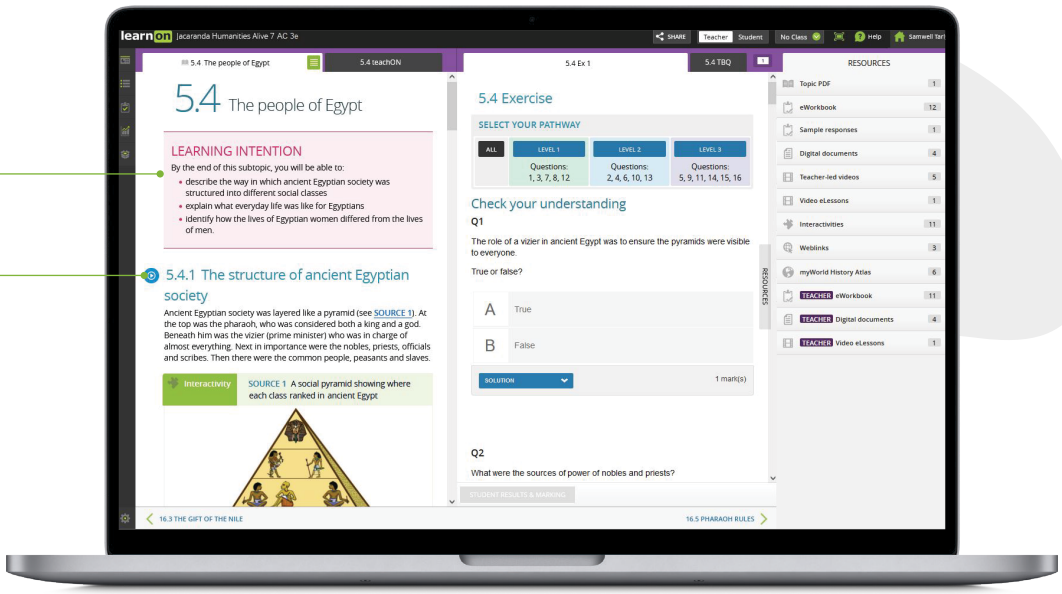
Interactive questions with immediate feedback

Get the most from your online resources

Online, these new editions are the complete package

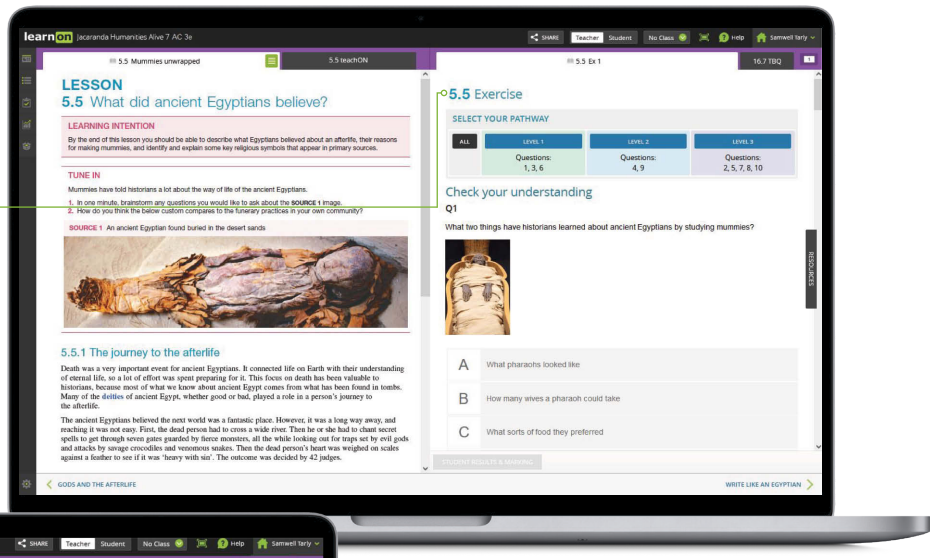
Trusted Jacaranda theory, plus tools to support teaching and make learning more engaging, personalised and visible.

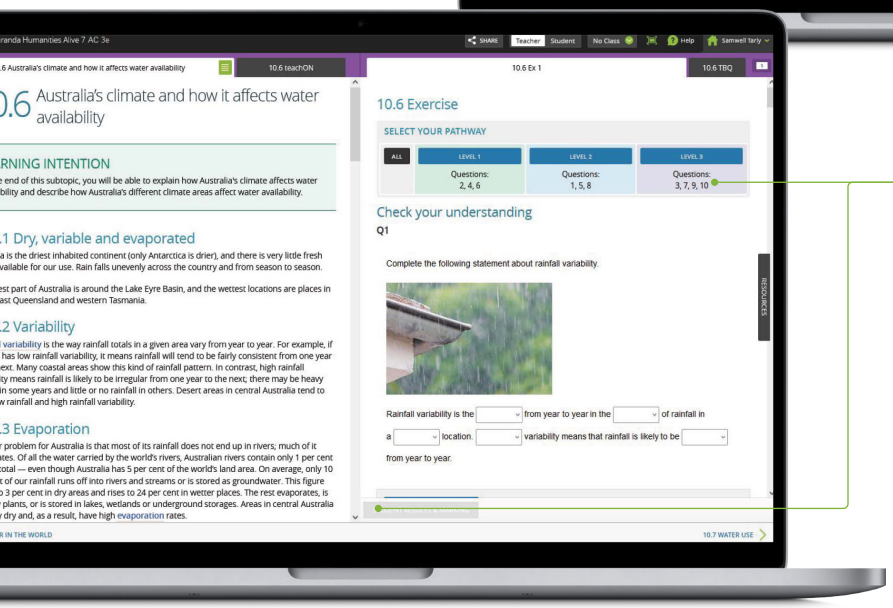
Embedded interactivities and videos enable students to explore concepts and learn deeply by ‘doing’.



New teaching videos are designed to help students learn concepts by having a ‘teacher at home’, and are flexible enough to be used for pre-and post-learning, flipped classrooms, class discussions, remediation and more.

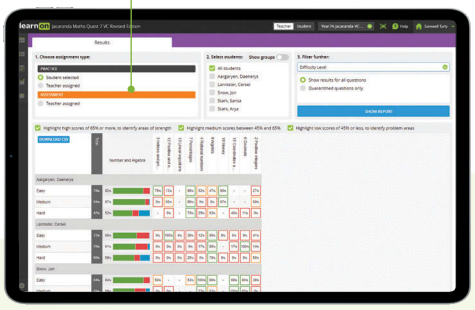
Brand new! Tune in activities to spark interest and kick off every lesson with discussion and source analysis

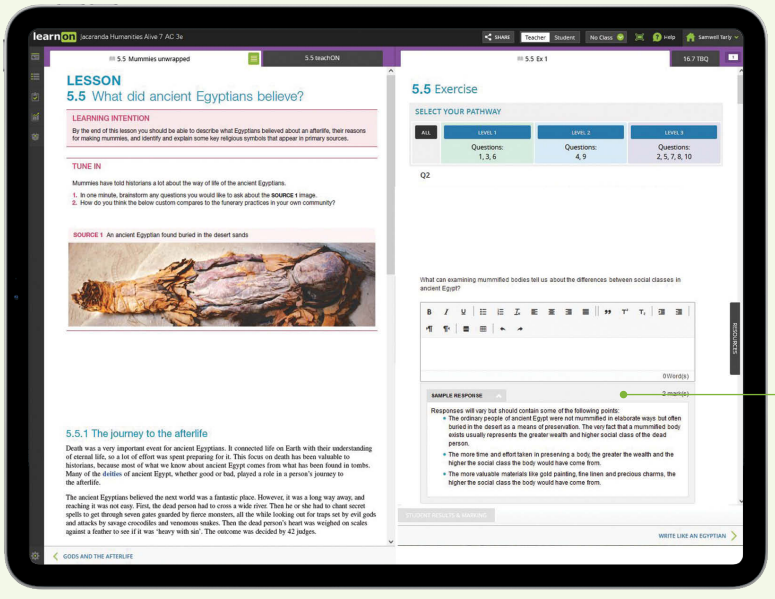




Three differentiated question sets, with immediate feedback in every lesson, enable students to challenge themselves at their own level.

Instant reports give students visibility into progress and performance.

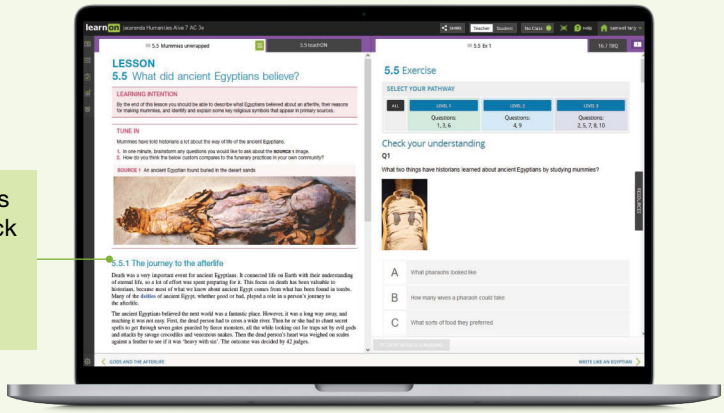




Every question has immediate, corrective feedback to help students overcome misconceptions as they occur and get unstuck as they study independently — in class and at home.

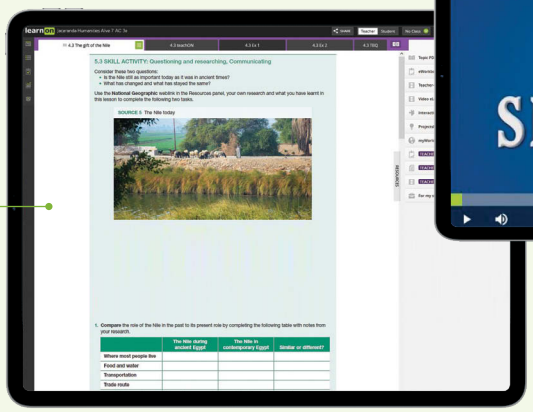
TUNE IN lesson starters

New Tune In activities spark interest and kick off every lesson with discussion and source analysis.



Skill development

New skill activities provide opportunities to develop and build crucial Humanities skills using research, collaboration and analysis.



SkillBuilders support and strengthen skill development using our Tell me, Show me, Let me do it approach.

Inquiry projects

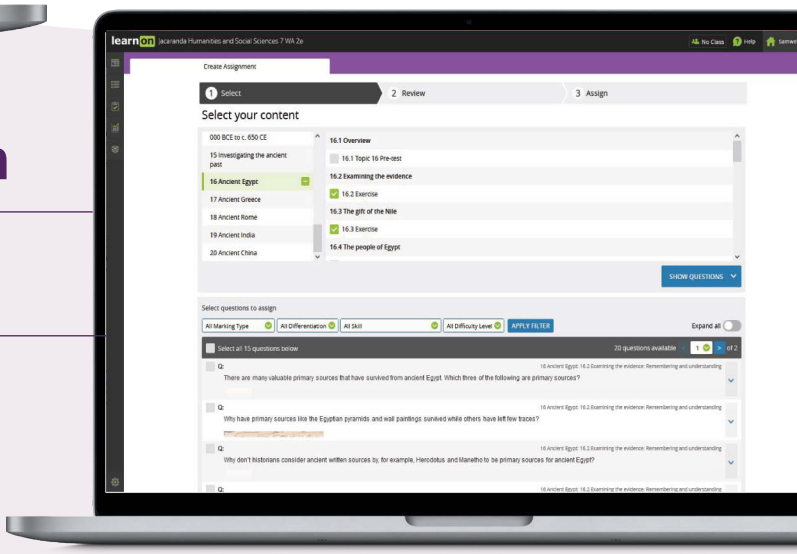
New Inquiry lessons use project-based learning and a clear skill structure for a deep dive into every topic while practising the curriculum-specific skills.

A wealth of teacher resources

Enhanced teaching-support resources for every lesson, including:

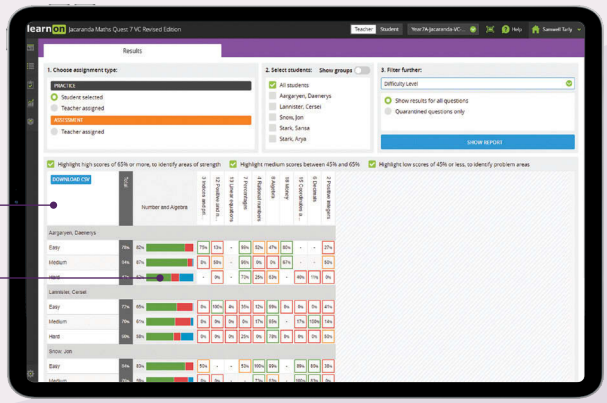
- work programs and curriculum grids
- practical teaching advice
- three levels of differentiated teaching programs
- quarantined topic tests (with solutions)

Customise and assign



An inbuilt testmaker enables you to create custom assignments and tests from the complete bank of thousands of questions for immediate, spaced and mixed practice.

Reports and results



Data analytics and instant reports provide data-driven insights into progress and performance within each lesson and across the entire course.

Show students (and their parents or carers) their own assessment data in fine detail. You can filter their results to identify areas of strength and weakness.

Acknowledgements

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Understanding cognitive verbs

Cognitive verbs in the Australian Curriculum

The Australian Curriculum aims to develop students' disciplinary knowledge, skills, understanding and general capabilities across the curriculum. Students are also expected to progressively develop their thinking skills.

In the Australian Curriculum, cognitive verbs are used as signposts for this depth of thinking. Cognitive verbs signify different types of thinking and are already used in the classroom by many teachers and students.

Questions within Jacaranda resources use these cognitive verbs to support students in cognitive verb 'thinking'. The following list describes the cognitive verbs that are frequently used in Years 7 and 8.

Cognitive verb	Description
analyse	considering something in detail, finding meaning or relationships and identifying patterns. In an analysis you may reorganise ideas and find similarities and differences.
apply	using knowledge and understanding in order to solve a problem or complete an activity. This may involve applying a familiar concept to an unfamiliar situation.
compare	recognising how things are similar and dissimilar. Concepts or items are generally grouped before a comparison is made.
decide	selecting from available options. This may involve considering criteria on which to base your selection.
describe	giving an account of a situation, event, pattern or process. A description may require a sequence or order.
develop	bringing something to a more advanced state. Processing and understanding are required in order to develop an idea or opinion.
evaluate	making a judgement using a set of criteria. This may include considering strengths and limitations of something in order to make a judgement on a preferred option.
examine	considering the information given and recognising key features. This sometimes requires making a decision.
explain	making an idea, concept or relationship between two things clear by giving in-depth information. Explanations may include details of who, what, when, where, why and how.
identify	recognising and showing a particular part or feature of something. This might also include showing what or who something or someone is.
interpret	gaining meaning from text, graphs, data or other visuals. An interpretation includes stating what something might mean.
select	choosing the most suitable option from a number of alternatives. This might require some consideration of context.

Source: Adapted from the QCAA Cognitive Verbs.

HISTORY

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DEEP TIME HISTORY OF AUSTRALIA

2 Deep time history of Australia 40

THE ANCIENT WORLD

3 Ancient Greece ..... online only

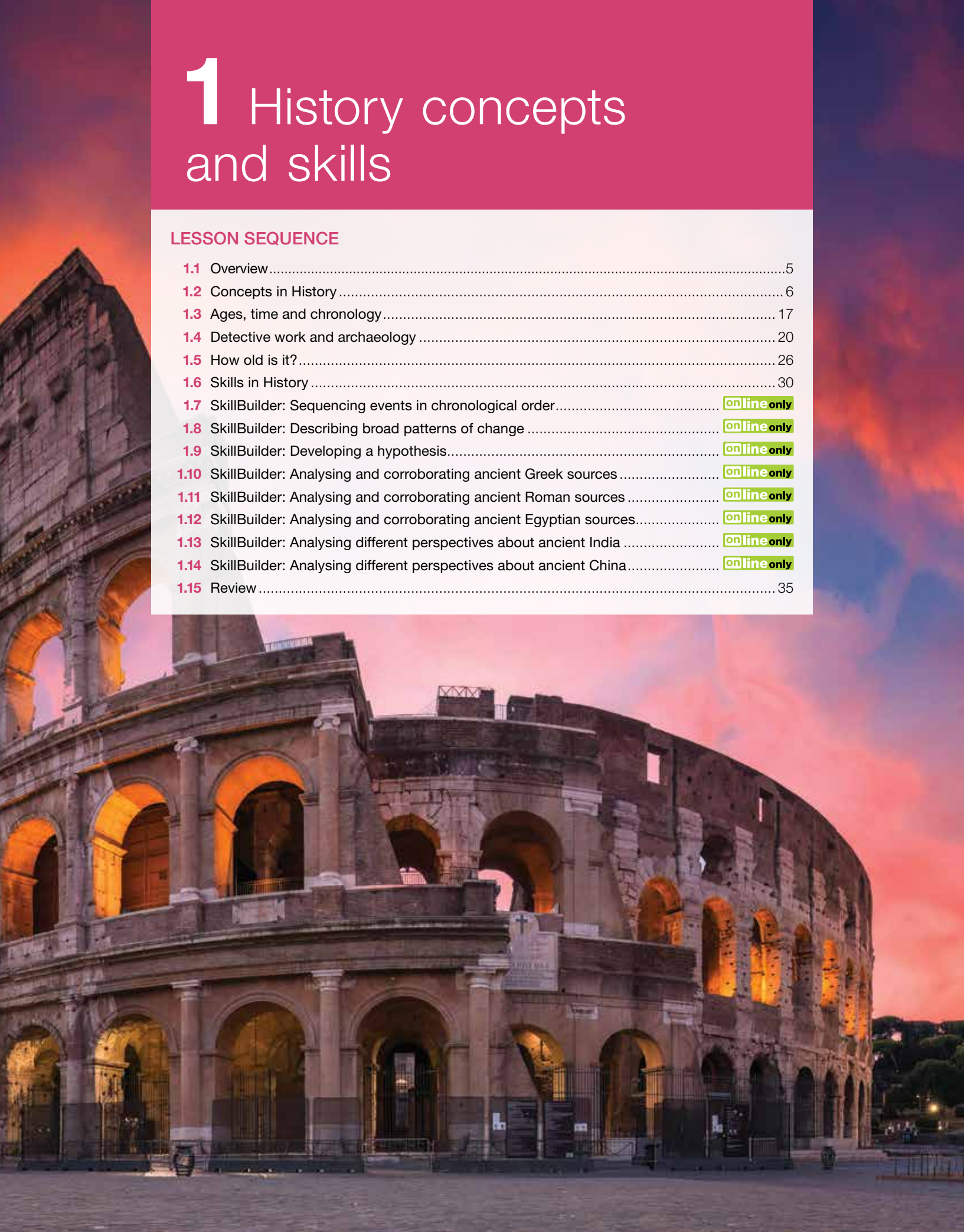
4 Ancient Rome 108

5 Ancient Egypt 168

6 Ancient India ..... online only

7 Ancient China 226

1 History concepts and skills



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LESSON
1.1 Overview

Hey students! Bring these pages to life online

Watch videos

Engage with interactivities

Answer questions and check results

Find all this and MORE in jacPLUS

1.1.1 Introduction

Although the ancient civilisations disappeared a long time ago, much evidence of the ancient past has been left behind. In many cases, our modern society can trace aspects of its origins back to people or civilisations who existed thousands of years ago.

We can thank the ancient Egyptians for some aspects of modern architecture and the art of writing; the ancient Greeks for developments in medicine, mathematics, science and philosophy; the ancient Romans for their influence on art and architecture and our modern political and legal system; and the ancient Chinese for many technologies, including the compass, paper and printing, and gunpowder.

SOURCE 1 This ancient Egyptian papyrus is a source of information about the people and society in ancient Egypt and is useful for historians.

In many ways, how our societies operate now is very similar to those that existed thousands of years ago. We, as historians, can study the evidence that these societies have left behind to examine similarities such as art and religion, using currency, laws and regulations, trade routes, writing and language.

It's hard to believe that we, in modern society, could have things in common with warriors who fought to the death in arenas packed with thousands of people. However, when you look closely, you can likely start to see more similarities than what you first thought.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10466)

Video eLessons Investigating the past (eles-6006)
History concepts and skills (eles-6007)

LESSON
1.2 Concepts in History

LEARNING INTENTION

By the end of this lesson you should be able to identify the six historical concepts and explain why they are important.

1.2.1 Why 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.

SOURCE 1 Terracotta models of actors' masks used in plays performed in ancient Greece around 2200 years ago. The actual masks have not survived because they were made of materials such as wood, linen and leather.

What is a historian?

Our own times have 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. Historians research past civilisations, cultures and societies. They try to build a picture of how people in earlier 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 enquire 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.

In this topic, we will look at the following concepts:

- **Evidence** — sources are any written or non-written materials that can be used to investigate and give us information about the past; evidence is the information we get from sources that is useful to our investigations.
- Perspective — this involves considering a person's point of view, and how they see and understand what is going on around them.
- Interpretations and contestability — this looks at the debate over how we interpret the past; for example, because of a lack of evidence or different views.
- Continuity and change — where we consider the parts of life or society that have stayed the same and those that have changed over a period of time.
- Cause and effect — where we look at the relationship between historical events or actions; for example, when one event or action happens because of the other.
- Significance — where the importance given to events of the past is considered.

evidence information that indicates whether something is true or really happened

DID YOU KNOW?

The ancient Greeks invented the dramatic genres of tragedy and comedy. The remains of their theatres can be seen today at several places, including Delphi, Athens and Epidaurus.

1.2.2 The value of history

Some people question the need to understand the past. But many very good reasons can be found 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.

SOURCE 2 Conservation work on the Parthenon in Athens, a temple built in ancient Greece in the fifth century BCE (Before Common Era)

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 more than one way of thinking about any problem is usually possible
- think critically
- communicate effectively.

heritage everything that has come down to us from the past

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 derive from travel, books and movies when they know about the history that shaped the places they visit, or the stories they read or watch on a screen?

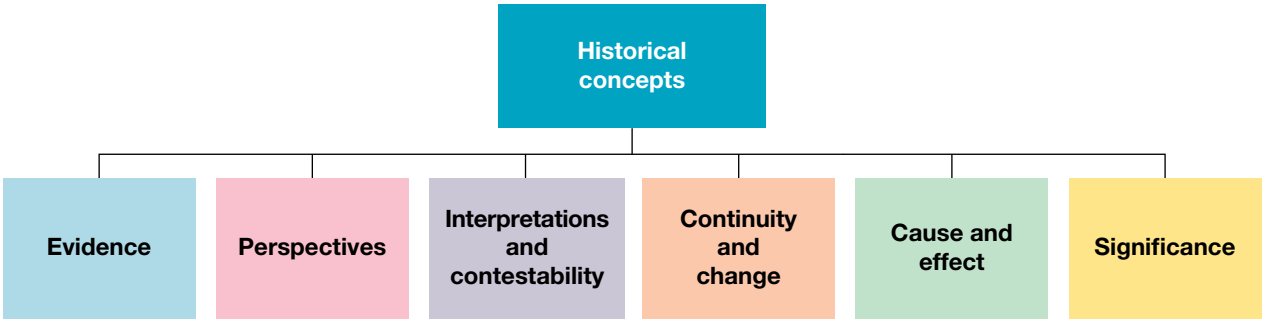
History and democracy

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.

1.2.3 What are history concepts?

You will learn six historical concepts throughout your History unit, as shown in **SOURCE 3**. You will become familiar with these concepts by investigating how we have found out about the ancient past, both here in Australia and in other countries across the world. You will also investigate where the earliest societies developed and why they developed in the ways that they did. You will become more proficient with these concepts as you learn other History units in subsequent years.

SOURCE 3 The six historical concepts



1.2.4 Evidence

Evidence refers to the available facts that indicate whether something is true or really happened. Evidence can come from primary sources and from secondary sources. Evidence is what historians use to discover when events have happened, how they happened and why they happened. Sources provide historians with the evidence they need to prove or disprove events from the past.

Sources

Historians gather information from sources. Sources are any written or non-written materials that can be used to investigate and provide information about the past. It is important to make use of 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 sources objects and documents that were created or written in the period of time that the historian is investigating

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

Primary and secondary sources

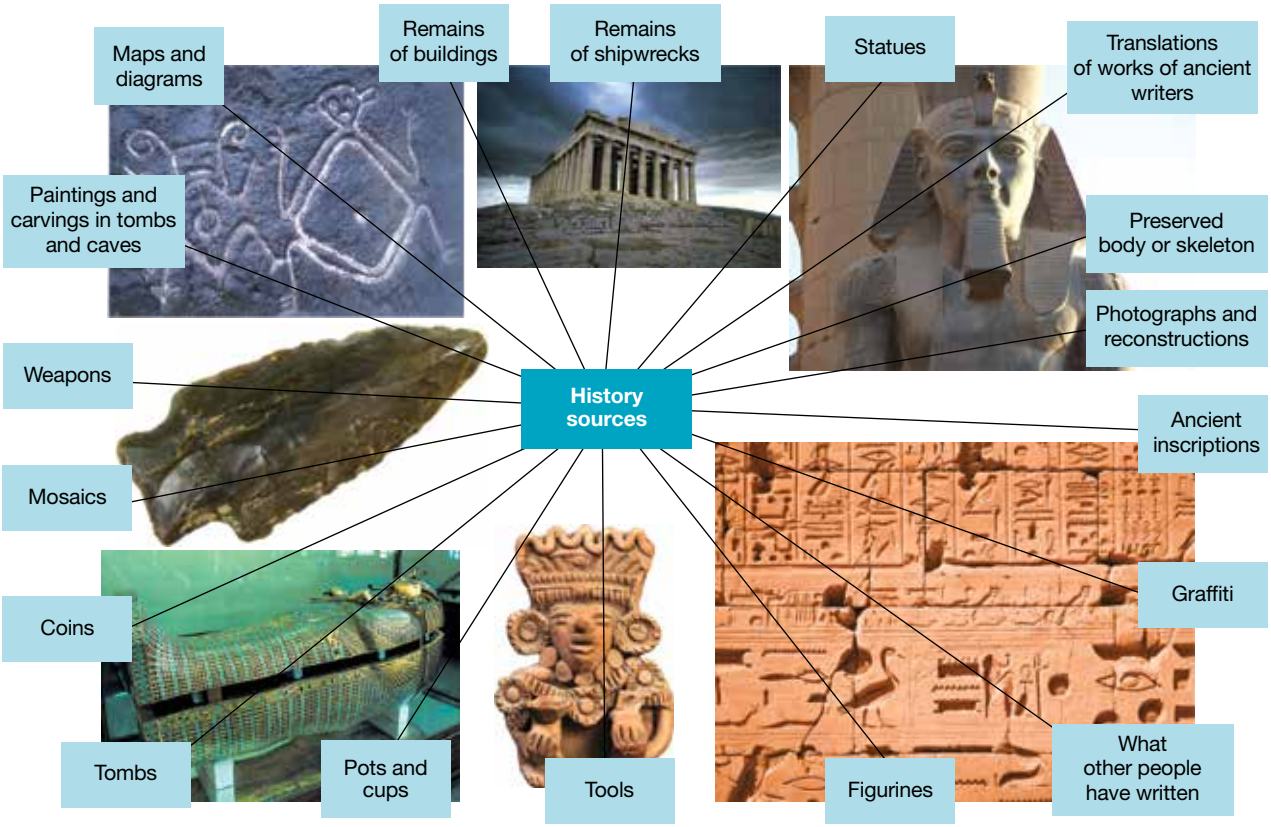
Historians can use two types of sources to investigate events from the past. **Primary sources** were created or written in the period of time that the historian is investigating. **Secondary sources** are reconstructions of the past written or created by people living at a time after the period that 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 in 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 can include books, articles, 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.

SOURCE 4 Some types of primary sources



Analysing evidence

Historical sources are valuable but they do not explain themselves. When using historical sources as evidence, historians 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

artefact an object made or changed by humans

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

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 crime today, 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 our evidence often has gaps. 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.

1.2.5 Perspectives

Historians often come across many different versions of the same event. This is because of **perspectives**, which is the different points of view that people may have of an event. Imagine you and some of your friends were asked to describe what happened at lunchtime. You would probably all have a different version of the events, depending on what things you saw and what you consider to be important. People in the past may have had different points of view about an event, depending on their age, gender, social position and their beliefs and values. We try to understand the perspectives of people in the past by exploring their points of view, attitudes and values. Historians also have perspectives, and this can influence their interpretation of the past. 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.

Empathy

It is important for historians to empathise with the people they study. This means trying to understand how people thought and felt at different times in the past. 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?

To show empathy means that the historian can understand the past from the point of view of a particular individual or group, taking into account the unique circumstances of that person or group. Understanding the motivations, values and attitudes that are causes of their actions is also important.

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 where 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.

hypothesis (plural: hypotheses) a theory or possible explanation
perspectives point of view or attitude

How should we judge people in the past?

When we learn about some of the things people did in the past, we naturally make moral judgements. For example, we now see slavery and torture as cruel. What we should try to avoid is judging people in the past by beliefs or standards that did not exist in their time. It would be wrong, for example, to judge a Roman army officer as being particularly cruel because he allowed his prisoners of war to be sold as slaves. At that time, he would have been upholding the laws and attitudes of his society. However, some ancient Romans were cruel even by the standards of their own time. We should also remember that in the future, people may think that many kinds of behaviour we consider normal are, by their standards, wrong.

SOURCE 5 The ruins of the Colosseum in Rome

DISCUSS

What might a gladiator decide to do if other gladiators suggested that, instead of continuing to kill each other for the amusement of Romans, they band together, overpower their guards and make a bid for freedom?

Consider in your discussion how his decision might be influenced if this gladiator was:

a. expecting to be killed in his next fight
b. confident of winning his next fight and expecting to be given his freedom in the near future
c. from a cultural group that was hostile towards other groups represented among these gladiators
d. disgusted with having to kill his fellow gladiators for the entertainment of Romans.

1.2.6 Interpretations and contestability

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 an important concept in the study of history.

Historical debates are ongoing. They occur when, for example, evidence is lacking or when different perspectives (points of view) lead to different conclusions. In some cases, little evidence may remain of an event and the historian has to use what evidence is available to fill in the gaps with what could have reasonably happened. This means that their interpretation of the event could be contested or debated. In other cases, several different perspectives of the same event may be available to historians, and all the perspectives could have

contestability when particular interpretations of the past are open to debate

some evidence to support them. In these cases, the historian needs to examine the evidence available and make a reasonable judgement as to what events occurred and how they occurred, but this could still be contested. Debates are ongoing in many areas, including the causes of particular wars and the roles of particular individuals, groups and ideas in bringing about significant changes.

1.2.7 Continuity and change

When studying different societies, historians can see that some aspects of life have remained the same over time, while other aspects of life have changed dramatically. Historians study the changes and the things that have remained the same because it is important to be able to identify when a change has occurred and when things have continued unchanged. As a history student, you will need to be aware of continuity and change, cause and effect, and long-term causes and short-term triggers. This concept 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 in history. Sometimes these continuities have lasted into modern times.

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 6 The ruins of an ancient house at Sardis, located in present day Türkiye (formally Turkey).

SOURCE 7 A modern suburban house in Western Australia

Sequencing, chronology and timelines

Historians often use sequencing of events and create timelines to study the changes that have happened over time. We can make comparisons between and among historical events occurring at the same time, between and among historical periods and between the present time and the past. The causes of change, or reasons change has been resisted, can also be investigated.

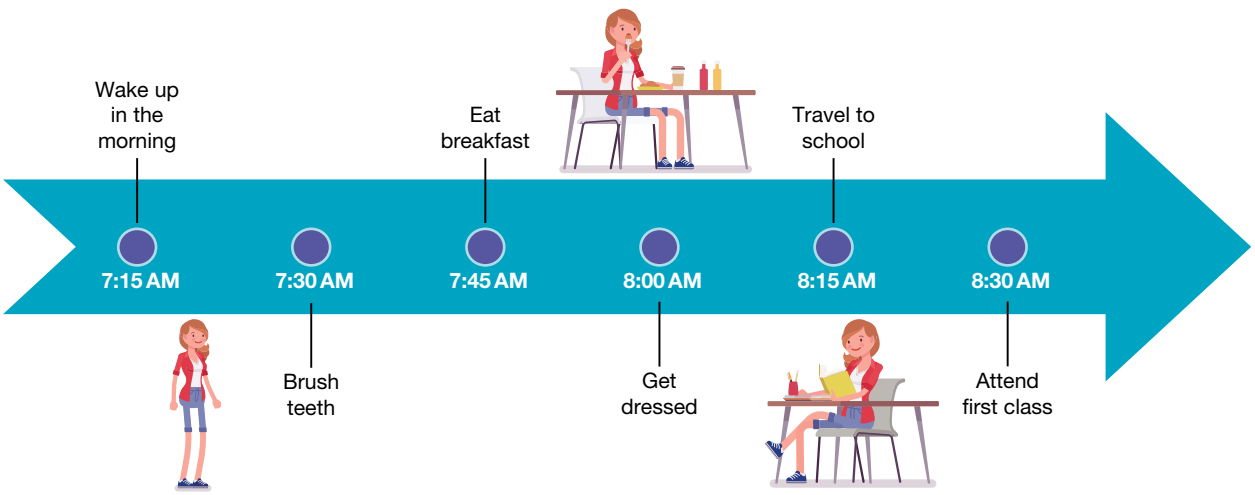
Chronology involves recording events in order of time. It is an important skill because historians need to know the order in which events occurred so they can get a sense of what happened. A story will make more sense if we start at the beginning and work towards the end. For example, your morning routine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

continuity and change the concept that while many changes occur over time, some things remain constant

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

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 8**.

SOURCE 8 A simple timeline representing the sequence of events during a typical morning



1.2.8 Cause and effect

History involves much more than putting events in order and understanding the sequence and flow of events. Historians use sequencing and timelines to examine and investigate how one event could be connected to another. Once the events have been placed into chronological order, investigating how one event has caused another event and how events are connected becomes easier. We can also look at the developments that have happened in both the short term and over a longer period of time.

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 equally significant — some causes may have more influence than others.

SOURCE 9 Ancient Spartan ruins at the archaeological site outside the modern Greek town of Sparti

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 the event. Some effects occur immediately after an event or action, while others may occur years, decades or centuries following the event or action.

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

For example, ancient Greece was made up of a number of city-states (or poleis), which were independent settlements with their own governments. Greek city-states shared a common language and religion. Two powerful and well-known city-states were Athens and Sparta. People living in ancient Greece did not consider themselves to be Greek but, rather, citizens of their city-state; for example, Athenians or Spartans.

SOURCE 10 The Temple of Hephaestus located at the north-west side of the Agora of Athens, Greece

The development of Greek city-states was caused by a number of factors. One major cause was the geography of Greece. The country's mountainous landscape, isolated valleys, numerous islands and largely unnavigable rivers meant that settlements were isolated from each other. Fertile farmland was rare and overland travel was difficult. This meant that Greek settlements turned to the sea for contacts and trade between each other.

The development of Greek city-states also resulted in a number of effects. One positive effect was the rise of democracy in Athens. Athens introduced democracy in 508 BCE, which was a system of government by which citizens decided how their city-state would be run. City-states also resulted in the arts and sciences flourishing in ancient Greece. One negative consequence of the city-states of Greece was the frequent wars that occurred between the various city-states.

1.2.9 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?

Once we know the answers to some of these questions, we can then, as historians, put ourselves in the shoes of those we are studying and try to understand why or why not an aspect may be significant. Don't forget that aspects that happen quickly or that do not last a long time can still be significant.

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

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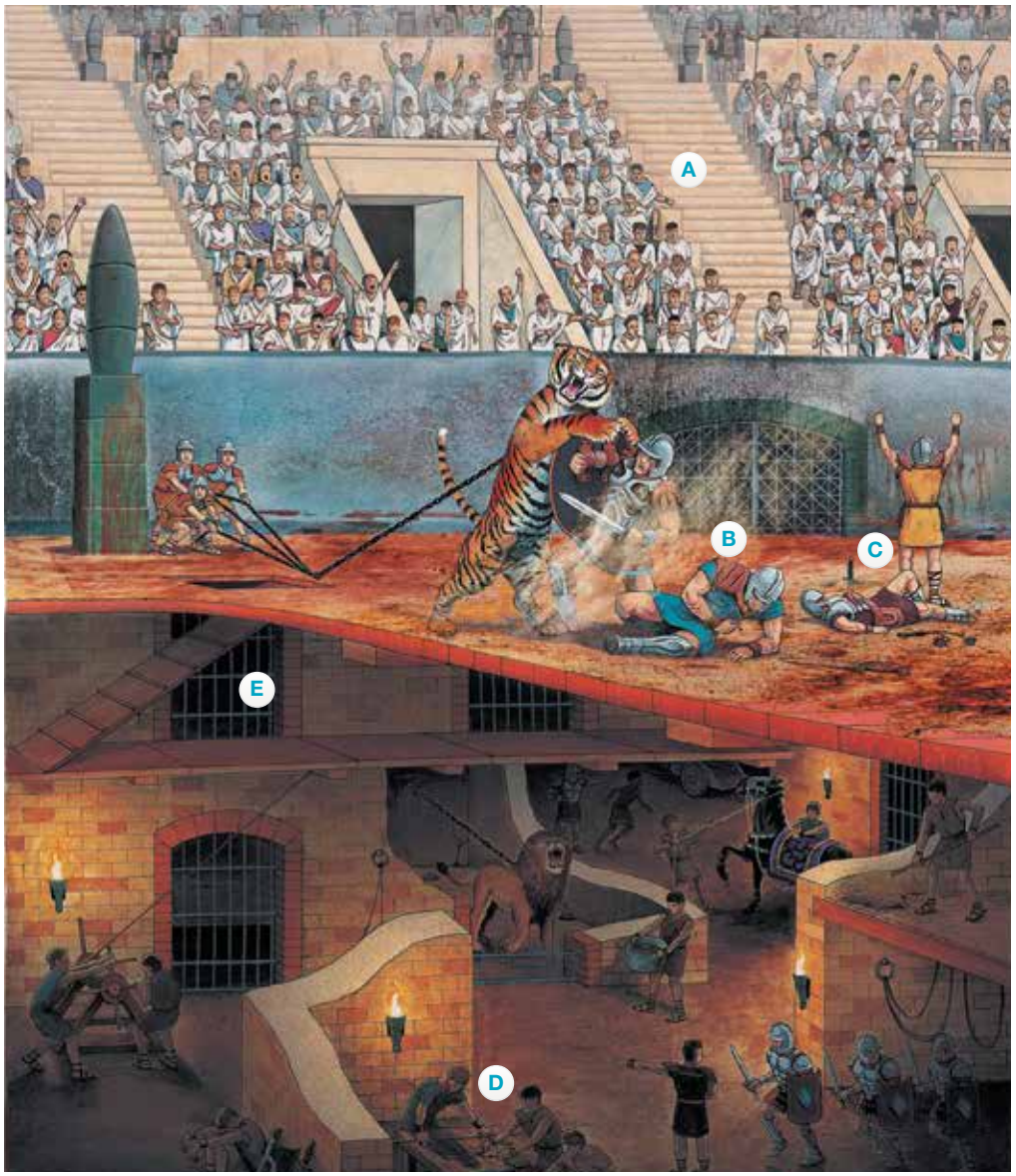
SOURCE 11 The Colosseum was a vast amphitheatre in ancient Rome. To entertain Roman crowds, slaves trained to be gladiators were forced to fight, often to the death, against other gladiators or against wild animals that had been tormented to make them ferocious. Most gladiators were men but at least a few were young women. This artwork shows what happened below the arena as well as what happened above ground.



A The Colosseum was a vast amphitheatre in ancient Rome. This enormous elliptical stadium was 189 metres long, 156 metres wide and 48 metres tall. It had four levels of seating and a capacity of up to 80 000 spectators. The 80 entrances, 76 of which could be used by ordinary spectators, allowed crowds to enter and leave quickly.

B To entertain Roman crowds, slaves trained to be gladiators were forced to fight, often to the death, against other gladiators or against wild animals that had been tormented to make them ferocious.

C Most gladiators were men but at least a few were young women. They wore elaborate armour, partly for protection and partly for show.

D The floor of the fighting area was made of wood and covered in sand. Trapdoors with a lift and pulley system were used to provide spectators with an element of surprise, or to dispose of the dead bodies and carcasses.

E Below the Colosseum was a maze of tunnels, cells and dungeons. The cells and dungeons were used to contain the criminals, gladiators and animals, while the network of tunnels was used to transport the entertainment in and the remains out.

DISCUSS

What aspects of your life as a student do you consider to be significant? Some things to consider could be access to technology, the physical state of the space you use, the resources you can access or the subjects that you are studying.

Do you think that the things you consider to be significant were important 10, 50 or 100 years ago? Do you think they will be significant 50 years from now?

1.2 SKILL ACTIVITY: Communicating

1. Imagine you are a spectator at the Colosseum in Rome. Choose one of the perspectives listed and then use the information from **SOURCES 5** and **11** as evidence to write a short paragraph about what you can see from where you are sitting. Share your article with your classmates and discuss the different perspectives that you can identify.
   Choose one of the following perspectives: noble, referee or animal handler.
2. In small groups, come up with a list of ten events, places or people that you consider to be the most significant in world history. Rank them in order of historical significance and then share your responses with your classmates.
3. After you have shared your responses, discuss some of the reasons each of the lists is unique and what would cause the lists to be similar or different.

1.2 Exercise

learnon

1.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 7, 9	4, 5, 6, 10	8, 11, 12

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Check your understanding

1. What is heritage?
   - **A.** A record of past events in order of time
   - **B.** Information that has been passed from one person to another
   - **C.** Everything that has come down to us from the past
   - **D.** Information that indicates whether something is true or really happened
2. **Describe** the difference between primary sources and secondary sources.
3. Complete the following sentences by choosing words from the box.

Contestability	theory	debate	contradict	evidence

   - **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 _____.
4. **Describe** a way to test primary sources for reliability.
5. **Explain** what the term 'bias' means and why we might not be able to trust a primary source.
6. **a.** What does it mean to empathise with the people you study?
   b. Identify the questions you might consider when trying to understand the perspectives of people in the past.

Apply your understanding

Using historical sources

7. The masks in **SOURCE 1** are held in the National Archaeological Museum in Athens, Greece. Each year the museum attracts millions of visitors from around the world. What might you be able to understand about ancient Greece just by using this source as evidence?
8. Each year, many countries donate money for conservation work to preserve the remains of this ancient Greek temple in **SOURCE 2**. Why do you think so much effort goes into conserving traces of the past?
9. Look at the mind map in **SOURCE 4** and describe each of the types of sources pictured around the mind map.
10. Suggest what we might learn about the past from old graffiti or one of the other types of primary sources listed in the **SOURCE 4** mind map.
11. **Explain** why it might be wrong to think that primary sources are more reliable than secondary sources.

Historical perspectives and interpretations

12. 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?

LESSON
1.3 Ages, time and chronology

LEARNING INTENTION

By the end of this lesson you should be able to sequence historical events and define key terms relevant to ages, time and chronology.

1.3.1 Dividing the past

At Year 7 level we will be investigating **prehistory** and **ancient history**. Because prehistory covers many tens of thousands of years, we usually describe prehistoric changes over millennia (blocks of 1000 years). Historians studying later times sometimes concentrate on particular centuries (blocks of 100 years) or even decades (blocks of 10 years).

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 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.

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. So 500 BC would be 300 years earlier than 200 BC. Historians now commonly use the term BCE (Before Common Era) in place of BC.

prehistory the period before writing was invented

ancient history the period from the beginning of civilisation to the fall of the Roman Empire

civilisations societies that have towns and features such as complex forms of government and religion

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

Latin the language of ancient Rome and its empire

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

PREHISTORY

ANCIENT HISTORY

MEDIEVAL HISTORY

MODERN HISTORY

BCE

3000

c. 2900 BCE
Earliest known writing recorded in Mesopotamia.

c. 2550 BCE
Great Pyramid built at Giza in Egypt.

2000

2000 BCE
Knossos palace built on Crete.

This timeline is divided into 1000-year sections.

1279 BCE
Rameses the Great becomes pharaoh of Egypt.

1100 BCE
Decline of Mycenaean civilisation on Greek mainland

Key dates and brief descriptions of events are given.

1000

776 BCE
First known Olympic Games

The timeline is broken to show a break in the time scale.

753 BCE
Rome founded.

356 BCE
Alexander the Great is born.

221 BCE
First Qin emperor unifies China.

146 BCE
Rome conquers Greece.

Where appropriate, a timeline is divided into eras.

BCE
CE

392 CE
Christianity becomes official religion of Roman Empire.

632 CE
Death of Mohammed

900 CE
Most Mayan cities in decline (South America)

1000

1340 CE
Black Death reaches Europe.

1500 CE
World sea exploration begins.

1789 CE
French Revolution

2000

CE

Brackets are used to mark a specific period of history.

Why use a Christian calendar?

Even though we use BCE and CE, the dates still count forward from Jesus Christ's birth. Up until recently, history and records were kept by the church. Rather than redesign the system entirely, we adapted it to maintain continuity. We call this calendar the Julian calendar, because it was first used widely under the rule of Julius Caesar in Rome.

The passage of time can be represented in other ways — BP means 'before the present' (which means before 1950) and is sometimes used to talk about pre-history. The Vikram Samwat calendar is used in India and Nepal and starts in 527 BCE, while the Lunar Hijri is used by believers of the Islamic faith and begins in 632 BCE.

When we're unsure about an exact date, we put 'c.' before it. This stands for *circa* (Latin for 'around').

DID YOU KNOW?

There is an easy way of working out what century a particular date is in. 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. Therefore, the year 2011 is in the twenty-first century CE. The year 705 BCE is in the eighth century BCE.

1.3 SKILL ACTIVITY: Historical perspectives and interpretations

1. Using **SOURCE 1** as a model, **create** a timeline of your life up to the present. Include the important events of your life. Use the terms CE, century and decade.
2. **Explain** how your timeline helps you to present an overall picture of your life so far.

1.3 Exercise

learnon

1.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 4, 6, 7	2, 5, 8	3, 9, 10, 11

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Check your understanding

1. What is prehistory?
2. **Explain** how the prehistoric period differs from ancient times.
3. In Islamic countries, what event marks the beginning of time?
   - **A.** The founding of Mecca
   - **B.** The flight of the prophet Mohammed from Mecca
   - **C.** The death of the prophet Mohammed
   - **D.** The birth of the prophet Mohammed
4. What is the difference between AD and BC?
   - **A.** AD means 'before Christ', BC means 'since the birth of Christ'
   - **B.** AD means 'since the birth of Christ', BC means 'before Christ'
   - **C.** AD means 'after death', BC means 'before Christianity'
   - **D.** AD means 'before the common era', BC means 'before Christ'
5. **Identify** the terms that historians commonly use in place of the following.
   - **a.** AD
   - **b.** BC

Apply your understanding

Communicating

6. The year 2019 is in the twenty-first century CE. Work out in which century each of the following years occurs: 705 CE, 1890 CE, 315 BCE.
7. **Calculate** the number of years between 195 BCE and 755 CE.
8. **Write** the meaning of the following terms: millennia, centuries, decades, ages, BC, AD, BCE, CE and BP.

Using historical sources

9. Look closely at **SOURCE 1**, the timeline. Use it to find dates for the earliest known writing and the first known Olympic Games.

Communicating

10. Why do you think the date for the building of the Great Pyramid has 'c.' (for 'circa') before it?
11. We use the terms Stone Age, Bronze Age and Iron Age to refer to periods of time in which people used those materials as their most advanced materials. **Propose** an appropriate name (based on materials) for the age in which we now live.

LESSON
1.4 Detective work and archaeology

LEARNING INTENTION

By the end of this lesson you should be able to describe the different methods used by archaeologists to investigate the past.

1.4.1 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 a 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.

1.4.2 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 in Rome, because this is where the records of the Roman Catholic Church are held.

1.4.3 Digging up the past

Historians also draw on the work of archaeologists. These experts examine the physical remains of the past; they collect, record and interpret them. Sometimes we already know where to find such archaeological sources. Examples include sites such as the pyramids in Egypt and the Great Wall of China. 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.

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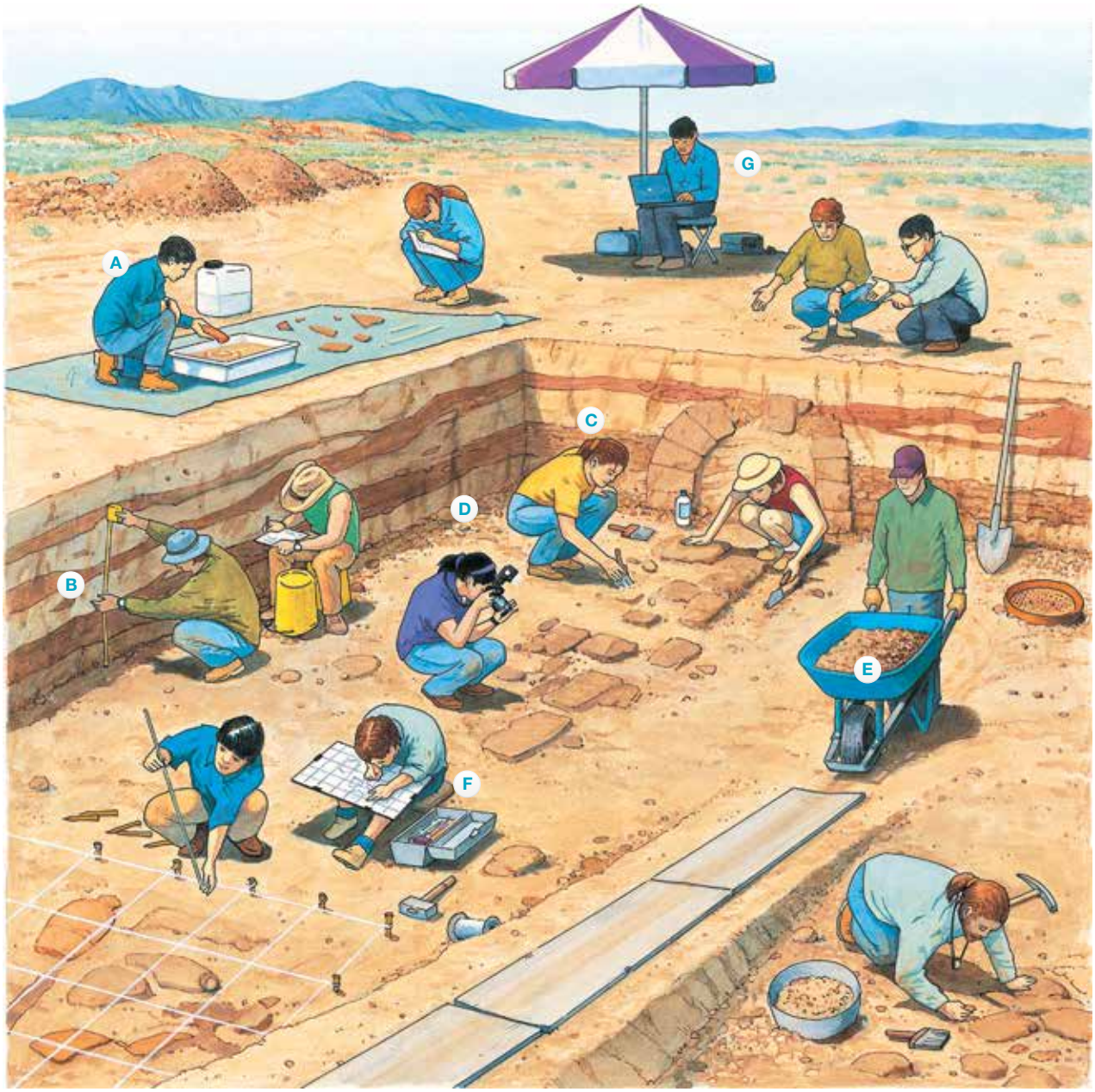
SOURCE 1 Activities at an archaeological dig



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.

C 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.

Deciding where to dig

The first decision archaeologists have to make is where to dig for remains of past times. Many remains become buried over time by wind-blown sands, sediments from floods or volcanic ash. Some remains are hidden but clues to their whereabouts may be found in sources such as old documents. Caves are likely places in which to look and so are mounds of earth or other features that suggest that humans have changed the landscape (see **SOURCE 2**). Sometimes ancient remains are found purely by accident.

DID YOU KNOW?

For investigations of prehistoric and ancient times, historians and archaeologists also use important information from other scientists. Anthropologists study human behaviour, especially in tribal societies. Their findings help historians to understand past societies. Palaeontologists study fossils (traces of humans and animals from prehistoric times). Cryptographers specialise in breaking codes. Their skills have helped us to decipher and read some ancient languages.

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.

SOURCE 2 Mounds called barrows were made in England in prehistoric times. They were usually the burial place of a chief or king.

SOURCE 3 Remains of a ditch called a moat that was dug around a castle at Old Sarum in England in the eleventh century CE

Excavating remains

Once the site for an excavation, or dig, has been decided on, several steps need to be followed. 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 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, several layers of remains may be found. 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.

1.4.4 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.

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.

1.4.5 Clues from pottery

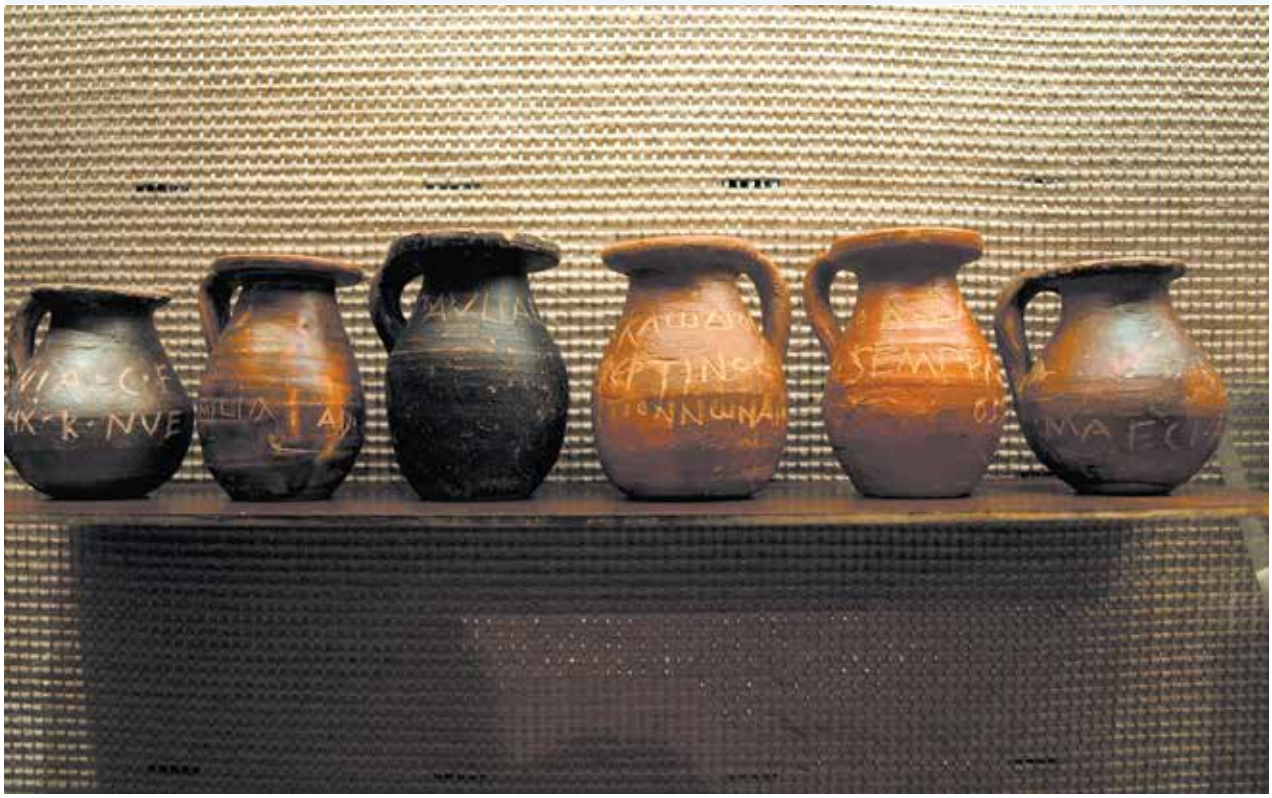
One of the most common and important sources of archaeological evidence is pottery. Pottery is made by shaping wet clay and then baking the clay so that it hardens and keeps the shape the potter has given it. Pottery has been made for about 10 000 years in East Asia, the Middle East and the Mediterranean 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. A lot of evidence remains 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. Archaeologists have named some prehistoric people after the style of pottery they made.

Particular pottery styles can be identified with different ages. For example, in one period, a typical container made of pottery might have a long neck but no handles. In another age, a typical style might have a short neck and a handle. Such differences help archaeologists to compare pottery from different sites to decide whether they are likely to belong to the same age or to a different time. Further clues are provided by decoration. Some vases, jugs, urns and bowls were engraved or painted with scenes showing the customs, work, stories and beliefs of the societies that produced them.

SOURCE 4 Painted pottery from ancient Greece, sixteenth or fifteenth century BCE

SOURCE 5 Small pottery vases from the first century BCE, found together in Rome. Each contains a small piece of bone from a dead person, and each has an inscription stating the person's name and date of death.



1.4 SKILL ACTIVITY: Using historical sources

Working in small groups, **list** reasons why there would usually be more archaeological evidence from ancient times than from prehistoric times.

1.4 Exercise

learnon

1.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4, 5, 6	3, 7, 8	9, 10

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Check your understanding

1. 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 _____ sources.
2. What three tasks describe the main work of archaeologists?
   A. Collecting and recording evidence
   B. Finding archaeological evidence
   C. Modifying archaeological evidence
   D. Interpreting evidence

3. **State** the kinds of clues that help archaeologists to decide where to dig.
4. **Identify** two causes of destruction of archaeological traces.
5. **Identify** what kinds of archaeological traces would be most likely to be lost through theft.
6. In ancient times, people re-used broken pottery. True or false?

Apply your understanding

Historical perspectives and interpretations

7. **Describe** four of the activities that people are performing in **SOURCE 1**.

Using historical sources

8. Examine **SOURCES 2** and **3**.
   a. **Describe** what you see in each photograph.
   b. **Explain** why it is obvious that humans did something to change the landscape shown in each photograph.
   c. **Suggest** what an archaeologist might expect to find on a dig at either of these sites.
9. Look closely at the details in **SOURCES 4** and **5**. Use these details and information in the captions to **hypothesise** about each of the civilisations that made these items.

Historical perspectives and interpretations

10. **Explain** why pottery is such an important source of evidence for archaeologists

LESSON
1.5 How old is it?

LEARNING INTENTION

By the end of this lesson you should be able to outline methods of working out the age of objects, including relative dating techniques and absolute dating techniques.

1.5.1 Dating techniques

Archaeologists are finding evidence of our past all the time. Before we can assess what the source of evidence tells us about past human activity, we need to know how old the source is. 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.

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. Fluorine testing was used to expose one of the most famous scientific frauds in history — the Piltdown Man. For 41 years the skull of this so-called creature had been accepted as firm evidence of the 'missing link' between ape and man. Fluorine testing conducted in 1953 found that the top section of the skull was much older than the jawbone and teeth. It was then revealed that the remains of a human skull had been carefully joined with those of a chimpanzee. It is still a mystery who set up this amazing fraud.

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

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

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

What's its age?

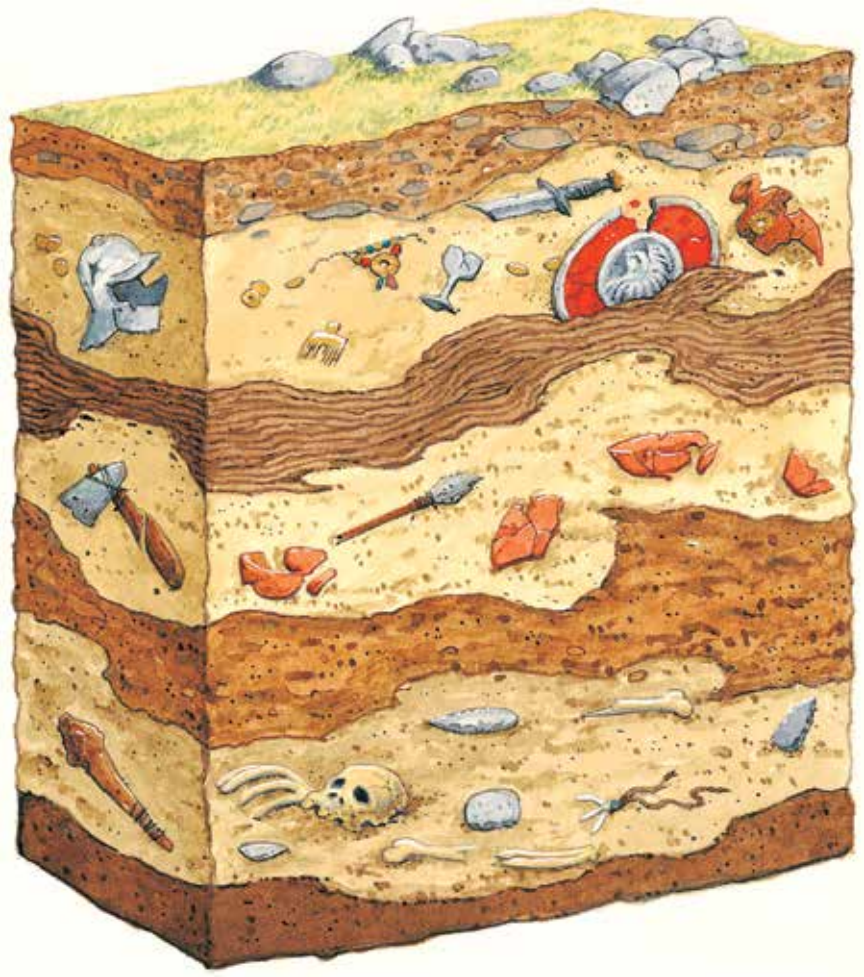
Absolute dating techniques are used to work out the actual age of something or someone. Archaeologists combine these with relative dating techniques. For example,

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. Many different absolute dating techniques are possible.

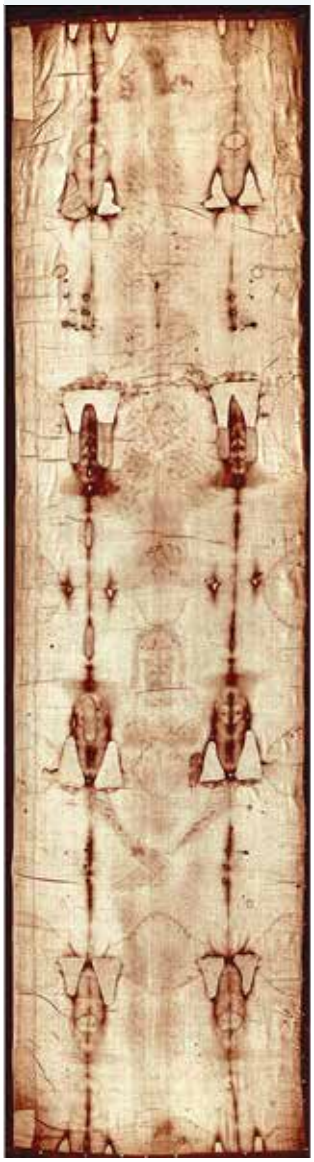
Radiocarbon dating

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

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, not be enough C14 will be 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 One famous object that has been radiocarbon dated is the Shroud of Turin — said by some to be the cloth in which Christ was wrapped after his crucifixion. These tests, carried out in the late 1980s, indicated the cloth was only around seven hundred years old. Then further tests were done. These proved that only the bacteria and mould on the cloth were around seven hundred years old. The mystery continues. Written records confirm the cloth did exist in 1357.



1.5.2 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.

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.

SOURCE 3 Tree growth rings

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.

1.5 Exercise

learnon

1.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4, 5	3, 6, 7, 8	9, 10

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Check your understanding

1. Circle the correct options to complete the sentence
   Strata are the different **layers** / **earth** / **slices** that are revealed when **layers** / **earth** / **a slice** is cut through the **layers** / **earth** / **slice**.
2. Objects found in a lower stratum are newer than those found in a higher stratum. True or false?
3. **Define** radiocarbon dating, and **explain** how knowing the rate at which C14 breaks down can help in finding out the likely age of once-living remains.
4. What is another name for dendrochronology?
   - **A.** Carbon dating
   - **B.** Radiocarbon dating
   - **C.** Tree-ring dating
   - **D.** DNA dating
5. **Explain** how dendrochronology might help in finding out the age of wooden objects.

Apply your understanding

Historical perspectives and interpretations

6. 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.
7. Examine **SOURCE 2** and **outline** why you think the Shroud of Turin might be regarded by many people as something of great historical significance.

Using historical sources

8. Look at the evidence in **SOURCE 3**. **Suggest** how old (approximately) the tree was using the tree growth rings.

Communicating

9. **Design** a mind map to represent the technologies that help archaeologists to date the sources of evidence that they discover.
10. **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 age of each item in order to identify what changed over the centuries during which the site was occupied.

LESSON
1.6 Skills in History

1.6.1 What skills will you build this year?

This year, you will continue to build your ability to use the four broad categories of skills in History. The following summaries are to remind you of these four key skills.

1. **Questioning and researching** involves asking questions about history, locating relevant and detailed information and/or data from a range of appropriate sources. In Year 7 History this includes primary and secondary sources related to the ancient world, such as artefacts, written sources and archaeology.
2. **Using historical sources** involves identifying and using primary and secondary sources. It also includes looking at the sources to identify their usefulness and accuracy. In Year 7 History this includes looking for patterns of change over time, such as asking questions about sources such as 'Who wrote/produced this?', 'When?', 'Why?' and 'What does it show about the past?'.
3. **Historical perspectives and interpretations** means using historical thinking. It involves sequencing historical events and describing and identifying historical concepts such as cause and effect, continuity and change and significance to help you understand the past. In Year 7 History this includes looking for patterns of change over time, such as looking at how ancient societies developed over time. You will also build your ability to identify the causes and effects of historical events. It also means drawing conclusions about the impact of significant individuals and the ways life was diverse for different groups in society.
4. **Communicating** your ideas means presenting information in a range of formats to suit the intended audience and purpose. This includes essays, oral presentations, debates, tables and cartoons. Reflecting on your skills is also an important part of the process. It also means using historical sources to describe, explain and argue points of view about the past. In Year 7 History this might include writing from the perspective of different people living in ancient societies, role-playing the life of a hunter-gatherer, sketching ancient weapons, or creating a timeline of key events and people.

1.6.2 SkillBuilders in the topic

In addition to these broad Humanities skills, you will learn a range of essential practical skills as you study History. The SkillBuilder lessons in this topic will tell you about the skill, show you how to apply the skill and let you practise the skill with tasks related to the topics covered in this subject.

The SkillBuilders you will use in Year 7 are as follows:

- SkillBuilder: Sequencing events in chronological order
- SkillBuilder: Describing broad patterns of change
- SkillBuilder: Developing a hypothesis
- SkillBuilder: Analysing and corroborating ancient Greek sources
- SkillBuilder: Analysing and corroborating ancient Roman sources
- SkillBuilder: Analysing and corroborating ancient Egyptian sources
- SkillBuilder: Analysing different perspectives about ancient India
- SkillBuilder: Analysing different perspectives about ancient China

LESSON
1.7 SkillBuilder: Sequencing events in chronological order

online only

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 to the skill.

LESSON
1.8 SkillBuilder: Describing broad patterns of change

online only

What are broad patterns of change?

During any period of history, some changes happen quickly and others occur slowly. Some changes affect only limited numbers of people, while others are widespread. Broad patterns of change are not the kind of changes that might have affected one community; rather, they are patterns of change that are extensive and widespread.

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.

LESSON
1.9 SkillBuilder: Developing a hypothesis

online only

How can we interpret evidence of life in ancient Australia?

In their work of studying the ancient past, archaeologists are dealing with evidence that is in tiny pieces. They must rely on the physical landscape and archaeological evidence to tell the story. Very little material from ancient Australia has survived the thousands of years between their time and ours. Shell, bone and teeth will endure; animal hides, plant fibres, feathers and hair will not.

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.

LESSON
1.10 SkillBuilder: Analysing and corroborating ancient Greek sources

online only

Why is it important to analyse and corroborate ancient Greek sources?

Almost all of our knowledge of ancient Greece comes from primary sources. Works of art tell us much about ancient Greek culture, especially myths and religious ideas. Buildings and sculptures tell us about technology, skills and values. Written records tell us about Greek ideas about politics, myths, history, science and a vast range of other subjects.

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.

LESSON
1.11 SkillBuilder: Analysing and corroborating ancient Roman sources

online only

Why is it important to analyse and corroborate ancient Roman sources?

Almost all our knowledge of ancient Rome comes from primary sources. Works of art and writings tell us much about ancient Roman culture. Buildings and sculptures tell us about entertainment, technology, skills, religious ideas and values. Written records tell us about Roman ideas about politics, history, law and a vast range of other subjects.

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.

LESSON
1.12 SkillBuilder: Analysing and corroborating ancient Egyptian sources

online only

What are the main ancient Egyptian primary sources?

Ancient Egyptian primary sources include pyramids, tombs, temples, mummies, coffins, art, and written records on stone and papyrus.

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.

LESSON
1.13 SkillBuilder: Analysing different perspectives about ancient India

online only

How do we analyse the different perspectives of people in ancient India?

Primary sources often give different perspectives because not everyone will have seen an event or problem from the same point of view. It is important to analyse different perspectives, especially for bias and propaganda, when trying to determine what happened in 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.

LESSON
1.14 SkillBuilder: Analysing different perspectives about ancient China

online only

How do we analyse the different perspectives of people in ancient China?

Primary sources often give different perspectives because not everyone will have seen an event or problem from the same point of view. It is important to analyse different perspectives, especially for bias and propaganda, when trying to determine what happened in 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.

LESSON
1.15 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

Watch teacher-led videos

Practise questions with immediate feedback

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1.15.1 Key knowledge summary

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

1.2 Concepts in 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.
- You will learn six historical concepts throughout your History course.

Evidence

- Sources are any written or non-written materials that can be used to investigate and provide information about the past.
- The two types of sources are primary sources, which come directly from the time of the event, and secondary sources, where are written or created after the event has already happened.
- Using historical sources as evidence relates to analysing sources to judge how reliable they are, and exploring the different points of view, or perspectives, of the people from the past.
- Using evidence from sources, historians can form a hypothesis (a possible theory to explain what happened).

Perspectives

- Perspective is the different points of view that people may have of an event.
- We try to understand the different perspectives of people in the past by exploring their points of view, attitudes and values.
- Historians also have their own perspectives, which can influence the way they see the past.
- Historians try to discover how people thought and felt in the past.
- We should avoid judging people from the past by the standards of our own age.
- Using historical imagination requires using your imagination, but basing your ideas on evidence.

Interpretations and contestability

- When attempting to interpret the past, differing interpretations will always exist, and these can be debated and contested.
- Sometimes evidence is available that supports different versions of events and, in these cases, historians must make a judgement, based on the evidence, as to what most likely happened.

Continuity and change

- Identifying continuity and change is being able to recognise that while many changes occur over time, some things remain constant.
- Historians often use sequencing of events and create timelines in order to study the changes that have happened over time.
- Historians divide the past into ages and periods.

Cause and effect

- Using chronological order and timelines helps us to recognise cause and effect.
- 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.

Significance

- Determining historical significance is being able to make judgements about the importance assigned to particular aspects of the past; for example, events, developments, movements and historical sites.
- Historians will often have differing opinions about how significant certain things are.

1.3 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 other systems are also possible.
- Using chronological order and timelines helps us to recognise cause and effect.

1.4 Detective work and archaeology

- 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.

1.5 How old is it?

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

1.6 Skills in History

- Using historical sources means identifying the context and features of a source and analysing its intent. It also involves looking at sources to work out how reliable they are.
- Historical perspectives and interpretations involves considering cause and effect and patterns of continuity and changes. It includes looking at different perspectives in sources and analysing different interpretations.
- Communicating is about creating historical explanations and arguments which use historical terms, conventions and sources.

1.15.2 Key terms

absolute dating techniques methods used to assess the age of something (e.g. radiocarbon dating, tree-ring dating)
ancient history the period from the beginning of civilisation to the fall of the Roman Empire
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 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 and its empire
perspectives point of view or attitude
prehistory the period before writing was invented

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

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10466)
Reflection (ewbk-10471)

Interactivity Historical skills and concepts crossword (int-7690)

1.15 Review exercise

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Multiple choice

1. We study history in an effort to learn about what?
   - A. Our past
   - B. Our heritage
   - C. Our future
   - D. Our grandparents
2. What are historical sources?
   - A. Written materials that provide information about the past
   - B. Non-written materials that provide information about the past
   - C. Stories from people who lived during the time of the event we are studying
   - D. All of the above
3. How can we, as historians, test the reliability of evidence from sources?
   - A. Compare them with other sources that are available
   - B. Ask a teacher
   - C. Ask Google
   - D. Check for bias
4. Why do historians make use of chronology, sequencing and timelines?
   - A. To investigate how events have happened from start to finish
   - B. To investigate the relationship between different events
   - C. To investigate what has changed about society and what has stayed the same
   - D. All of the above
5. What must historians be able to do to identify cause and effect?
   - A. Place events in chronological order
   - B. Create timelines
   - C. Identify patterns of cause and effect
   - D. Explain the relationship between two events
6. Why do different perspectives of events occur?
   - A. Differing values and attitudes
   - B. Differing age and gender
   - C. Differing social status
   - D. All of the above
7. What does demonstrating empathy when investigating ancient history mean?
   - A. Understanding that soldiers and war were considered necessary to the empire
   - B. Acknowledging that skilled craftsmen built complicated structures
   - C. Collecting evidence that many women worked only in the home
   - D. Understanding the social hierarchy that existed at the time
8. What does determining historical significance mean an historian can do?
   - A. Explain all the important events that have taken place in history
   - B. Make judgements about what is more important and what is less important
   - C. Decide what is important and what is not
   - D. Argue that one event is more significant than another

9. When do historical debates occur?
   - **A.** Many sources of evidence are available about the same event.
   - **B.** Some sources of evidence contradict other sources.
   - **C.** Evidence is missing about an event an historian is investigating.
   - **D.** All of the above
10. Why is gaining confidence and expertise with history skills important?
   - **A.** Learning about our past can help us to predict what may happen in the future.
   - **B.** Critical thinking and effective communication skills are important to employers.
   - **C.** Knowledge of our own history is important to our everyday lives.
   - **D.** All of the above

Short answer

Communicating

11. **Explain** what a historian is doing when identifying continuity and change.
12. **Outline** the difference between short-term causes and effects and long-term causes and effects.
13. 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? Give reasons for your answer.
14. **List** three features of a well-constructed timeline.
15. In your own words, **define** the term 'contestability'.

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LESSON
1.7 SkillBuilder: Sequencing events in chronological order

LEARNING INTENTION

By the end of this SkillBuilder you should be able to sequence events in chronological order.

1.7.1 Tell me

What is a timeline?

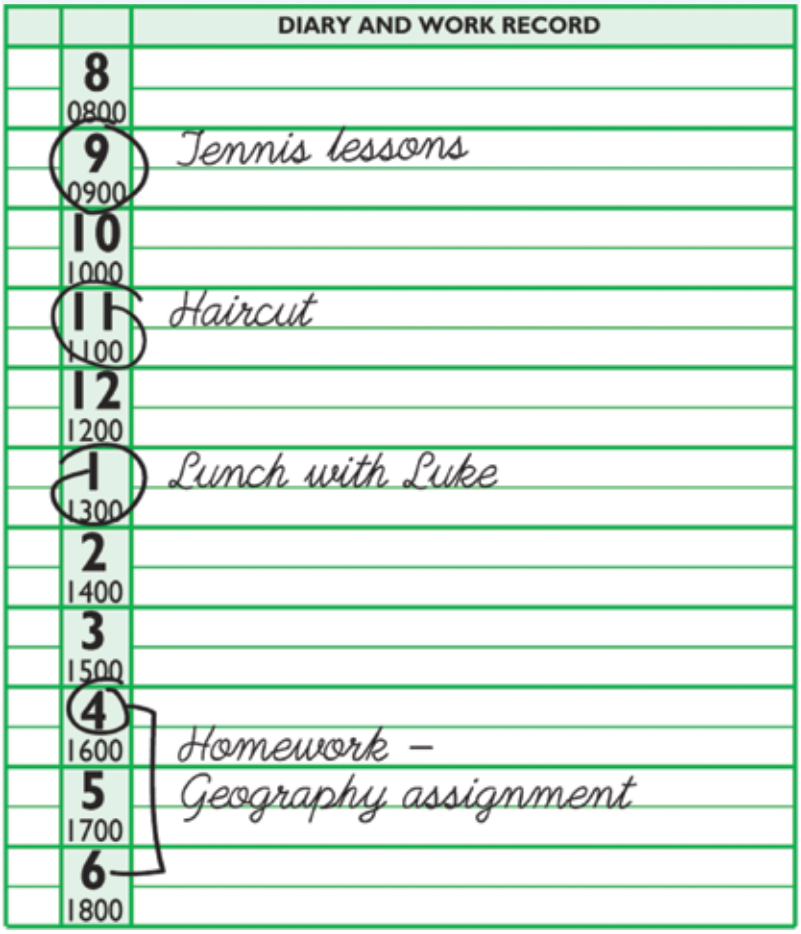
A timeline is a diagrammatic tool for placing events in chronological order (the order in which they happened). A simple chronology would be one, for example, that showed in sequence, or time order, key events of a day in your life.

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 whether one event might have led to another event (cause and effect).

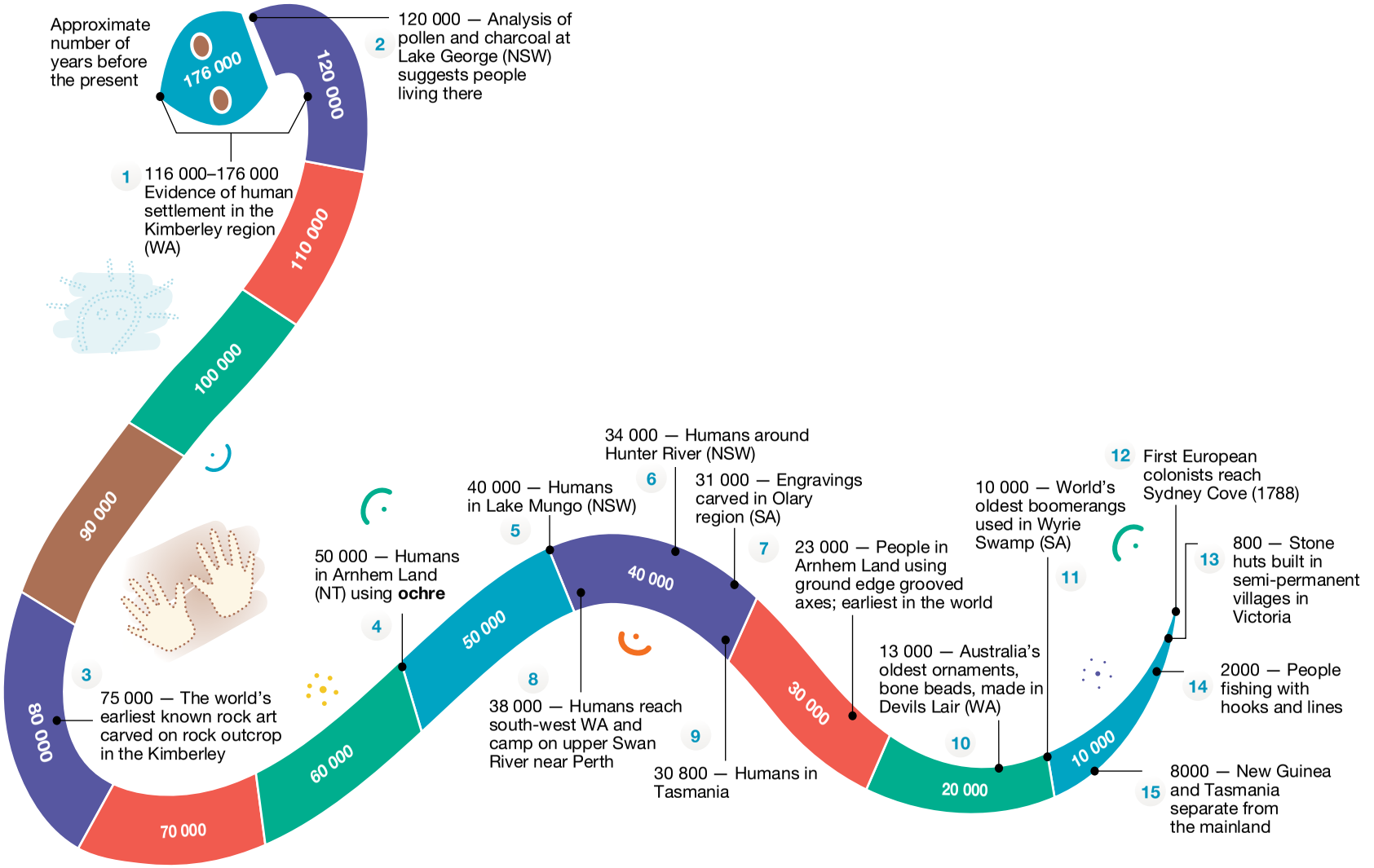
SOURCE 1 A simple chronology



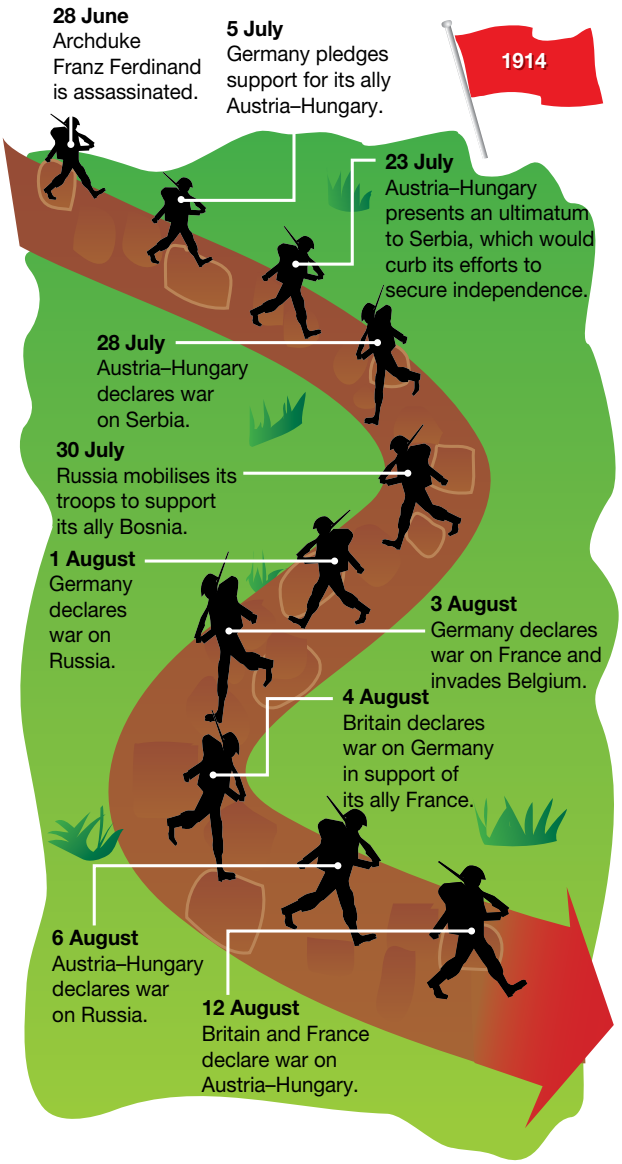
Generally, timelines are constructed using a sequence of dates with the addition of descriptive labels. The timeline may span thousands of years (see **SOURCE 2**) or cover a very short period (see **SOURCE 3**). In print, timelines may be as simple as a horizontal or vertical line, or highly visual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

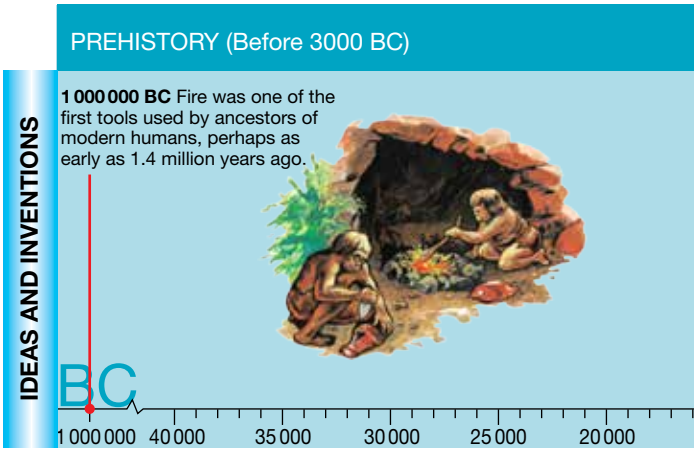
SOURCE 2 An example of a timeline that covers a long span of time



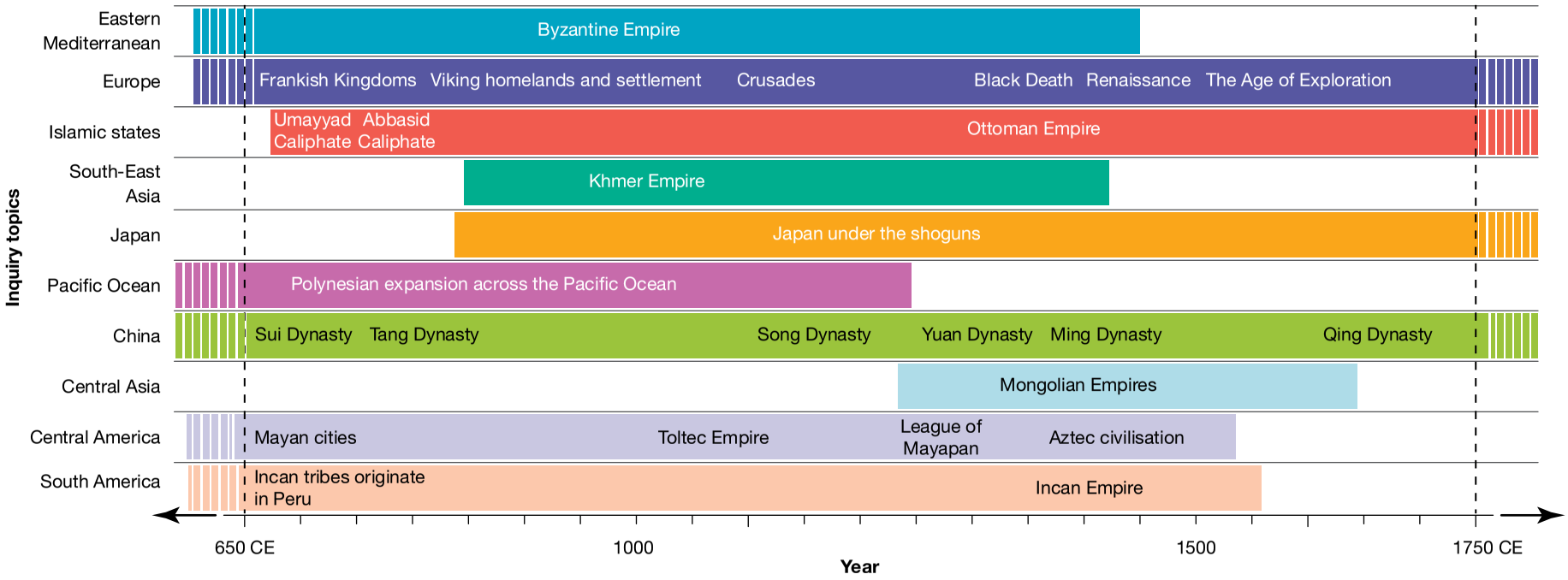
SOURCE 3 An example of a timeline that covers a short span of time



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



SOURCE 5 An example of a horizontal timeline that uses coloured bars to compare significant events in different places at the same point in time



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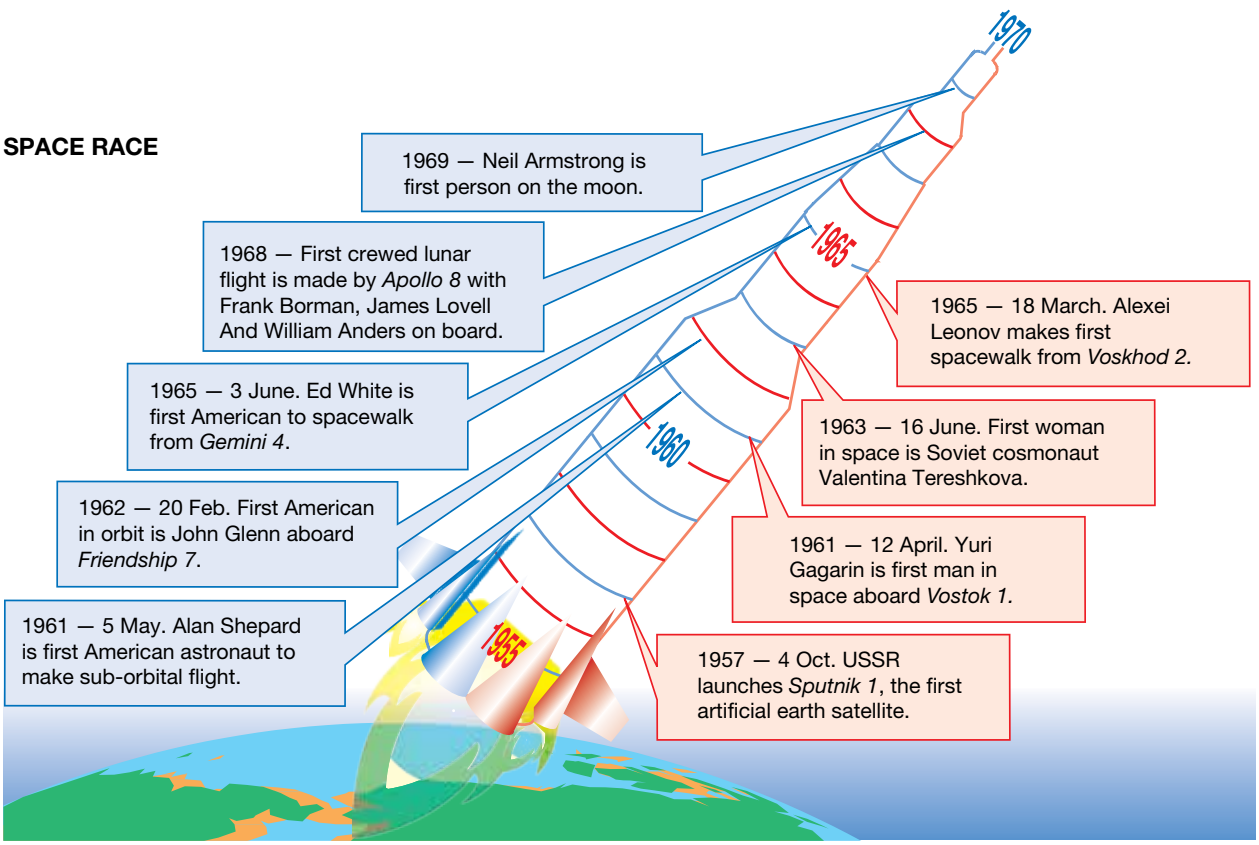
SOURCE 6 An example of a timeline that uses a drawing of an object related to the timeline's subject or theme



1.7.2 Show me

How to create a timeline

Timelines can cover very short or very long periods of time. They have the following features and requirements:

- 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 also 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. This stands for the Latin word *circa*, which is Latin for 'around' or 'about'.

Step 1

Study the timeline shown in **SOURCE 7**. 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.

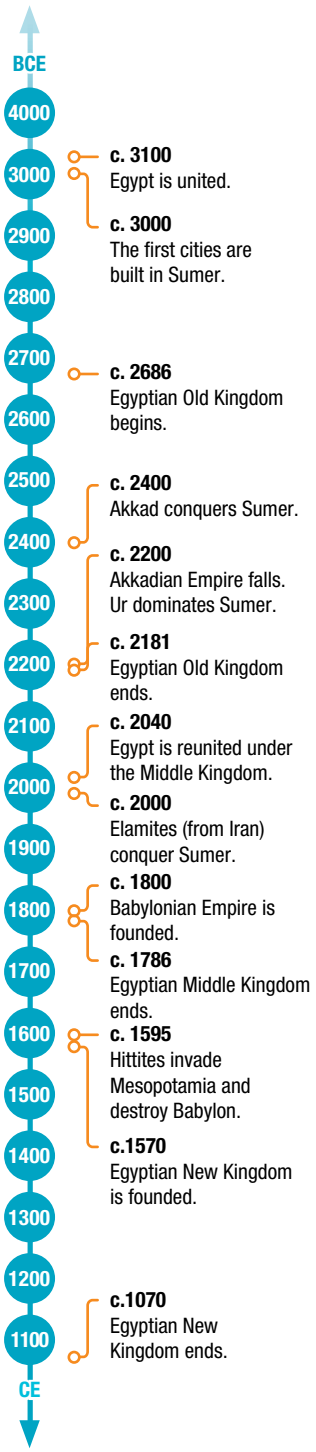
Step 2

A completed timeline has a clear title.

The title should state:

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

SOURCE 7 Timeline of the rise and fall of kingdoms and empires in Egypt and Mesopotamia between 3000 BCE and 1000 BCE



1.7.3 Let me do it

Complete the following activities to practise this skill.

1.7 ACTIVITIES

1. **Construct** a timeline of the rise and fall of civilisations in east and south Asia between 2500 BCE and 200 BCE.
   - Use a vertical timeline.
   - Divide it into centuries.
   - Decide on the scale you will use.

Key events for your timeline

c. 2500 BCE	Cities are built by the Indus Valley civilisation.
c. 2100 BCE	According to Chinese legends, the Xia dynasty begins ruling China.
c. 1600 BCE	The Shang dynasty is established in China. The Indus Valley cities are abandoned and India is invaded by Aryans.
c. 1100 BCE	Iron begins to be used in India.
c. 1045 BCE	The Zhou overthrow the Shang and start the Zhou dynasty.
c. 770 BCE	The Eastern Zhou dynasty begins in China.
c. 500 BCE	Iron begins to be used in China.
475 BCE	The Warring States period begins in China, starting centuries of conflict.
327 BCE	India is invaded by Alexander the Great (of Macedonia and Greece).
304 BCE	India is united under the Mauryan Empire.
221 BCE	China is united under the Qin dynasty.
206 BCE	The Qin dynasty is overthrown in a peasant revolt. The Han dynasty begins.

Your timeline will help you to **analyse** and **compare** events. For example, you could use it to answer questions, such as:

- Which of these two cultures was the first to build cities?
- Which was the first to use iron?

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 Chinese dynasty shown on your timeline was the earliest?
   - **c.** How many years elapsed between the establishment of the Shang and Qin dynasties?
   - **d.** Did the Indian or Chinese civilisation use iron first? What period of time separated the introduction of the use of iron in the two civilisations?
   - **e.** **Identify** three significant events during the period of time illustrated on the timeline for:
     - **i.** China
     - **ii.** India.
   - **f.** What statement could you make about the length of Chinese dynasties over the period shown on your timeline?
   - **g.** What event of significance for ancient Indian civilisation occurred during the period of the Shang dynasty in China?
   - **h.** What might have been a consequence for Indian civilisation of the invasion of Alexander the Great? (*Hint:* Look for an event that happened relatively shortly after his invasion.)

LESSON
1.8 SkillBuilder: Describing broad patterns of change

LEARNING INTENTION

By the end of this SkillBuilder you should be able to analyse and describe broad patterns of widespread change over time.

1.8.1 Tell me

What are broad patterns of change?

During any period of history, some changes happen quickly and others occur slowly. Some changes affect only limited numbers of people while others are widespread. In this topic we have studied developments in human societies from early communities (around 60 000 BCE) to later ancient times (up to around 650 CE). Over such a long period we would expect significant changes. Broad patterns of change are not the kinds of changes that might have affected one community, such as a change of rulers. Rather, they are patterns of change that are extensive or widespread.

Broad patterns of change have taken place in the modern world in just a generation. For example, when your parents were your age there was no internet, and Facebook or X (formally known as Twitter) could hardly have been imagined. Such technological changes have revolutionised the ways we communicate. In the ancient world, patterns of change occurred much more slowly but, just as much as the recent technological revolution, these changes transformed human societies.

Why is it important to describe broad patterns of change?

In a period as long as that of the ancient world, there are many examples of broad changes in technologies, religious beliefs and the ways in which societies were organised and governed. Identifying such broad patterns of change will help you to:

- recognise the nature of a change that occurred
- recognise the speed of any change
- recognise the extent or significance of any change
- assess the role of changes in contributing to other changes.

1.8.2 Show me

How can broad patterns of change be described?

From your work in this topic, you will already understand that there were enormous changes from the Old Stone Age through the New Stone Age and into later ancient times. You will be able to recognise such changes when comparing primary sources from different ages within the times of the ancient world. You can recognise evidence of broad patterns of change by asking questions, such as:

For what broad patterns of change do these sources provide evidence?

To answer such a question, you need to break the question down into more specific questions, such as:

1. What kind of development was this? For example, was it a change in the ways in which people provided for basic needs, such as food and shelter, or a change in beliefs, transport, technology, trade or entertainment?
2. What was the situation before the change?
3. How did the change occur?
4. What was different after the change?

In the following example, these types of questions have been applied to **SOURCES 1, 2** and **3**.

Returning to the question we posed earlier:
For what broad patterns of change do **SOURCES 1, 2** and **3** provide evidence?

SOURCE 1 This Old Stone Age painting on rock shows a man hunting deer. It is from Mexico. Old Stone Age rock paintings, cave paintings and engravings showing similar scenes have been found in many places, including Australia and France. Some are believed to be as much as 30 000 years old.

SOURCE 2 This ancient Egyptian wall painting of people harvesting crops is from the tomb of a successful Egyptian artisan named Sennedjem, c. 1306–1290 BCE.

SOURCE 3 This relief sculpture depicts ancient Assyrians hunting lions. It is from around 883 BCE to 612 BCE when Assyria was a powerful empire in the Middle East.

We can break the question down to more specific questions and answer these:

1. *What kind of development was this?* **SOURCES 1** and **2** provide evidence for a change from hunter-gatherer societies to societies based on farming.
2. *What was the situation before the change?* Before the New Stone Age, which saw the development of farming, all peoples provided for their needs by hunting and gathering, like the hunter depicted in **SOURCE 1**.
3. *How did the change occur?* The change first came about around 9000 BCE, when people in the Fertile Crescent began growing crops and herding sheep and goats. As others saw advantages in adopting these new ways, the development spread to other societies, such as the ancient Egyptians, shown in **SOURCE 2**.
4. *What was different after the change?* People were able to produce food in smaller areas than were needed by hunter-gatherers so they could settle in permanent dwellings. They could also produce a surplus so that some people could specialise in work other than food production. Large settled societies saw the need for laws and powerful rulers. The surpluses the people produced could support a ruling class, who saw hunting as a form of sport or recreation, as depicted in **SOURCE 3**, rather than as a necessity, as in **SOURCE 1**.

1.8.3 Let me do it

Complete the following activities to practise this skill.

1.8 ACTIVITIES

1. **Apply** the following questions to **SOURCES 4** and **5** to identify broad patterns of change in another aspect of life in ancient times.
   General question: For what broad patterns of change do **SOURCES 4** and **5** provide evidence?
   More specific questions:
   a. What kind of development was this?
   b. What was the situation, as shown in **SOURCE 4**, before the change?
   c. How did the change occur?
   d. What was different, as shown in **SOURCE 5**, after the change?

SOURCE 4 Creevykeel Megalithic Tomb was constructed in Ireland around 3000 BCE by New Stone Age people. This was around the same time that structures, such as Stonehenge and other stone circles, temples and tombs were built in England. Because everything else built by these peoples was made of wood and other vegetable matter, such giant stone monuments, called megaliths, are the only built traces they left behind.

SOURCE 5 Part of the remains of the ancient Roman town of Pompeii, which was buried in volcanic ash when Mount Vesuvius erupted in 79 CE

LESSON
1.9 SkillBuilder: Developing a hypothesis

1.9.1 Tell me

Interpreting the evidence of life in ancient Australia: Lake Mungo

In their work of studying the ancient past, archaeologists are dealing with evidence that is in tiny pieces. They must rely on the physical landscape and archaeological evidence to tell the story. Very little material from ancient Australia has survived the thousands of years between their time and ours. Shell, bone and teeth will endure; animal hides, plant fibres, feathers and hair will not.

Archaeologists are involved in the work of detectives as they:

- search for evidence
- analyse the evidence, separating relevant from irrelevant information
- draw conclusions based on the evidence
- combine the evidence with background knowledge to develop a hypothesis.

SOURCE 1 Lake Mungo has been dry for thousands of years. This has allowed archaeologists to search for historical evidence.

Lake Mungo is a site of enormous archaeological importance because it provides some understanding of life as it may have been over 40 000 years ago. Our image of life at Lake Mungo is built from the limited archaeological evidence and from our modern understanding of traditional life as it existed in First Nations Australian communities in more recent times. It is easy for us to imagine that the lives of First Nations communities remained unchanged for generations. We have built a picture of the first Australians as nomadic hunters, stalking kangaroos or dugongs and living in small independent tribal communities; beliefs, such as the Dreaming, reach back into the distant past and give us a sense of the connection between the past and the present. But we also have a great deal of evidence pointing to the diversity, or mixture of cultural traditions, of ancient First Nations communities.

What is a hypothesis?

A hypothesis is an explanation, made on the basis of limited evidence, and is a place to begin a more detailed study or investigation. Anyone who develops a hypothesis is making a guess, based on the evidence they have. When a hypothesis is well supported with solid evidence we call it a *theory*.

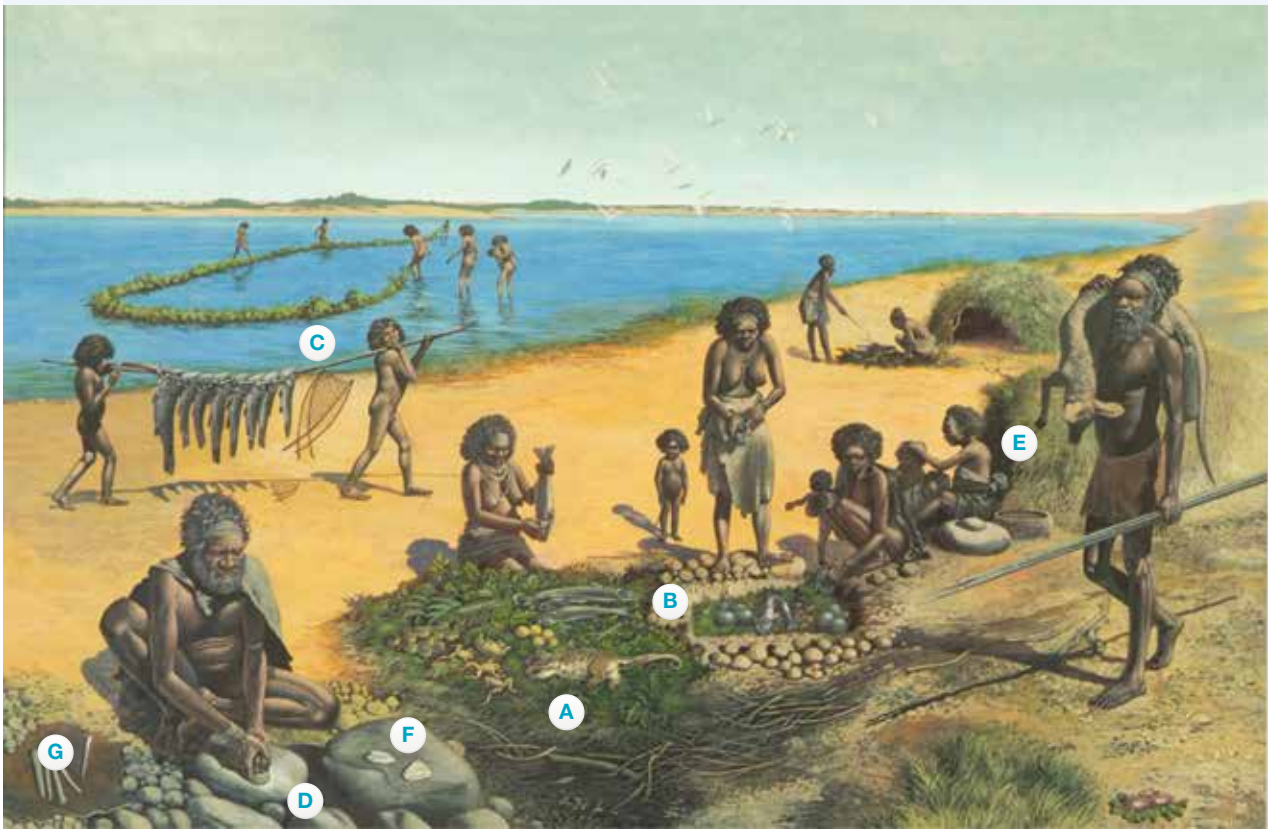
The difference between theories and hypotheses is known as the *contestability* of history. It reminds us that history is about interpreting the evidence. How the past is understood and interpreted is influenced by the point of view of the historian. If we look at people and events from our own modern Australian point of view we can sometimes misunderstand what has happened. We all have a cultural background that influences us. Our understanding of the world is shaped by many things such as our nationality, values, beliefs, personal experiences and interests.

Archaeologists study the evidence that has survived to explain and understand ancient life at Lake Mungo. Because the archaeological evidence of Lake Mungo is limited, archaeologists have developed more than one hypothesis to explain the nature of Lake Mungo life long ago.

1.9.2 Show me

Look carefully at **SOURCE 2**, an artist's reconstruction of Pleistocene life at Lake Mungo. This image gives a general view of Lake Mungo life, using details that have been borrowed from what we know of later First Nations tools, technology and traditions. The image shows First Nations Australians from the Pleistocene Period living in much the same way as First Nations Australians did in south-east Australia at the time of European settlement, two thousand generations later.

SOURCE 2 An image of life during the Pleistocene Period at Lake Mungo, by Giovanni Caselli. The visual reconstruction was based on research published in Bernard Wood's book The Evolution of Early Man, published in 1977.



- **A** Remains of animal species such as bandicoot, rat, kangaroo, wallaby, wombat and small marsupials such as bettong were found in the fireplaces at Mungo. Fireplace evidence suggests that hunters returned to the community site for cooking and eating. Remains of birds, emu eggs and frogs were also found at the site.
- **B** Remains of shellfish and golden perch have been found, as have the shallow fireplace ovens. Perch were probably caught in deeper lake water as indicated in the image of people fishing in the background.
- **C** Fish traps and fish netting were also probably used. The fish trap shown was not found at the Lake Mungo site and is based on artefacts found in south-east Australia dating from a much later period.
- **D** The stone tools shown do not closely correspond with the style of tools found at the Pleistocene Period Lake Mungo site. Grinding stones, as shown, were not found at Lake Mungo, with no evidence of the collection of seeds for grinding before 15 000 BP. Grinding stones found in south-east Australia from much later periods were flat, unlike the rounded stone in the image.
- **E** The clothing and physical appearance of the people are based on images of First Nations Australians from more recent times. Cloaks, body decoration and headbands have not been found. Necklaces made from animal teeth and bones have been found.The baskets and spears are based on artefacts found in the region from much later time periods.
- **F** Axe heads have not been found at the Pleistocene site.
- **G** Bone artefacts similar to those shown have been found in excavation. Archaeologists think these may have been used for sewing or fishing, but definitive evidence has never been found.

SOURCE 3 Excerpt from Bernard Wood's *The Evolution of Early Man*, describing ancient life at Lake Mungo

Recent research in Australia has shown that thriving communities were established there nearly 30 000 years ago. These people lived on narrow strips of land between land, lakes and the huge sand dunes that stretched out into the desert. Fish bones, shell remains and animal bones are evidence that they learned to exploit the lakes as well as the land. Hearths where they cooled their food have been excavated, and it is the carbon from charred bones that has provided the dating evidence.

The following steps will help you analyse the evidence and establish your own hypothesis and investigate the various Lake Mungo hypotheses that archaeologists have put forward:

1. *Begin with a question*. For example, 'What is the key feature of the Lake Mungo lifestyle during the Pleistocene Period?'
2. *Based on your question, write a central statement that becomes your hypothesis*. For example, 'The people of the Pleistocene Period lived in small hunting and foraging family units'. Your central statement, or hypothesis, should be arguable.
3. *Investigate your thesis*. Consider the other possibilities to explain the nature of Pleistocene life at Lake Mungo; for example, 'The people of the Pleistocene Period lived in large communities supported by hunting and foraging a wide area of land'.
4. *Conduct some research into theories developed by archaeologists*. Peter Hiscock, for example, investigated the Lake Mungo site to develop his own visions and theories about life during this period. Hiscock's study of the evidence challenges the Lake Mungo theory expressed in the sources.

The annotations in **SOURCE 2** provide you with questions to consider when assessing the usefulness of the source as evidence of the Pleistocene lifestyle.

1.9.3 Let me do it

Complete the following activities to practise this skill.

1.9 ACTIVITIES

1. Form a hypothesis about life at Lake Mungo and use the steps outlined to write a paragraph explaining why your hypothesis is correct, based on your preliminary research. Refer to the information in **SOURCES 2** and **3** to help develop your hypothesis.
   Present your Lake Mungo hypothesis to your class in a creative way. **SOURCE 2** is a visual representation of a hypothesis. You could present your hypothesis as a poster, short speech or story.
2. What evidence do archaeologists need to study in the process of developing their understanding of life in ancient Australia?
3. What is the correct meaning of the term 'hypothesis'?
4. Why have archaeologists developed more than one hypothesis to explain and understand ancient life at Lake Mungo?
5. What is the difference between theories and hypotheses known as?

LESSON
1.10 SkillBuilder: Analysing and corroborating ancient Greek sources

LEARNING INTENTION

By the end of this SkillBuilder you should be able to analyse and corroborate sources.

1.10.1 Tell me

What are the main ancient Greek sources?

Ancient Greek sources include pottery, tombs, temples, fortifications, weapons, tools, coins, theatres and written records. They also include artworks such as statues and other sculptures in stone and bronze and the paintings that decorated vases and other types of pottery.

Why is it important to analyse and corroborate ancient Greek sources?

Almost all of our knowledge of ancient Greece comes from such sources. Works of art, in particular, tell us much about ancient Greek culture, especially myths and religious ideas. Buildings and sculptures tell us about technology, skills and values. Written records tell us about Greek ideas about politics, myths, history, science and a vast range of other subjects. Not all ancient Greek sources are really primary sources as some were written long after the events they describe.

SOURCE 1 A sixth century BCE Spartan cup showing Spartan soldiers returning from war carrying a slain comrade

1.10.2 Show me

How do we analyse and corroborate ancient Greek sources?

When you study an ancient source, you need to think carefully about the clues it provides and ask questions about its accuracy, usefulness and reliability. You need to ask questions such as:

1. What is it?
2. Who created it and when was it created?

3. Who or what was it created for?
4. For what aspect of ancient Greek history does it provide useful evidence?
5. Is the evidence it provides accurate and reliable and how can we tell this?
6. What conclusions can we draw from the source about ancient Greek society?

These questions have been applied to **SOURCES 1** and **2**.

Ancient writers and many later historians have regarded Spartans as tough soldiers who would die fighting rather than surrender or run from battle. **SOURCES 1** and **2** are relevant to this issue.

1. *What is it?* It is a cup with a design showing Spartan soldiers carrying the body of a comrade killed in battle.
2. *Who created it and when was it created?* We do not know who made it but we know that it was created in Sparta in the sixth century BCE.
3. *Who or what was it created for?* We cannot know whom it was created for. It was made to be a cup but more likely as a decoration than for practical uses.
4. *For what aspect of ancient Greek history does it provide useful evidence?* It indicates that Spartans honoured their men who died in battle by carrying their bodies from the battlefield.
5. *Is the evidence it provides accurate and reliable and how can we tell this?* Without other evidence, we cannot tell whether this source is accurate and reliable. However, several ancient Greek sources support this view of the Spartans.
6. *What conclusions can we draw from the source about ancient Greek society?* The Spartans regarded fighting bravely and dying in battle as great virtues.

SOURCE 2 Written by the Athenian general and historian Thucydides (c. 460–403) in his book, *History of the Peloponnesian War*, this extract describes the surrender of a force of 120 Spartans in the seventh year of this war between Athens and Sparta

was . . . made, to know if they [the Spartans] would surrender themselves and their arms to the Athenians . . . [Hearing] this offer, most of them lowered their shields and waved their hands to show that they accepted it. Hostilities now ceased . . . after consulting together they surrendered themselves and their arms . . .

Nothing that happened in the war surprised the Hellenes [Greeks] so much as this. It was the opinion that no force or famine could make [Spartans] give up their arms, but that they would fight on . . . and die with them in their hands: indeed, people could scarcely believe that those who had surrendered were of the same stuff as the fallen.

1. *What is it?* It is an account of the surrender of a force of Spartans during the Peloponnesian War.
2. *Who created it and when was it created?* It was written by Thucydides, an Athenian general and historian, in the fifth century BCE, soon after the events it describes.
3. *Who or what was it created for?* Thucydides wrote a history of the Peloponnesian War, a conflict that divided the Greeks for many years. The extract was part of that history. Its original readers would most likely have been other Athenians.
4. *For what aspect of ancient Greek history does it provide useful evidence?* It tells of an occasion when a Spartan army surrendered to Athenians rather than fighting to the death.
5. *Is the evidence it provides accurate and reliable and how can we tell this?* In judging its accuracy and reliability, we should take into account that the writer was an Athenian general and, therefore, someone who had fought against the Spartans. Without other evidence, we cannot tell whether this source is accurate and reliable. However, as many other Greeks would have witnessed this event it is unlikely that Thucydides would have distorted the facts.
6. *What conclusions can we draw from the source about ancient Greek society?* We can conclude that, although the Spartans regarded fighting bravely and dying in battle as great virtues, they did not always carry out this ideal. If the source is reliable, we might conclude that Spartans were not always as heroic as many liked to think they were.

1.10.3 Let me do it

Complete the following activities to practise this skill.

1.10 ACTIVITIES

1. Ancient writers and many later historians have regarded Spartan women as being as tough as Spartan men. **SOURCES 3** and **4** are relevant to this issue. Use the following questions to analyse **SOURCES 3** and **4**.
   - **a.** What is it?
   - **b.** Who created it and when was it created?
   - **c.** Who or what was it created for?
   - **d.** For what aspect of ancient Greek history does it provide useful evidence?
   - **e.** Is the evidence it provides accurate and reliable and how can we tell this?
   - **f.** What conclusions can we draw from the source about ancient Greek society?

SOURCE 3 From Plutarch, *Moralia, III, Sayings of Spartan Women*, 241. Plutarch lived c. 46–120 CE. He was born in Athens but was an admirer of Sparta and was writing many centuries after the events he described.

Another Spartan woman killed her son, who had deserted his post because he was unworthy of Sparta. She declared: 'He was not my offspring… for I did not bear one unworthy of Sparta'.

Another, hearing that her son had fallen at his post, said: 'Let the cowards be mourned, I, however, bury you without a tear, my son and Sparta's'.

As a woman was burying her son, a shabby old woman came up to her and said, 'You poor woman, what a misfortune!' 'No, by the two goddesses, what a good fortune,' she replied, 'because I bore him so that he might die for Sparta and that is what happened for me'.

Another woman handed her son his shield, and exhorted him: 'Son, either with this or on this'.*

* In order to run from battle a soldier would have to throw away his heavy shield. A soldier who was killed in battle would be carried home on his shield.

2. **Apply** your skills to answer the following questions.
   - **a.** **Explain** how you would differentiate between ancient Greek primary sources and secondary sources about ancient Greece.
   - **b.** Why should **SOURCE 3**, the extract from Plutarch, be classified as secondary source?
   - **c.** In this SkillBuilder, you have worked with a Spartan cup and a bronze figure (artefacts) and written accounts by two ancient Greek historians. **Identify** three other types of primary sources that a historian could use for a study of ancient Greece.
   - **d.** **Explain** why it is sometimes difficult to judge the reliability of ancient Greek primary sources.

SOURCE 4 A bronze gure of a running girl, 520–500 BCE, believed to have been made in or near Sparta

LESSON
1.11 SkillBuilder: Analysing and corroborating ancient Roman sources

LEARNING INTENTION

By the end of this SkillBuilder you should be able to analyse and corroborate sources.

1.11.1 Tell me

What are the main ancient Roman sources?

Ancient Roman sources include temples, amphitheatres, houses, fortifications, roads, aqueducts, weapons, tools, coins and many written records. They also include artworks such as mosaics, paintings, statues and other sculptures in terracotta, stone and bronze.

Why is it important to analyse and corroborate ancient Roman sources?

Almost all our knowledge of ancient Rome comes from such sources. Works of art and writings tell us much about ancient Roman culture. Buildings and sculptures tell us about entertainment, technology, skills, religious ideas and values. Written records tell us about Roman ideas about politics, history, law and a vast range of other subjects. Not all ancient Roman sources are really primary sources as some were written long after the events they describe.

1.11.2 Show me

How do we analyse and corroborate ancient Roman sources?

When you study an ancient source, you need to think carefully about the clues it provides and ask questions about its accuracy, usefulness and reliability. You need to ask questions, such as:

- What is it?
- Who created it and when was it created?
- Who or what was it created for?
- For what aspect of ancient Roman history does it provide useful evidence?
- Is the evidence it provides accurate and reliable and how can we tell this?
- What conclusions can we draw from the source about ancient Roman society?

As you know, cruel public entertainments, including fights between gladiators, played a very big role in Roman life. **SOURCES 1** and **2** are both relevant to this issue.

SOURCE 1 Written by the Roman Emperor Augustus (Octavian), who ruled from 27 BCE to 14 CE

Three times I gave shows of gladiators under my name…Twenty-six times, under my name or that of my sons and grandsons, I gave the people hunts of African wild beasts in the circus, in the open, or in the amphitheatre; in them about 3500 beasts were killed.

These six questions have been applied to **SOURCE 1**.

1. *What is it?* It is a written account of the number of gladiatorial combats and staged animal hunts paid for by Augustus.
2. *Who created it and when was it created?* The writer was Augustus, who became emperor of Rome in 27 BCE.
3. *Who or what was it created for?* As Augustus founded a dynasty, he was probably boasting to win popularity with other influential Romans.

4. *For what aspect of ancient Roman history does it provide useful evidence?* It provides evidence about public entertainment in Roman society, ways in which Roman politicians and rulers won favour and Rome's treatment of animals and slaves.
5. *Is the evidence it provides accurate and reliable and how can we tell this?* Other sources would be required to verify such details as the number of combats paid for by Augustus. Many other sources confirm that such entertainments were frequent.
6. *What conclusions can we draw from the source about ancient Roman society?* Cruel public entertainments were frequent and popular in ancient Rome, and they were often provided by political leaders to win popular support.

In the next example, the questions have been applied to **SOURCE 2**.

1. *What is it?* It is a terracotta figurine of two gladiators.
2. *Who created it and when was it created?* We do not know who created this figurine. We only know that it was made in the first or second century CE.
3. *Who or what was it created for?* As quite a few gladiator figurines have been found they must have been made to meet a popular demand for decorative souvenirs of the games.
4. *For what aspect of ancient Roman history does it provide useful evidence?* It provides evidence about issues of public entertainment in Roman society and Roman attitudes towards gladiators. It also provides evidence of the different types of gladiators who took part in combats and of their popularity.
5. *Is the evidence it provides accurate and reliable and how can we tell this?* The accuracy and reliability of the source can be verified using similar sources (such as **SOURCES 3** and **4**).
6. *What conclusions can we draw from the source about ancient Roman society?* Cruel public entertainments were frequent and popular in ancient Rome but, in a strange way, gladiators also appear to have been admired in much the same way as modern football stars.

SOURCE 2 A terracotta figurine of two gladiators. The figurine is from the first or second century CE. By this time there were several different categories of gladiators, including the *hoplomoch* (with a circular shield) and the *thraex* (with a small rectangular shield). Several gladiator figurines have been found.

1.11.3 Let me do it

Complete the following activities to practise this skill.

1.11 ACTIVITIES

1. Use the following six questions to **analyse SOURCES 3** and **4**.
   a. What is it?
   b. Who created it and when was it created?
   c. Who or what was it created for?
   d. For what aspect of ancient Roman history does it provide useful evidence?
   e. Is the evidence it provides accurate and reliable and how can we tell this?
   f. What conclusions can we draw from the source about ancient Roman society?

SOURCE 3 A relief sculpture from Turkey, first century CE, depicting three gladiators fighting

2. **Apply** your skills to answer the following questions.
   a. **Explain** how you would differentiate between ancient Roman primary sources and secondary sources.
   b. Why is it sometimes difficult to judge the reliability of ancient Roman primary sources?
   c. Why would **SOURCE 1**, the extract from the Roman Emperor Augustus (Octavian), need to be questioned very thoroughly to assess its reliability?
   d. In this SkillBuilder you have worked with a written account by a Roman emperor, a figurine and two relief sculptures. **Identify** four other types of primary sources that a historian could use for a study of ancient Rome.

SOURCE 4 A marble relief sculpture of two female gladiators named Amazon and Achilia. It was found in the ancient Roman city of Halikarnassos (in modern-day Turkey).

LESSON
1.12 SkillBuilder: Analysing and corroborating ancient Egyptian sources

LEARNING INTENTION

By the end of this SkillBuilder you should be able to analyse and corroborate sources.

1.12.1 Tell me

What are the main ancient Egyptian primary sources?

Primary sources from ancient Egypt include pyramids, tombs, temples, mummies, coffins and written records on stone and papyrus. They also include art such as models, statues and the paintings that decorated papyruses, coffins, canopic jars and the walls of tombs and temples.

Why is it important to analyse and corroborate ancient Egyptian primary sources?

It is important to analyse and corroborate ancient Egyptian primary sources because almost all of our knowledge about ancient Egypt comes from primary sources. Works of art, in particular, tell us much about the lives of Egypt's rulers. Some also provide evidence about ordinary Egyptians. Some show peasants and labourers working in the fields, artisans busy at their trades and women grinding grain, weaving cloth and brewing beer.

1.12.2 Show me

How do we analyse and corroborate ancient Egyptian primary sources?

When you study a primary source, you need to think carefully about the clues it provides and ask questions about its accuracy, usefulness and reliability. You need to ask questions, such as:

- What is it?
- Who created it and when was it created?
- Who or what was it created for?
- For what aspect of ancient Egyptian history does it provide useful evidence?
- Is the evidence it provides accurate and reliable and how can we tell this?
- What conclusions can we draw from the source about ancient Egyptian society?

These questions have been applied to **SOURCE 1**.

- *What is it?* It is a scene from a wall panel in a tomb.
- *Who created it and when was it created?* We cannot know the name of the artist/s who created it but we do know that it was created around 1419 to 1386 BCE.
- *Who or what was it created for?* It was painted to decorate the tomb of an Egyptian official named Sobekhotep.

SOURCE 1 A fragment of a scene on a wall panel in the tomb of Sobekhotep, a senior Egyptian treasury official during the reign of Thutmose IV (c. 1419–1386 BCE)

- *For what aspect of ancient Egyptian history does it provide useful evidence?* It provides evidence that ancient Egyptian craftspeople included talented artists, such as those who created this scene. It shows Egyptian craftsmen manufacturing jewellery, so it provides useful evidence for such work. Therefore, it would be useful for any study of the skills and methods of Egyptian craftsmen.
- *Is the evidence it provides accurate and reliable and how can we tell this?* We might assume that the artists who depicted such scenes based them on what they saw in Egypt. However, to test the accuracy and reliability of this source, we would need to compare it with other artworks and written manuscripts that describe the same kinds of work.
- *What conclusions can we draw from* **SOURCE 1** *about ancient Egyptian society?* We could conclude that crafts, such as manufacturing jewellery, were highly organised with specialised workers in factory-type workshops. This meant that agriculture produced a surplus that freed such workers from the need to produce food. There must also have been a privileged class that consumed the luxury products produced in the workshops. There was probably also foreign trade in these products.

1.12.3 Let me do it

Complete the following activities to practise this skill.

1.12 ACTIVITIES

1. Use the six questions to **interpret SOURCE 2** as evidence for the lives of the people of ancient Egypt.

SOURCE 2 A fragment of a painting in the tomb of Nebamun. It was made around 1350 BCE and shows a banquet scene divided into two registers (levels).

2. Apply your skills to answer the following questions.
   a. Using your answers to the questions on **SOURCES 1** and **2**, write a brief general statement about work and social life in ancient Egypt.
   b. **Explain** how you would differentiate between the primary and secondary sources for ancient Egypt.
   c. In this SkillBuilder you have worked with paintings from wall panels in tombs. **Identify** five other types of primary sources that a historian could use for a study of ancient Egypt.
   d. **Explain** why it is sometimes difficult to identify the origin and purpose of ancient Egyptian primary sources.

LESSON
1.13 SkillBuilder: Analysing different perspectives about ancient India

LEARNING INTENTION

By the end of this SkillBuilder you should be able to analyse different perspectives.

1.13.1 Tell me

What are different perspectives and why do they occur?

A perspective is a point of view, which is formed from someone's values, beliefs, attitudes and experiences. When studying a period of history, perspectives on the period or an event can be gathered from primary sources, especially eyewitness accounts, such as those found in a diary, as well as official sources, such as records produced by those in power. Sources give different perspectives because not everyone sees an event or problem from the same point of view. Some sources are biased (one-sided or prejudiced) or are based on insufficient understanding or information to be reliable. Each source will reflect the perspective of its creator and their target audience and purpose.

To uncover the truth on any issue we have to be aware that what someone says or writes about it may be one-sided or incorrect. It may even be an attempt to deceive. This is as important when trying to make up our mind on current issues as it is when trying to understand the past. For example, when buying a product, you don't necessarily believe what advertisements say about it. An advertiser will wish to show a product in its best light; that is, present only positive aspects of it so that a consumer will buy it. In the same way, a ruler may only want positive records of their rule to be made or displayed to make sure there is no dissent from those they rule or that their legacy is protected.

Sometimes, the perspectives of those not part of the ruling group may be silenced — their absence from the public record also tells a historian something about that period. Historians must often research extensively to find perspectives of a range of people about events from the past in order to build up a balanced picture of the event or time period. Since secondary sources rely on interpretations of primary sources, these are based on the perspectives or bias of the creator of the secondary source. This may add another layer of perspective on top of the perspective of the creator of the primary source.

1.13.2 Show me

How can different perspectives in primary and secondary sources be analysed?

When you read an interpretation of a historical event or development, you need to ask:

- What is the subject or main idea of the source?
- When was the source created?
- Who created the source?
- Why was it written?
- Is the source based on reliable information?
- Is the source supported or contradicted by the evidence of other sources?

The six questions have been applied to **SOURCE 1**, an ancient Greek account of the Indus Valley Civilisation.

SOURCE 1 From *Geography*, a book by the Greek historian and geographer Strabo (c. 63 BCE–24 CE). Strabo's book was an encyclopaedia of geographical knowledge of his time. Here he was recounting observations made by an earlier historian, Aristobulus, who accompanied Alexander the Great to India around 327 BCE. Aristobulus's book has been lost.

[Aristobulus] says that when he was sent upon a certain mission he saw a country of more than a thousand cities, together with villages, that had been deserted because the Indus had abandoned its proper bed, and had turned aside into the other bed on the left that was much deeper, and flowed with precipitous descent like a **cataract**, so that the Indus no longer watered by its overflows the abandoned country on the right, since that country was now above the level, not only of the new stream, but also of its overflows.

- *What is the subject or main idea of the source?* The subject is the abandoned cities of the Indus River Valley. According to the writer, the cities were abandoned because the river changed its course so that it no longer provided water at a level suitable for use by the people of those cities.
- *When was the source created?* The source was created between c. 63 BCE and 24 BCE.
- *Who created the source?* Strabo is using information he obtained by reading Aristobulus, who was in India around 327 BC.
- *Why was the source written?* Aristobulus wrote an account of what he observed during his journey to India. Strabo used Aristobulus as a source for his own book.
- *Is the source based on reliable information?* We know that Aristobulus could not have seen 'more than a thousand cities' because there is archaeological evidence of only a few cities. If he exaggerated this, he may be wrong about other things.
- *Is the source supported or contradicted by the evidence of other sources?* Aristobulus's statements about the river changing course are supported by archaeological evidence (see 19.4.3 The end of a civilisation). This change had a different effect in Mohenjo-daro from that described by Aristobulus, but his description could be accurate for other Indus Valley towns and cities.

cataract series of waterfalls
monastery residence of a community of monks

1.13.3 Let me do it

Complete the following activities to practise this skill.

1.13 ACTIVITIES

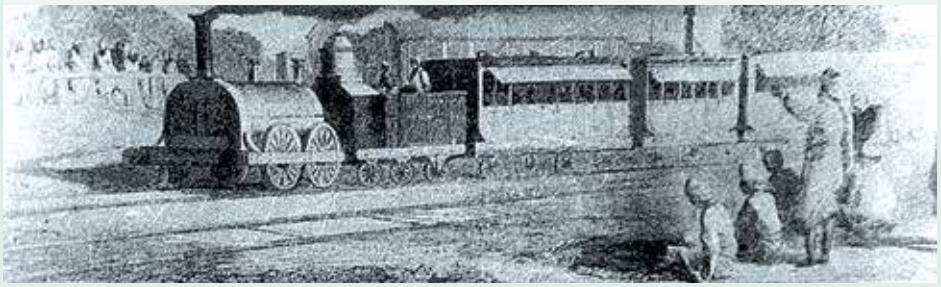
1. **SOURCES 2** and **3** will help you understand some of the difficulties people faced in interpreting the ruins of Indus Valley cities.

As shown in **SOURCE 2** The stupa and the nearby **monastery** were constructed around 200 CE from bricks taken from the surrounding abandoned buildings. The stupa is itself now a ruin. Anyone who was untrained in archaeology might have had diffi culty in recognising that the stupa belonged to a different age from the earlier ruins.

Now use the six questions to see if you can recognise and **analyse** the different perspectives in **SOURCES 4** and **5**.

SOURCE 2 A Buddhist stupa on top of the Higher Town of the city of Mohenjo-daro.

SOURCE 3 The first locomotive on the East India Railway. In the 1850s the British began to use crushed bricks taken from the ruins of Harappa as ballast under the tracks and sleepers for the rail line.



SOURCE 4 From the account of Charles Masson, a British army deserter who in 1826 stumbled on the ruins of what later would be called the Indus River Valley city of Harappa

I found . . . in front of the village [of Harappa] a ruinous brick castle. Behind us was a large circular mound . . . and to the west was an irregular rocky height, crowned with the remains of buildings, in fragments of walls, with **niches**, after the eastern manner . . . The walls and towers of the castle are remarkably high, though, from having been long deserted, they exhibit in some parts the ravages of time and decay. Between it and our camp extended a deep trench . . . overgrown with grasses and plants . . . Tradition affirms the existence here of a city . . . [It] was destroyed by a particular visitation of **Providence**, brought down by the **lust** and crimes of the **sovereign**.

SOURCE 5 Archaeologist John Marshall, recollecting his colleague R. D. Banerji's discovery of Mohenjo-daro in 1922, from John Marshall, *Mohenjo-daro and the Indus River Civilization*, [1931] 2004

. . . [I]t was not until 1922, when Mr R. D. Banerji started to dig there [in Mohenjo-daro], that the prehistoric character of its remains was revealed. This was not greatly to be wondered at; for the only structures then visible were the Buddhist Stupa and Monastery . . . and these were built exclusively of brick taken from the older ruins, so that it was not unnatural to infer that the rest of the site was referable to approximately the same age as the Buddhist monuments [around 200 CE]. Indeed . . . Mr Banerji himself . . . had no idea of finding anything prehistoric. His primary object was to lay bare the Buddhist remains, and it was while engaged on this task that he came by chance on several seals which he recognized at once as belonging to the same class as the remarkable seals inscribed with legends in an undecipherable script which had long been known to us from the ruin of Harappa . . . The few structural remains of that civilization which he had unearthed were built of bricks identical with those used in the Buddhist Stupa and Monastery, and bore so close a resemblance to the latter that even now it is not always easy to discriminate between them. Nevertheless, Mr Banerji **divined**, and rightly divined, that these earlier remains must have **antedated** the Buddhist structures, which were only a foot or two [30–60 cm] above them, by some two or three thousand years. That was no small achievement!

2. **Apply** your skills to answer the following questions.
   a. **Explain** why primary source evidence from ancient India often provides different perspectives.
   b. Why would **SOURCE 4**, the extract from the account of Charles Masson, need to be questioned very thoroughly?
   c. **Explain** how multiple primary sources can be used to increase the accuracy of a historical investigation.
   d. How do historians decide which is the most reliable source of evidence when choosing between two very different perspectives?
   e. **Suggest** which kind of primary sources from the Indus Valley Civilisation provide the most information about ancient culture and traditions.

niche a shallow recess, especially in a wall, to display a statue or other ornament
providence act of God
lust sexual desire, strong appetites
sovereign a king, queen or emperor
divine to guess or predict
antedate to come before, to be earlier in time

LESSON
1.14 SkillBuilder: Analysing different perspectives about ancient China

LEARNING INTENTION

By the end of this SkillBuilder you should be able to analyse different perspectives.

1.14.1 Tell me

What are different perspectives and why do they occur?

A perspective is a point of view, which is formed from someone's values and beliefs, attitudes and experiences. In a study of a period of history, perspectives on an event or a period can be gathered from primary sources, especially eyewitness accounts as might be found in a source such as a diary, as well as official sources such as records produced by those in power. Primary sources often give different perspectives because not everyone will have seen an event or problem from the same point of view. Some primary sources are biased (one-sided or prejudiced) or were created as propaganda (attempts to persuade people to accept a biased view). Each source will reflect the perspective of its creator and their target audience and purpose.

Why is it important to analyse different perspectives, especially bias and propaganda?

To find the truth on any matter, we have to be aware that what someone says or writes about it may be one-sided and an attempt to persuade and possibly to deceive. This is as important when trying to make up our minds on current issues as it is when trying to understand the past. For example, when buying a product you do not necessarily trust what advertisements say about it. An advertiser will wish to show a product in its best light — that is, present only positive aspects of it so that a consumer will buy it. In the same way, a ruler may only want positive records of their rule to be made or displayed to make sure no dissent from those they rule or that their legacy is protected. Sometimes, the perspectives of those not part of the ruling group may be silenced — their absence from the public record also tells a historian something about that period. Historians must often research extensively to find the perspectives of a range of people about events from the past in order to build up a balanced picture of the event or time period.

1.14.2 Show me

How can different perspectives in primary sources be analysed?

When you read an interpretation of a historical event or development you need to ask:

1. What is the subject or main idea of the source?
2. When was the source created?
3. Who created the source?
4. Why was it written?
5. Does it try to persuade and if so how does it do this?
6. Is the source supported or contradicted by the evidence of other sources?

An example: Qin Shihuang's achievements

Qin Shihuang wanted to be seen as a great and powerful ruler who brought peace and happiness to his people. **SOURCE 1** is an example of his propaganda. **SOURCES 2** and **3** provide other evidence. The six questions have been applied to **SOURCE 1**.

SOURCE 1 From an inscription ordered by Qin Shihuang (shown in image). It was carved in 219 BCE.

…Great are the Emperor's achievements…

All people under heaven

Work with a common purpose.

Tools and measures are the same…

The written script is made the same…

He defines the laws, leaving no one in doubt,

Making known what is forbidden…

No evil is tolerated,

So all strive to be excellent people…

None dare to be lazy…

The ordinary people know peace…

People help each other,

There are no robbers or thieves:

People delight in his rule…

Wherever life is found,

All acknowledge his supreme rule…

SOURCE 2 From a Qin imperial edict. When the First Emperor decided to standardise weights and measures, his order was published on bronze plates. Attached to the plates were wooden measures.

In the twenty-sixth year of his reign [221 BCE], the Emperor unified all the lands under heaven, brought peace to the people, and mounted the throne as Emperor. [He] ordered the prime minister to reform the measures and weights. For those who do not know the new system, this [object] is a standard model for making more copies.

SOURCE 3 Hsun-tzu, a Confucian scholar of the third century BCE, commenting on the methods of the rulers of the state of Qin in the last years of the Warring States period. These same methods were used throughout China under the Qin dynasty.

The Qin rulers employ their people harshly, terrorise them with authority, embitter them with hardship, bribe them with rewards, and destroy them with punishments.

1. *What is the subject or main idea of the source?* The main idea is that the First Emperor's reforms have unified China, given its people certainty about the laws, protected them from wrongdoers and made them hardworking, responsible, happy and grateful to their ruler.
2. *When was this source created?* It was written in 219 BCE.
3. *Who created the source?* Qin Shihuang ordered it to be written.
4. *Why was the source written?* It was written to tell people that the emperor acted for their benefit.
5. *Does it try to persuade and if so how does it do this?* It tries to persuade by giving a distorted account of what was happening. It makes no mention of forced labour, high taxes and the cruelty of the emperor's punishments.
6. *Is the source supported or contradicted by the evidence of other sources?* **SOURCE 2** supports the statement about measures. **SOURCE 3** contradicts most of the source by accusing the Qin rulers of causing misery and suffering rather than happiness.

1.14.3 Let me do it

Complete the following activities to practise this skill.

1.14 ACTIVITIES

1. In 213 BCE, Qin Shihuang ordered the burning of many books. He then executed hundreds of scholars who kept their books. **SOURCE 4** gives the official reasons for these harsh measures. Now use the six questions to see if you can recognise the bias in this source and **analyse** it. **SOURCE 5** provides other evidence.

SOURCE 4 Advice given by Prime Minister Li Si to Qin Shihuang

Your Majesty rules a unified Empire in which the difference between right and wrong is as clear as your own total authority. Yet there are people who unofficially spread teachings that are against official orders . . . they openly criticise your commands . . . The people are thus encouraged to be disrespectful. If this lying is not stopped the imperial authority will be weak . . . all people owning books . . . should destroy them.

SOURCE 5 From Sima Qian's book *Shiji*, 91 BCE

But the First Emperor was greedy and short-sighted, confident in his own wisdom, never trusting his meritorious officials, never getting to know his people . . . outlawing books and writings, making the laws and penalties much harsher, putting deceit and force foremost and humanity and righteousness last, leading the whole world in violence and cruelty.

2. Sima Qian was Grand Historian of China during the Han dynasty. He did not live in the period when Qin Shihuang ruled. How does this fact affect your assessment of the usefulness of **SOURCE 5**?
3. **Suggest** sources or people from the time that might present other perspectives on Qin Shihuang's book-burning edict.
4. **Explain** why primary source evidence from ancient China often provides different perspectives.
5. **Explain** why, despite differing perspectives, primary source evidence from ancient China rarely gives the perspectives of the lower classes.
6. Why would **SOURCES 1** and **2** need to be questioned very thoroughly?
7. **Explain** why differing perspectives can sometimes make it difficult to judge the reliability of ancient Chinese primary sources.

Key terms

antedate to come before, to be earlier in time
cataract series of waterfalls
divine to guess or predict
lust sexual desire, strong appetites
monastery residence of a community of monks
niche a shallow recess, especially in a wall, to display a statue or other ornament
providence act of God
sovereign a king, queen or emperor

2 Deep time history of Australia

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LESSON
2.1 Overview

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How do First Nations Australians, as the world's oldest continuing cultures, display evidence of both continuity and change over deep time?

2.1.1 Introduction

The histories, cultures, beliefs and rituals of First Nations Australians stretch back into Australia's deep time. Scientists estimate that the story of First Nations Australia began between 60 000 and 120 000 years ago. It is a story that stretches far beyond our usual understanding of the ancient history of civilisations such as ancient Rome or Egypt. *This is the story of the world's longest continuous culture.*

The epic history of First Nations Australians lies carved into the rock faces and beneath the soils of this ancient land. The remains of tens of thousands of years of human occupation provide modern Australia with a connection to the past. At culturally important archaeological sites, such as those at Lake Mungo in New South Wales and Badu Island in the Torres Strait, evidence is revealed of the life and culture of ancient communities. Archaeologists have discovered sites of human occupation on the Australian continent from at least 60 000 years ago and evidence of human activity in the Torres Strait dating from 4000 years ago.

Through the ages, the relationship between First Nations Peoples and their land survived, and it continues today in stories, songs, dancing, ceremony and art. Yuwaalaraay/Gamilaraay woman Frances Peters-Little explained the importance of understanding Australia's deep time history: 'All things will outlast us, the land will change, and survive. Yes, the land will be different. But new things will come of it.'

SOURCE 1 The relationship between First Nations Australians and their land continues today in dancing and art.

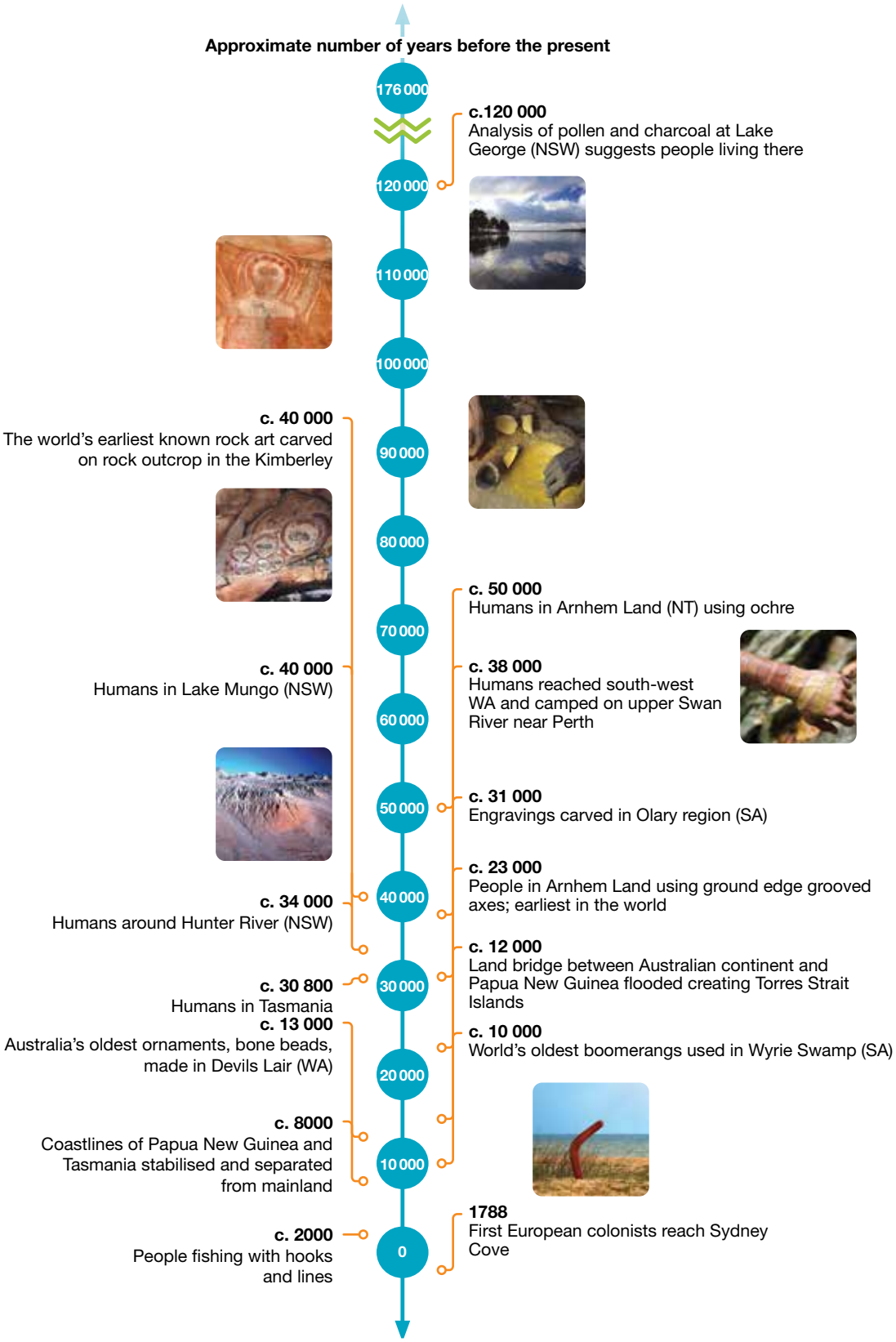
on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10468)

Video eLesson Deep time history of Australia (eles-6008)

int-8925

SOURCE 2 A timeline of deep time Australia



LESSON
2.2 How do we know about the deep time history of Australia?

LEARNING INTENTION

By the end of this lesson you should be able to locate and identify written, oral and archaeological primary sources as evidence of the deep time history of Australia.

TUNE IN

While reading and looking at all the sources in this topic, think about how our everyday objects provide an understanding of the world that we live in.

1. Think about a personal possession that is of real significance to you. Tell your partner what the object is, how it came to be yours, and why it is special.
   Now think about how primary archaeological sources can help us to understand the lives of people from Australia's deep history.
2. Read **SOURCE 1**. Discuss how the author believes we add meaning to objects.
3. As the custodians of the rich cultural heritage of all the peoples who lived and walked before us, we look at the material remains and stories handed down through the generations to understand the world they lived in. Look carefully at the beautiful item shown in **SOURCE 2**. What do you see? What do you think of when you look at this item? Imagine you are an archaeologist — what more would you like to find out about it?

SOURCE 1 Denise Lovett of the Gunditjmara Peoples (western Victoria) explaining the importance of connecting artefacts, such as the emu-feather skirt made by her ancestors, with the object's cultural background

I look at the feathers that the women would have collected, made and danced with. I wonder what song they were singing while they danced. Rightfully, this should have been handed down to someone's daughter and the story handed down too. It's sad that we don't have the whole meaning of them, that they are just objects.

2.2.1 How do we know about the deep time history of Australia?

The history and beliefs of ancient Australia were not written onto clay tablets or scrolls of papyrus. Rock art, including petroglyphs (or engravings), is important in storytelling and passing on knowledge. Modern archaeologists often begin their study of the life and culture of First Australian communities by talking and consulting with Elders and traditional owners of the land.

Oral tradition and archaeology

Our ancient past was remembered through the spoken word. This oral history was passed down through the generations. First Nations histories and the record of **lore** was entrusted to kinship members who had the responsibility of passing knowledge on. The evidence was found in the land, in the sky country, in the waterways and in the engravings and the paintings held on rock faces.

The archaeological record of our ancient past is incomplete. Archaeologists gather their evidence from ancient occupation sites such as camps, **quarries**, **shell middens** and fish traps, burial areas, and ceremonial and sacred sites. Archaeologists interpret layers of **sediment**, charcoal, clay and sand.

lore the customs and stories that came from The Dreaming and continue to govern all aspects of First Nations Australians' life

quarry an excavation or pit from which stone or building material is cut

shell midden a mound of shells and other waste material marking the site of an ancient community

sediment the material that settles at the bottom of a liquid

SOURCE 2 An emu-feather dance skirt, made and worn by Wendy Berick of the Dja Dja Wurrung Peoples (Melbourne, Victoria)

Sites, such as Lake Mungo in the Willandra Lakes region of western New South Wales, are studied and interpreted not only by archaeologists, but also **geologists**, **palaeontologists** and **anthropologists**.

Lore and museums

'Caring for Country' is a very important responsibility taken on by many First Nations Australian communities. To them, 'Country' refers to the traditional land to which a person belongs, or the land of their **Dreaming**. 'Country' encompasses the land, sky, waters, flora and fauna. In caring for their Country, the traditional custodians of the land share knowledge and pass on the lore.

Non-Indigenous people and government institutions, such as museums, also have an important role to play in protecting and conserving the heritage, culture and artefacts of ancient Australia. Museums are the places where the stories of many people, places and times can be told. The National Museum of Australia preserves and displays collections of **artefacts** that represent our history from deep time to modern times.

Artefacts become wonderful sources of information when they are given a background. The art and objects of First Nations Australians come to life when they are interpreted by First Nations Peoples who have traditional knowledge and understanding. Connecting the oral traditions with the museum objects helps us to see the images and hear the voices of ancient Australia.

geologist someone who studies the sediments and landforms associated with ancient campsites

palaeontologist a scientist who studies fossils

anthropologist someone who researches the appearance and features of the life of prehistoric people and the connections they had with other human populations

The Dreaming in First Nations spirituality, the beginning of earth and the cycles of life and nature, explaining creation and the nature of the world, the place that every person has in that world and the importance of ritual and tradition; Dreaming stories pass on important knowledge, laws and beliefs; also known as The Dreamtime

artefact an object made or changed by humans

aud-0403

SOURCE 3 Newspaper article, 'Australian dig finds evidence of Aboriginal habitation up to 80 000 years ago'

A groundbreaking archaeological discovery in Australia's north has extended the known length of time Aboriginal people have inhabited the continent to at least 65 000 years.

The findings on about 11 000 artefacts from Kakadu National Park prove Indigenous people have been in Australia for far longer than the much-contested estimates of between 47 000 and 60 000 years, the researchers said. Some of the artefacts were potentially as old as 80 000 years.

The new research upends decades-old estimates about the human colonisation of the continent, their interaction with megafauna, and the dispersal of modern humans from Africa and across south Asia.

'People got here much earlier than we thought, which means of course they must also have left Africa much earlier to have travelled on their long journey through Asia and south-east Asia to Australia,' said the lead author, Associate Prof Chris Clarkson, from the University of Queensland.

'It also means the time of overlap with the megafauna, for instance, is much longer than originally thought — maybe as much as 20 000 or 25 000 years. It puts to rest the idea that Aboriginal people wiped out the megafauna very quickly.'

The significant trove of thousands of artefacts was buried in 2.6 metres of sand and sediment on the western edge of the Arnhem Land plateau. The site at Madjedbebe is on the traditional lands of the Mirarr people.

Source: Helen Davidson and Calla Wahlquist, 'Australian dig finds evidence of Aboriginal habitation up to 80,000 years ago', *The Guardian*, 20 July 2017.

DID YOU KNOW?

Stone tools are the longest lasting objects that archaeologists find because organic substances such as plants and animals perish after only a few hundred years. Nature sometimes preserves objects, such as the wooden boomerangs that survived in the water-logged peat bog of South Australia's Wyrie Swamp for over 10 000 years and the 20 000-year-old bone tools at Devil's Lair in Western Australia.

2.2 SKILL ACTIVITY: Using historical sources

You are the archaeologist engaged in the study of **SOURCE 3**. You now want to learn a lot more about Australia's deep time history through the study of material remains.

1. Refer to the 2.1 Overview lesson and select one period from the **SOURCE 2** timeline of ancient Australia to examine in more detail.
   - **Research** your selected time. What period in deep history does it belong to — for example, Pleistocene or Holocene? **Identify** some of the features of life on Earth during this time.
   - Refer to the timeline to **identify** what and where you would look to find evidence of the people who lived during your chosen time. Locate one artefact to use as your clue in gaining some understanding of the world as it was for these people.
   - Read **SOURCE 3** as an example of how archaeologists use artefacts as clues of how people lived in these distant times.

2. **Analyse** your artefact by asking the same questions you applied to the **SOURCE 2** emu-feather dance skirt. What do you see? What do you think of when you look at this artefact? What more would you like to find out about it?
3. **Communicate** your understanding of the significance of your artefact. Write a short guide for museum visitors coming to view your exhibit. Your guide should outline the time and the region in Australia your artefact came from, the traditional custodians of the region, some of the geographical features of the region and some knowledge of what life would have been like for the people of the time. Your aim is to develop cultural awareness of a time that is very different from our own.

(*Note*: artefacts similar to those being archaeologically studied are still in use by First Nations communities in some regions of Australia today.)

2.2 Exercise

learnon

2.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 4, 5, 8	2, 3, 6, 7, 9, 10	11, 12

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Check your understanding

1. What is an artefact?
   - A. A natural object
   - B. Anything from the past
   - C. Any object that gives historical clues
   - D. An object made by human beings
2. **Explain** why modern archaeologists talk to today's traditional custodians and Elders of the land.
3. **Identify** how the histories and beliefs of ancient Australia have been passed down through generations.
4. Estimates of the deep time history of the First Nations Peoples of the Kakadu National Park region have been extended by possibly 20 000 years. True or false?
5. _____ tools are a rare archaeological find.
6. Archaeologists gather their evidence from many places. **Identify** the layers that archaeologists investigate.

Apply your understanding

Using historical sources

7. **Propose** two reasons archaeological sources may not give a complete picture of life in ancient Australia.
8. Why is the evidence found at Kakadu a 'ground-breaking archaeological discovery'?
9. **Identify** where the trove of around 11 000 artefacts was located.
10. From an examination of **SOURCE 2**, what assumptions could you make about the resources people used in ancient Australia?

Historical perspectives and interpretations

11. 'Artefacts from ancient Australia can only reveal their true meaning if their cultural background is also considered.' **Explain** what you understand by this statement. **SOURCES 2** and **3** may help you to do this.
12. **Consider** the ways we can learn about ancient Australia as presented in this lesson. **Rank** them from most useful to least useful as a way of learning about ancient Australia's past. **Justify** your ranking.

LESSON
2.3 What is deep time?

LEARNING INTENTION

By the end of this lesson you should be able to explain the meaning of deep time and recognise the importance of First Nations Peoples of Australia as the knowledge holders of Australia's own deep time.

TUNE IN

Rock art is an important part of the culture of First Nations Australians, and has been used by archaeologists to prove the length of time that Australia has been inhabited by First Nations Peoples.

Rock art has been found that has been dated to 43 000 years ago.

1. What figures can you identify in the picture shown in **SOURCE 1**?
2. What might this artwork tell us about First Nations Peoples of Australia who painted it?
3. Discuss whether it is important to conserve ancient Australian sites such as these. Explain your answer.

SOURCE 1 Walinynga (Cave Hill) archaeological site in the Olary region of South Australia

2.3.1 Understanding deep time

Deep time can simply be understood as Earth time. The concept requires us to look far back into Earth's history, as well as looking into its future. First Nations Australians have lived on this continent for at least 60 000 years. The western concept of ancient history — covering, for example, ancient Rome or the Egyptians — only goes back approximately 6000 years ago. Australia's deep time history, therefore, relates to all of the time that First Nations Australians lived and all the things that they achieved before the arrival of the Europeans in the eighteenth century.

These early histories of First Nations Australians were not necessarily written down. Instead, they were painted, carved, built and passed down orally through stories. Often, the land itself tells the story, with First Nations Australians' cultural knowledge providing the ability to understand those stories.

2.3.2 Dating deep time history

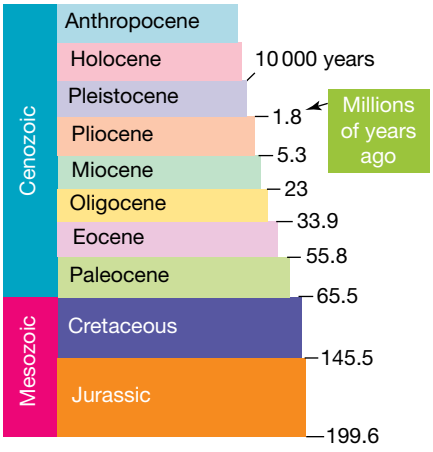
The Pleistocene period began approximately 2.5 million years ago and is more commonly known as the last 'great ice age'. This is when large portions of the Earth's oceans are frozen in ice caps, allowing for land bridges normally covered by oceans or seas to be used by humans to reach areas previously uninhabited. First Nations Australians used these land bridges to first come to Australia. The Holocene period is believed to have begun approximately 12 000 years ago. The Holocene period is when the majority of the ice thawed and the sea levels rose again, covering the land bridges and creating the continents that we know today.

These periods are separate to European concepts such as the Stone Age, Iron Age or Bronze Age, and are instead characterised by environmental characteristics such as climate and sea levels. First Nations Australians lived on this continent for at least 50 000 years of the Pleistocene period and ancient stories, such as Dreaming stories, can be seen as a representation of this time on Earth. **SOURCE 5** is an example of one such story.

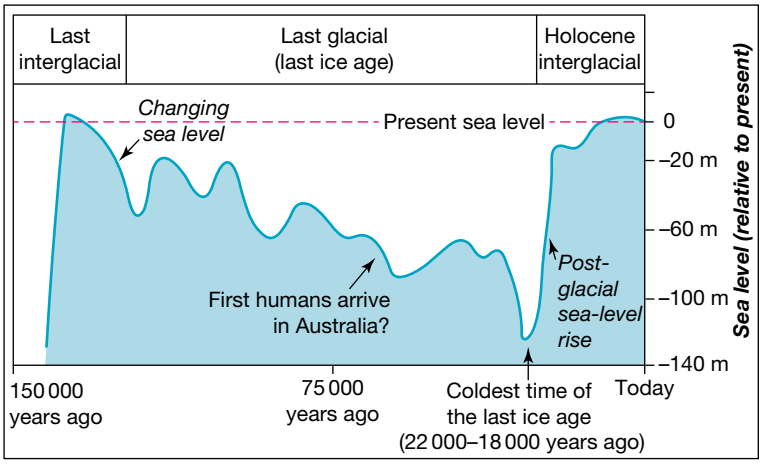
tlvd-10487

SOURCE 2 The Baiame's Ngunnhu, or the Brewarrina Fish Traps, are used by the Ngemba Wayilwan Peoples of far-western New South Wales, have been dated to be approximately 40 000 years old. They are evidence of the sophisticated knowledge First Nations Australians had of the land and its natural resources for thousands of years.

SOURCE 3 Part of the geological time scale



SOURCE 4 Sea-level change over the past 150 000 years



Source: https://aiatsis.gov.au/sites/default/files/research_pub/deep_time_in_noongar_country.pdf

aud-0404

SOURCE 5 A Ngadjon story that explains the origin of the three volcanic crater lakes Yidyam (Lake Eacham), Barany (Lake Barrine) and Ngimun (Lake Euramo)*

It is said that two newly initiated men broke a taboo and angered the rainbow serpent, major spirit of the area. As a result, 'the camping-place began to change, the earth under the camp roaring like thunder. The wind started to blow down, as if a cyclone were coming. The camping-place began to twist and crack. While this was happening, there was in the sky a red cloud, of a hue never seen before. The people tried to run from side to side but were swallowed by a crack which opened in the ground . . .'

The formation of the three volcanic lakes took place at least 10 000 years ago. A strong case can be made for the story of the volcanic eruptions, and of the spread of rain forest, having been handed down from generation to generation for something like 10 000 years.

** Yidyam and Ngimun are Yidinyji place names. Lake Eacham is Wiingina in Ngadjon and Lake Euramo is Nuta.*

2.3.3 The Pleistocene and Holocene periods

To First Nations Australians, the concept of the actual age of something is of low importance. However, as archaeological evidence constantly evolves, ways to determine approximate dates for important cultural sites have become available. Certain techniques have been used by archaeologists to date First Nations Australian sites. For example, radiocarbon dating was used to date artefacts found at Lake Mungo in central Australia to around 40 000 years before present day. Often, archaeologists will use stratigraphy to show how old something is. Other techniques can also be used, including DNA evidence. Unfortunately, some substances, such as ochre (a natural clay substance), are more difficult to date because they are made from an inorganic pigment that does not contain carbon. However, technological advancements are allowing scientists to date ochre paintings by dating the micro-organisms (such as bacteria or algae) found within the paint itself. This technology has placed some heritage sites as much older than was first thought.

2.3 SKILL ACTIVITY: Questioning and researching

1. **Research** another Dreaming story that has archaeological significance.
2. **Explain** how it could be a representation of the Pleistocene or Holocene period.
3. **Analyse** the story you researched in question 1.
   - What archaeological evidence might it provide?
   - What are the significant moments?
   - What information is learnt from those moments?
   - Do you have further questions relating to this story?

2.3 Exercise

learnon

2.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 4, 5	2, 3, 6, 8	7, 9, 10

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Check your understanding

1. **Recall** whether deep time relates to 'Earth time' or 'human time'.
2. **Identify** what we can use First Nations Australian stories, such as Dreaming stories, to learn about.
3. Complete the following statement.
   The Brewarrina Fish Traps, as shown in **SOURCE 2**, are an example of _____ _____. Traditionally known as _____ _____ the traps are of great importance to the _____ _____ people of far-western New South Wales.

4. The Holocene period came before the Pleistocene period. True or false?
5. Which of these methods have been used by archaeologists to date historical sites from ancient Australia?
   - **A.** Radiocarbon dating
   - **B.** DNA evidence
   - **C.** Stratigraphy
   - **D.** All of the above

Apply your understanding

Historical perspectives and interpretations

6. First Nations Peoples of Australia are often described as having an oral history or oral tradition. **Explain** what this tells you about their stories.

Using historical sources

7. Would the Dreaming story in **SOURCE 5** be considered a primary or secondary source? **Explain**.
8. 'First Nations Australians lived on this continent for at least 50 000 years of the Pleistocene period and ancient stories, such as Dreaming stories, can be seen as a representation of this time on Earth.' **Identify** how the story in **SOURCE 5** proves this statement.

Communicating

9. First Nations Australians' culture, traditions and lore has been passed down orally for thousands of years. Archaeologists are now beginning to understand that these Dreaming stories are able to be further corroborated by analysing artefacts such as rock art and carvings. **Explain** the significance of this for First Nations Peoples of Australia.
10. **Communicate** your understanding of deep time and how it relates to First Nations Australians in a short paragraph.

LESSON
2.4 Where and what was the land of Sahul?

LEARNING INTENTION

By the end of this lesson you should be able to describe the changes to environment and geography that occurred in Australia throughout the Pleistocene Period, and identify how First Nations Peoples' knowledge of Country and deep time history was recorded and passed on.

TUNE IN

Samples of hair from First Nations Peoples from across Australia were collected through the twentieth century, from 1928 to the 1970s. Modern DNA technology has now enabled analysis of the samples to determine maternal ancestry of First Nations Australians. Researchers concluded that First Nations Australians are descended from one single founding population arriving in Pleistocene Australia, at least 50 000 years ago. At this time, the ancestors of modern Asian and European peoples had not migrated beyond Africa or the Middle East.

SOURCE 1 is a quote from a First Nations Elder who donated to the hair sample study.

SOURCE 1 Aboriginal hair shows 50 000 year connection to Australia

Kaurna Elder Mr Lewis O'Brien was one of the original donors in the hair sample study and was on the advisory group for the study. He says, 'Aboriginal people have always known that we have been on our land since the start of time. But it is important to have science show that to the rest of the world.'

Source: University of Adelaide, 'Aboriginal hair shows 50 000 year connection to Australia', 8 March 2017.

1. Read Mr Lewis's quote carefully. Why do you think he might have been willing to take part in the study? Use evidence from his quote in your explanation.
2. Discuss whether you think a study like this is important and the reasons why.

2.4.1 The great continent of Sahul

The ancient continent of Sahul was composed of what is now Australia, New Guinea, Tasmania and the Aru Islands of eastern Indonesia. Sahul existed at a time when geographic conditions were very different from today.

During the long Pleistocene period, the climate alternated between periods of ice formation and warmth. The glacial ice periods exposed land bridges between the Sunda shelf of Asia, and the Sahul shelf of Australia. The movement of peoples from Africa, across Asia and then into Australia were nevertheless remarkable journeys across land and sea. We do not know the location where these ancient travellers found land and entered Sahul, because it would have vanished under the rising sea levels accompanying the end of the last Ice Age.

The seas finally separated New Guinea from the Australian mainland approximately 8000 years ago, and Tasmania approximately 6000 years ago. Human settlement of the Australian continent probably took another 4000 years from the time of arrival.

2.4.2 The drowning of the Dampier Archipelago

The Dampier **Archipelago**, known by the traditional custodians as *Marntakamani*, is located off the Pilbara coastline of Western Australia and is composed of 42 islands and **islets**. Murujuga, meaning 'hip bone sticking out', is the largest of the islands.

During the last Ice Age, sea levels were 130 metres lower than today. The islands of Marntakamani would have been a flat plain featuring a series of low rocky hills and ridges. The ocean lay a distant 100 kilometres away.

Over thousands of years, the last Ice Age came to an end and the polar ice caps gradually melted until the shoreline stabilised approximately 6000 years ago. Sand gathered in the sheltered bays left behind, creating beaches and rock platforms and a richness of animals and plants.

SOURCE 2 An aerial view of the Dampier Archipelago, on the northwestern coast of Australia

The Yaburara Peoples lived on Murujuga, which encompassed the nearby Burrup Peninsula. The evidence of the lives of the Yaburara of Murujuga can be found in the shell middens and scatters, stone quarries, stone tools, grinding stones and stone arrangements. The most remarkable archaeological evidence is found in the rock art of petroglyphs, made over a period of 30 000 years.

Rock paintings are called *pictographs*. *Petroglyphs* are images carved into the rock using a stone chisel and a hammerstone to reveal the lighter layers of rock beneath the surface. Marntakamani holds the largest single collection of petroglyphs in the world, featuring a great variety of images — from plants and animal tracks to abstract designs and human figures. Over one million petroglyphs provide a record of life before the last Ice Age. Among the petroglyphs are images of megafauna, such as the giant kangaroo.

archipelago islands scattered over an expanse of water
islet a very small island

2.4.3 Megafauna: The giants of Sahul

Sahul was home to at least 50 species of unique animals, known as *megafauna*, that evolved very differently from other species around the world. The megafauna mammals of Sahul were primarily marsupials — animals that carried their babies in pouches and mammals that laid eggs. Some hopped, some were scavengers or burrowers, some were predators, and some were browsers.

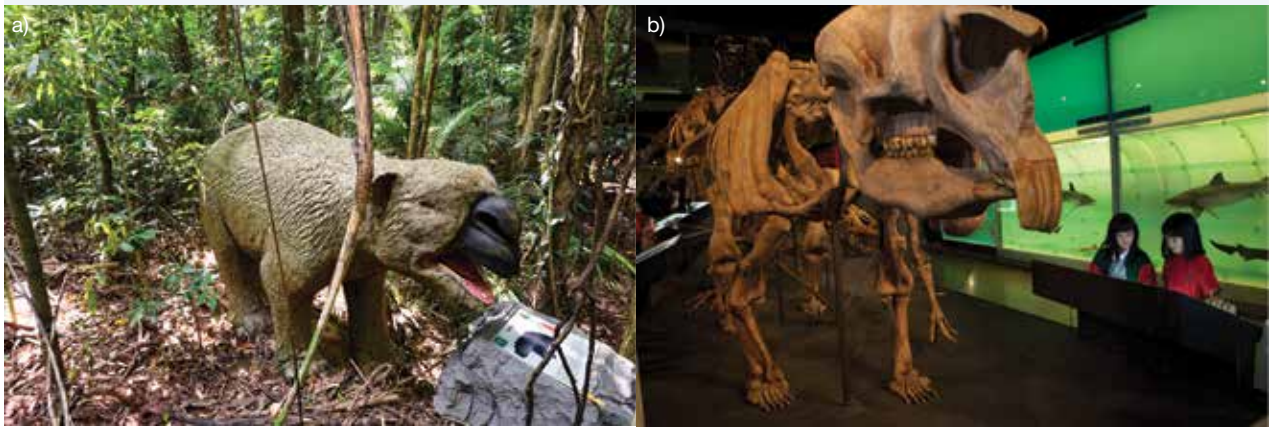
During the late Pleistocene period, the marsupials were much bigger than their modern equivalents. *Genyornis* was a huge emu and *Sthenurus* an enormous kangaroo. The ancient wombat, *Phascolonus*, grew up to eight times the size of a modern wombat and dug a burrow large enough for humans to enter. Another wombat-like marsupial, *Diprotodon*, was the size of a hippopotamus, with a head that measured over one metre in length and ended with a koala like nose pad.

Giant crocodiles, snakes and lizards, such as *Megalania prisca,* populated the land. *Megalania* was a colossal carnivore measuring up to 7 metres in length. It concealed its bulky body and short powerful tail in the high grass of the tropical **savannah**. *Megalania* had curved teeth, serrated like a carving knife on one side. The top marsupial predator was the lion-like *Thylacoleo*. This was similar in size to a leopard, with claws that were adapted to climbing and ripping and teeth designed to pierce and stab. Palaeontologists believe *Thylacoleo* lived mainly in the trees and hunted from above.

Scientists have long debated the reasons for the extinction of Australia's megafauna, such as the giant kangaroo and the giant wombat-like *Diprotodon*. Some scientists suggest that as human settlement spread across Australia, the megafauna were hunted into extinction. Many archaeologists disagree with this theory of extinction, because little evidence exists of megafauna bones near ancient campsites, or megafauna skeletal remains marked by spears or showing any evidence of human intervention.

Another hypothesis is that extinction of the megafauna was due to climate change.

SOURCE 3 (a) A model of a *Diprotodon* in the Jurassic Forest, Daintree Discovery Centre, Queensland, and (b) an articulated skeleton of a *Diprotodon* in an exhibit at the Melbourne Museum showing the sheer size of the mammal



2.4.4 Creatures of The Dreaming

Archaeological evidence suggests that humans and megafauna lived together in Australia for between 15 000 and 20 000 years. Stone artefacts and the bones of *Genyornis, Diprotodon* and *Sthenurus* have been found at the Pleistocene site at Cuddie Springs, amid the northwest New South Wales Country of the Muruwari, Ngemba, Weilwan and Yualwarri Peoples. Much evidence for the existence of megafauna also comes from the thousands of rock art sites scattered across Australia. The realistic manner and anatomical detail of the engravings and paintings indicate the artist had a direct contact with these animals, which are now long extinct. In the Yolngu Country of Arnhem land, the rock paintings of a four-legged powerful

savannah area of land that is a grassy plain with few trees in tropical and subtropical regions

animal, with a very large jaw and thick snout, have a striking resemblance to the fossilised remains of the *Thylacoleo*. A clear representation of the massive legs and rounded toes of the flightless *Genyornis* is also located under a shallow rock shelter in Yolngu Country. The age of some of these paintings is now believed to be between 40 000 and 50 000 BP.

The Aranda story of the giant *Kadimakara* is set in a time when the now arid regions of Willandra Lakes and Lake Eyre were covered in thick vegetation and towering gum trees, and when people hunted and fished the surrounding waters. The frightening *Kadimakara* lived in the treetops, until the land dried up and *Kadimakara* fell to the ground — where the bones remained on the shrinking shores of the dying lake. In these regions, palaeontologists have found the bones of *Thylacoleo* and other megafauna of Australia's Palaeolithic past.

aud-0405

tlvd-10488

SOURCE 4 Debunking the myth that Aboriginal stories are just myths: the Yamuti and the megafauna *Diprotodon*

Jacinta Koolmatrie is an Adnyamathanha and Ngarrindjeri person who works in the South Australian museum sector.

Since the beginning of time my ancestors have been telling stories. These stories derived from the land, waters and skies. We express our stories using our voice and through our actions. They are told at night, when the fire crackles and the stars are bright. They are told through the marking of the walls using sacred pigments the land has provided for us. They are the foundations of our songs and dances. Our language itself would not exist without these stories.

When our lands were invaded, the ways our stories were told changed. Those who were not part of our communities — those who were privileged to hear them — documented every detail that they could understand. These people were fascinated with our stories. They kept close and learnt our languages in order to understand them fully. When it came to sharing our stories, they lessened their importance. They said our stories were 'myths' and in doing so, they turned them into myths.

The reality is that we could never see them as myths because they have always had real world implications. As kids, we were always told stories that were there solely to protect us. Some of them seemed incredibly far-fetched, although as kids they had never been more real.

As a young Adnyamathanha kid, I was told the story about the Yamuti. The Yamuti was a very large and scary animal that specifically looked to steal little kids. This story was not told in a way that placed it in the past; the Yamuti existed in real time. We were always told that if we ever saw the Yamuti we had to run to the nearest tree and climb high, because the Yamuti had one flaw, the Yamuti could not look up. Despite us little kids having this one advantage, the thought of being taken by the Yamuti was scary enough to make us never want to leave our mother's side, especially if we were outside in the dark. But even when we were inside a house, the story instilled that much fear in us that it would make us lock all the doors, shut the windows and go to bed. The Yamuti was not something we were interested in seeing ourselves.

One of the striking descriptions of the Yamuti was that he is very big. Bigger than us kids especially. But this isn't a unique description; many of the animals in our stories are big. Thousands of years ago megafauna were abundant on this land. One animal in particular was the *Diprotodon*, the largest marsupial to have existed. The *Diprotodon* was incredibly large and thought to have been a browser, eating plants like shrubs. However, it's mostly believed to have been a harmless animal.

Thinking more about the *Diprotodon*'s physical description, it is oddly similar to that of the Yamuti. Interestingly, I was even told that our understanding that a Yamuti could not look up did show some potential of being present on a *Diprotodon*'s skeleton.

Whether or not you believe the *Diprotodon* is the Yamuti, our stories are derived from the truth. Something happened over 40 000 years ago that made my ancestors tell a story to protect their children. This relates to all of our stories. They simply weren't told to pass the time; these stories were created to help us live on this land. The most amazing thing about all of this is that despite animals becoming extinct, lands changing, and our stories being reframed as myths, they have prospered right through to today.

SOURCE 5 The Peoples of the Pilbara region sharing the same language and culture are known as The Ngaluma. They believe that the pictographs and petroglyphs were created by the *margas*, who were the ancestral beings who formed the landscape at the time of creation.

2.4 SKILL ACTIVITY: Questioning and researching, Communicating

SOURCE 4 relates the story of the Yamuti and the megafauna *Diprotodon*. Like the Aranda story of the giant Kadimakara, the Yamuti was remembered through the generations as a story told to children. The Yidindji Peoples of the Cairns area tell stories of a time when the ancestors lived on land of broad floodplains and undulating hills, where today the Great Barrier Reef is located.

The Peoples of the Nukunu (Spencer Gulf) Country also have stories of a time when the Gulf did not lie 50 metres below sea level. The Narrangga Peoples' stories describe a long ago time when the Gulf was marshy country dotted with freshwater lagoons, and home to a great number of birds and animals.

Children learnt of The Dreaming and all the natural features of Country through the wisdom of stories passed down from the Elders.

1. **Research** another story that you feel explains the changes to Australia's landscape and climate, the impact of rising sea levels, or the existence of Australia's megafauna. Relate your story to the deep time history of the First Nations Peoples of Australia.
2. **Communicate** your research as an illustrated storybook for children. Your story should provide an understanding of the key features of Country and climate, or the place that your giants of the Palaeolithic world had in it.

2.4 Exercise

learnon

2.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4	3, 5, 6	7, 8, 9, 10

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Check your understanding

1. **Match** the name of the megafauna animal with the description provided.

Name		Description
Genyornis		a. Leopard-like animal living mainly in the trees
Thylacoleo		b. Wombat-like animal with a head over a metre in length
Diprotodon		c. Large kangaroo-like animal with a short flat face
Meglania prisca		d. Large emu-like flightless bird
Sthenurus		e. Huge lizard with bulky body and powerful short tail

2. **Decide** whether each of the following statements is true or false.
   a. The ancient continent of Sahul was composed of the continent of Australia, New Guinea, Tasmania and the Aru Islands
   b. The largest collections of petroglyphs in the world are located in the region of Marntakamani.
   c. During the Pleistocene period, no animals or people inhabited Sahul.
   d. The Aranda story of the giant *Kadimakara* is set in a time after the end of the last Ice Age.
3. The end of the Ice Age changed the geographical features of Australia. **Identify** three regions in Australia where the environment was greatly changed by the warming of the earth.
4. The glacial ice periods exposed land bridges between the _____ shelf of Asia and the _____ shelf of Australia.

Using historical sources

5. Select the statement which best **explains** how the glacial periods assisted the movement of peoples out of Africa and eventually into the continent of Sahul.
   A. The hotter climate made it easier for people to sail out of Africa.
   B. The colder climate flooded land bridges and made it easier for people to sail out of Africa.
   C. The glacial ice periods exposed land bridges enabling people to walk across exposed areas of land and undertake shorter sea voyages.
   D. The glacial ice period covered land bridges, enabling people to sail across shallow, safer waters.

Apply your understanding

6. Write an extended caption to accompany **SOURCE 3** **describing** the *Diprotodon* and the similarities you can see with wombats or any other animals.
7. Refer to **SOURCE 4** to **summarise** the purpose of stories in the education of First Nations Australian children.
8. **SOURCE 4** relates the story of the Yamuti. **Name** the megafauna that the Yamuti bears a resemblance to, and then **reflect** on how stories have been used to record deep time history. Write a caption to accompany **SOURCE 4** connecting the megafauna and the stories handed down through generations of First Nations Australians.

Communicating

9. **Develop** your own hypothesis to explain why the megafauna vanished and were ultimately replaced by their much smaller Australian relatives.
10. Some of the most important features of the Dampier Archipelago are the pictographs and petroglyphs. Using **SOURCE 5** as your evidence, **propose** reasons images such as these are of such enormous archaeological significance to our deep time history.

LESSON
2.5 Who were the First Peoples of Australia and the Torres Strait Islands?

LEARNING INTENTION

By the end of this lesson you should be able to sequence events in chronological order to investigate when and how the early First Peoples settled into and throughout Australia.

TUNE IN

You are alive during the final stage of the Pleistocene epoch. it is the last Ice Age, and you are living on the large continent called Sahul. People are living in the lands lying to the north of Sahul. They live on sheets of ice about a kilometre thick and with massive glaciers covering huge areas of land. They share this land with the giants of the ice, such as the woolly mammoth, sabre-toothed cats and massive ground sloths.

1. What challenges would people face living in such a harsh environment?
2. How would Australia change if our own sea levels rose 150 metres due to climate change?

SOURCE 1 Life in the Ice Age

2.5.1 The peopling of an ancient continent

For the last 2 million years, the Earth's climate has gone through periods of change. Australia's deep time history is divided into two main eras: the Pleistocene (2.5 million years ago until approximately 12 000 BP — **Before the Present**) and the Holocene (the era from the end of the last major Ice Age). During the **Ice Ages**, the level of the ocean dropped up to 150 metres below the present level. From 80 000 to 10 000 years ago, the sea levels remained so low that Papua New Guinea, the Torres Strait Islands and Tasmania were linked to the Australian mainland.

Scientists generally believe that the first Australians made the journey from South-East Asia sometime during a long Ice Age period. It would have been possible to walk much of the way and, when crossing water, still stay in sight of land. The ocean levels are thought to have been at their lowest approximately 55 000 years ago. Later, as the climate became wetter and warmer, the sea levels rose and the land bridge between mainland Australia and Papua New Guinea flooded and formed the Torres Strait.

First Nations Australians archaeologists do not agree on the length of time people have lived on the Australian continent. However, the beginning of human occupation of Australia is generally agreed to date back to the Pleistocene period. During this period, great changes occurred in climate and sea levels. The natural environment and landscape were constantly being reshaped.

Before the Present a term used by archaeologists instead of BCE (before the common era) for when time periods are vast

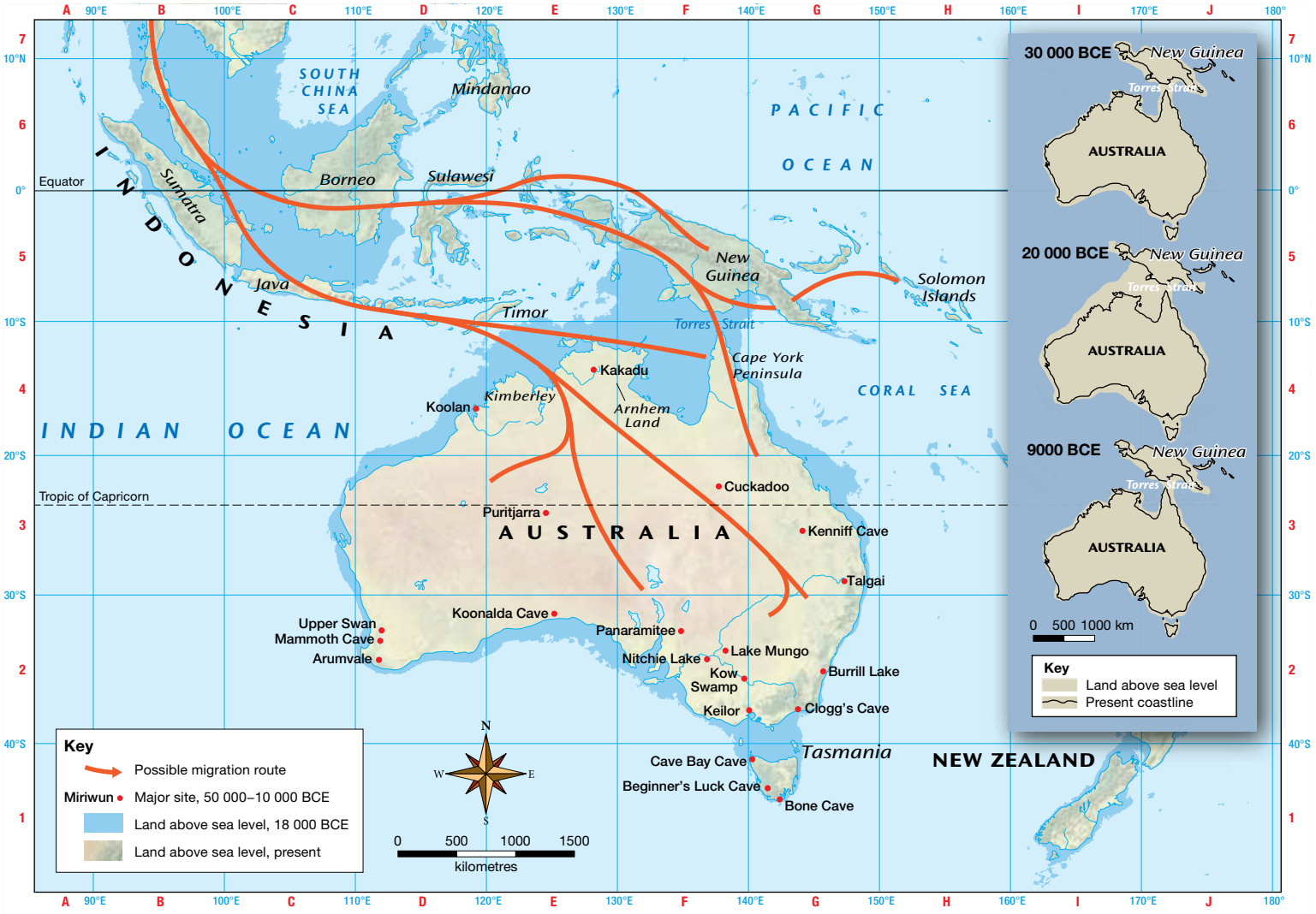
Ice Ages long periods during which glaciers covered much of the northern hemisphere

In the early 1960s, experts commonly believed that First Nations Peoples had inhabited Australia for only 9000 years. By 1980, **radiocarbon dating** had pushed the dates for settlement of the continent back a further 30 000 years. Scientists and archaeologists continue to debate the topic as new evidence and research technology develops. The remains of tools found in Victoria, for example, support a date of inhabitation in that region as far back as 70000 years ago.

radiocarbon dating a way of dating objects of plant or animal origin according to the amount of carbon left within them

int-8975

SOURCE 2 Possible migration routes of the forebears of First Nations Australians. The lowest sea levels in the last 120000 years occurred about 20000, 70000 and 90000 BP (Before the Present). Sea levels were lower then because large amounts of water were locked up as ice at the Earth's poles.



Source: Spatial Vision.

DID YOU KNOW?

Experts believe that First Nations Australians crossed the land bridge that connected Tasmania to the mainland more than 30000 years ago. When sea levels rose and covered the land bridge to form Bass Strait, these early First Nations communities remained isolated in Tasmania.

First Nations settlement of Australia possibly occurred over many generations, and the first Australians likely travelled along different routes. Three main theories currently explain human settlement of our continent:

1. Joseph Birdsell, an American anthropologist, suggested that small groups of people settled the inland areas of Australia first and then spread rapidly across the continent as their population increased. Birdsell's 'fast-track model' estimated that within 3000 years the settlement would have extended all the way to the eastern and southern coasts.
2. Sandra Bowdler, an Australian archaeologist, believes the first Australians were a seafaring people who selected coastal areas for their first settlement communities. Bowdler's theory has the spread of the population moving gradually from the coast and along the river systems to avoid the harsh deserts. Central Australia would have been the last place of inhabitation.
3. David Horton, an Australian biologist and archaeologist, points to the adaptable and varied nature of traditional First Nations communities to suggest that a wide variety of coastal, river and woodland environments would have been the starting place for groups of early people who progressively spread across the continent.

DISCUSS

Does it matter that experts cannot agree on when early humans arrived in Australia? Discuss as a class.

Torres Strait Islander Peoples

tlvd-0281

The rising sea levels at the end of the last Ice Age created Australia's modern coastline and the 247 islands of the Torres Strait. The Torres Strait Islands are located to the north of the Australian mainland where the Coral and Arafura Seas meet. The islands of the Torres Strait vary greatly in landscape and were mainly formed from the remains of:

- the isolated tops of a range of **plateau** land extending from Cape York, the northern tip of the Australian continent, to the low hills of the southern coast of Papua New Guinea. These are the rocky islands because they are the remains of the former land bridge and are an extension of Australia's Great Dividing Range.
- the extinct volcanoes of Mer, Erub and Ugar, located on the eastern side of the Torres Strait and the northern end of the Great Barrier Reef. These islands supported large gardens because of the rich volcanic soil.
- coral reefs in the central area. These are mostly **cays** with poor quality sandy soil and little water.
- **mangrove** mud flats in the top-west. These were formed by **silt** deposits from the large rivers of Papua New Guinea and are rich in wildlife.

SOURCE 3 The Murray Islands are the vents of volcanoes flooded by rising sea levels 8000 to 10000 years ago. The foreground shows Waier Island, with Murray Island in the background.

Land bridges would have been a migration route and possible place of settlement for early peoples during the Ice Age. The earliest archaeological evidence of permanent settlement of the Torres Strait Islands dates to 4000 years ago. Earlier evidence has been destroyed by powerful tides created by rising sea levels. However, by 2500 years ago, a robust seafaring culture was well established on many of the islands.

plateau a high, flat-topped landform

cay a small island found on coral reefs

mangrove area in a tropical or subtropical climate where vegetation grows in salty or brackish water

silt fine sand or earth particles carried and deposited by running water

The people of the Torres Strait Islands are the second group of Indigenous Australians, and are not First Nations people who live on the islands of the Strait.

2.5.2 Explaining creation — The Dreaming

tlvd-10489

As human occupation of the Australian continent proceeded, hundreds of different spiritual beliefs and cultural traditions, as well as hundreds of different languages, developed. However, despite these regional differences, First Nations communities did share a common belief in *The Dreaming*. The Dreaming explains creation and the nature of the world, the place that every person has in that world, and the importance of ritual and tradition. The Dreaming also teaches people about their country and where water, food and shelter would be found.

SOURCE 4 Wandjina rock art painted on the wall at Bachsten Creek in West Kimberley. The Wandjina are ancestral beings of the Kimberley region and the bringers of rain, who made and controlled the weather and fertility.

Teachings from The Dreaming are handed from one generation to the next through stories, music, dance, ceremony, art, significant cultural and sacred sites. It tells of the time when the **ancestral beings** moved across the continent, creating and moulding the land and its rivers, lakes, mountains and living creatures. As the ancestral beings travelled across the landscape, they left a trail that could be understood as mountains, waterholes, plant formations and other features of the geography. The Ancestral Beings told people how they came to be on the land.

SOURCE 5 From Regina McKenzie, *Towards a New Dreaming*

Dreaming gives us our history, our origin, where we started from. They are not made up stories, they are factual events from long ago. Our people have made them into stories so that they are easier for children to understand.

The Dreaming established the laws and the nature of the relationships between different groups of First Nations Peoples. The links between people were built on their connections to the land and to The Dreaming. First Nations tradition taught people that the place of their birth and kinship system, and their **clan** established the country they belonged to.

The belief in The Dreaming cannot be accurately translated into English because no equivalent set of beliefs exists in non-Indigenous society. Many First Nations words describe the idea of The Dreaming, according to the language group a person belongs to:

- *Ungud* — the Ngarinyin Peoples of the Kimberley region in Western Australia
- *Wongar* — the Yolngu Peoples of northeast Arnhem Land.

Many First Nations Australians believe that the origin of their ancient ancestors in Australia happened at a time when humans formed with the landscape. Their Dreaming beliefs provide stories of a First Nations presence on the continent since the beginning of time. This Dreaming belief explains the origin of all life in Australia and denies theories of the arrival of people from South-East Asia to Australia during a previous Ice Age. The Dreaming and the modern science of

ancestral beings gods or deities who taught people how to live and the rules of society; regarded as the direct ancestors of First Nations Peoples living today

clan a group of people of common descent or ancestry

DNA do not always present different theories explaining the origin of First Nations Peoples. The study of archaeological remains and the science of genetics do support The Dreaming connections between the First Australians and their Country. Science shows that at least 45 000 years ago human settlement was widespread across the continent. These deep time Australians were the descendants of one small group who had truly been the first Australians. It can be argued that before arriving in Sahul, there were no ancient Australians. It was the land itself who made the people.

aud-0406

SOURCE 6 Torres Strait Islander Peoples also have their Dreaming stories. Tagai, a warrior and fisherman, was the creator being who shaped their world. To seafaring people, the stars gave them their navigation for journeys across the ocean. In a range of stories, Tagai is responsible for creating the star patterns in the night sky.

Tagai was a great fisherman. One day he and his crew of 12 were fishing from their outrigger canoe. They were unable to catch any fish, so Tagai left the canoe and went onto the nearby reef to look for fish there.

As the day grew hotter and hotter, the waiting crew of Zugubals (beings who took on human form when they visited Earth) grew impatient and frustrated, Their thirst grew, but the only drinking water in the canoe belonged to Tagai. Their patience ran out and they drank Tagai's water.

When Tagai returned, he was furious that the Zugubals had consumed all of his water for the voyage. In his rage he killed all 12 of his crew. He returned them to the sky and placed them in two groups: six men in Usal (the Pleiades star cluster) and the other six Utimal (Orion). He told his crew to stay in the northern sky and to keep away from him.

Tagai can be seen in the southern skies, standing in a canoe in the Milky Way. His left hand is the Southern Cross holding a spear. His right hand is a group of stars in the constellation Corvus holding a fruit called Eugina. He is standing on his canoe, formed by the stars of Scorpius.

DID YOU KNOW?

The first sea voyages to Sahul, the combined continent of Australia and New Guinea, would have been the longest and most treacherous sea voyages that had ever been made. This journey would have been the first time that human beings had ventured beyond the massive single land mass that covered modern Africa, Asia, Europe, western Indonesia and the Americas. The coastline these first seafarers landed on would eventually be drowned by the rising sea levels of the Holocene era.

on Resources

Interactivity An image of life during the Pleistocene Period (int-8926)

2.5 SKILL ACTIVITY: Communicating

For many First Nations Australians, the scientific study of origins, and the timing of human settlement, is not important.

1. Read **SOURCES 5** and **6** to gain an introduction into the meaning of The Dreaming. Make notes on anything you find interesting.
2. Working in groups, **write** a simple explanation of what you think The Dreaming helps people to understand. (Your understanding of the concept will develop as you work through this topic.)
3. Using **SOURCE 4** as the visual centrepiece for a poster promoting a museum exhibition of Australia's deep time history, **write** a short explanation of the place of the Wandjina in expressing Dreaming beliefs.

2.5 Exercise

learnon

2.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 5, 8	2, 3, 4, 6	7, 9, 10, 11, 12

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Check your understanding

1. **Determine** whether each of the following statements is true or false.
   a. Archaeologists agree on the exact time Australia was occupied by humans.
   b. Scientists believe that the Torres Strait was formed when sea levels rose and the land bridge between mainland Australia and Papua New Guinea was flooded.
   c. Evidence for human occupation of Victoria can be dated back to over 90 000 years ago.
   d. Archaeologist Sandra Bowdler believes central Australia would have been the last area of the continent to be inhabited by First Nations Australians.
   e. Australia was once connected to Papua New Guinea by a land bridge.
2. Briefly **describe** the various landscapes of the Torres Strait Islands.
3. Fill in the blank spaces.
   The _____ is a _____ system that is shared by First Nations Peoples. It describes a time when _____ beings moved across the continent creating the features of the _____ and all living _____.
4. **Explain** how The Dreaming is handed down to successive generations of First Nations Australians.
5. Why are the stars so important to Torres Strait Islander Peoples?
   A. Stars provided the Torres Strait Islander Peoples with an understanding of the universe.
   B. Stars provided the Torres Strait Islander Peoples with a scientific understanding of ocean currents.
   C. Stars provided the Torres Strait Islander Peoples with navigation guidance, enabling them to find their way across the ocean.
   D. Stars provided the Torres Strait Islander Peoples with clues about changing weather conditions.

Apply your understanding

Historical perspectives and interpretations

6. Using the map in **SOURCE 2** and the information in the text, **describe** how the Ice Age changed Australia and from where archaeologists believe the migration of ancient people to Australia came.
7. **Explain** how you think the location and geography of the Torres Strait Islands would have influenced occupation of this area by early humans.

Using historical sources

8. Read **SOURCE 5**.
   a. Why was The Dreaming made into stories?
   b. **Explain** how The Dreaming connects people with the land or Country.
9. **SOURCE 4** shows a representation of an ancestral being for many First Nations Australian communities. **Describe** how the ancient artist portrayed this ancestral being and why it would have been important for ancient peoples to express their stories through their art.
10. **Identify** what evidence scientists examine in developing their theories on the human settlement of Australia.

Historical perspectives and interpretations

11. **Propose** reasons archaeologists have developed different theories explaining how First Nations Australians occupied the continent.
12. Think back over the events mentioned in this lesson.
    a. List all the dates and events in chronological order from earliest to latest and **create** a timeline.
    b. Can you **identify** any events that led i) directly and ii) indirectly to another? Why is this task difficult?

LESSON
2.6 How did First Nations Australians manage the land?

LEARNING INTENTION

By the end of this lesson you should be able to explain the significance of developments in the land management, and agricultural and aquacultural practices of ancient Australians.

TUNE IN

Think about a natural environment you are familiar with. Describe the plants, animals, landscape and the climate. Identify the challenges you would face if you were living in, and from, this location. How would your daily life change, and what landscape changes would you have to make for survival in this location?

Look at **SOURCE 1**. Describe the plants, animals and landscape, and what you think the climate would have been like. What evidence in this nineteenth-century painting indicates how the First Nations Peoples of the region managed the landscape? Suggest why they would have needed to manage this land.

tlvd-10490

SOURCE 1 Joseph Lycett, the early nineteenth-century convict artist, painted images of First Nations life. Lycett's paintings show fire being used as a tool to catch animals and create grasslands. Early European explorers often noted open country with scattered trees that looked like well-tended parkland. Firestick farming created the landscape that Europeans occupied in 1788.

2.6.1 The influence of the environment on ancient Australian communities

The landscape and climate of ancient Australia was constantly changing. First Nations Australian communities had to develop many methods of hunting, gathering and managing their sometimes challenging Country. First Nations Australian communities are widely recognised as having an enormous practical knowledge of land and resource management. In traditional communities, food was farmed very efficiently, leaving time for the

development of cultural activities. First Nations Peoples did have permanent housing structures; however, as the climate changed, camps were moved according to community understanding of patterns of climate, marine and insect life, plant growth and the habits of native animals. The gathering and hunting of food from the natural landscape was performed in a sustainable way, ensuring resources would remain for future generations. The practice of moving according to the seasonal cycle was determined by the availability of food and resources. First Nations Australians took only what was needed from the land, ensuring as little harm to the environment as possible. They avoided killing young animals, left seeds to grow in the following season and, when collecting eggs, left some to hatch for the next generation. First Nations Peoples ate a wide variety of food, ranging from the gathered fruits, berries, plant roots and grubs, to the possums, kangaroos and other animals local to the area in which they lived. Accessing a wide variety of resources was sustainable because nothing was exploited.

Firestick farming

Fire is an important aspect of managing the land in First Nations life and eventually shaped much of the Australian landscape. Fire was a powerful tool that was a part of nearly every daily activity. **SOURCE 2** shows the uses of fire.

Carrying a firestick appears to have been an ancient custom. Setting fire to the bush and the grasslands is a practice known as firestick farming. First Nations Peoples would often carry firesticks or bundles of smouldering banksia branches to set fire to the dry leaves and grass and to burn ground vegetation. These small-scale fires were lit during the cooler seasons when the weather conditions ensured the fires did not burn out of control. Firebreaks were also put in place to contain fire.

int-8928

SOURCE 2 Uses of fire in First Nations Australian culture

1. Cooking food and catching animals by flushing them from burrows and driving them into traps
2. Repelling insects and removing snakes from long grass surrounding campsite
3. Manufacturing tools such as spears and stripping bark from trees in the process of making canoes
4. Sending messages by smoke over long distances and clearing the ground through recognised travel pathways

5. Cleaning wounds and scarring the skin for initiation and ritual
6. Scaring off evil spirits and burning the bodies of the dead in regions where this was the funeral tradition
7. Lighting the night for community gatherings and providing warmth for sleeping
8. Regularly burning the forest undergrowth to prevent large-scale bush fires

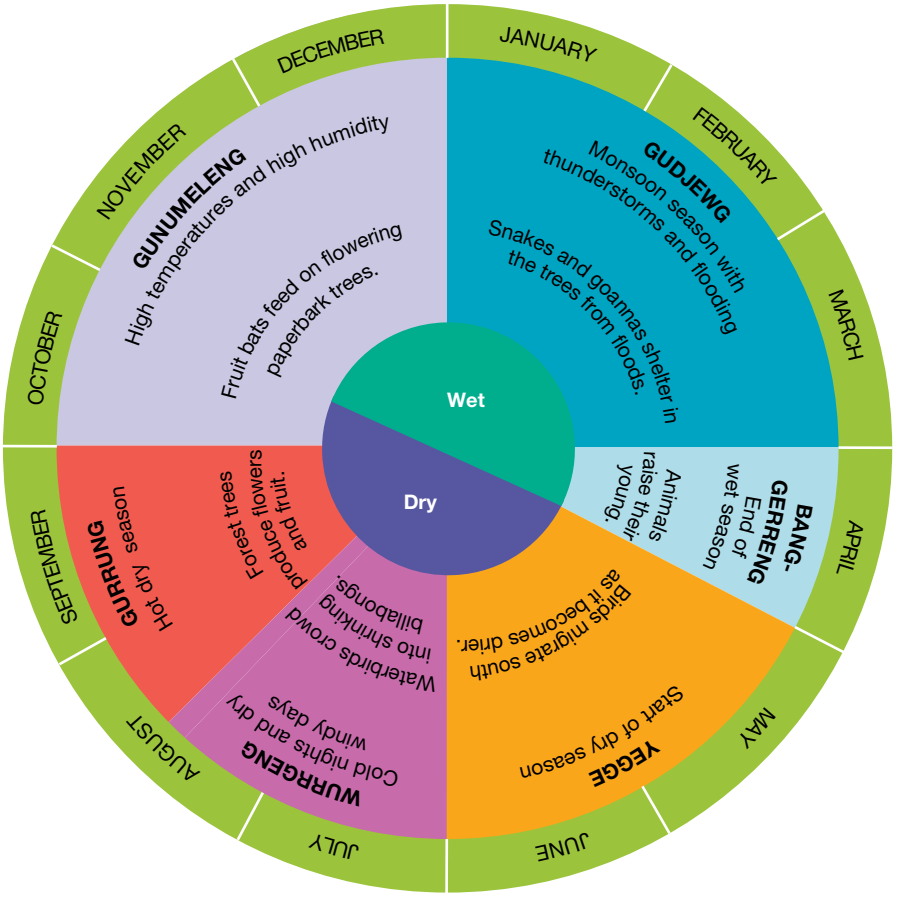
First Nations Australians knew they could use fire to manage their land and produce the foods they wanted. Fire assisted in changing patterns of plant growth and animal life across the many different landscapes of the continent. The grasslands were burnt to promote regrowth of lush plant life. Fire management was carefully planned by those within the clan who were responsible for firestick farming, backburning and cool burns. Thousands of years of burning increased the size of the open grasslands. This encouraged the populations of a variety of the grass-eating animals, such as the kangaroo. Fire increased the availability of food for people who hunted and **foraged**. Bush potatoes and other edible seeds and ground plants flourished in the more open environment left by small-scale fires. Scientists believe that small animals, such as the bilby, were threatened with extinction when First Nations firestick farming was no longer being regularly practised.

forage to search for provisions or food

int-8967

SOURCE 3 First Nations communities in the Kakadu area of today's Northern Territory identified six seasons based the changes in plants, animals and the environment. These are shown below in a modern-day representation.

tlvd-10491



tlvd-10492

SOURCE 4 A nineteenth-century painting of village life at Erub (Darnley) Island in the Torres Strait. Erub Island is located within the eastern region of the Torres Strait. Its rich volcanic soil supported the farming of taro, bananas and a range of vegetables. At the time of painting, the island supported approximately seven villages and 400 permanent residents.

2.6.2 Managing the land in the Torres Strait Islands

Farming practices

Farming was practised in the Torres Strait Islands during ancient times. Crops and farming knowledge spread from the southern coast of Papua New Guinea to the people of the Torres Strait. Early Torres Strait communities cultivated a wide variety of crops, according to the particular geographic conditions of the island.

- People on the islands to the north-west, located close to the coast of Papua New Guinea, relied most heavily on agriculture for their food supplies. The people grew the **taro** plant as their main crop; they also established gardens growing bananas away from the tidal swamps on the surrounding uninhabited islands.
- People on the islands to the north-east, where the volcanic soil was moist and fertile, grew coconuts, taro, bananas and a variety of smaller fruits and vegetables.
- People on the islands on the west and closest to the Australian mainland, such as Muralag Island, only farmed on a small scale. Taro was grown as an addition to food supplies that were mainly drawn from the sea. The soils and climate of the rockier islands were not as well suited to agriculture, and so people continued to depend on a hunting and foraging lifestyle.

taro a plant with broad edible leaves and root vegetable, grown in the tropical regions, especially the Pacific Islands

seagrass a grass-like plant living in or close to the sea

ecosystem a community of organisms, plants or animals and the environment they exist in

dugong a sea animal, sometimes called a sea cow, found mainly on the coasts bordering the Indian Ocean

Fishing practices

While the different island groups of the Torres Strait had different landscapes and ocean conditions, they all developed a seafaring culture. Even those who depended on farming took to the sea for food and resources. Fishing was central to the Torres Strait way of life. The shallow waters, complex tropical reef systems and huge beds of **seagrass** created a thriving marine **ecosystem**.

SOURCE 5 Fishing practices such as those described would have been practised by early Torres Strait Islander Peoples, from *Reports of the Cambridge Anthropological Expedition to Torres Straits* by A. C. Haddon, W. H. R. Rivers, 1912.

> At low tide men, women, and children may be seen searching the reef for shellfish and fish which have become imprisoned in rock-pools, but as a rule this simple collecting is done more by the women and children. Although serious fishing is more particularly men's work the women also take a part, but definite fishing expeditions and the quest of dugong and turtle are confined to the men. Practically the fishing of the women is limited to that which they can undertake on the fringing reef of their home island.

Torres Strait Islander Peoples constructed a wide range of tools for fishing, such as harpoons and spears, hooks and lines, fish scoops and nets. They built stone-walled fish traps and harvested over 450 different species of marine life. They developed techniques of drying and preserving turtle and **dugong** flesh so that it could be kept for later eating and trading. Dugong and turtle were very important to the diet of Torres Strait Islander Peoples and are central to creation stories of the Torres Strait.

DID YOU KNOW

First Nations Australians on the mainland also fished, although it is believed that Tasmanian First Nations Peoples stopped fishing about 3500 years ago in favour of collecting abundant supplies of shellfish. While harpoons were favoured by Torres Strait Islander Peoples, spears were more common on the mainland. Some of the spears were made using human hair and some with a barb from a stingray.

2.6 SKILL ACTIVITY: Questioning and researching

First Nation Australians were practising aquaculture (the farming of organisms that live in water) from ancient times. The massive Darling River Fish Traps are claimed by some archaeologists to be the first human-made structures on Earth. Weirs, clay dykes over one metre high, irrigation systems, water evaporation reduction systems, fish haul nets with floats and weights, whale fishing boats and tools are all evidence of aquaculture and the sustainable fishing practices of ancient First Nations Australians.

You have read about the agriculture and aquaculture practised across Australia from ancient times. Now consider the Country of the Gunditjmara Peoples, of Lake Condah and the Western District in Victoria. Nineteenth-century Europeans, such as the escaped convict William Buckley, saw the extensive fish traps that had been constructed in Victoria before the great pyramids were built in Egypt. You want to learn more. Refer to **SOURCE 6** as your starting point

aud-0407

SOURCE 6 Brewarrina fish traps

The fish-trap system is so old that the local Aboriginal people, the Ngemba, attribute its construction to the creator spirit Baiame. It is hard to get much information on this incredible construction but at an Aboriginal Languages meeting in Sydney in 2012 I met Brad Steadman, an Elder from Brewarrina, who, upon hearing of my interest in the traps, told me one of the traditional stories:

> Bunggula, the Sooty Grunter (bream), grunts when taken out of the water. The spines on its back are the spears flung by the old man, Baiame, who hunted him in the waterhole. The fish escaped, and as he flashed his tail he made a channel which filled with water to make the river. But the country dried out, the kangaroos went away, the plants died, and there was a big drought. The old man came back with his dogs and his sons, and said the drought was because the people didn't know the law or the names of the rivers. He told them the songs to sing and the dances to dance so the rain would fall again and things would be as they are today.

Source: Bruce Pascoe, *Dark Emu: Aboriginal Australia and the birth of agriculture*, Magabala Books, 2014.

1. Work in groups to **discuss** what information **SOURCE 6** provides about First Nations Australian aquaculture.
2. Refer to primary and secondary source material to continue your own **research** into how the Gundtitjmara Peoples, whose Country and culture was tied to the rivers and lakes, developed an industry around the abundance of this natural resource.
3. Other members of your group could research further examples of ancient Australian aquaculture — for example, the mollusc industries of the Kombumerri Peoples, the Brewarrina fishing systems of north-west New South Wales, the Barragup fishing weir on the Serpentine River of Western Australia or the stone walled fish traps of the Torres Strait.
4. The aquaculture, sustainable harvesting and water management practices of ancient Australia are not well understood. Discuss and **evaluate** your group research findings to write one statement expressing the importance of aquaculture and fishing in developing our knowledge of deep time Australia.

2.6 Exercise

learnon

2.6 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
2, 3, 4	1, 5, 9	6, 7, 8, 10

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Check your understanding

1. Fishing was central to the Torres Strait Islander way of life. **Identify** three geographical features of these islands that allowed for this seafaring culture.

2. Number the following sentences (1–6) in the correct order so that they provide a short explanation of the importance of farming and hunting to ancient Australian First Nations Peoples.

	The particular geographic conditions of each group of islands influenced how and what people farmed.
	Torres Strait Islander Peoples cultivated a wide range of crops, such as taro, bananas and coconuts.
	Torres Strait beliefs provide further evidence of the importance of the sea.
	Farming knowledge spread from Papua New Guinea to the islands of the Torres Strait.
	Despite the different landscapes, all the Islanders took to the sea for food and resources.
	Evidence of this can be seen in the wide range of tools for fishing, such as harpoons and spears, hooks and lines, fish scoops and nets.

3. **Identify** three ways fire increased food supplies for First Nations Australian communities.
   - **A.** Promoted new growth
   - **B.** Attracted grass-eating animals
   - **C.** Scared off animals competing with people for food supplies
   - **D.** Changed patterns of plant growth
   - **E.** Killed the weeds
4. Why did First Nations Peoples of Australia have to develop so many methods of hunting and managing the land?
   - **A.** Methods changed as resources were depleted.
   - **B.** Methods were diverse because people lived in such a wide range of environments.
   - **C.** Methods changed because people were constantly developing new technologies.
   - **D.** Methods changed because people were given new advice.

Apply your understanding

Using historical sources

5. Use the information from the text and **SOURCE 1** to answer the following questions.
   - **a.** How important was firestick farming to the First Nations way of life?
   - **b.** What was the impact on the environment of firestick farming?
   - **c.** What do you think were the consequences for the environment when firestick farming stopped?
6. **Explain** how reliable **SOURCE 1** is in providing historians with evidence of ancient First Nations land-management practices. Give reasons for your answer.
7. **Explain** how the sources in this lesson support the view that First Nations Peoples of Australia lived in harmony with the land.

Communicating

8. Imagine that you have accompanied one of the early nineteenth-century explorers on their voyages across the continent and through the islands of the Torres Strait. Refer to the sources and the text, and **create** a series of diary entries detailing some of the land-management practices you have witnessed.
9. Management of land and natural resources was important to all First Nations Australian Peoples. **Explain** how significant the natural environment was in shaping the beliefs and daily life of First Nations Australians.

Using historical sources

10. **SOURCE 4** was painted by the English artist Harden Melville. He was appointed the artist on board the HMS *Fly* and travelled extensively throughout the broader Pacific Island communities during the nineteenth century. **Analyse** the painting for the clues it gives you to life on the Torres Strait Islands. **Describe** the impression of lifestyle and the importance of the sea communicated by the artist in the painting.

LESSON
2.7 How did technology develop in ancient Australia?

LEARNING INTENTION

By the end of this lesson you should be able to research and analyse sources to identify the development of First Nations Australian technologies, and how they contributed to daily life.

TUNE IN

In 1788, two very different cultures came into contact when Captain Arthur Phillip led a fleet of 11 ships into the waters of Botany Bay. Despite the conflict and violence that was to follow this event, early colonial art does provide a record of the first European impressions of First Nations Australian societies, cultures and technologies.

Look at **SOURCE 1**. Watercraft of various shapes and sizes were a very important fishing and transportation tool for First Nations Peoples of Australia. Discuss how this source would be useful to an archaeologist gathering evidence of the technology of First Nations Australians.

SOURCE 1 A 1789 engraving of the *Natives of Botany Bay*, by Thomas Medland, showing First Nations men fishing and hunting

2.7.1 First Nations Australian languages

As modern Australians, we are a multicultural people — as were the Peoples of ancient Australia. The exact number of First Nations languages spoken when the Europeans colonised Australia is unknown, but experts estimate that approximately 250 separate language groups existed, along with hundreds of additional **dialects** of the main language groups. The spread of human settlement across Australia took generations, and through the passage of time, completely new languages had the opportunity to evolve. Ancient Australian communities developed varied cultural features, new and varied technologies and different languages because of the vastly different natural environments people lived in and the distances between them.

Despite differences existing in languages across the country, many neighbouring First Nations groups used similar words, and this was useful when trading items such as ochre, tools and weapons. For example, the word or variation of *marra* (hand) is used by many First Nations Peoples along the east coast of Australia.

During the tens of thousands of years First Nations Peoples lived in Australia, the climate and conditions changed dramatically. Changes in climate would have affected water supply and where food could be hunted, gathered and stored. The rising Ice Age seas would have inundated many ancient communities and forced the first Australians to adapt to the challenges of this shifting landscape. First Nations Australians did not just react to a changing environment; they also shaped it. In a process we call **intensification**, ancient communities set about increasing the productivity of the land they farmed. Fire was

dialects different forms of a language

intensification activities undertaken with the intention of enhancing the productivity of land

used in ancient times to manage the land and encourage food production. Food sources that were controlled and sustainable were developed using traditional burning and sowing, and storing of grains such as native millet, macadamia nuts, fruit and berries. The material remains of stone picks used to plough the soil and ground edge axes made from hard stone such as basalt are the remains of ancient land management tools. Finely crafted hafted stone axes (axes with handles attached, giving the tool greater force) have been found in Australia dating back 50 000 years. The very hard stone needed for the axes was quarried from as few as six sites in Victoria, and from there the axe heads were traded across south-eastern Australia.

Stone was widely used in the construction of tools and weaponry:

- Millstones are the largest stone implements and were usually made from slabs of sandstone quarried from locations such as western New South Wales. Millstones were used to grind the seeds collected from grasses, wattle and kurrajong trees. Men used the back and side of the millstones to sharpen axes and chisels.
- Whetstones were smaller versions of millstones. They were portable and often had a grinding side on both stone faces.
- Percussion stones are also known as hammer stones. The hammer stones were used for trimming and breaking other stones, shredding bark, and pounding bones, seeds and shells.
- Anvil stones could be flat or egg shaped, with a chiselled and roughened centre, and were designed to hold an object that was being shaped with a hammer stone.
- Chisels were a type of long axe head affixed by gum to a handle. Their function was similar to axes in that they were designed to split bark from trees and split timber.
- Blades were highly crafted stone implements used as spear heads, and for carving and cutting hide.

Wood was very important and used to construct a wide range of objects, such as canoes, weapons, message sticks and domestic utensils. Bark was used for the construction of canoes, huts, sleeping mats, clothing and sandals. Shell, bone, gum, grass, skins and hair were among the wide variety of natural resources used on a daily basis.

tlvd-10493

SOURCE 2 A collection of First Nations Australian artefacts, tools and weapons, including boomerangs and hand axes

2.7.2 Weapons of war

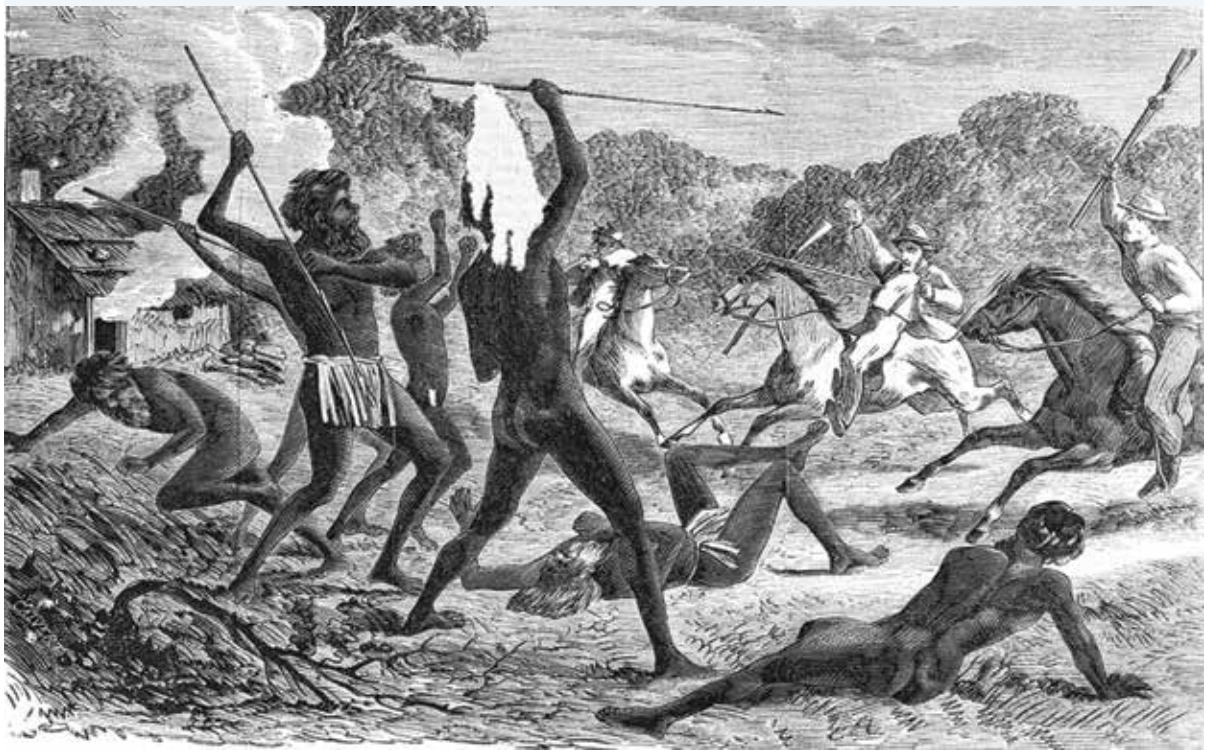
As the climate shifted and the seas expanded, the Pleistocene era moved into the Holocene. Inland lakes dried up, deserts and dunes expanded, the continental shelves flooded and the coastline moved inland. Competition for land and resources increased. To the existing stone Pleistocene tool technology, new techniques for flaking stone developed to produce very sharp blades and scrapers in a wide variety of sizes, shapes and designs. The 'small tool tradition' spread, resulting in spears and weapons with greater penetrating power. Tools suited for defence were now more commonly produced.

The proudly independent language and clan groups of ancient Australia were sometimes rivals, fighting with each other over territory and resources. Men traditionally carried spears for hunting and defence when they moved away from their campsites. Museum collections of First Nations Australian artefacts include hundreds of different designs of weapons of war such as spears, clubs and shields. Artefacts reflect the different geography and climate of the makers' country. Coastal peoples, for example, used fishbone on the tips of their spears while desert peoples used stone. First Nations Australian tools and weapons are noted for their flexibility and adaptability, being objects that could be used for a variety of purposes.

- Clubs were used for throwing, stabbing, slashing and smashing. The wood of clubs was hardened through firing and then treated with ochre and oils to prevent weathering. Clubs came in a variety of shapes and sizes. Club heads varied in shape, from being cylindrical or cone-shaped to bulbous or hooked. Long straight clubs were used as fighting sticks and as defence against an opponent's blows. In the north-eastern rainforests, a two-edged club was used like a sword. It was carried with a large softwood shield. Large clubs, called *nulla nulla*, were used in north-east South Australia for organised combat. At approximately 2 metres in length, they were too big to be thrown. *Nulla nulla* were usually owned by male Elders and were objects showing a person's importance in the clan. They were also used as valuable trade items. In some communities, the murrawirri clubs were considered to have special magical powers. Clubs were also used for ceremonial purposes, particularly in dances.

tlvd-10494

SOURCE 3 A warrior advancing for combat, from a drawing by nineteenth-century British artist H Calvert



- Boomerangs had a variety of purposes, such as fighting, fishing, hunting and ceremonies. Boomerangs were throwing sticks that were accurate at high speeds. They were made from a very hard wood, making them a deadly blade when travelling with force through the air. The form and use of boomerangs changed according to where and how the boomerang was made. The returning boomerangs were mainly used in south-east Australia. Boomerangs made in the Kimberley and in central Australia were large and broad and generally used in combat. These boomerangs did not return when thrown but moved in a powerful swerving line.
- Spears and spear throwers known as *woomera* were also used for hunting, fighting, fishing and ceremonial occasions. Fighting spears were designed to inflict serious wounds — they had heads with up to 40 barbed tips attached and tiny stone or shell fragments set into the spearhead. The barbed spears could not be pulled out without tearing at the wound (these are also known as death spears). The small shell pieces remained lodged in the flesh of the victim. In the Cape York region, a large number of stingray barbs were set into the head of spears that were then regarded as having special magical properties. Every region had its own style of spear and spearhead. The *woomera* was the name commonly given to the barbed death spear. The *woomera* was not thrown with the spear, but remained in the man's hand, acting as a lever to project the spear with greater force.
- Shields provided defence from spears and clubs. Shields were often decorated with totemic designs and were objects of great beauty. In the region of Victoria, a narrow hardwood shield was used as defence against clubs while a broad bark shield was used in spear fights. The bark was harvested when still green and so was able to absorb the impact of the spears.

Island warriors

First Nations Peoples of Australia used similar weaponry, with the exception of the bows and arrows that were commonly used in Melanesian communities. Bow and arrows and spears were the main weapons of the Torres Strait Islands. Clubs were constructed with star- or disc-shaped stone heads and stout wooden handles. The razor-sharp bamboo knives were particularly effective weapons. Some Torres Strait Islander communities had the fearsome reputation for practising headhunting. The bamboo knives were used for ritualistic decapitation, with the heads then being hung on loops of cane passed through the mouth and out of the neck. The people of the central region of the Torres Strait lived on flat islands with little natural defences. Raiders came regularly from the east and the west to plunder their gardens. The image of these violent warriors travelling the sea is the stuff of Torres Strait belief. According to Island legend the Mabuiag warrior chief, Kwoiam, organised an army of sea pirates who led raids across the Straits and as far north as Papua New Guinea's Fly River.

SOURCE 4 Images of the weaponry used by Torres Strait Islander Peoples

2.7 SKILL ACTIVITY: Using historical sources

The Holocene era was not just an era of climate change; it was also a time of great changes in technology. Along the newly formed coastlines, the people who had once hunted on land developed the tools for fishing. Tools became more sophisticated, efficient and versatile.

You are now a member of a team of archaeologists presented with a range of tools, including stone drills and serrated saws, spears made of stone blades and barbs, and needles and fishing hooks made from bone or shell. The tools have been collected over a long period of time from a range of sites.

Your first impression is that the tools belong to the Holocene era.

1. **Research** the features of the Holocene technology so that you can explain how these artefacts are different from those of the Pleistocene era.

Your next task is to date the tools you have in front of you using a range of methods.

2. **Research** three main dating methods to determine which is the best for dating your collection; consider radiocarbon dating, electron spin resonance dating and luminescence dating.

Your final team task is to design a museum display of a variety of your tools.

3. Refer to the text and **SOURCES 2** and **4** to select a category of tools for further research. Locate images as examples, and identify the materials your tools have been manufactured from and the probable uses of the tools. If possible, also **demonstrate** how the tools worked. (For example, how was a boomerang thrown? How was a woomera held?) **Identify** examples of nation groups who used such tools.
4. **Design** the visual layout of your tools exhibit, grouping like tools together and writing annotations detailing the key features of each tool group.
5. **Communicate** your knowledge of the technology of First Nations Australia by putting your group research together into a pamphlet to be used as the museum guide for your collection of Australian tools and weapons. The guide should be aimed at a museum audience that has no knowledge of the archaeology, geography, culture or deep time history of Australia. Choose a striking image for the front of the pamphlet to grab the interest of museum patrons.

2.7 Exercise

learnon

2.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 4, 5, 8	2, 3, 6, 7	9, 10

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Check your understanding

1. **Determine** whether each of the following statements is true or false.
   a. At least 250 First Nations languages were spoken in Australia at the time of European invasion.
   b. During the innumerable years of First Nations occupation of Australia, little change occurred in the climate.
   c. Fire was used to manage land and increase food production.
   d. The Holocene period came before the Pleistocene period.
   e. First Nations Australian weapons and tools were noted for their adaptability and flexibility.

2. **Match** the tools with descriptions by placing the corresponding letter in the middle column.

Tool		Description
Clubs		**a.** Called *nulla nulla* in north-east South Australia
Large combat clubs		**b.** Used for fighting, fishing, hunting and ceremony
Boomerangs		**c.** Used as a lever to help propel a spear with force
Fighting spears		**d.** Often decorated with totemic designs
Woomera		**e.** Constructed with barbed tips
Shields		**f.** Used for throwing, stabbing, slashing and smashing

3. **Define** the process we call 'intensification'.
4. **Identify** one reason the First Nations Peoples of Australia developed a wide variety of cultural traditions and languages.
   A. People migrated from many different parts of the world.
   B. People lived in vastly different natural environments and were often separated by long distances.
   C. People had no contact with each other.
   D. People fought with each other constantly.
5. Finely crafted hafted stone axes (axes with handles attached, giving the tool greater force) have been found in Australia dating back _____ years.

Apply your understanding

Communicating

6. Briefly **explain** how fighting practices differed between First Nations Australian communities.
7. First Nations Peoples of Australia used natural resources with great skill to create efficient tools and weapons. **Propose** reasons why the archaeological record of these artefacts is limited.
8. **Match** the tools with each purpose to create a brief summary of a variety of stone tools.

Tools		Purpose
Millstones		**a.** Designed to hold an object that was being shaped with a hammer stone
Percussion stones		**b.** Designed to split bark from trees and split timber, and for foraging in the ground
Anvil stones		**c.** Used to grind the seeds collected from grasses, wattle and kurrajong trees
Chisels		**d.** Used for trimming and breaking other stones, shredding bark, and pounding bones, seeds and shells

9. After hunting and foraging, food was often cooked in huge earth ovens constructed from long trenches partially filled with stones, pieces of anthill and clay. These permanent structures have been of great archaeological value because some have survived for centuries. Nearby middens — heaped mounds of discarded stone artefacts, shells, and mammal and fish bones — provide further archaeological evidence. **Identify** the archaeological evidence of life in ancient Australia that could be uncovered at a midden or an ancient oven site.
10. First Nations Peoples of Australia were highly skilled at using the natural resources of their environment to meet all their physical needs. Write one paragraph **explaining** some of the items that would have been found in a First Nation hunter's tool kit, and the variety of materials used in daily life.

LESSON
2.8 What was the First Nations Australian economy?

LEARNING INTENTION

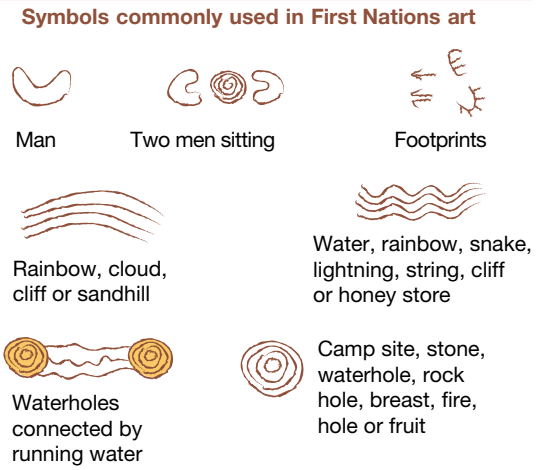
By the end of this this lesson you should be able to investigate everyday life through the ancient trade and Country connections that crossed ancient Australia, and how this developed over time.

TUNE IN

SOURCE 1 shows the landforms of the region around Kiwirrkura, approximately 400 kilometres west of Alice Springs. First Nations artists used symbolism as a way of creating a map of Country and the sacred sites. These artworks are maps of The Dreaming places created by the ancestral beings, in the same way that the songlines formed a map, sung in short verses, of the ancestral being's creative journeys.

tlvd-10495

SOURCE 1 Donkeyman Lee Tjupurrula Kukatja's artwork *Tingarri Dreaming at Walawala*



Look at **SOURCE 1** and discuss what the artwork communicates, and how the information about the Walawala landscape is expressed.

2.8.1 Trade tracks and songlines

First Nations Peoples of Australia carefully managed their land and resources to ensure their food supplies were protected. Language and clan groups remained largely self-sufficient. While food was not commonly exchanged, a complex trade network was established over thousands of years. The network extended over hundreds of kilometres, linking many clans and language groups together. The countless pathways of daily travel and trade crossed the continent and are known as The Dreaming tracks, or songlines. The Dreaming tracks began with the stories told in ancient times of the journeys taken by The Dreaming ancestors. The pathways they took were marked out by the features of the landscape, such as water holes, hills and riverbeds. The people remembered these tracks as the 'songlines'.

The songlines

As the ancestral beings travelled across Australia giving life, they created landmarks and named the geographical features of the land. For example, the great Rainbow Serpent, commonly called Jarapiri in northern and central Australia, laid eggs that became the huge round boulders of Karlu Karlu (the Devil's

Marbles). The Serpent's slithering and twisting created the rivers and waterholes. As the ancestral beings formed the land, they also established the laws and 'sang' the Country into life. When they completed their work, the ancestral beings returned to the sky, sea or land. The songs were the record of what they had done, and the means by which their story could be handed on to future generations of First Nations Australians.

The sequence of songs, or songlines, recorded the route the ancestral beings took on their journeys of creation. These routes, or Dreaming tracks, were the maps that gave First Nations Peoples a detailed mental picture of their land and all the living creatures on it.

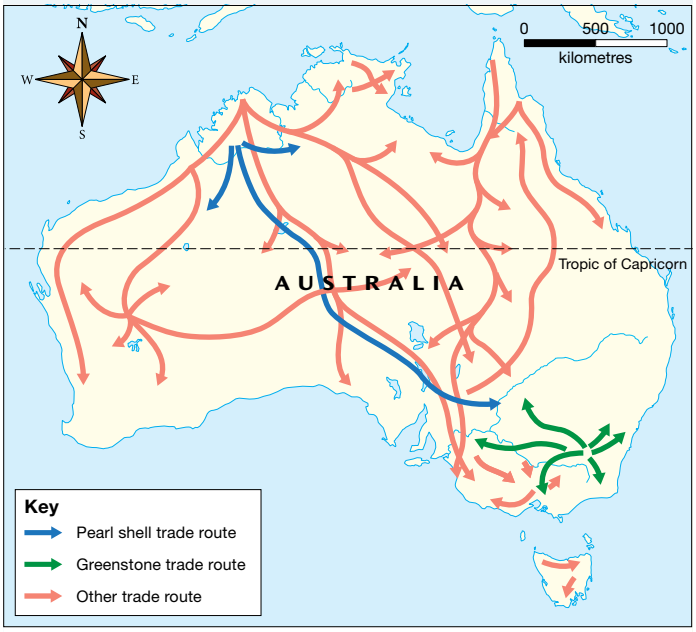
2.8.2 Trade networks

int-8929

Archaeological sites across Australia have revealed evidence of the extensive trade networks that criss-crossed Australia (and still do today). Trade took place between neighbours and regional groups, but also between those who were vast distances away, serving both practical and cultural purposes. Many different items were traded:

- Stone was the heaviest trade item and was often carried in parcels of paper bark tied with string. Evidence of the harvesting and grinding of grass seeds to make flour has been found dating from 3000 BP. The flat-surface grinding stones were a major trade item. Suitable slabs of sandstone were carried by a relay of traders from north-west Queensland, across a distance of 500 kilometres, to reach the plains of Diamantina. The volcanic stone prized for axe heads came from a quarry on Mount William, north of Melbourne. The Wurundjeri mined it and traded it to the north where it was used to cut the bark for canoes that floated along the Murray River.

SOURCE 2 The major trade routes of First Nations Australia



Sources: Museum of Australia, Cited in Barlow, Alex, *Aboriginal Technology,* 1994.

- **Ochre** from Pukardu in the Flinders Ranges was mined and traded 500 kilometres north along a network stretching across South Australia, New South Wales and Queensland. *Message sticks* were sent ahead of the trade parties to the custodians of the mines suggesting goods suitable for ochre exchange. The Pukardu ochre was highly sought after because it was believed to have particular spiritual value and was used for body decoration on important ceremonial occasions. Ochre exchange gifts from the people of the north included black manganese paint, boomerangs and spears, nets and bags of grass seeds.
- A small shrub grown in central Australia called pitjuri was traded from markets held on the banks of the Cooper, Diamantina and Georgina rivers. Pitjuri is a nicotine-like drug used to relieve hunger, tiredness and pain. People from the north exchanged their spears, glue made from spinifex, stone knives and pearl shell for the pitjuri. From the east came wooden shields and spear shafts made from reeds, and from the west came ochre and light wooden spears. The people from the south exchanged weapons, stone axe heads and possum skins for the pitjuri plant.

ochre a natural pigment found in soil, ranging in colour from pale yellow to orange and red

The pearl-shell trade

Of all the goods traded across ancient Australia, the pearl shell probably travelled the furthest. The journey of the pearl shell began when the Ngarluma Peoples collected the shell from their beaches and from the Country of the Kariyarra and Ngarla Peoples who lived to their north. People also set off on rafts made from mangrove wood to collect the shells from offshore reefs. The Ngarluma traded the shell with the Yindjibarndi, Nyamal and Njangamarda-Iparuka Peoples in exchange for spears made from mulga and witjuti wood. The shells were carefully wrapped in soft bark to protect them as they passed through many hands on their journey across the continent. When they reached the Fitzroy River they were at the crossroads of several trade routes that were under the control of the Gooniyandi Peoples. This opened up trade with the western desert peoples. The prized pearl shells, flaked stone blades and spear points from the Kimberley were traded for boomerangs and beautifully carved spears.

The pearl shell became more valued the further it travelled from the Kimberley coastline. Evidence of the distance of the ancient pearl-shell trade has been found across a vast area of Australia; from the tropics in the far north to the **mallee** scrub between Adelaide and the coastline of Victoria.

SOURCE 3 Message sticks belonging to the Yirandali language Dalleburra Peoples, Queensland. The messages are written in symbols, not script. Message sticks protected people as they moved through the Country of another clan or language group. Smoke signals were sent, followed by the presentation of a message stick to the Elders and a verbal explanation of the purpose of the visit.

2.8.3 Trade practices

First Nations communities lived in small self-contained communities for most of the year. The seasons determined the availability of food and resources, and the paths people took through Country. An important part of the yearly cycle was the annual gathering of the clans. These great gatherings always took place during times of plenty, when prized food was in good supply. The opportunity to feast on the large freshwater eels of Western Victoria or the Bogong moths in the high country of the Snowy Mountains provided the opportunity to conduct ceremonies, organise marriages, decide matters of law and exchange goods at the market place.

Clan gatherings

The clan gatherings always began with a formal invitation through an exchange of message sticks across nation groups. The western district of Victoria was one of the most densely populated areas of the continent. The people of this region shared their resources and engaged in trade when the land was able to provide for a sudden increase in population. An abundance of eels, kangaroo, mushrooms and a variety of root vegetables meant the land could cater for visitors, without bringing food shortages and hardship on the traditional custodians. With eel feasting came markets at Mount Noorat, where exchanges took place of valuable items such as spear points, possum cloaks, acacia resin, seashells and net bags. The leftover eels became a takeaway product that was dried and wrapped in kangaroo skin for transporting.

mallee a low-growing bushy Australian eucalypt plant

In the high country of the Snowy Mountains, a wide range of food was available with the melting of the snow. Emu, possum, snake meat and Bogong moths provided a rich diet. Every year the Ngarigo and Walgalu Peoples would send out their message stick invitations to the neighbouring clans. Many clans would gather at Jindabyne and on Tumut River and Wollondibby Creek for the purposes of trade and ceremony. Groups of men travelled into the high country where the Bogong moths were smoked out of their resting places in the rock crevices. The moths were caught in nets and then cooked into rissoles that were transported down the mountain for all to enjoy during the ceremonial feasting.

DID YOU KNOW?

Dr Builth, an archaeologist who studied the eel-farming practices of the Gunditjmara Peoples in Victoria's Lake Condah wetlands, has estimated that these farms could have fed up to 10 000 people.

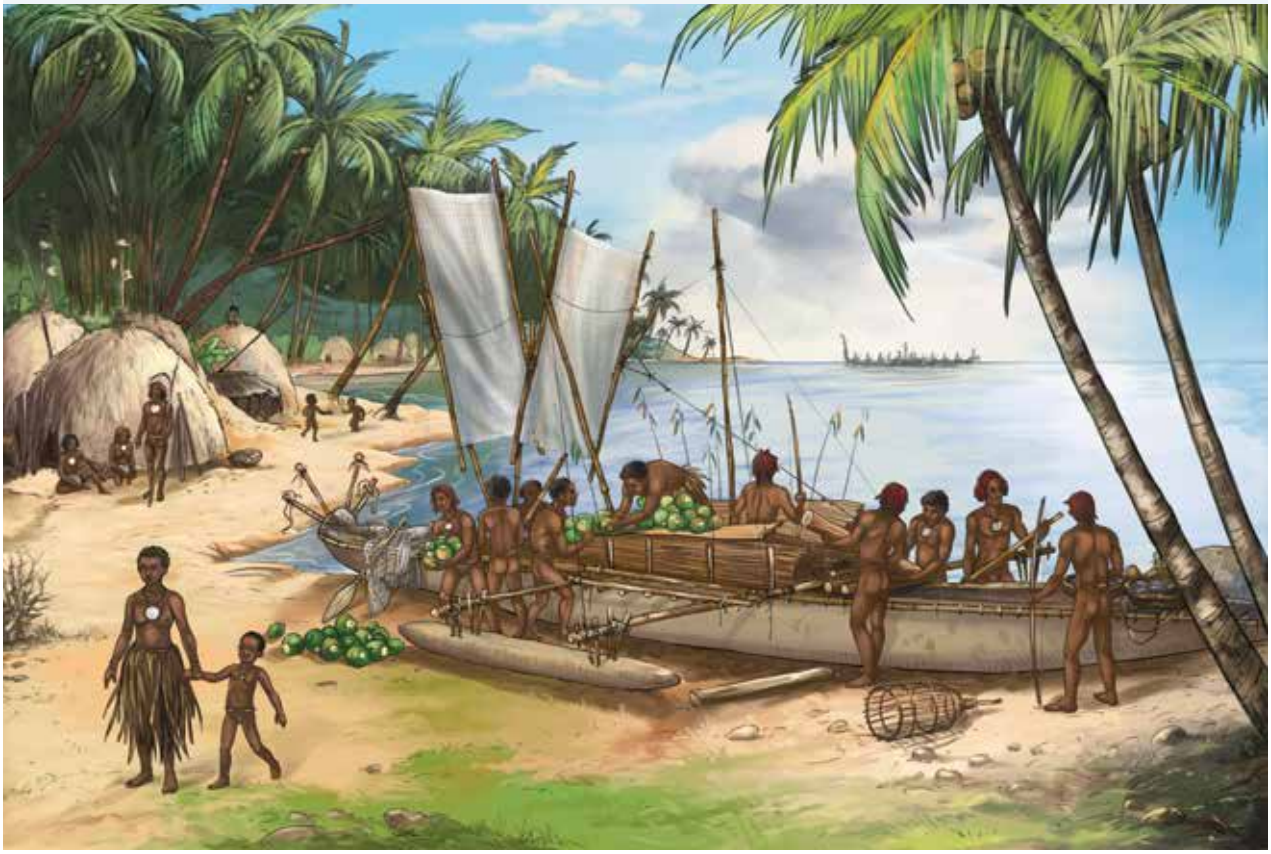
Bogong moths are native to Australia and get their name from the Bogong High Plains region in the Victorian Alps. When roasted and eaten, they are said to have a 'nutty taste'. They are highly nutritious.

2.8.4 Torres Strait trade

The farmers and fishers of the Torres Strait Islands had more food than they needed at certain times of the year. Turtle and dugong could be dried, stored and traded with the neighbouring clans around Cape York and the coastal peoples of Papua New Guinea. A range of root vegetables were also well suited to trade because they did not deteriorate quickly in the tropical heat.

tlvd-10496

SOURCE 4 Dugout canoes swept along by two or three sails provided the transport for people and their trade goods between the Torres Strait Islands and the coasts of Papua New Guinea and the Australian mainland.



Trade was critical for survival on the Torres Strait Islands. The canoes Torres Strait Islander Peoples relied on for fishing and transport were obtained through a complicated trade link with the Saibai Peoples living in the estuary region of Papua New Guinea's Fly River. Trees large enough for the construction of a canoe hull do not grow on the Torres Strait Islands.

The Saibai traded with highly skilled canoe builders living in the heavily wooded forests further up river. The Saibai then adapted the single outrigger canoes that were only suitable for lagoon and Fly River journeys. They turned them into double outrigger canoes and then added masts and woven nipa-palm sails ready for the rough conditions of the open seas of the Strait.Torres Strait Islander Peoples exchanged shellfish and dried fish, turtle and dugong for their new double outrigger canoes, drums, **sago**, bows and arrows, **cassowary** and bird of paradise feathers.

sago a starch food obtained from palm used to produce a flour

cassowary a large flightless bird related to the emu with a bare head and neck

DID YOU KNOW?

Torres Strait Islander Peoples of each language group traded with their immediate neighbours. The Kaurareg Peoples were the only Torres Strait Islander group trading directly with the Cape York communities. The trade between the two groups took place on tiny Muralug Island, which lay very close to the Cape York coastline.

The Kaurareg acted as traders, exchanging goods on behalf of all the other Islanders. The Kaurareg exchanged goods such as finely crafted Muralug Island dugong harpoons and small bamboo items for the spears and ochres from Cape York's Gudang Peoples.

2.8 SKILLS ACTIVITY: Using historical sources, Historical perspectives and interpretations

Look at **SOURCES 2** and **3** to think about what ancient Australians traded and how they traded. You have learnt that trade was both a part of daily life, and of great ceremonial importance. As ancient Australia changed, so did the trade networks. The items traded across Australia have left an archaeological record of the extent of this ancient trade network.

1. Working in small groups, **organise** the information from the text and sources into a mind map identifying the goods traded, the origin of the trade items and their destination.
2. Refer to a map of Australia to **identify** the location of one of the trade regions identified in this lesson. Research the following.
   - The geographic features and landforms of the area (for example, rivers)
   - The climate (for example, subtropical)
   - The natural resources available (for example, seafood through being close to the sea)
3. **Discuss** the challenges of surviving in this location (for example, unreliable fresh water supply, cold in winter), and the natural resources in your location that could be swapped with another group.
4. Make a list of your location's three most valuable trade resources. Negotiate with other groups to trade, or barter, to obtain three additional resources you need.
5. Go back to your map to establish where the additional trade goods would have come from and the difficulties in moving resources from one location to another. **Present** the list of six resources to the rest of the class, explaining your choices and the challenges of negotiating the trade.

2.8 Exercise

learnon

2.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 6	4, 5, 7	8, 9, 10

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Check your understanding

1. Fill in the gaps.
   The pathways of daily travel and trade across the continent are known as _____ _____. Travel pathways are marked out by features of the landscape and remembered by First Nations Peoples as the _____. The songlines recorded the journey taken by the _____ _____ as they travelled across the land.
2. Briefly **explain** the importance of the following trade items to First Nations Australian communities.
   a. Pearl shell
   b. Ochre
   c. Grinding stones
3. **Determine** whether each of the following statements is true or false.
   a. Message sticks were sent before the exchange of goods took place.
   b. Trade often happened alongside ceremonial events.
   c. Clans gathered when seasons were bad to exchange scarce food resources.
   d. First Nations groups understood how to preserve food.
   e. Clans generally shared food rather than traded it.
4. The Peoples of the Torres Strait Islands traded with the First Nations Peoples of _____ and the coastal people of _____. Animal goods that could be dried such as turtle and _____ were exchanged.
5. **Explain** why trade was critical for survival on the Torres Strait Islands.

Apply your understanding

Using historical sources

6. a. Is **SOURCE 1** a primary or secondary source? **Explain**.
   b. **Explain** how you could compare the symbols used in First Nations Australian art with, for example, Egyptian hieroglyphs or Sumerian cuneiform.
7. Greenstone was used for thousands of years by First Nations Australian communities to manufacture ground edge axes. **Explain** what the study of greenstone could tell archaeologists about First Nations Peoples' trade, travel and technology.
8. What do the messages on the message sticks in **SOURCE 3** tell you about what was important to First Nations Australians?

Communicating

9. Torres Strait Islander Peoples and some coastal mainland Australian communities indicated direction by referring to the name given to the wind that came from that direction. The wind and the sea were central to the life in the Torres Strait. Referring to **SOURCE 4**, write two sentences **evaluating** the importance of the dugout canoes to the life and culture of Torres Strait Islander Peoples.
10. Write a paragraph **comparing** and **contrasting** the trade practices of ancient Australian communities with those of Torres Strait Islander communities. Ensure you mention any similarities and any differences in your answer.

LESSON
2.9 How did custom and kinship shape First Nations Australian society?

LEARNING INTENTION

By the end of this lesson you should be able to examine images and symbols to develop your understanding of the complex kinship systems and totems guiding the ceremonial and daily life of ancient Australians.

TUNE IN

Look closely at the **SOURCE 1** image of *totems*. The story depicted represents the Manarrngu mourning rites. The singing of this ceremony tells of the death of Gurrumarringu, the mighty hunter of the Manarrngu. The kangaroo and goanna represent animals he hunted. He died due to a snakebite.

Totems represent the natural objects, animals and plants that each individual and nation group has a responsibility to look after.

Totems express special qualities and strengths. They also give people a very effective way of protecting their natural environment, because people have special responsibilities to their totems and must protect them to ensure their survival.

1. What qualities or strengths do you think are represented by the **SOURCE 1** totems?
2. Discuss what totem you would feel very privileged to have if it could be granted to you. Why would you choose this totem, and what qualities do you believe it expresses?

SOURCE 1 A bark painting entitled *Totems of the Manarrngu, Mortuary Rites* by David Malangi, 1966. The painting shows a file snake on the left with a water goanna superimposed on a kangaroo in the centre and a tree on the right.

2.9.1 Kinship

Kinship continues to play a much more important role in First Nations of Australia communities than in Western society. The kinship system is a social system that establishes a person's relationship, roles, responsibilities and obligations to others and to Country. Kinship relationships are more complex than the Western notion of family and involve strict rules and obligations. Kinship links are tied to spiritual belief because The Dreaming ancestors are considered to have **genealogical** links with living people and their land, and so are important in deciding each person's kinship connections.

Three levels of kinship exist: moiety, totem and skin names.

- People with a shared moiety are regarded as siblings, cannot marry each other, and have a duty to support one another. All things, from plants and animals to clan groups, belong to a moiety. Moieties divide people of one clan into two groups, often according to their mother or father's bloodline. The two moieties balance each other in ceremonies and in daily life.

genealogical an account of the descent or ancestry of a person or group

- Totems are split between moieties to create a balance. A totem also expresses a person's identity, community roles and duties. Each person can have multiple totems, depending on their nation group, representing their nation, clan, family group and personal identity. Totems are spiritual emblems given to a person at birth to connect them to their Country and kin. Children learn that their relationships are not just with people, but also with their Country — the plants, the sky, the water and spirits that live within it.
- Skin names identify a person's bloodline, as it has been passed down through the generations. Skin names inform people of the connections between different generations, and the nature of the relationships people can have with each other. Husbands and wives do not share the same skin names, and parents do not share the same skin name as their children. Each nation has its own skin names, with a prefix or suffix to indicate a person's gender. *Note:* not all First Nations groups have skin names.

The kinship networks were strengthened through ceremonial exchange of goods. Younger men, for example, may be expected to give the gift of a spear to an older man from another clan who was connected through a kinship arrangement. The ties would be cemented by the older man's involvement in the younger man's initiation ceremonies. Because trade took place over long distances, possibly requiring movement through Country belonging to different language groups, the kinship agreements were complex. Trade goods were carefully given out to ensure all kin connections were recognised. Different traditions and ceremonies had to be learned and respected to make sure that alliances were protected and the exchange of goods could continue. The act of giving was part of ceremonial life and was very important in honouring kinship.

SOURCE 2 Excerpt from a speech given by Bryon Powell, representing the Kulin National Heritage Organisation, explaining the clan links of the Kulin Peoples, May 2000

The Kulin nation was made up of five Aboriginal tribes, which took up a fair swag of land in Central Victoria, centring on Melbourne itself . . . They were made up of clans, family groups. And what happened with the five tribes, they had commonalities in language, custom, traditions, burial rights, and very strong trade links. And I knew the Woiwurrund and Boon Wurrung, they were exceptionally close, they actually inter-married to strengthen those ties, they traded between themselves . . .

tlvd-10497

SOURCE 3 When outsiders were invited onto Wurundjeri lands a ceremony called *Tanderrum* was held. The ceremony granted safe passage through Wurundjeri country with a ritual exchange of gifts. This nineteenth-century Charles Troedel painting shows Wurundjeri clan members fishing and camping at Merri Creek near Melbourne.

The kinship system was also an important feature of life in the Torres Strait Islands, where conflict over scarce resources was more common. Trade was essential for people living in tiny island communities. Trade expeditions and negotiations were often very anxious occasions between communities where property and kinship rights were in dispute. Visiting trading parties kept their canoes near the shoreline to enable a hasty retreat if the kinship system failed to keep harmony among the different clans and language groups.

2.9.2 Totems

The many language groups of First Nations Australia reflected the great variety of cultural beliefs. The spiritual connection with the land was nevertheless shared by all. The spiritual beliefs of First Nations Peoples of Australia shaped First Nations lore across the land.

All life comes from the land, and so First Nations traditions and ceremonies centre on fulfilling one's obligations to the land. Because the land provides everything for the people, caring for the health of Country is a great responsibility. Spirituality and the land are not separate. The Elders pass on their knowledge of the land and the lore through ceremony and The Dreaming.

At the start of The Dreaming, the ancestral beings created totems for the people. The totems identified the different clans and language groups of Australia. They also gave each individual a sense of place and cultural belonging.

The sacred places of Country were protected by keeping The Dreaming beliefs and rituals alive. The Dreaming gave people rules about where they could live, whom they could marry and the animals they could hunt. The continued supply of natural resources depended on people respecting the rules put in place by the spirit ancestors. Areas of animal refuge, where hunting was prohibited, were set aside. This helped ensure conservation of animal species of great importance to human survival in harsh landscapes. Totems guided First Nations Peoples of Australia in managing their resources. The Dreaming gave people the totems they would honour for life.

2.9 SKILL ACTIVITY: Questioning and researching

The languages, spiritual beliefs and social organisation of First Nations Peoples varied widely across Australia. The many First Nations are separate Peoples in origin, history and traditions. Each nation has its own understanding of concepts such as moiety. The Yolngu Peoples of Arnhem Land are either Dhuwa or Yirritja moiety. The Yolngu believe that the ancestral beings assigned everything to either the black cockatoo, Dhuwa, or the white cockatoo, Yirritja.

Despite the differences, kinship connected many of the different language and cultural groups across ancient Australia. People who shared totems may have lived in areas that were geographically separated, but they would still gather for trade, marriage and ceremonies

1. Imagine the difficulties nineteenth-century European settlers would have encountered when trying to understand the culture and kinship of First Nations Australians. **Research** one First Nations group of Australia, such as the Kulin Peoples of Victoria. Through your research identify the following.
   - The region that is the Country of your people, and the geographic features of the land
   - How the land and climate may have changed over the long period of deep time
   - The languages and dialect/s spoken
   - Stories related to The Dreaming, when the spirit ancestors travelled the land creating all the physical features such as mountains and rivers
   - Archaeological evidence of the deep time human occupation of the region
2. Write an **explanation** of the cultural and spiritual beliefs of your chosen First Nations Peoples of Australia that could be understood by a nineteenth-century European settler. Your explanation should emphasise the importance of Country, kinship, trade and ceremony.

2.9 Exercise

learnon

2.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4	1, 5, 6, 9	7, 8, 10

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Check your understanding

1. Briefly **explain** what the kinship system is and why it is of such significance to First Nations Australian communities.
2. How were kinship and trade connected?
   - A. Kinship ties and agreements changed according to the objects being traded.
   - B. Kinship ties and agreements were complex and determined who traded.
   - C. People only traded within their kinship group.
   - D. All of the above
3. Visiting trading parties in the Torres Strait Islands kept their canoes close to the shore because all trade negotiation was conducted on the shoreline. True or false?
4. Decide whether each of the following statements is true or false.
   - a. Two First Nations people could not have the same totem.
   - b. Totems were chosen by the individual.
   - c. Totems helped First Nations Peoples to manage their resources.
   - d. A totem was given at the time of a person's birth.
   - e. Totems were used for trade among First Nations Peoples.
5. **Explain** what totems are and why they vary from one community to another.

Apply your understanding

Using historical sources

6. **SOURCE 2** is a modern explanation of what kinship means to First Nations Australians. Identify the key beliefs and values expressed in the source that have continued to be of significance.
7. **Infer** what the artist of **SOURCE 3** suggests about the nature of First Nations Australian society. How does this contribute to our understanding of the role of the kinship and ceremony in daily life?
8. Refer to **SOURCE 1** for an understanding of the significance of the totem. **Describe** how the totems shown in the artwork reflect the natural environment.

Communicating

9. In ancient Australian communities you would have called more people 'brother' or 'sister'. **Explain** why this was and the effect this would have had on other aspects of First Nations Australian life and culture.

Questioning and researching

10. **Develop** a subset of questions you could ask if you were enquiring into this overall question: How important were kinship systems and totems to First Nations Peoples?

LESSON
2.10 How was life and death recognised in ancient Australia?

LEARNING INTENTION

By the end of this lesson you should be able to identify the limited sources of evidence to develop your general understanding of the cultural practices and rituals of First Nations Australians.

TUNE IN

Think about a ceremony, such as a wedding, that you have attended. Consider why the ceremony was important to your family or community.

Read **SOURCE 1**. Discuss why you think ceremonies would have been a very important part of the daily life and culture of First Nations Peoples in Australia.

aud-0408

SOURCE 1 An Elder from the Ngarinyin Peoples, of the north-west Kimberley region of Western Australia, explains the significance of the traditional Welcome to Country

Before whitafellas came, it was the tradition of Aboriginals that when strangers came into their particular country to hunt or to gather, or to just pass through on their way to other places, that the host Aboriginals would go out to welcome them.

When they met, there would be the formalities of greeting. Part of the ceremony of welcome would be the men sitting around and talking men's business whilst the host women would take the visiting women and children to a women's site to talk women's business.

When this was completed, the two groups would join again and the men would hunt for kangaroo, goannas or bush turkey — and the women would prepare an area for eating and would gather firewood and berries, fruit, nuts and lily roots for a meal.

Then the ceremonies — the corroborees or jumbas would commence, and the dancing, the singing around the fire could well go on, not only all night, but sometimes for many nights in a row. Each jumba with a message — each with its own story — men, women and children taking part. Whilst during the day, the visiting tribe would be taken and shown the sites of significance and be told the stories of the spirit of the land they would be passing.

In this way, the hosts believed that by the end of formalities, when the strangers were ready to move on — they would not be considered strangers but friends who now had the spirit of the Country in their hearts — they carried the Wunggud with them — just like the people who lived there.

They believed that once the spirit of the land was in their hearts, then those people would never damage the land — they would love it and care for it like those whose home Country it was . . .

2.10.1 Dreaming lore

The Dreaming explained how the world came to be, identified the relationships between people and the land, and how people should behave. The Dreaming also shaped the traditions, ceremonies and rituals that represented the beliefs of First Nations Peoples of Australia. Chanting, singing, dancing, distinguishing decorative body painting and sometimes headdresses made from brightly coloured feathers were all part of the cycle of ritual and ceremony at the core of the traditions of First Nations Australian life. The ceremonies maintained the life of the land and the people, the time for hunting and the time for initiation, and the way funerals and marriages should be conducted. The men and women who were the Elders made all the important decisions, gave advice, judged crimes and determined punishments, arranged marriages and presided over ceremonies. The Elders are the guardians of The Dreaming lore.

Ceremonies demonstrate respect and understanding. Welcome to Country is an ancient ceremony that recognises the boundaries of clan land, which were clearly identified and understood by all clan members and their neighbours. While the details of the ceremony varied according to the traditions of each clan, the ceremony was conducted when members of one clan sought permission to enter another clan's territory. The visitor was required to ask permission to enter Country. This permission recognised that the custodians were agreeing to some sharing of the resources of their land, ocean, lakes or rivers.

SOURCE 2 Aunty Joy Murphy, Senior Wurundjeri elder of the Kulin Nation, performs a Welcome to Country before a cricket match in Melbourne

SOURCE 3 First Nations leader Professor Mick Dodson explains the meaning of Country.

When we talk about traditional Country . . . we mean something beyond the dictionary definition of the word. For Aboriginal Australians . . . we might mean homeland, or tribal or clan area and we might mean more than just a place on the map. For us, Country is a word for all the values, places, resources, stories and cultural obligations associated with that area and its features. It describes the entirety of our ancestral domains.

DISCUSS

Discuss the ways in which First Nations Australian communities use ceremonies as a way of recognising rights and obligations. Write a short paragraph explaining why the acknowledgment of these ceremonies continues to be important in modern Australia.

2.10.2 Initiation ceremonies

Archaeologists have learned a great deal about life in ancient Australia by studying ceremonial places, called *bora grounds*. Bora grounds were built with mounds of earth in the shape of two rings. The inner ring was a space reserved for initiation rites.

A boy could not become a man or a girl could not be accepted as a woman until passing through initiation ceremonies. Enduring tests and trials of physical and mental strength took the young from the carefree days of childhood to the responsibilities of the adult world. A general English translation of First Nations Australian initiation ceremonies is to be *put through the law*; meaning that initiation passed on the knowledge of the Elders, the sacred lore of The Dreaming and the right to participate in the ritual and ceremonies of Country. Initiation taught young people codes of conduct, customs and responsibilities. A person gained status with initiation.

Initiation connected people to The Dreaming by challenging them in ways that the great spirits had been tested. The ceremonies differed according to the particular beliefs of Country.

Initiation scars and practices, such as knocking out a front tooth (known as evulsion) or removing part of a finger, sometimes identified a person's clan group or kinship relationships. The role each person played in the process of initiation was determined by their kinship obligations. The Elders were responsible for instructing the young through the stages of the initiation, which could have involved a number of ceremonies carried out over a period of years. Initiates had to be taught the lore, the totem history and the ceremonial rites. Strong **taboos** often had to be observed about aspects of daily life, such as the food eaten and the people spoken to. Obedience to the Elders' instructions was the key to initiation. Once the ceremony was planned, invitations were sent out to the members of kinship and clan groups to be witnesses to the ancient **rites of passage**.

taboo something strictly forbidden

rite of passage a ceremony or event marking an important stage in someone's life

2.10.3 Death and funerary customs

First Nations Australians believe that with death a person's spirit would return to The Dreaming ancestors or to their spirit pool. Funeral and mourning ceremonies differed according to clan and Country, but they were all elaborate rituals that could last for many months. The ceremonies were a time to recognise the deceased and The Dreaming ancestors.

Mounds of earth, such as those built in the bora grounds, piles of stones and carved trees often marked the location of burial sites in the south-east of Australia. Funeral traditions and practices varied across Australia and included:

- simple burial in graves with bodies either stretched out or placed in a crouching position. Grave goods were sometimes placed with the body.
- cremation. Sometimes the charred skeletal remains were collected and later buried or placed in the hollow of a tree.
- drying out or smoking the body in a process called *desiccation*. The dried remains may have then been kept for a period of time before being buried.
- leaving the body on tree platforms to decay. The bones were later collected and often finally buried.

Ritual always accompanied funerals, such as facing the body in a particular direction or burying personal items as grave goods. Sometimes bodies were painted with totemic images or covered in ochre. The Kulin Peoples of Victoria tied the body in a crouching position and buried important members of the community with their possum cloaks, stone tools and woven bags. Mourners painted their faces white, women cut their hair and sent the spirit of the dead on their way with singing and dancing.

DID YOU KNOW?

At Roonka Flat, in the Murray River Valley of South Australia, the excavation of an occupation site has found burial sites of different types. Some graves were shallow and oval shaped with the dead lying horizontally, while others were deep shafts where bodies were placed in an upright position. One man's skeleton was found with the remains of a baby placed in his chest cavity.

Tiwi and tutini

The Tiwi Peoples live on Bathurst and Melville Islands, located 80 kilometres off the coast of Darwin. For thousands of years the Tiwi had only limited contact with the mainland First Nations communities because they believed that was where the spirits of the dead made their homes. A beautiful and distinctive art form developed from the Tiwi ceremonies associated with death, known as the *pukumani* ceremonies. Performance of pukumani funerary ceremonies went through stages that took a number of months to complete.

- The first funeral ceremony occurred at the time of death, called the *iliana* by modern Tiwi Islander Peoples. The body was painted with totem symbols and decorated with hair ornaments. Mourners painted their own bodies white.
- Elaborate burial poles or grave posts called *tutini* were carved as expressions of the person's life and as gifts to the spirit of the dead. The large poles were carved from the trunk of the ironwood tree and then erected around the grave site. The poles symbolised the importance of the dead person.
- The final pukumani ceremony took place approximately six months after burial at the tutini site. Performance of the ceremony enabled the dead to enter the spirit world. The mourners were painted in rich ochre designs and wore decorative head and armbands, called *pamajini*, as protection against a spirit that could still be angry. Dances and songs were performed during all parts of the ceremony that were drawn from the stories of the great Dreaming ancestor, Purukapali. After the death of his child, Purukapali had ordered the people to make grave posts and to sing and dance.
- With the ending of the ceremony the mourners departed from the grave, leaving the beautiful tutini to rot away.

tlvd-10498

SOURCE 4 The distinctive burial poles of the Tiwi Peoples of northern Australia. Tree trunks are carved into poles with windows and reduced sections. These examples are painted in the Tiwi art style of geometric and abstract patterns. To form the paint, ochre was mixed with wax, honey or egg yolks. Brushes were made from soft bark, sticks and human hair.

2.10 SKILL ACTIVITY: Communicating

Ceremonies have been part of the cultures of Australia's First Nation Peoples since deep time history. Important events in the life of the community were marked by gatherings, and ceremonies that could last for weeks and involve hundreds of people. Some ceremonies were held on a regular basis in selected locations; others were held when the occasion demanded it.

The Kulin Peoples of modern Victoria were an alliance of five nations, speaking five related languages. The archaeological record of Kulin occupation of this land goes back over 40 000 years. When one Kulin community passed through the lands of another, the tanderrum ceremony was performed as a show of diplomacy and respect.

1. Select a ceremony practised by one of the First Nations Peoples of Australia to conduct your own **research** on — for example, marriage, rain-making, smoking ceremony or Welcome to Country.
2. **Identify** the following.
   - Why the ceremony would be conducted
   - Where the ceremony would take place
   - Who would be involved, and how invitations would be communicated (for example, using message sticks)
   - What the preparations would be for the ceremony (for example, construction of earth mounds or rock arrangements)
   - What ceremonial objects or rituals would be part of the ceremony (for example, the Tjurunga used by the Arrente Peoples of Central Australia, or bullroarers, ceremonial poles, sacred chants, headdresses or body painting)
3. **Communicate** your understanding, and the significance, of the ceremony you have chosen via a visual representation, a booklet, a brochure or a website.

2.10 Exercise

learnon

2.10 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 4	5	2, 6, 7, 8

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Check your understanding

1. Initiation ceremonies were the tests that _____ had to go through before they could gain the status, responsibility and position of _____. The tests were trials of physical and _____ strength. During these ceremonies, knowledge and _____ of behaviour were passed down generations.
2. Briefly **explain** how burial practices differed between First Nation Australian communities.
3. Tutini poles are made from the trunk of an _____ tree.
4. Approximately how long after burial did the final pukumani ceremony take place?
   - **A.** Six years
   - **B.** Six months
   - **C.** Six weeks
   - **D.** Six days
5. **Create** a short guide (one or two paragraphs) to the Tiwi funeral rituals for someone who is visiting the islands and keen to become familiar with the traditions.

Apply your understanding

Communicating

6. Ceremonies marking a period of change in a person's life are known as *rites of passage*. The ceremonies expressing rites of passage will often give the person a significant change in their position or status within their community. Section 2.10.2 provides an insight into ceremonies marking a rite of passage.
   - **a.** Briefly **describe** the ceremonies discussed, and then identify a rite of passage ceremony practised in your own community.
   - **b.** **Write** a paragraph explaining why ceremonies marking rites of passage are important in all communities and cultures.
7. Using the sources presented in this lesson, write a paragraph about the social customs of First Nations Peoples. Remember to include a topic sentence, supporting evidence and a concluding sentence in your response.

Using historical sources

8. **Explain** what evidence of a society archaeologists can find through the study of death and burial practices.

LESSON
2.11 How have the world's oldest continuing cultures changed over time?

LEARNING INTENTION

By the end of this lesson you should be able to recognise how Australia's First Nations Peoples continued to adapt to environmental change and thrive on the Australian continent for thousands of years.

TUNE IN

Some of the best evidence of Australia's deep time history was found buried within the sand dunes bordering the dried shorelines of Lake Mungo National Park, in western New South Wales.

The layers of the now arid land created a time capsule of everyday life, dating back to the distant Pleistocene period. Massive environmental changes dried the Pleistocene Lakes that had once been brimming with water and resources, and changed the patterns of life for the First Nations Peoples living in this region.

As Lake Mungo dried the sea levels rose and flooded Australia's coastal plains, creating the Great Barrier Reef off the continental shelf of the northeast.

1. Consider how environmental change would have shaped new ways of living for the Peoples of Lake Mungo, and the coastal margins where the Great Barrier Reef now stands.
2. What do you think would have been the challenges, and what opportunities would have been created for these peoples?

SOURCE 1 Lake Mungo, a dry lakebed in Australia marked by sand drifts, is the location of one of the most significant cultural sites and archaeological finds from ancient Australia.

2.11.1 Environmental change and settlement patterns

By 1788, First Nations Peoples of Australia had populated and occupied every corner of the Australian continent. They had adapted to a range of climates, including dry and arid deserts in the centre as well as more tropical rainforests in the north.

Between the Pleistocene and Holocene periods, the impact of a changing climate was immense for the First Australians. At the beginning of the Holocene period, frozen sea-ice, formed during the Pleistocene era, began to melt and sea levels rose, resulting in a changing coastline (see **SOURCE 2** in lesson 2.5). These rising sea levels also meant that land bridges once traversable between New Guinea and Australia, and between Australia and Tasmania were covered by the rising sea, creating the islands that we know today. This meant that First Nations Australians who had once been able to travel freely between the mainland and the islands slowly become isolated.

This isolation meant that the ancient Australians in Tasmania and the Torres Strait Islands needed to adapt to their new island life, becoming reliant on salt-water fish and other marine creatures.

Similarly, the ancient Australians who had settled around Lake Mungo in western New South Wales had lived there for thousands of years when the lake began to dry up approximately 20 000 years ago. Archaeological evidence suggests that these people migrated south, and spread out along the Murray–Darling River, where access to fresh water was more readily available.

2.11.2 Changing Country and culture

Approximately one seventh of the land mass of the Australian continent drowned under the rising oceans, signalling the end of the last Ice Age. Detailed accounts of the impact of the rising waters was remembered in the Dreaming beliefs recalling events that had taken place thousands of years before.

Approximately fifty per cent of Australia's continental coastline was transformed into sandy beaches, 30 per cent into tidal flats and 20 per cent into cliffs and estuaries. Many coastal peoples became islanders, or were forced to retreat from the coast as their territory was inundated. Over the following centuries new languages and technologies emerged in the isolated island communities.

The Peoples of The Keppel Islands were now 13 kilometres from the mainland. They travelled between their island homes on distinctive one-piece bark canoes, and replaced the technology of boomerangs, shields and ground edge axes with stone drills for manufacturing fish hooks made of turtle shell.

First Nations Peoples have been linked to the area that is now the Great Barrier reef for thousands of years. Before the reef was formed over 7000 years ago, the people lived on what is now the ocean floor. The waters of the new Great Barrier Reef moved the coastline over 30 kilometres inland.

Deep time Dreaming beliefs tell of a time when the islands of the reef were attached to the mainland, and when the people walked across floodplains and hills hunting kangaroo and emu, rather than sailing over the reef to fish. The peoples and their communities adapted and changed with their new geographic and aquatic environments.

With the stabilising of the coastline new sand protected lagoons formed at the mouths of rivers, food-rich bays and inlets developed, estuaries and tidal reefs extended and rock platforms now offered easy access to shellfish and landing places for fishing canoes. Archaeological evidence suggests that the Holocene population increased with the improved access to a much wider range of resources.

aud-0409

SOURCE 2 From Naaman Zhou's 'Earliest evidence of Aboriginal occupation of Australian coast discovered', *The Guardian*, 2017.

Australia's earliest known site of human occupation of the Australian coast has been discovered in a remote cave in Western Australia, pushing back the start date of Indigenous occupation to more than 50 000 years ago.

Archaeologists led by the University of Western Australia found evidence of inhabitation on Barrow Island in the country's north west, discovering charcoal, animal remains and ancient artefacts that confirmed hunter-gatherer occupation.

Located 60 kilometres off the Pilbara coast, the Boodie Cave on Barrow Island was cut off from the mainland roughly 7000 years ago due to rising sea levels.

But researchers found the cave had been used as a hunting shelter from as early as 50 000 years ago, before becoming a residential base for groups of families from 10 000 years ago.

Archaeologists found Barrow Island provided rich records of ancient artefacts.

'This pushes back the age of occupation from the previous and more conservative limit of 47 000 years ago', said lead archaeologist Peter Veth. 'Even older dates are entirely plausible.'

The researchers said the site contained the longest record of dietary fauna in Australia. 'Barrow Island provided rich records of ancient artefacts, gathering and hunting of marine and arid animals, and environmental signatures which show the use of a now-drowned coastal desert landscape', said Veth.

2.11 SKILL ACTIVITY: Historical perspectives and interpretations, Communicating

The book *My place* by Nadia Wheatley and Donna Rawlins traces the history of one location in Sydney from 1788 to 1988. The story is told through the eyes of the different children who lived there over the course of 200 years. The Sydney that each child belongs to changes over time.

The story of the traditional custodians of the land, the identification of place, and the connection to land are central to *My Place*.

Beginning with the First Nations view of Australia during the Pleistocene period, your task is to **create** a children's storybook titled *Our Place: Australia*.

1. Select five different Australian places and times as the focus of the story. Research, **describe** and **illustrate**:
   a. The physical environment, including the flora and fauna of the chosen place.
   b. The key features of life for the First Nations Peoples for whom this place is Country.
   c. The Dreaming stories explaining how the land and its people came into being.

In bringing your storybook into the present, you should acknowledge the adaptability and survival of First Nations cultures despite the enormous environmental and social changes occurring from deep time to now.

2.11 Exercise

learnon

2.11 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 5	2, 3	4, 6, 7, 8

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Check your understanding

1. Prior to European colonisation, First Nations Peoples had colonised all of the Australian continent. True or false?
2. Complete the following passage.
   At the end of the _____ period, changing climate resulted in _____ _____ melting. This meant that the coastline of Australia changed. _____ _____ were flooded by rising sea levels, isolating First Nations communities in _____ and the _____ _____ _____.
3. Lake Mungo was once an inland freshwater lake. Approximately how many years ago did it dry up?
   A. 10 000
   B. 20 000
   C. 30 000
   D. 40 000
4. **Identify** how First Nations Peoples documented the deep time changes to their Country.

Apply your understanding

Using historical sources

5. Refer to **SOURCE 2. Identify** Australia's earliest known site of coastal human occupation.
6. **SOURCE 2** details the finds in Boodie Cave, Barrow island, located off the coast of Western Australia. **Evaluate** the significance of the finds at Boodie Cave.

Communicating

7. **Explain** why the Great Barrier Reef is of importance to the deep time human history of Australia.
8. When Boodie Cave was first occupied, Barrow Island was part of the mainland. What evidence is there to suggest that the people did not abandon the site with the end of the ice age and the rising sea levels?

LESSON
2.12 How do we conserve our deep time history?

LEARNING INTENTION

By the end of this lesson you should be able to explain the different ways that archaeologists have studied the ancient past, and the cultural sensitivities of heritage sites, ancestral remains and material remains.

TUNE IN

The ability to identify with a person and their times is known as empathy. When we empathise we seek to understand, through imagination and knowledge, how others acted and thought. We show empathy when we read a novel, watch a movie, study a painting or listen to others.

A child living 20 000 years ago left some of the footprints shown in **SOURCE 1**; they are evidence of someone's life from long ago. These footprints provide only a glimpse of that child's life but are nevertheless historically very significant.

tlvd-10499

SOURCE 1 The Pleistocene footprints from the clay at Lake Mungo left an ancient human record of life in Australia.

Write the inscription for a plaque erected near these footprints, explaining to visitors what they are looking at when they see these simple impressions. Convey a sense of the significance of the footprints and support this with your knowledge of the key features of the life and culture of First Nations Peoples during Australia's deep time history.

2.12.1 Investigating Australia's ancient past

With all the fascinating information that archaeological and scientific study of ancient burial sites can give us, it is easy to forget that these sites are also places of great spiritual significance and that ancient Australia is not just a story of the past.

SOURCE 2 Extract from Harvey Johnstone and Michael Westaway, archaeologists

Some of the footprints and stride lengths [belong to a child and] show how the child walked, paused, turned and ran away from the groups they were with, before walking briskly back towards them. Perhaps the child was called back by an adult or older sibling. So seldom in open-site archaeology do we see such a personal and familiar signature.

The First Nations owners and custodians of the land continue to care for Country and all the generations who belong to it. Australian governments now recognise the rights that First Nations communities have over human remains, artefacts and heritage sites. Debate over the control and correct treatment of human remains and heritage continues to be an important issue in Australia.

The role of the archaeologist

Careful investigation of archaeological sites is where the collection of evidence begins. The sites are the source of information and the basis for our archaeological understanding of how people lived in ancient Australia. Most sites have been found through careful survey of the landscape. Pits and trenches are then dug so that excavation can reveal the layers of history found in places such as middens and campsites.

The Kulin nation

The Kulin nation is made up of five First Nations clans or groups of Victoria. The Kulin Peoples left a variety of archaeological sites and a range of artefacts, and these are the record of life that archaeologists and scientists can observe and analyse.

- *Quarries:* the Kulin Peoples used many types of stone for a wide range of tools and weapons. Fine grained stone, such as quartz, was obtained easily and was used for making sharp tools. Axe heads needed a very hard rock so the Kulin used greenstone (diorite), which was found at only a few sites such as Mt William in Central Victoria. Axe heads from this site were traded as far away as Queensland, where axes were exchanged for highly valued objects such as possum skin rugs.
- *Scarred trees:* throughout the Victorian grasslands, old trees have been found showing symmetrical scars that are the result of the removal of bark. The Kulin cut the bark for a wide range of purposes, such as building shelters, lining graves, and making water containers, shields and canoes.
- *Stone scatters:* Kulin families once camped close to water sources, such as rivers and lakes. Stone pieces have been found at these sites that were the remains of broken tools or the waste that came from the making of new tools.
- *Rock art:* rock art sites are found across Australia as patterns, images and designs on rock surfaces. The art can be painted on, using materials such as ochre and charcoal, engraved or carved with a sharp stone, or rubbed into the rock with a ground stone. An engraving or carving into the rock is called a *petroglyph.* Rock art is difficult to date and requires a range of techniques. Radiocarbon dating can be used on paint, while luminescence dating can be used on some sand and rock sites. Victoria's Grampians National Park contains approximately 60 rock art sites of the Kulin Peoples, making it the most important rock art site in the state. The rock art sites feature images of people, human hands, animal tracks, birds and Dreaming spirits such as Bunjil.
- *Ceremonial circles:* five Kulin earth circles have been found at Sunbury, west of Melbourne. The circles are approximately 20 metres in diameter and can be seen as a lower level in the ground, indicating the earth has been scraped away.

- *Ceremonial rocks:* special rocks associated with the Kulin Dreaming beliefs are located in the foothills of the Dandenong Ranges. Archaeologists believe the rocks indicated sacred ground where activities such as hunting were not permitted.
- *Caves:* Cape Schank, located in Bunurong Country, on the south coast of the Mornington Peninsula, was of particular spiritual significance to the Kulin Peoples. Dreaming beliefs and stories are connected to locations such as this. Ancestral being Bunjil was believed to have told the rocks to create the cave there so that he could have shelter from a mighty storm.
- *Rock wells and springs:* cavities that were dug into the rock provided reliable water supplies in regions lacking rivers and permanent creeks. These wells were used by generations of First Nations communities as they travelled through Country.
- *Fish traps:* along the coastal areas, First Nations Peoples constructed tidal fish traps. At Toolondo in Victoria, the evidence of approximately four kilometres of shallow drains and ditches remains as part of an First Nations system of eel and fish trapping. At Lake Condah, another large system of First Nations fish traps was constructed consisting of stone weirs and channels. The Lake Condah trap has been dated to 3000 BP.
- *Burials:* along the banks of Australia's longest river, the Murray, numerous burial grounds have been located. The burial sites are sometimes connected to important resources, such as stone quarries or fish traps. The number of Murray River burial sites also indicates large First Nations populations lived in this region over long periods of time. The Kulin sometimes buried their dead in caves or placed them on platforms in trees.
- *Mounds and middens:* in areas where a small area of ground appears to have been raised above the surrounding land, archaeologists have found campsites. The mounds are due to the accumulation of rubbish and earth that has been blackened by the ashes of fires. In the nineteenth century, the Melbourne floodplain areas surrounding the Plenty and Maribyrnong rivers and Darebin and Merri creeks were reported as being the site of many cooking mounds. Ovens excavated there were large and probably used to cook for approximately 20 people at a time. Food waste, such as the remains of shellfish, built up at the sites because shell can survive buried in the ground. Middens have also been found on the banks of rivers, lakes and beaches, containing shellfish remains mixed with charcoal, bones and tools. This material collects in layers that archaeologists then use for establishing dates of site occupation.

SOURCE 3 A shellfish midden at King River, Northern Territory

DID YOU KNOW?

Bones and teeth leave a record of health and disease. At Roonka Flat in South Australia, people suffered from arthritis of the jaw and tooth loss. Archaeologists have connected this condition to chewing very stringy food and the use of the mouth as a tool. Chewing tough bulrush roots was part of the process of making the string necessary for the large hunting and fishing nets of the region.

2.12.2 Lake Mungo site study

The evidence of the lives of the ancient people who lived on the shores of the now dry beds of Lake Mungo, in the Willandra Lakes region of western New South Wales, has been exposed by erosion. Lake Mungo lies in the lands of the Paakantji, Ngyiampaa and Mutthi Mutthi Peoples. In 1968, wind erosion uncovered the charred remains of a young woman in the sand dunes near Lake Mungo. This skeleton, known as 'Mungo I', had been cremated and then the bones had been crushed before burial. The first archaeologists to study her remains estimate the burial had taken place 25 000 years ago, making it the oldest known cremation in the world. More recent studies have concluded that Mungo I is closer to 42 000 years old.

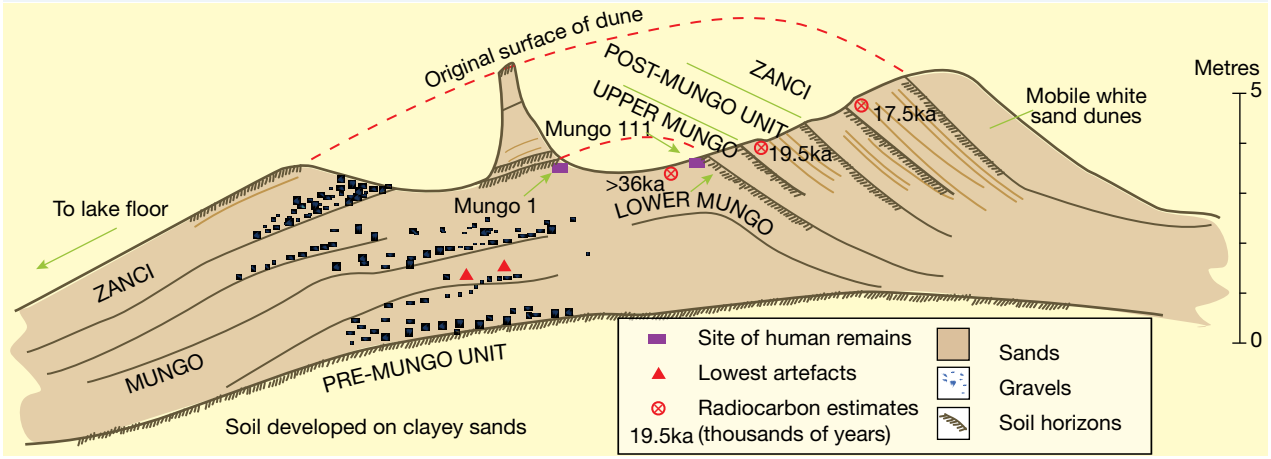
Many other human remains and hundreds of artefacts have since been found in the eroded dunes of the vast Lakes region. Possibly the oldest human remains are the skeleton of a person, probably a tall man, who died between 38 000 and 42 000 years ago. Archaeologists have named him 'Mungo III'. (He is also known as Mungo Man.) The body had been carefully laid out, with hands clasped together and knees slightly bent. Archaeologists believe that so much ochre had been spread over the body during burial that traces of it turned the surrounding soil pink. A sense of the dignity, ritual and respect for the dead were preserved for thousands of years in the remains of Mungo I and III.

Lake Mungo is one of the 17 lakes in the Willandra region, a series of fossil lakes that is a World Heritage Site because of its natural and cultural importance. The remains of fireplaces, shell middens and human burials provide evidence of a time when Lake Mungo was full of water and supported an abundance of life. In 2003, another remarkable archaeological discovery was made when the 20 000-year-old footprints of the Willandra Peoples were found.

Archaeologists working with Elders of the Paakantji, Ngiampaa and Mutthi Mutthi Peoples were visiting Country when Mary Pappin Junior, a Mutthi Mutthi woman, showed the footprints to archaeologists. Hundreds of the Pleistocene footprints had formed in soft muddy clay, dried and then became fossilised.

int-8930

SOURCE 4 Diagram showing a cross-section of the excavations at the Lake Mungo archaeological site



First Nations Elders have interpreted the footprints as the record of a small group of adults and children walking on top of a thick layer of clay. Within a couple of days, a band of hunters ran through the same area. The prints show that one Willandra man ran extremely fast while another was one-legged. Elders from the Paakantji, Ngiampaa and Mutthi Mutthi Peoples continue to work with the government in the ongoing care of the Lake Mungo archaeological site.

SOURCE 5 The remains of Mungo III, a man placed on his side with hands clasped and then buried in a shallow grave

Appreciating our heritage

Many sites in Australia today are of historical, cultural and archaeological significance. In addition to this, the Australian government has established over 70 Indigenous Protected Areas. These areas are managed by the traditional custodians, who look after the plants, animals and any special sites. First Nations rangers manage the impact of visitors, particularly tourists, who come to the area. In this way, First Nations Australians keep their culture strong.

The Heritage Council of Victoria, for example, agreed in 2010 to principles of the Burra Charter, an agreement that is a guide for the conservation of Australia's heritage sites. The principles are of particular importance to Australia's fragile First Nations art and settlement sites.

The Burra Charter principles express the belief that:

- Heritage sites enrich all our lives because they help us to understand the past and the cultural richness of the world that we live in today.
- The cultural significance of a heritage site is in its location, the objects within it, its use and the meaning that it has to people today.
- Consideration of cultural significance, combined with careful analysis and study, must take place before any decisions are made that affect a heritage site.
- Careful records must be kept to ensure the care, management and understanding of heritage sites into the future.

SkillBuilders to support skill development

- 1.8 Developing a hypothesis

SOURCE 6 A map of Australia showing some First Nations Australian art sites and locations of ceremonial and cultural significance in south-east Australia

Source: Spatial Vision

2.12 SKILLS ACTIVITY: Using historical sources, Communicating

Establish the location of an Australian First Nations site of cultural significance that you can visit.

1. In small groups, **plan** your excursion and **design** a range of archaeological fieldwork activities. Remember that traditional custodians should be consulted when planning site visits. Extend an invitation to a member of your local First Nations community to accompany your class on the excursion to help explain the significance of the site and the artefacts you are studying.
2. It is important that the site be treated with the same respect you would give a church, mosque or war memorial. Think about how your group will need to move around to ensure you do not damage the site.

In the planning process you will also need to:

- Check with local park and wildlife services for the rules of the site in their care.
- Ensure that all visitors to your chosen site are aware of the rules of site management and that the only records taken of your visit are what you write, what you photograph and what you draw.
- Familiarise yourself with the key features of the site location: if is it near water, if it is exposed or protected from the weather, how accessible it is, what the vegetation surrounding the site is, and so on.
- **Research** The Dreaming stories and beliefs of the peoples who created and maintained the site.

2.12 Exercise

learnon

2.12 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 5	7, 8	4, 6, 9, 10

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Check your understanding

1. **Match** the Kulin archaeological site with its location by placing the corresponding letter in the middle column.

Burial sites		**a.** Sunbury, west of Melbourne
Rock art		**b.** Cape Schank
Fish and eel traps		**c.** Plenty and Maribyrnong rivers and Darebin and Merri creeks
Ceremonial circles		**d.** Mt William in Central Victoria
Mounds and middens		**e.** Lake Condah
Quarries		**f.** Grampians National Park
Ceremonial rocks		**g.** Banks of the Murray River
Caves		**h.** Foothills of the Dandenong Ranges

2. **Identify** the artefacts and evidence of life found at Lake Mungo.
3. Hundreds of Pleistocene footprints were preserved at Lake Mungo because the people walked across a layer of thick _____ that later dried and hardened.
4. **State** what the principles of the Burra Charter are designed to achieve.
5. The charred remains of a young woman found in the sand dunes near Lake Mungo, known as Mungo I, are close to 20 000 years old. True or false?

Apply your understanding

Using historical sources

6. The map in **SOURCE 6** shows artefacts and sites around Australia of archaeological significance. **Identify** all the challenges for the protection and conservation of these sites.
7. Examine **SOURCE 4** and read the relevant text.
   - **a.** What role did erosion play in discovering the evidence of early First Nations occupation of Lake Mungo?
   - **b.** How deep was the Upper Mungo level?
   - **c.** Would you expect Mungo I or Mungo III to be closer to the boundary between Upper and Lower Mungo?
   - **d.** What does 'ka' stand for? What difference in time is there between the first date in the Zanci layer and the third date in the Lower Mungo layer?
8. Look at the photograph in **SOURCE 5**. What evidence of First Nations spiritual and funerary practices could an archaeologist gain from studying this source?

Communicating

9. **Discuss** the concept of a 'shared heritage' and decide what that should mean in modern Australia.
10. **Explain** the main points of the 2010 Burra Charter and then **identify** why you believe it is of significance to the care of Australia's deep history sites.

LESSON
2.13 INQUIRY: Communicating deep time culture and history

LEARNING INTENTION

By the end of this lesson you should be able to able to research and represent information celebrating the culture and deep time history of one of Australia's First Nation Peoples.

Background

The Peoples of the Kulin nation of the modern state of Victoria belonged to the land extending from Port Phillip and Western Port, up into the Great Dividing Range and the Loddon and Goulburn River Valleys. The Kulin lived well from the land — fishing the abundant waters of Port Phillip, and hunting and foraging the surrounding grasslands. The Gunditjmara Peoples of southwestern Victoria built huts from wood and bluestone and wore cloaks of possum skin. They were lake people who constructed sophisticated systems of aquaculture. They constructed stone dams to create the ponds and wetlands where short-finned eels could be harvested. The Gunditjmara built channels and weirs linking their wetlands, and wove large baskets to cull the mature eels. Radiocarbon dating indicates the Gunditjmara aquaculture ponds were constructed 8000 years ago.

You are a documentary producer working with Imparja, a television station that tells the stories of First Nations communities, communicating between First Nations Peoples and the wider Australian community. Your task is to develop an outline of the format, and the content of a documentary being produced as a record of the culture, custom, language and deep time history of one group of First Nations Peoples. You are working with Elders representing this group. The guidance of the Elders is of great importance to your documentary, because they hold the knowledge of language, and the cultural traditions and beliefs of Country.

Consider what you already know about the deep time history and culture of First Nations Australia. Think about what you understand about The Dreaming and ceremony, social structure and organisation, trade networks, land management and technology, and the great significance of Country in shaping culture.

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task you can use this rubric to self-assess.

Inquiry steps

Working in small groups, complete the following steps.

Step 1: Questioning and researching

Discuss and **decide** on the history and culture of the group of First Nations Peoples you want to explore further, and the subjects that are the focus of your investigation. Use the lesson question headings in this topic to help you get started.

Allocate topics for individual group research.

Step 2: Using historical sources

Discuss how you would communicate the knowledge of First Nations history and culture to a wider audience. As a film maker, you would have a variety of ways of recording knowledge. The Elders could assist you in making a record of art, music, dance, stories or the poetry of songlines. Decide on the most appropriate way to represent the subjects of your inquiry.

Step 3: Communicating

In the role of the film maker, each member of the group will present your classmates with their chosen subject of investigation using the most appropriate way of representing their research.

Step 4: Historical perspectives and interpretations

Remember that you are presenting your understanding of the longest continuing culture in world history. Celebrate the achievements of a civilisation that adapted and survived because its people understood the importance of environmental sustainability in the face of thousands of years of change to climate and geography.

Complete your self-assessment using the **Inquiry rubric**, or access the 2.13 exercise set to complete it online.

SOURCE 1 First Nations Australians have a rich cultural history.

on Resources

Digital document Inquiry rubric (doc-39367)

LESSON
2.14 Review

Hey students! Now that it's time to revise this topic, go online to:

- Review your results
- Watch teacher-led videos
- Practise questions with immediate feedback

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2.14.1 Key knowledge summary

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

2.2 How do we know about the deep time history of Australia?

- Scientists and archaeologists study the record of Australia's ancient past in sites such as Lake Mungo and Barrow Island.
- The oral history of Australian First Nations Peoples has also left a record of the ancient world in the form of stories passed down through the generations.
- Museums work with First Nations Peoples to give meaning to the artefacts they have in their collections.

2.3 What is deep time?

- Deep time relates to Earth time, or geological time, and covers thousands of years into the past, encompassing all time that First Nations Peoples have spent in Australia.
- First Nations Australians have lived here for at least 60 000 years, during both the Pleistocene and Holocene periods.
- Dreaming stories can be used to explain geological phenomenon, such as volcanic eruptions and changing sea levels. These stories can be used alongside archaeological evidence in order to date First Nations Australian heritage sites and artefacts.

2.4 Where and what was the land of Sahul?

- During the Pleistocene period the huge continent of Sahul was composed of Australia, New Guinea, Tasmania and the Aru Islands of Indonesia. The seas finally separated the continent of Australia from the greater Sahul land mass at the end of the last Ice Age, between 8000 and 6000 years ago.
- Records of Pleistocene life in the region of the Dampier Archipelago of Western Australia have been left in the pictographs, petroglyphs, stone tools and the stories of First Nations Peoples.
- The stories of First Nations Australians and archaeological evidence suggests that humans and megafauna co-existed in Australia for approximately 15 000 to 20 000 years.
- Modern DNA technology concludes that First Nations Australians are descended from one founding population who were present on the land mass of Sahul at least 50 000 years ago.

2.5 Who were the First Peoples of Australia and the Torres Strait Islands?

- Scientists believe that the low sea levels of the last Ice Age made the settlement of Australia possible, because First Nations Peoples were able to walk much of the way from their place of origin in South-East Asia to the islands of the Torres Strait and on to the Australian mainland.
- As human settlement spread across Australia, hundreds of different languages and beliefs developed to explain the nature of the land and the links between people. A belief in a creation time known as the Dreaming was shared by Australia's First Nations Peoples.

2.6 How did First Nations Australians manage the land?

- First Nations communities used their detailed knowledge of climate, animal and plant life to manage their resources and survive in challenging natural environments.
- Fire was used as a tool to care for the land, hunt and promote the growth of new vegetation.
- Farming and fishing were central to life for people living in the islands of the Torres Strait.

2.7 How did technology develop in ancient Australia?

- At the time of first European colonisation, Australia was a multicultural society with at least 250 separate First Nations languages spoken and hundreds more dialects.
- First Nations Peoples did not just react to a changing environment; they also shaped it. In the process called 'intensification', ancient Australian communities set about increasing the productivity of the land they farmed.
- Sustainable and controlled food sources were developed as the climate changed, and tools adapted to meet the changing environment.

2.8 What was the First Nations Australian economy?

- Dreaming tracks were well-established trade networks extending for hundreds of kilometres across the land to provide links between many clan and language groups.
- Sequences of songs provided a record of creation beliefs and helped people to create mental maps of their Country, enabling them to travel long distances in safety.
- Large gatherings of many clan groups occurred annually to coincide with increased food supplies and to provide an opportunity for trade, feasting, ceremonial celebrations, marriage and business negotiations.

2.9 How did custom and kinship shape First Nations Australian society?

- Relationships between clan groups and within families are complex in First Nations communities and are known as kinship networks.
- The levels of kinship are moiety, totem and skin names (when given).
- The spiritual connections between people and Country are represented by totems, which are the sacred plants, insects, birds and animals of the natural world.

2.10 How was life and death recognised in ancient Australia?

- Bora grounds were ceremonial places where initiation rites were often carried out. These gave young people the status and responsibility that came with adulthood.
- The death and funerary customs of the First Nations Peoples connected the deceased with The Dreaming ancestors.
- The ancient pukumani ceremony of the Tiwi Islands has survived into modern times as a beautiful art form showing the importance to First Nations communities of funeral ceremony and ritual.

2.11 How have the world's oldest continuing cultures changed over time?

- First Nations Australians had inhabited the entirety of the Australian continent prior to the arrival of European settlement in the eighteenth century. This included the harsh arid landscapes of central Australia.
- Climate change during the Holocene period dramatically changed the environment for First Nations Peoples. Plentiful lakes dried up and coastlines shifted, meaning change was necessary to grow and survive.
- Remains from ancient Australian sites have been dated at over 50 000 years old. First Nations Peoples are part of the world's oldest continuing cultures.

2.12 How do we conserve our deep time history?

- The ancient river bed of Lake Mungo in New South Wales has provided evidence of the oldest known funeral practices anywhere in the world.
- First Nations communities play an important role in the conservation and cultural appreciation of archaeological sites such as Lake Mungo.
- The Burra Charter is an agreement made by the Australian government to ensure the conservation and protection of our heritage sites.

2.13 INQUIRY: Communicating deep time culture and history

- Elders hold the knowledge of language, The Dreaming, the lore, cultural traditions and beliefs of Country.
- The civilisation of First Nations Australians adapted and survived thousands of years of change to climate and geography because its peoples understood the land, and the importance of environmental sustainability.

2.14.2 Key terms

ancestral beings gods or deities who taught people how to live and the rules of society; regarded as the direct ancestors of First Nations Peoples living today

anthropologist someone who researches the appearance and features of the life of prehistoric people and the connections they had with other human populations

archipelago islands scattered over an expanse of water

artefact an object made or changed by humans

Before the Present a term used by archaeologists instead of BCE (before the common era) for when time periods are vast

cassowary a large flightless bird related to the emu with a bare head and neck

cay a small island found on coral reefs

clan a group of people of common descent or ancestry

dialects different forms of a language

The Dreaming in First Nations spirituality, the beginning of earth and the cycles of life and nature, explaining creation and the nature of the world, the place that every person has in that world and the importance of ritual and tradition; Dreaming stories pass on important knowledge, laws and beliefs; also known as The Dreamtime

dugong a sea animal, sometimes called a sea cow, found mainly on the coasts bordering the Indian Ocean

ecosystem a community of organisms, plants or animals and the environment they exist in

forage to search for provisions or food

genealogical an account of the descent or ancestry of a person or group

geologist someone who studies the sediments and landforms associated with ancient campsites

Ice Ages long periods during which glaciers covered much of the northern hemisphere

intensification activities undertaken with the intention of enhancing the productivity of land

islet a very small island

lore the customs and stories that came from The Dreaming and continue to govern all aspects of First Nations Australians' life

mallee a low-growing bushy Australian eucalypt plant

mangrove area in a tropical or subtropical climate where vegetation grows in salty or brackish water

ochre a natural pigment found in soil, ranging in colour from pale yellow to orange and red

palaeontologist a scientist who studies fossils

plateau a high, flat-topped landform

quarry an excavation or pit from which stone or building material is cut

radiocarbon dating a way of dating objects of plant or animal origin according to the amount of carbon left within them

rite of passage a ceremony or event marking an important stage in someone's life

sago a starch food obtained from palm used to produce a flour

savannah area of land that is a grassy plain with few trees in tropical and subtropical regions

seagrass a grass-like plant living in or close to the sea

sediment the material that settles at the bottom of a liquid

shell midden a mound of shells and other waste material marking the site of an ancient community

silt fine sand or earth particles carried and deposited by running water

taboo something strictly forbidden

taro a plant with broad edible leaves and root vegetable, grown in the tropical regions, especially the Pacific Islands

2.14.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How do First Nation Australians, as the world's oldest continuing cultures, display evidence of both continuity and change over deep time?

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

eWorkbooks	Customisable worksheets for this topic (ewbk-10468) Reflection (ewbk-10684) Crossword (ewbk-10685)
Interactivity	Deep time history of Australia crossword (int-8931)

2.14 Review exercise

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Multiple choice

1. Why was pitjuri a valuable trade item?
   - **A.** It was valued for its great beauty.
   - **B.** It was a strong timber used to make spears.
   - **C.** It was used for decoration.
   - **D.** It was a drug that could relieve pain, tiredness and hunger.
2. Why are kinship relationships very complex in First Nations Australian communities?
   - **A.** People lived in small village communities.
   - **B.** People were living in harsh environments.
   - **C.** Family links were tied to spiritual beliefs.
   - **D.** Families were very large.
3. A totem is a special plant or animal that is which of the following?
   - **A.** People were permitted to hunt it or gather it for food.
   - **B.** It was only known of through Dreaming beliefs.
   - **C.** It was chosen during an initiation ceremony to protect a young person.
   - **D.** It was painted and carved onto rock walls.
4. What were the tutini?
   - **A.** A set of Tiwi Island beliefs
   - **B.** Elaborately carved grave posts used in the pukumani ceremony
   - **C.** A weapon used by Torres Strait Islanders
   - **D.** A totem
5. What is Lake Mungo the site of?
   - **A.** The largest ceremonial grounds found
   - **B.** The most remote First Nations communities
   - **C.** The oldest known cremation site in the world
   - **D.** The most complex rock art in Australia
6. Why are the Elders the ceremonial leaders in First Nations communities?
   - **A.** Their old age has given them wisdom.
   - **B.** They are respected community members with a deep knowledge of tradition.
   - **C.** They are born into a hereditary position of power.
   - **D.** They are the great warriors.

7. How did First Nations Australians use fire to manage the land?
Select three correct responses.
   - **A.** They started bushfires to scare away enemies.
   - **B.** Burning grasslands promoted lush new growth.
   - **C.** Fire flushed animals from their burrows so they could be killed.
   - **D.** They burnt areas to let others know where they had been.
   - **E.** They burnt the undergrowth to reduce the risk of large bushfires.

8. What is the estimated number of First Nations language groups that existed when Europeans first arrived in Australia?
   - **A.** 50
   - **B.** 100
   - **C.** 150
   - **D.** 250

9. As the ancestral beings travelled across Australia giving life, they created landmarks and named the geographical features of the land. The countless pathways of daily travel and trade crossed the continent and are known as The Dreaming tracks.
What do First Nations Australians also remember these tracks as?
   - **A.** Songlines
   - **B.** Sacredlines
   - **C.** Dreamlines
   - **D.** Pathlines

10. What is the word for how First Nations Australians explain creation, the nature of the world and the importance of ritual and tradition?
   - **A.** The Storytelling
   - **B.** The Dreaming
   - **C.** The Sagas
   - **D.** The Folklore

Short answer

Historical perspectives and interpretations

11. **Summarise** the changes that took place in Australia between the Pleistocene and the Holocene periods.

Communicating

12. **Communicate** your understanding of deep time history and then identify the ways in which the deep time history of Australia has been recorded.
13. **Identify** the ways in which First Nations Australian Peoples managed the land and cared for Country.
14. **Explain** how the songlines were formed, and were then used to create trade networks.
15. **Compare** the concept of *kinship* in Western societies, and the kinship system as it continues to be defined in First Nations Australian communities. **Identify** the similarities and differences in a one paragraph explanation of kinship.

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3 Ancient Greece

LESSON SEQUENCE

online only

3.1 Overview
3.2 How do we know about ancient Greece?
3.3 Who were the Minoans and Mycenaeans?
3.4 What was the Greek ‘Dark Age’?
3.5 How were Athens and Sparta governed?
3.6 What was it like to live in Sparta?
3.7 What was life like in Athens?
3.8 What do we know about Greek laws, myths, gods and oracles?
3.9 What were the Olympic Games?
3.10 How was Greece changed by wars?
3.11 What is the heritage of ancient Greece?
3.12 INQUIRY: Contested histories — did the Spartans really kill their weak babies?
3.13 Review

LESSON
3.1 Overview

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How do we know about ancient Greece, and what were its defining features, achievements and legacies?

3.1.1 Introduction

In 2004, the Summer Olympic Games, officially known as the XXVIII Olympiad (28th Olympiad), were held in Athens, the capital of modern Greece.

Its motto, 'Welcome Home', was chosen because Greece was the birthplace of the Olympics. According to Greek tradition, the first ancient Greek Olympics were staged in 776 BCE.

As we will see in this topic, the Olympics are far from being our only legacy from Greece. Greeks have settled in many places, bringing their culture with them. More people of Greek descent live in Melbourne than in any city except Athens.

Much more importantly, many ancient Greek ideas were handed down to the present through other cultures. Ancient Greek influences are all around us.

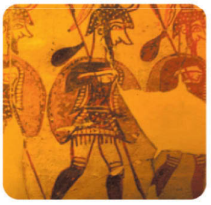
SOURCE 1 Statues called caryatids on the Acropolis in Athens, Greece

on Resources

	eWorkbook	Customisable worksheets for this topic (ewbk-10470)
	Video eLesson	Ancient Greece (eles-1836)

int-4294

SOURCE 2 A timeline of ancient Greece



BCE

3000 — **c. 3000** The Minoan civilisation develops on Crete.

1500

1400 — **c. 1400–1200** The Great Age of Mycenae flourishes.

1300

1200

c. 1150 The Greek 'Dark Ages' (to c. 750): Many Greeks migrate from the mainland to the Aegean islands and the coast of Asia Minor.

1100

1000 — **c. 1000** Dorians settle in Sparta and other Mycenaean sites.

900

800 — **c. 800** The Greek alphabet is developed.

c. 776 The First Olympiad is held.

c. 750 The Greek archaic period (to c. 490)

700

c. 490 Greek Classical Age (to c. 323): a period of great achievements in art, literature and drama

600

508 Democracy is introduced in Athens.

500 — **490** The Persian Wars begin.

460–445 The First Peloponnesian War.

431–404 The Peloponnesian War is waged between alliances led by Athens and Sparta.

400 — **403–371** Sparta dominates the Greek world.

371 The Thebans defeat the Spartans.

300

336 Alexander the Great becomes ruler of Greece.

200 — **334** Alexander the Great invades the Persian Empire.

146 The Romans conquer Greece.

100

0

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LESSON
3.2 How do we know about ancient Greece?

LEARNING INTENTION

By the end of this lesson you should be able to describe the archaeological and written sources for ancient Greece and explain the gaps in our knowledge.

TUNE IN

tivd-10500

Archaeological sources such as sculptures can tell us about the past.

1. Discuss how sculptors around 2500 years ago could produce art such as that shown in **SOURCE 1**.
2. Brainstorm what you think these sculptures could have been about.

SOURCE 1 Some of the many marble sculptures that once adorned the Parthenon (temple) in ancient Athens

3.2.1 How do we know about ancient Greece?

Every year millions of people visit Greece to marvel at the many surviving traces of its ancient civilisation. These include the shells of magnificent buildings such as the Parthenon and Erechtheion on the **Acropolis** of Athens, and the National Archaeological Museum, which holds the world's largest collection of ancient Greek artefacts. They also visit the extensive ruins of the original Olympic Games at Olympia and other sites, such as the god Poseidon's temple at Sounion and the sanctuary at Delphi, which the ancient Greeks called the 'navel of the Earth'. Great collections of Greek art are also held in other parts of the world, including the famous Parthenon Marbles, which were taken from the Parthenon by the British diplomat Lord Elgin more than 200 years ago and are now displayed in the British Museum in London.

Written sources

The Greeks also left many written records. Ancient Greek writers are still read today. Among the best known are the works of the epic poet Homer, the historians Herodotus (c. 484–425 BCE) and Thucydides (c. 460–403 BCE), the philosophers Plato (c. 428–348 BCE) and Aristotle (c. 384–332 BCE), and playwrights such as Sophocles (c. 495–405 BCE). Their works and other written records add much to our understanding of ancient Greece.

acropolis a city, citadel or complex that sits on a high hill

SOURCE 2 Mycenaean soldiers painted on pottery. Mycenae was the earliest civilisation on the Greek mainland.

SOURCE 3 A theatre mask used in performances of plays in ancient Athens. Beside the mask you can see the excavated remains of an ancient Greek amphitheatre in Aphrodisias on the Turkish coast. It was in open-air theatres like this that ancient Greek actors performed wearing such masks.

3.2 SKILL ACTIVITY: Using historical sources

The Parthenon is the building on top of the Acropolis.

1. **Conduct reasearch** online to find images and information about the Parthenon.
2. **Identify** the features of the Parthenon that have influenced the design of many modern-day public buildings. Share the features you have identified with your class.

3.2 Exercise

learnon

3.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7	8, 9, 10

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Check your understanding

1. **Identify** the main reason that millions of people visit Greece each year.
2. **Identify** the ancient Greek writer whose works are still read today.
   - A. Homer
   - B. Thucydides
   - C. Aristotle
   - D. All of the above
3. The original Olympic Games were held at Olympia. True or false?
4. **Recall** what the earliest civilisation on the Greek mainland was called.
   - A. Mycenae
   - B. Dorian
   - C. Aeolian
   - D. Ionian
5. Who was Herodotus?

Apply your understanding

Using historical sources

6. **Explain** how **SOURCE 1** provides evidence of the artistic skills of ancient Greek sculptors.
7. Use **SOURCE 1** to **develop** a hypothesis about the wealth and values of ancient Athens.
8. **Discuss** what you think we might learn from **SOURCE 2** about the skills of Mycenaean potters.
9. **Explain** what kind of character you think the mask in **SOURCE 3** was meant to represent. How can you tell?
10. Write a short **summary** of what you have discovered about ancient Greece from **SOURCES 1** to **3**.

LESSON
3.3 Who were the Minoans and Mycenaeans?

LEARNING INTENTION

By the end of this lesson you should be able to describe the first ancient Greek civilisation, the Minoans, and the Mycenaeans, who conquered them around 1375 BCE.

TUNE IN

The sculptures shown in **SOURCE 1** have been dated to the time of the first ancient Greek civilisation, the Minoans.

SOURCE 1 Ancient Minoan sculptures of bulls

1. Why do you think they would have sculpted the heads of bulls?
2. Consider what significance bulls might have had for them.

3.3.1 Minoan civilisation

Civilisation in Greece began before 3000 BCE when people started to grow crops and herd animals on Crete, the largest of the Greek islands. The archaeologist Arthur Evans was the first to excavate their cities. He called these people Minoans after their legendary King Minos. During the fourteenth century BCE, their peaceful civilisation appears to have been overrun by the more warlike Mycenaeans of mainland Greece.

By about 2500 BCE the Minoans had built towns. They had also learned to make tools, weapons and ornaments from bronze and to create beautiful pottery. The main Minoan city, Knossos, dates from about 1900 BCE. The walls of the buildings in Knossos were decorated with scenes of Minoan life, including athletes leaping and performing acrobatics on the backs of wild bulls (see **SOURCE 2**).

Around the time that Knossos was built, the Minoans were building palaces, and most Minoans were living in large coastal towns. These were probably centres of their extensive sea trade. Evidence suggests the Minoans set up trading bases on several Greek islands and exchanged goods with Egypt, Syria and other civilisations. The Minoans used a written language we call Linear A. It disappeared suddenly about 1450 BCE and it is still

SOURCE 2 A fresco (wall painting) from Knossos showing young Minoan men and women leaping on the back of a bull

not understood. Around 1700 BCE the Minoan cities were destroyed following the eruption of a volcano on the island of Santorini, which triggered a massive tsunami. The cities were rebuilt but were destroyed again by earthquakes in about 1450 BCE.

3.3.2 The Mycenaeans

Most archaeologists believe that by about 1375 BCE, Mycenaean invaders from small kingdoms such as Mycenae, Athens and other hilltop cities on the Greek mainland had conquered the Minoans. Mycenaean civilisation flourished between about 1400 BCE and 1200 BCE. The Mycenaeans were great seafarers and traders and were highly skilled in the use of bronze. They appear to have copied some aspects of Minoan culture. The warrior ruling class lived in palaces and enjoyed music, dancing and sport.

The Mycaenaeans spoke an early form of Greek. Their written language, which we call Linear B, has been translated since its code was cracked in 1952. The earliest Mycenaean stories to appear in written sources are Homer's *Iliad* and *Odyssey*. The *Iliad* tells the story of how in about 1200 BCE the Mycenaeans laid siege to, and finally captured and destroyed, the city of Troy in Anatolia (present-day Turkey).

SOURCE 3 Crete, Greece and Egypt at the time of the Minoan and Mycenaean civilisations

Source: Map drawn by Spatial Vision.

Homer's *Iliad* and the Trojan War

The story told in the *Iliad* is so popular that it has been told and retold, even by Hollywood in a twenty-first century movie. Whether any part of the story is true is still a mystery. Some archaeological discoveries have only added to the debate. The story was probably passed down by storytellers for three centuries before it was recorded in writing by Homer. Homer is believed to be a Greek who lived in the eighth century BC. However, some scholars think that his poems were the work of several people.

As the *Iliad* tells the story, there are several main characters. Among them are:

- Agamemnon, the king of Mycenae
- Menelaus, the king of Sparta and brother of Agamemnon
- Helen, the wife of Menelaus
- Priam, the king of Troy
- Paris, son of Priam
- Odysseus, a Mycenaean warrior hero.

According to the *Iliad*, the war started because Paris abducted Helen and took her to Troy. As Homer tells the story, Agamemnon gathered a great Greek navy and led a ten-year siege of Troy that included huge battles outside the city's walls. Troy was finally defeated by Mycenaean trickery. Pretending to have given up the siege, the Greeks left a giant wooden horse with their hero Odysseus and about 20 other warriors hidden inside. Seeing that the Greeks had sailed away, the Trojans thought that the Greeks had left the horse as a gift. After the rejoicing Trojans dragged the horse into the city, Odysseus and his companions crept out and opened the city gates for the returning Greeks, who seized and destroyed Troy.

SOURCE 4 A scene from one of the wall paintings found at Tiryns, a Mycenaean site from the fourteenth to thirteenth centuries BCE

Fact or fiction?

Even in ancient times the truth of the *Iliad* was doubted (see **SOURCE 5**). Until the late nineteenth century CE, the story was thought to be simply a myth. Then, in 1870, a German amateur archaeologist, Heinrich Schliemann, began digging on what he believed was the site of ancient Troy. He used the *Iliad* to help find its location and he discovered the ruins of a city that could have been Troy (see **SOURCE 6**). However, later excavations showed that the level Schliemann identified as Troy was hundreds of years too early.

SOURCE 5 From *The Histories*, written by the ancient Greek historian Herodotus (c. 484–425 BCE)

. . . had Helen really been in Troy, she would have been handed over to the Greeks with or without Paris' consent; for I cannot believe that either Priam or any other kinsman of his was mad enough to be willing to risk his own and his children's lives and the safety of the city, simply to let Paris continue to live with Helen.

SOURCE 6 At Canakkale, about 300 km south-west of Istanbul in Turkey, Schliemann dug up these city ruins. Later excavations showed the site contains ruins of nine different settlements, built one on top of the other.

The Mask of Agamemnon?

Four years later, Schliemann excavated Mycenae to find the grave of Agamemnon. He found at least five royal graves filled with gold and other treasure. His most exciting finds were several gold masks, including one pictured in **SOURCE 7** that became known as the 'Mask of Agamemnon'. Many archaeologists doubt that this really is Agamemnon's death mask for several reasons:

- Schliemann had a record of faking archaeological finds and he could have had the mask made.
- The grave where the mask was found is about 300 years earlier than the supposed date of the Trojan War.
- The 'Mask of Agamemnon' looks very different from the masks, including **SOURCE 8**, found covering the remains of other Mycenaean chieftains.

Clear evidence is still yet to be found that the Trojan War really happened or that the grave Schliemann unearthed at Mycenae was, in fact, the grave of King Agamemnon.

3.3 SKILL ACTIVITY: Questioning and researching

1. **Compare SOURCES 7** and **8**.
   a. **Describe** the features of the masks in **SOURCES 7** and **8**
   b. If both of these masks were really found in the graves at Mycenae, **explain** why you think a decision was made to call **SOURCE 7** rather than **SOURCE 8** the mask of Agamemnon.
2. Choose one other primary source in this lesson. **Propose** three questions you could ask about it to try to assess its reliability and usefulness for a study of Minoan or Mycenaean history.

SOURCE 7 The gold 'Mask of Agamemnon'. Heinrich Schliemann claimed to have found it in 1876 when he excavated graves in Mycenae. It is held in the National Archaeological Museum, in Athens.

SOURCE 8 Another Mycenaean gold mask from excavated graves in Mycenae, now held in the National Archaeological Museum, in Athens

3.3 Exercise

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3.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4, 9	1, 6, 7, 8	5, 10

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Check your understanding

1. **Describe** the achievements of Minoan civilisation by about 1700 BCE.
2. **Identify** what caused the collapse of Minoan civilisation.
   A. The Persian Wars
   B. An earthquake
   C. An invasion
   D. The Romans
3. **Explain** what role the Mycenaeans might have played in the destruction of Minoan Crete.
4. According to legend, **identify** how the Mycenaeans won the Trojan War.
   A. They killed Priam, the king of Troy.
   B. They left a wooden horse filled with Mycenaean Greek warriors outside the city walls and then pretended to sail for home.
   C. They defeated the Trojans during battle.
   D. They did not win the Trojan war.
5. **Describe** the supposed causes and effects of the Trojan War.

Apply your understanding

Using historical sources

6. Look closely at **SOURCE 2**.
   a. **Describe** what is depicted in this Minoan wall painting.
   b. Do you think the Minoans did this for sport or could there be another explanation for the scene? **Justify** your answer.
7. Study **SOURCE 3**. **Explain** how the location of Crete would have enabled the Minoans to trade with other civilisations and how the Minoans would have benefited from trade.
8. Analyse **SOURCE 4** and **explain** what you might be able to suggest about Mycenaean art and everyday life from this source.
9. In **SOURCE 5**, **identify** what Herodotus doubts about the account of the Trojan War in the *Illiad.*
   A. That the Mycenaeans used a wooden horse to enter and take the city
   B. That Troy was defeated
   C. That Helen ever existed
   D. That the Trojan king would have risked defeat, death and destruction just so Paris could have kept Helen
10. **Explain** why it is likely that the walls in **SOURCE 6** are not the walls of ancient Troy.

LESSON
3.4 What was the Greek 'Dark Age'?

LEARNING INTENTION

By the end of this lesson you should be able to identify the geographical features of Greece and explain how they influenced the development of Greek civilisation from about 1150 BCE to 490 BCE.

TUNE IN

Pottery and other works of art can be powerful sources to help us better understand history. Examine **SOURCE 1.**

1. Is this piece of pottery considered a primary or secondary source? Why?
2. Discuss the elements of this source that suggest what hoplites were.
3. Consider how accurate you think these images are.
4. Share your thoughts with your class.

SOURCE 1 Mycenaean pottery showing hoplites

3.4.1 The influence of geography

From their heavily fortified cities, the Mycenaean kings dominated the south of Greece from around 1600 BCE to 1200 BCE. But soon after 1200 BCE, Mycenaean culture suffered a sudden and violent collapse. This was followed by the Greek 'Dark Age', which lasted almost 400 years. We know very little about ancient Greece between 1150 BCE and the development of the Greek alphabet around 800 BCE.

What we do know is that the landscape, climate and natural resources of Greece had a huge influence on its civilisations in this period and later. As you can see in **SOURCE 2**, 75 per cent of the Greek mainland is mountainous. This meant that settlements were isolated from each other, overland travel was difficult and only about 20 per cent of the land was useful for farming. This caused the Greek settlements to turn to the sea for contacts and trade.

Ancient Greece had long, hot summers and short, cool and wet winters. Rainfall was unreliable and long droughts could cause hunger, but floods could also destroy food crops. However, soils in many of the valleys were suitable for growing barley, oats and some wheat, while the uplands provided slopes for grazing sheep and goats and growing grapes and olives. Most ancient Greeks were small farmers who lived in small villages. They provided the staples of the Greek diet, such as bread, wine and olive oil, as well as products from the herds, including wool, skins, cheese and occasionally meat.

int-7757

SOURCE 2 The origins of Greece

Source: Map drawn by Spatial Vision.

Trade

Although sudden storms made sea travel in ancient times very dangerous, the Greeks also relied on the sea for trade in bronze, timber and other materials they lacked. Some wheat also had to be imported because from around 600 BCE, the Greek population increased and wheat did not grow well in the steep terrain and limestone soils. The Greeks imported it and other foods from Egypt, southern Italy and around the Black Sea. They exported olive oil, wine and pottery.

3.4.2 The development of the Greek city-states

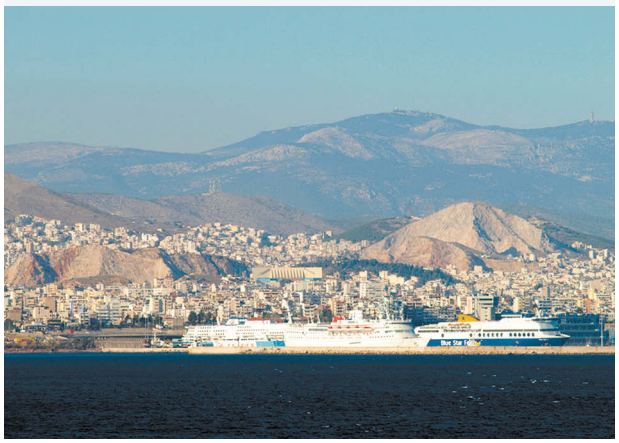
The Greek 'Dark Age', c. 1150–750 BCE

The period from about 1150 to 750 BCE is called the Greek 'Dark Age' partly because very little is known of it. Mycenaean palaces were looted and burned and nearly all the Mycenaean fortresses except Athens were abandoned. We do not know who the attackers were. Until the late twentieth century, historians mostly agreed that they were **Dorians** from northern Greece. Among these Dorians were people who settled in villages at the site of Sparta around 1000 BCE. However, archaeological evidence suggests that the Mycenaean kingdoms had collapsed before the Dorians moved south.

During the Dark Age, the art of writing was lost, trade collapsed and central government disappeared. A consequence was a lack of evidence for this period. Another important Dark Age development was the migration from around 1050 BCE of mainland Greeks to the Aegean islands and the coast of Asia Minor (modern-day Turkey). According to Greek legends, these migrants included people fleeing from the Dorians. Around the same time, the **Iron Age** reached Greece, which meant the beginning of tool and weapon manufacturing using iron.

SOURCE 3 An archaeological excavation at the site of an ancient Greek settlement in what is now the Black Sea port of Odessa, in Ukraine

SOURCE 4 Athens today as seen from its port, Piraeus. The arid mountains in the background are typical of Greece.



The Archaic Period and the rise of the polis

The time between c. 750 and 490 BCE is called the Archaic Period. It describes the time leading up to the Classical Period. Many changes took place in the Greek world. **Pan-Hellenic** institutions, such as the Olympic festivals, came to express a common Greek culture. Around 750 BCE, Greeks set up colonies in southern Italy, Sicily and even as far away as the Black Sea. This was probably because of a growing shortage of farming land on the dry, rocky mainland. By the early seventh century BCE, throughout the Greek mainland, islands and colonies, a new kind of state developed. Greeks formed **poleis** — independent, self-governing city-states such as Athens, Sparta, Corinth and Thebes that often fought each other for territory.

Dorians tribes from the north of Greece who moved into the south during the Dark Age

Iron Age period in which people learned to use iron to make tools and weapons

pan-Hellenic for all the Greeks

polis (plural **poleis**) ancient Greek city-state

3.4 SKILL ACTIVITY: Questioning and researching, Communicating

1. **Create** a timeline of events and developments in this lesson, noting approximate dates or ranges of dates from between around 1600 BCE and 490 BCE.
   Note on your timeline any developments that could be considered to be turning points.
2. **Describe** the broad changes that occurred in Greece over this period.

3.4 Exercise

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3.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5, 6	3, 4, 7	8, 9, 10

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Check your understanding

1. Complete the following paragraph by **selecting** the correct words from the list: sea, fifth, unreliable, mountainous, isolated, hot.
   The type of civilisation that developed in ancient Greece was influenced by the _____ landscape, _____ summers and _____ rainfall. Only a _____ of the land was good for farming. Because Greek settlements were _____ from each other, the Greeks used the _____, despite the risk of dangerous storms.
2. The Greek 'Dark Age' refers to what period of time?
   A. When Troy was defeated by the Mycenaens
   B. When Mycenaean civilisation collapsed
   C. When Minoan cities were destroyed following the eruption of a volcano on the island of Santorini
   D. All of the above
3. **Describe** what became of the Mycenaean cites and writing in this period.
4. **Explain** why many Greeks migrated during this period.
5. **Identify** three locations where many Greeks set up colonies during the Archaic Period.
   A. Sicily
   B. Bulgaria
   C. Southern Italy
   D. The Black Sea
   E. Northern Greece

Apply your understanding

Using historical sources

6. **Examine SOURCE 2**. **Describe** how much of Greece is mountainous and how that would have affected farming and travel.
7. Referring to **SOURCE 2**, **explain** why the Greek coastline is very long relative to the size of the country.
8. Look closely at **SOURCE 3** and **propose** three questions you would ask about its usefulness and reliability as evidence for the establishment of ancient Greek colonies.

Historical perspectives and interpretations

9. Using **SOURCE 4**, **describe** the landscape surrounding Athens.
10. Using all the sources in this lesson as evidence, **summarise** why Greece became a country of independent, self-governing city-states that often fought each other.

LESSON
3.5 How were Athens and Sparta governed?

LEARNING INTENTION

By the end of this lesson you should be able to explain the different systems of government that developed in Athens and Sparta.

TUNE IN

A bust is a sculpture of a person's head, shoulders and chest. The bust shown in **SOURCE 1** was made by a sculptor in Rome in the second century CE. The original Greek bust is lost.

1. Discuss who you think Pericles was.
2. Brainstorm possible reasons Pericles was so significant that Romans would have wanted a bust of him made seven centuries after his death.

SOURCE 1 A Roman copy of the original Greek bust of Pericles

3.5.1 Athens — the roots of democracy

Athens and Sparta were the two most powerful city-states in ancient Greece. They had many things in common with other ancient Greek city-states. For example, they generally worshipped the same gods and used the same language and alphabet. However, city-states had their own laws and traditions and their own ruling systems.

Greek city-states (or poleis) were originally ruled by kings. Later, most came under the control of **oligarchies**. From the seventh century BCE, many poleis were for a time led by absolute rulers called tyrants who, all the same, often carried out reforms to win popular support. In most cases the aristocrats (oligarchs) eventually regained power. Then in 508 BCE, Athens introduced a new system of government called **democracy**.

Democracy in Athens was well-established by the fifth century BCE. Athenian citizens decided how their city-state would be run. At meetings of the governing assembly (called the *Ecclesia*), they voted on laws and elected officials. Membership of the Council of 500 and jury courts was rotated. This meant that all citizens could participate, and no-one became too powerful. In fact, someone suspected of trying to grab power could be ostracised. **Ostracism** meant that if 6000 citizens spoke up against a man, he could be exiled from Athens for 10 years. Citizens expressed their concern by scratching the man's name on a piece of broken pottery called an *ostrak on*.

oligarchy governing council of rich aristocrats

democracy a political system according to which citizens choose the way in which they are governed

ostracism the punishment of being banished from Athens

But was it a fair democracy?

In Athens, as in Australia, only adult citizens could vote. In Australia today, most people who live here are citizens. However, during the fifth century BCE, only about 45 000 of Athens' population of around 300 000 were citizens. Women and children (who made up nearly half the population), **metics** (who made up about 12 per cent) and slaves (who made up about 25 per cent) could not take part in the democratic process.

Considering only certain people could vote and people in Greek society had specific responsibilities (for example, women couldn't vote and primarily looked after their household, while most men had an obligation to complete military service) were any Greek citizens actually 'free'?

metic free man living in Athens but not born there; could not vote or own property but served in the army and paid taxes

DID YOU KNOW?

All citizens were able to participate personally in the government of Athens because the citizen population was fairly small. Each citizen could discuss and vote on Athenian laws. They could also be elected to work as public officials on a fair, rotational basis. This sort of democracy is called direct democracy.

The form of democracy in Australia is called representative democracy. Australian citizens aged over 18 vote for politicians who they believe will best represent their or the community's interests. Generally, these representatives belong to political parties. The party or coalition winning most of the 151 seats in the federal House of Representatives forms the federal government. The main losing party or parties form the Opposition, whose role is to critically review what the government does. The Senate comprises 76 people — 12 from each state of Australia and two from each territory. Its role is to protect state interests.

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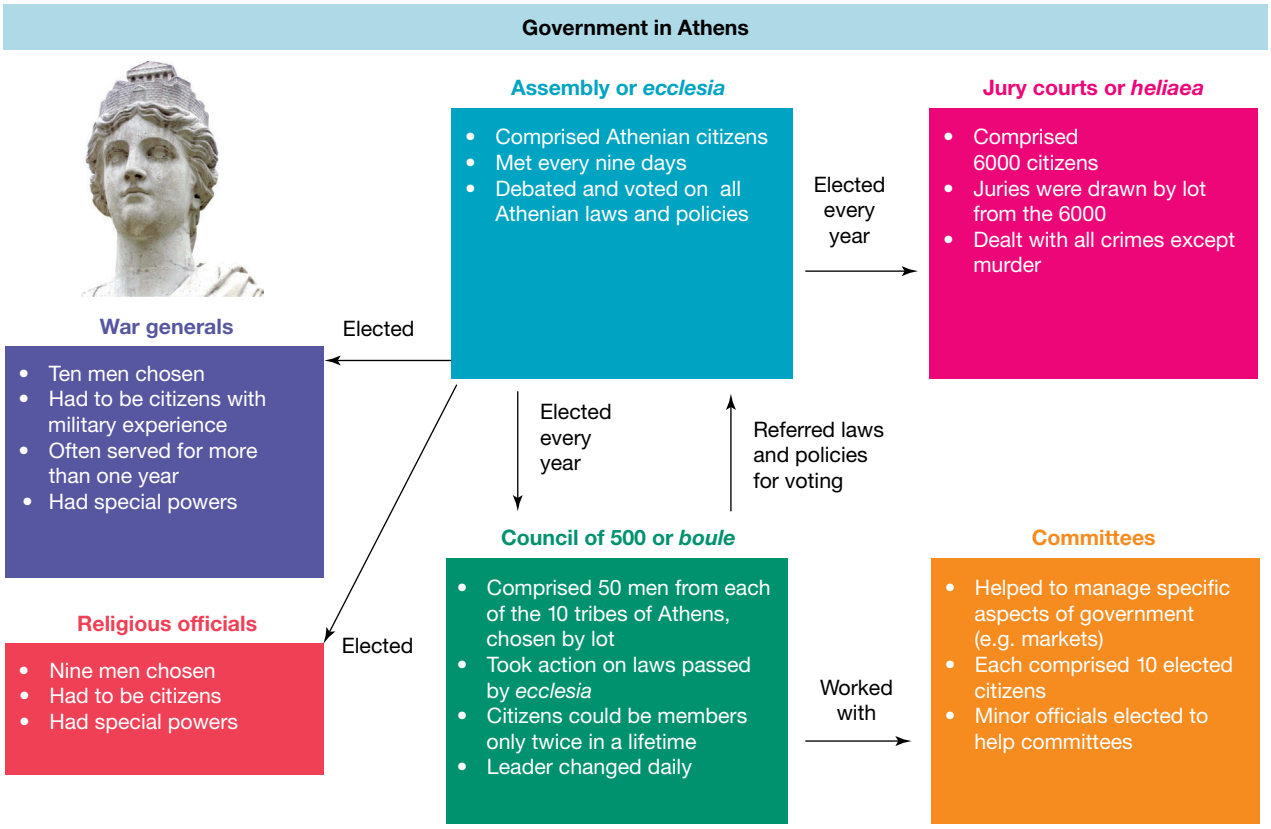
SOURCE 2 Government in Athens



SOURCE 3 Painting of Athenian Assembly after the death of Pericles in 429 BCE

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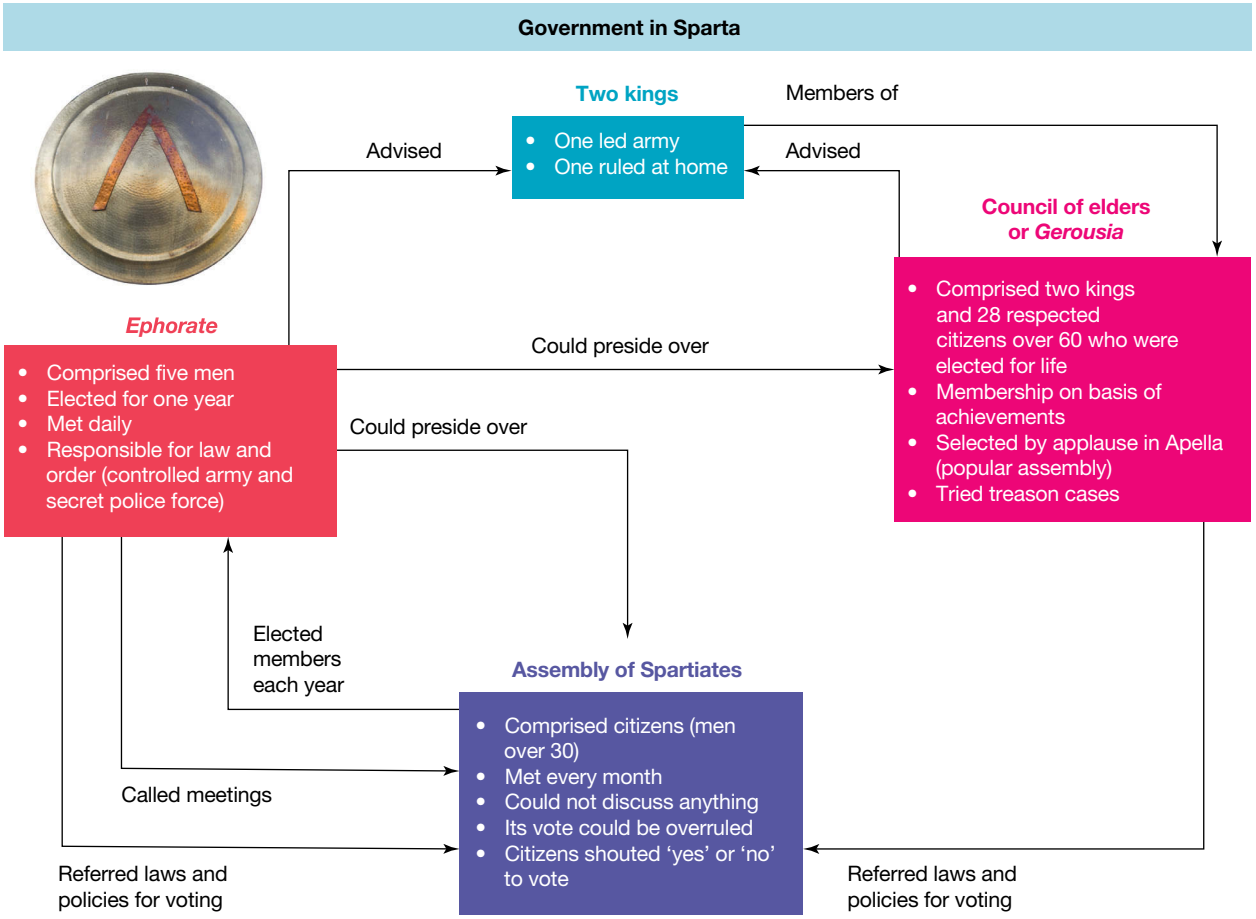
SOURCE 4 Government in Sparta



3.5.2 Spartan rule

Dorians settled at the site of Sparta around 1000 BCE. During the eighth century BCE, Sparta took control of the Laconian plain and conquered neighbouring Messenia. The Spartans made most Laconians and Messenians slaves, called **helots**, whom they controlled brutally.

Initially, Sparta was ruled by two kings who inherited their position. By about the end of the seventh century BCE, the government had become an oligarchy. Most power was in the hands of a few families who controlled the **Ephorate** and dominated the council of elders. These two bodies decided what laws and policies the Spartan citizens in the Assembly of Spartiates would vote on. Citizens could not discuss these matters. They could only shout 'yes' or 'no' to a proposal. Even if they voted 'no', this decision could be overruled.

helot slave of the Spartan state
Ephorate five-man ruling body in Sparta that advised the kings

3.5 SKILL ACTIVITY: Questioning and researching, Using historical sources

1. In chronological order, **state** the three forms of government that existed in many Greek states before Athens introduced democracy. **Identify** the main differences between these forms of government.
2. **Conduct** research to find out how modern democracy is different from ancient Greek democracy.

3.5 Exercise

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3.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 8	5, 6, 9	4, 7, 10

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Check your understanding

1. What did the ancient Greek city-states have in common? Select all that apply.
   A. Language and alphabet **B.** Ruling systems **C.** Gods
   D. Laws and traditions **E.** Festivals and myths
2. In _____ BCE, Athens introduced a new system of government called democracy.
3. **Select** the correct words to complete the passage.
   Someone suspected of trying to grab **wealth** / **power** / **children** in Athens could be ostracised. Ostracism meant that if **600** / **6000** / **60 000** citizens spoke up against a man, he could be exiled from Athens for **5** / **10** / **25** years.
4. **Identify** what effect the Spartan conquest had on the Messenians.
5. Around what time did Sparta become an oligarchy? **Explain** what this meant.

Apply your understanding

Using historical sources

6. Using **SOURCE 2**, **explain** the difference between the Athenian Assembly and the Council of 500.
7. **Describe** the scene in **SOURCE 3** and suggest what impression it gives of the character of the Athenian Assembly meetings.

Communicating

8. **Examine SOURCE 4** and **explain** who could be Spartan citizens.

Historical perspectives and interpretations

9. **Describe** powers held in Sparta by each of these institutions: the Ephorate, the Gerousia and the Assembly.
10. Using the sources in this lesson, **decide** if ordinary citizens had more power in Athens or in Sparta.

LESSON
3.6 What was it like to live in Sparta?

LEARNING INTENTION

By the end of this lesson you should be able to identify how Sparta became a military state, and describe how Spartan men and women lived.

TUNE IN

In our own time, the word 'Spartan' usually means 'tough and disciplined'. But what does that mean? A story that influenced this idea was passed down through the ages from ancient Greek times to very recent times, and was generally believed.

Spartan boys began their training as warriors from the age of seven. They were often starved and expected to steal food to survive. The theft was deemed acceptable if they were successful, but not if they were caught in the act. Historian and biographer Plutarch (c. 46–120 CE) was probably the first writer to record the famous story of the Spartan boy who died rather than be found out. The story was largely believed, even though Plutarch was writing centuries after the time in which these events were supposed to have happened.

SOURCE 1 From Plutarch, *Life of Lycurgus*

[One of the Spartan boys] who was carrying concealed under his cloak, a young fox, suffered the animal to tear out his bowels with its teeth and claws, and died rather than have his theft detected.

1. Clarify what you think this story is saying. What happened?
2. What kind of message do you think it was sending?

3.6.1 A strong city-state

After brutally putting down a slave revolt in about 650 BCE, Sparta became a military state, and it remained so for the next 300 years. Culture and art were no longer valued, and luxuries were despised. The main role of a Spartan man was to be a brave warrior, while the main role of a Spartan woman was to bear strong children.

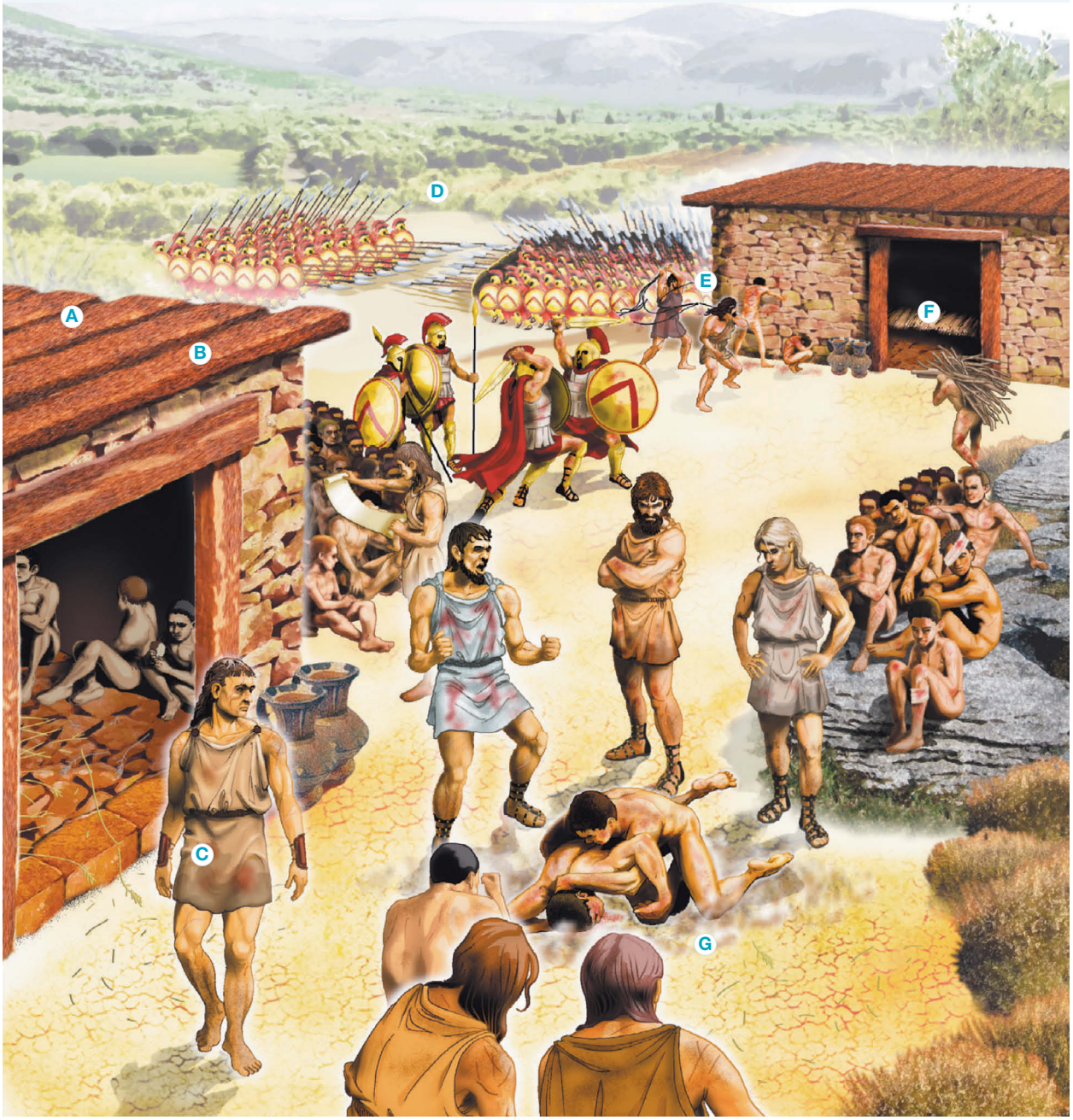
SOURCE 2 As the Greek writer Plutarch notes, the main aim of boys' education was to teach them to be fierce, disciplined soldiers.

The boys learned to read and write no more than was necessary. Otherwise their whole education was aimed at developing smart obedience, perseverance under stress and victory in battle. So as they grew older they intensified their physical training, and got into the habit of cropping their hair, going barefoot and exercising naked. From the age of twelve they never wore a tunic, and were given only one cloak a year. Their bodies were rough, and knew nothing of baths or oiling.

Like many settlements in ancient Greece, Sparta was a city-state. This means it was a fortified centre surrounded by a town community and farmlands. The farmlands provided the produce that people needed to survive. Like all city-states, it had its own laws and form of government. The city-state of Sparta became very powerful because it was the only one with a permanent army.

int-5983

SOURCE 3 Spartan males lived a harsh and disciplined life, much of which was spent in military camps.



A The army barracks and other Spartan settlements had no walls.

B Even after they married, Spartan men still ate in the army barracks as a member of a mess. To become a citizen, a man had to be a member of an army mess.

C Men lived in military camps until they were 30, when they could become a citizen and marry.

D Spartan soldiers grew their hair long and usually wore little clothing. However, when fighting or training, they wore armour and bright red cloaks. When in their phalanx formation, they stood close together, with shields touching and their spears jutting straight out ahead.

E Boys were often flogged to teach them to put up with pain and develop their courage. Being caught stealing was severely punished — though stealing itself was accepted.

F Beds were a bundle of long reeds, cut from the riverbanks, and laid on the floor.

G In the military camps, boys and young men exercised, played war games and learned about Sparta's rules of conduct. The boys enjoyed no 'home comforts' and discipline was very harsh.

A tough life

Sparta soon dominated the **Peloponnese peninsula**. But life in Sparta was harsh. Ancient Greek writers claimed that weak or sickly male babies were abandoned on a hillside to die of exposure. However, recent archaeological evidence casts some doubt on this story.

Boys left home at the age of seven to start their military training in barracks. Everything was geared to protecting the state — personal needs did not matter.

Spartan women

Spartan women could not become citizens, vote or hold public office. However, they could own land and represent themselves in court. Evidence suggests that Spartan women came to own about a third of Sparta's land and wealth because so many Spartan men were killed in battle. Like boys, they were taught to be brave and outspoken.

Women wore plain clothing, cut their hair short and did not wear perfume, make-up or jewellery. They trained to keep fit, and exercised and danced naked. Their role was to bear healthy children and be tough for their men.

Such great importance was placed on producing Spartan children that it influenced the way Spartans viewed death and funerary customs. The most honourable death for a Spartan man was to die in battle. Along with men who died in battle, women who died in childbirth were the only Spartans who were permitted to have their names on tombstones.

Peloponnese peninsula the southern part of mainland Greece, joined to the north by the narrow Isthmus of Corinth

DISCUSS

In history, we 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.

Is the reasoning sound in the following statements? Why or why not?

Statement 1: Spartan women had more rights than most other women in ancient times.

Statement 2: The modern women's rights movement, called feminism, emerged in the second half of the twentieth century.

Conclusion: Feminism came from ancient Sparta.

3.6.2 The helots and the perioeci

Unlike slaves in other Greek states, the helots were not owned by individuals. They were the property of the Spartan state, which allocated families of helots to farm the land set aside for each Spartan. Because the helots greatly outnumbered them, the Spartans lived in fear of a helot rebellion. It was probably this fear that led the Spartans to cruelly control the helots and to adopt a system that made Sparta such a harsh military state.

The **perioeci** were descended from Dorian tribes who settled in other areas around Sparta. Though perioeci men had to serve in Sparta's army if required, they were otherwise free. They were mainly craftspeople and merchants — occupations forbidden to the elite Spartans.

How did the helots react to enslavement?

When the Spartans conquered the Messenians, reducing them to the status of slaves, it was this slavery that made the Spartan way of life possible. Spartans could only be full-time soldiers because their state provided each Spartan family with sufficient helots to work their land and to provide those families with the produce they needed.

perioeci peoples of Laconian towns around Sparta who could be required to fight for Sparta but were not citizens

Evidence suggests the Messenian helots never lost the will to regain their freedom. They rebelled against Sparta around 650 BCE and again in 464–459 BCE. It is likely that the methods used by the Spartans to suppress the helots made the helots even more rebellious. The Spartan Ephorate ran a secret police force called the Krypteia. It recruited young Spartans and sent them out for a year to spy on the helots. They were authorised to kill helots, especially those who appeared to have the kinds of qualities that might fit them to lead a helot rebellion (see **SOURCES 4** and **5**).

aud-0410

SOURCE 4 A description of the treatment of helots, by the ancient Greek writer Plutarch (c. 46–120 CE)

The magistrates dispatched privately some of the ablest of the young men into the country, from time to time, armed only with their daggers . . . they . . . killed all the Helots they could light upon; sometimes they set upon them by day, as they were at work in the fields, and murdered them . . .

Aristotle, in particular, adds, that the ephori [ephors], so soon as they were entered into their office, used to declare war against them [the helots], so that they might be massacred without a breach of religion.

aud-0411

SOURCE 5 A description of the treatment of helots who had fought for Sparta against Athens in 424 BCE, by the ancient Greek writer Thucydides (c. 460–403 BCE)

The Helots were invited by a proclamation to pick out those of their number who claimed to have most distinguished themselves against the enemy, in order that they might receive their freedom; the object being to test them, as it was thought that the first to claim their freedom would be the most high-spirited and the most apt to rebel. As many as two thousand were selected accordingly, who crowned themselves and went around the temples, rejoicing in their new freedom. The Spartans, however, soon afterwards did away with them, and no-one ever knew exactly how each one of them perished.

How have historians explained Sparta's treatment of the helots?

Our only ancient sources for Sparta are a few archaeological traces and the writings of several ancient Greeks, including Herodotus and Thucydides. Almost none of our ancient written primary sources were created by Spartans and none by helots. Yet an enormous number of books and articles have been written about ancient Sparta by historians using the little evidence that exists. **SOURCES 6** and **7** are two examples.

aud-0412

SOURCE 6 An account of Spartan motives for suppressing the helots, from Sarah B Pomeroy, et al., *Ancient Greece: A Political, Social and Cultural History*, 1999

The Second Messenian War [of c. 650 BC] had been a terrifying revelation of the potential risks of the helot system, and the possibility of a repetition haunted the imaginations of Spartans and their enemies. One certain way of avoiding such a catastrophe, abandoning Messenia, was unthinkable . . . the Spartans realized that if all potential hoplites could be mobilized and trained to the highest degree of skill possible, Sparta would enjoy an overwhelming military advantage over its helots and other enemies . . . In effect they waged a perpetual war against the helots and were consequently always prepared to engage in other acts of aggression when necessary.

aud-0413

SOURCE 7 An account of Sparta recruiting helots as soldiers, from Antony Andrewes, *Greek Society*, 1991

The other main source [of recruits] was the helots. The 700 whom Brasidas took with him to the north [in 425 BC] were still formally slaves; they were only liberated on their return home . . . About the same time . . . Sparta created a whole new class . . . These were helots who were already liberated at the time when they were enrolled. For the next fifty years, they were a very important part in Sparta's military effort . . . The training-up of such numbers from a notoriously oppressed and ill-treated class looks like an appalling risk, though no doubt, in case of trouble, the Spartans could count on the *perioikoi* [perioeci] to support them.

3.6 SKILL ACTIVITY: Using historical sources

1. **Compare** and contrast **SOURCES 6** and **7** and make notes on the differences and similarities between each.
2. **Describe** the conclusions each of these secondary sources present on Spartan attitudes towards the helots.
3. **Discuss** how **SOURCE 6** and **SOURCE 7** differ in their interpretations of Sparta's treatment of the helots.

3.6 Exercise

learnon

3.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4, 8	1, 6	5, 7, 9, 10

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Check your understanding

1. **Identify** why Sparta needed to develop a strong army.
2. **Select** the correct words to complete the passage.
   Spartan women had **less** / **more** freedom and **better** / **worse** lives than Athenian women. Spartan women **could** / **could not** own land and represent themselves in court. They were expected to **stay meek and helpless** / **keep physically fit**, bear **smart** / **strong** children and to be **obedient** / **tough**.
3. **Select** the correct words to complete the passage.
   The **Dorian** / **perioeci** / **helots** were descended from **Dorian** / **perioeci** /**helots** tribes who had settled in other areas around Sparta. They were mainly craftspeople and merchants but they could not be Spartan citizens. The **Dorian** / **perioeci** / **helots** were slaves.
4. **Identify** why the position of the helots different from that of slaves in other parts of Greece.
   A. They were owned by individuals.
   B. They were owned by the Spartan state.
   C. They had rights and freedoms.
   D. They were treated with respect by the Spartans.
5. **Explain** how the slavery of the helots made the Spartan way of life possible.

Apply your understanding

Using historical sources

6. Read **SOURCE 2**. **Explain** how the hardships Spartan boys had to endure would have helped them to develop obedience and perseverance.
7. Look carefully at **SOURCE 3** and **examine** the labels. Then answer the following questions.
   a. **Recall** what Spartan boys did to keep fit and increase their mental strength.
   b. Would Spartan army camps have been easy targets for an enemy? **Explain**.
   c. **Discuss** why the way Spartans lived might have reduced the influence of the family and benefited the Spartan state.
   d. **Describe** what an approaching phalanx of Spartan soldiers would look like. Why might it frighten their enemies?
8. Read **SOURCES 4** and **5** and **analyse** them by answering the following questions.
   a. What information about Spartan treatment of helots does each source provide?
   b. Who wrote each source and around when would they have been written?
   c. How useful is each source as evidence for this topic?
   d. What more would you need to know about each of the authors to judge the reliability of these two sources?
9. Do **SOURCES 4** and **5** provide complementary evidence or conflicting evidence for the Spartans' treatment of the helots? **Justify** your answer.

Historical perspectives and interpretations

10. Using the sources and other information in this lesson, **explain** how Sparta's enslavement of the helots changed everyday life in Spartan society after 650 BCE.

LESSON
3.7 What was life like in Athens?

LEARNING INTENTION

By the end of this lesson you should be able to identify the main characteristics of Athenian society and describe the differences between the lives of men and women when Athens was at the peak of its power.

TUNE IN

SOURCE 1 shows a bride being escorted to the home of her new husband after a wedding feast at her parents' home.

SOURCE 1 A painting from a small Greek pottery box

1. Consider why the bride shown in **SOURCE 1** would be escorted by so many people.
2. Based on what you've learned so far, do you think she would have had any choice about the marriage?
3. Do you think she might want to flee, knowing what life was like for Athenian women? How would you feel in that situation?

3.7.1 The very different lives of Athenian men and women

Athens was the largest of the Greek poleis. It was very different from Sparta. From the fifth century BCE, it was one of the richest and most beautiful cities in the ancient world, famous for its temples, fine public buildings and love of the arts. Plays were often performed in theatres, and its citizens had a high regard for learning.

The man was the important figure in Athenian life. He decided everything — when and whom his daughters would marry, and even whether or not new babies would live or die. Most girls were married in their early teens to men twice their age (see **SOURCE 1**).

After marrying, a man spent most of his time away from the house. He might carry out government duties, run a workshop, work out in the gymnasium, meet his friends in the **agora** for a chat or attend dinner parties. In contrast, a woman spent virtually the rest of her life in the home. She was expected to produce children, especially sons. With the help of slaves and older daughters, women ran the household. Marriage feasts were one of the few occasions when women were able to do something other than home duties and celebrate with their menfolk.

agora large open space in the centre of a Greek city that served as a public meeting area and marketplace

Education

Only boys went to school. Very privileged girls might have a home tutor to teach them to read or perhaps play the lyre. Boys started school — a dawn-to-dusk affair — at around the age of seven. Their teachers read to them from papyrus scrolls, and the boys learned how to write on a wooden-framed slate (a fine-grained stone that easily splits into sheets) coated with wax. They were also taught reading (including poetry), maths, music and physical fitness.

Housing

Though most Athenian houses had two storeys, they were fairly small. Wealthy Greeks did not usually build impressive mansions, because most used their spare money to fund athletic and religious events. The home of a wealthy Greek family might have a central courtyard, a bathroom and a stone floor, rather than one made from packed earth. Apart from this, little difference existed between a mansion and the homes of poorer people.

Athenian houses were made of sun-dried bricks. All rooms faced inwards and were usually fairly dark, airless and smoky spaces. This was because windows were small and set high, and open fires were often lit indoors. Furniture was sparse, with household items mostly stored on the floor or hung from nails in the wall.

Men and women had separate living areas. The women's area was as far away as possible from the entrance and public areas of the house. It was forbidden to strangers and was often very dark.

3.7.2 Public life, death and burial

Only men could become citizens. Women generally had no legal or political rights. They could not hold public office or go shopping. They could, however, take part in some religious festivals and rituals.

Men's banquets were an important and common part of daily life, as you can see in **SOURCE 3**. Slaves removed guests' sandals when they arrived and washed their feet. Lying around on low couches, the men enjoyed foods such as fish fried in olive oil, boiled vegetables, cheese made from goats' milk, bread, figs, dates and grapes. They ate with their fingers, drinking wine mixed with water.

The fifth century BCE was the peak of the Golden Age of ancient Greece. By this time, Athens was a wealthy city with a stable democracy, strong trade links, a thriving culture and a keen sense of civic pride.

SOURCE 2 One of the few regular trips women could make outside the home was to collect water from public fountains near the agora. They carried the water in an amphora.

SOURCE 3 After a meal, men relaxed by telling jokes and riddles and playing musical instruments. Sometimes they might be entertained by singers, dancers, musicians or gymnasts.

Death and burial practices

Athenians, like most other Greeks, believed in an underworld, where Hades, the brother of Zeus, reigned over the dead. They believed that a person's *psyche* (spirit) left the body at the very moment of death. To make sure that the psyche would find its way to the afterlife, the dead person's mouth and eyes were closed. The body was anointed with oil, wrapped and displayed for two days while women stood by wailing, and friends and relatives visited to mourn. On the following day, the body was taken in a procession to the cemetery, which was outside the city gates of Athens, and placed in a tomb.

In the seventh and sixth centuries BCE, aristocratic families erected earth mounds, upright slabs or pillars, statues and some very elaborate monuments at grave sites. But by the end of the fifth century, Athenians were burying their dead in simpler stone coffins. In both eras, the aim was to ensure that the dead were remembered. They appear to have believed that such remembrance was needed to ensure life after death.

3.7.3 A city of beauty and bustle

Like most other city-states, Athens had a prominent acropolis at the centre of its cluster of houses and a large agora (or marketplace). It was surrounded by a large area of open country.

The Acropolis

During this time, elegant buildings were erected on the Acropolis in Athens — a large, rocky hill about 150 metres high. The largest of these was the **Parthenon**, which is pictured in **SOURCE 4**. It was a temple dedicated to the goddess Athena. She was the city's patroness and protector in time of war.

Parthenon Athenian temple dedicated to the goddess Athena

SOURCE 4 Work on the Parthenon started in 447 BCE and took 25 years to complete. Much of the building was destroyed in 1687 when it was being used by the Turks to store gunpowder, which exploded under enemy attack.

The Parthenon was decorated with many beautiful sculptures as well as with carved panels of the gods, battles and festivals. During the early nineteenth century, many of these carved panels were removed, cut into pieces and shipped to Britain by Lord Elgin. He was at that time the British Ambassador to the Turkish Empire, of which Greece had been part for over a thousand years.

Today more than half of the surviving panels, known as the Parthenon Marbles, are in the British Museum. The Greek government is trying to get the Parthenon Marbles back.

The agora

Below the Acropolis was the agora (see **SOURCE 5**). This large tree-filled square, framed by public buildings, was the place where everything happened. It was the city's centre of government. It was also the place to buy goods such as food, animals, furniture, jewellery, musical instruments and pots. Men went there to shop, learn more about new ideas, watch plays and chat with their friends. Women were rarely seen.

Attica

Most of the population of Athens lived in Attica (the surrounding countryside that was ruled by Athens). Although many were farmers, the generally dry and rocky landscape meant crops such as grain were not always easy to grow. So Athens imported grain from places such as Egypt and Sicily. It also imported timber and metals.

On the other hand, crops such as olives, figs and grapes grew well. The export of goods such as olive oil and wine made Athens very wealthy.

3.7 SKILL ACTIVITY: Communicating

Your task is to work in small groups to **design** a poster or a museum display for an exhibition on everyday life in ancient Athens.

1. Select four of the following headings to focus on.
    - Eating and drinking
    - Clothing, hairstyles, make-up and jewellery
    - Worshipping
    - Entertainment
    - Marriage
    - Children
    - Occupations
2. For each of your four chosen areas, **conduct research** to collect sources and other information from this lesson along with images and information from websites, including museum websites.
3. Select one suitable image from your research for each area and **write** a paragraph about it.
4. **Create** your display in an engaging and informative way.

int-5984

SOURCE 5 The agora was the political, legal, commercial and social heart of the city in ancient Greece.

A Public buildings surrounding the agora in Athens included the law courts (Heliaea), the mint, the military headquarters (Strategeion) and the Bouleuterion (meeting place of the Council of 500).

B Plays were first held in the agora and later in special amphitheatres. They began as religious ceremonies in honour of the Greek god Dionysus. He was the god of wine and merriment.

C Athenian pots were usually decorated with detailed scenes of daily life and with the stories of myths and legends.

D Slaves were bought and sold in the agora. A highly skilled slave might cost 6000 drachma; a simple wooden couch might cost 20 drachma. A drachma was the main silver coin of the ancient Greeks. Before coins were introduced, goods in ancient Greece were bought and sold by bartering.

E To build columns, ropes and pulleys were used to hoist blocks of stone into position. Metal rods joined each block to the one above and below.

F The mass of men provided an audience for philosophers such as Socrates. Works by philosophers such as Plato (Socrates' star pupil) and Aristotle (a follower of Plato) have been translated into English.

3.7 Exercise

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3.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5	4, 6, 7, 9	3, 8, 10

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Check your understanding

1. Which of the following is correct in relation to Athenian males?
   - **A.** They received an education.
   - **B.** They held all the power within Athenian families.
   - **C.** They decided when and whom their daughters would marry.
   - **D.** All of the above
2. **State** if the following are true or false.
   - **a.** Girls generally received no education.
   - **b.** Girls were able to choose any male of a similar age to marry.
   - **c.** Women spent almost all of their lives confined to their homes, doing housework and raising children.
3. **Explain** what Athenian funeral rituals tell us about their beliefs.
4. **Recall** what the Acropolis and Parthenon were.
5. **Identify** how the Parthenon Marbles were lost to Greece.
   - **A.** They were destroyed by the Turks.
   - **B.** They were stolen by Athenian citizens.
   - **C.** They were removed and shipped to Britain.
   - **D.** They were destroyed in an explosion.

Apply your understanding

Using historical sources

6. Examine **SOURCE 1**.
   - **a.** **Describe** the scene and **identify** the bride and groom.
   - **b.** **Explain** what evidence this source provides for the wealth and social class of the family.
7. **Explain** what evidence **SOURCE 2** provides for the clothing and hairstyles of Athenian women and their position in Athenian society.
8. **Describe** the scene in **SOURCE 3** and **discuss** what Athenian women might have thought about men's banquets.
9. **Examine SOURCE 4** and **use** clues from **SOURCE 5** to **explain** how the Parthenon's supporting columns were built.
10. Study **SOURCE 5**. **Compare** the activities at the agora and what would be seen in a modern marketplace by making a list of similarities and differences between the two.

LESSON
3.8 What do we know about Greek laws, myths, gods and oracles?

LEARNING INTENTION

By the end of this lesson you should be able to describe the main beliefs and values of the ancient Greeks, as expressed in their laws, their many myths and their religious ideas.

TUNE IN

The statue shown in **SOURCE 1** probably represents either Poseiden, the god of the sea (and of storms, earthquakes and horses) or Zeus, the king of the gods (and of thunder).

1. Judging by the statue, discuss whether you think the Greeks believed that the gods were more like humans than, for example, the gods of Egypt and those of many other ancient societies.
2. Suggest why you think the artist used this pose for the statue.
3. Can you think of any modern examples of statues that have been created and the reasons for them?

SOURCE 1 A large bronze statue of a Greek god, from c. 460 BCE.

3.8.1 Laws, myths and gods

The ancient Greeks lived in about a hundred separate city-states that often fought each other. However, they shared many aspects of their culture, which gave them a sense of shared identity. They all spoke dialects of the Greek language. They also shared the same myths, worshipped the same gods and took part in the same festivals to honour these gods.

Greek laws

Evidence suggests that each Greek city-state had its own laws, although no systematic collection of ancient Greek laws has survived. In some matters, such as inheritance, the laws of the city-states seem similar. But, even so, differences existed between Athens and Sparta. By the seventh century BCE, many Greek poleis chose men called 'law-givers' to make written records of their existing laws or set down new laws.

Athens is the city-state for which we have the most evidence. Athens appointed Draco as its first law-giver around 620 BCE. Around 594 BCE, he was followed by Solon, who created several new laws. Under Solon's laws, murderers were to be banished, but most crimes were punished only by fines. His laws also dealt with such matters as trade and the location and spacing of houses in Athens.

Solon's laws also corrected at last one injustice that had threatened to cause civil war in Athens. In the seventh century BCE, creditors (people who were owed money) had the power to enslave those who could not repay their debts. Solon abolished this practice, freed debt-slaves and cancelled their existing debts.

Law courts were established in Athens to try cases and decide on punishments but there were no official judges or lawyers. For most court cases, decisions were made by Athenian citizens, who were chosen by lot.

Sparta's laws were not written down. However, according to ancient Greek historians, Lycurgus was the legendary law-giver who brought Sparta the 'Great Rhetra', the set of laws dictating the entire Spartan system. Most evidence suggests that these laws were probably introduced after 650 BCE. However, Lycurgus actually existing is doubtful, and his story is much more likely to be a myth.

aud-0414

SOURCE 2 Herodotus, *The Histories*, Book I, 66.

How the change to good government came about I will now relate. Lycurgus, a distinguished Spartan, visited the Delphic oracle, and no sooner had he entered the shrine than he was greeted with these words:

Hither to my rich temple have you come, Lycurgus,

Dear to Zeus and to all gods that dwell in Olympus.

I know not whether to declare you human or divine –

Yet I incline to believe, Lycurgus, that you are a god.

. . . [Lycurgus] made fundamental changes in the laws, and took good care that the new ones should not be broken. Later he reorganized the army, introducing the system of messes and the new tactical divisions of squadrons and companies . . . By these changes Spartan government was put upon a sound basis, and when Lycurgus died a temple was built in his honour.

Greek myths

In common with people in many societies, the early Greeks had their myths (see **SOURCE 3**), which were handed down from one generation to the next through epic poems recited by storytellers. From about 800 BCE these stories were written down. Homer's *Odyssey* and *Iliad* are the two best known of these epics. The *Iliad* tells the story of the siege of Troy. The *Odyssey* follows the ten-year homeward journey of Odysseus, hero of Troy, and his encounters with many strange creatures and great dangers. In these mythical stories, the gods behave like people, often taking sides in human conflicts.

The gods of Mount Olympus

The Greeks believed their lives were controlled by the many gods who lived on Mount Olympus in the north of Greece. These gods were **immortals** but they had all too human weaknesses. The chief god was Zeus. The other gods were his brothers, sisters, sons and daughters. Each was responsible for a different aspect of human life.

- Hera, Zeus's wife, was patroness (protector) of marriage and children.
- Ares was the god of war.
- Artemis was patroness of hunting and wild animals.
- Dionysus was the god of wine and pleasure.
- Athena was the goddess of wisdom.
- Hephaestus was the god of fire.
- Hermes was the messenger of the gods.
- Apollo was the sun god and god of law.
- Aphrodite was goddess of love and beauty.
- Poseidon was god of the sea.
- Pluto was god of the underworld.

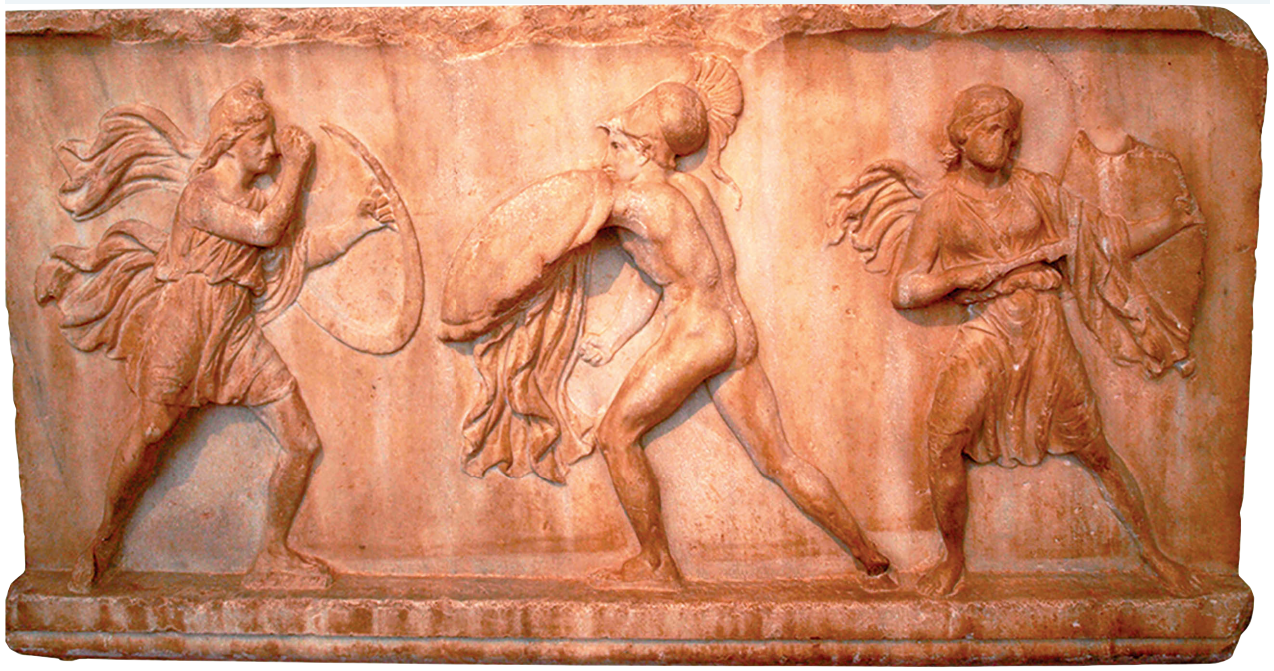
These were the most important gods, but there were others, along with many mythical heroes who were not immortals but had powers beyond those of ordinary people.

immortals gods who lived forever
mythology a body of myths

DID YOU KNOW?

In Greek **mythology**, the hero Heracles was not a god, but he was so strong that the gods sometimes depended on his strength. When he was still a baby, he strangled poisonous snakes. As a youth, he killed a ferocious lion. As a man, he performed legendary feats that included abducting Cerberus, the three-headed hound that guarded the underworld. For a time he also held up the sky, which was normally supported by Atlas. His death came as a result of a trick played on him. He put on a poisoned robe that caused such pain that he threw himself onto a fire. The gods then took him up to dwell with them on Mount Olympus.

SOURCE 3 A relief sculpture from mid-fourth-century BCE Athens depicting two Amazons fighting a Greek warrior. In Greek mythology, the Amazons were a nation of female warriors. They were often depicted in battles with Greeks.



SOURCE 4 A **metope** from the Temple of Zeus at Olympia. The scene tells part of the myth of the 12 labours of Heracles (Hercules). It shows Atlas offering Heracles the apples of the Hesperides while Heracles and Athena hold up the sky and the world.

3.8.2 The oracles — messages from the gods

In our own times, some people still believe in fortune tellers. Similarly, the ancient Greeks believed in oracles. An oracle was a place where people could question the gods about the future. It was also a message from the gods in answer to such a question. The most important oracle was at Delphi (see the map in lesson 3.4). According to myths, Delphi was the 'navel of the world' so the Greeks built a sanctuary there. Any Greek who went to Delphi to consult the oracle had to pay a fee, sacrifice a goat and look for **omens** in its **entrails**. They would then ask questions of a priestess called the Sybil. The priests of Apollo would translate the Sybil's answers but they were usually vague enough to have many possible meanings.

metope rectangular space above an architrave of a Greek building that often had paintings or sculptures on it

omen sign that predicts good or evil

entrails internal organs of an animal

SOURCE 5 From *The Persian Wars*, by the ancient Greek historian Herodotus

. . . the Athenians, anxious to consult the oracle, sent their messengers to Delphi . . . [They] went back with it to Athens. When, however, upon their arrival they produced it before the people, and inquiry began to be made into its true meaning, many and various were the interpretations which men put on it.

3.8 SKILL ACTIVITY: Questioning and researching, Historical perspectives and interpretations

1. Use your library or the internet to **research** a Greek myth. It could be related to the scenes in **SOURCE 3** or **SOURCE 4**.
2. Briefly **summarise** the myth and tell it to the class.
3. In small groups, **discuss** similarities and differences between the roles and importance of myths, religion and predictions of the future in ancient Greece and in modern times. You could, for example, **compare** the role of oracles in ancient Greece with astrologers who write the horoscope columns today.

3.8 Exercise

learnon

3.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 5	2, 4, 8	6, 7, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. **Recall** how most crimes were punished under Solon's laws.
   - A. Death
   - B. Fines
   - C. Imprisonment
   - D. Banishment
2. **Identify** which of Solon's laws would have been popular with poor citizens in Athens.
3. What were the two meanings of the term 'oracle'?
   - A. A message from the gods
   - B. A Greek myth
   - C. A place where messages from the gods were requested and received
   - D. A war
   - E. A law
4. **Explain** why the ancient Greeks consulted oracles.
5. In Greek mythology, the Amazons were the gods who lived on Mount Olympus. True or false?

Apply your understanding

Using historical sources

6. **Identify** reasons most historians would doubt the story in **SOURCE 2**.
7. **Consider** why the scene in **SOURCE 3** was a popular theme in ancient Greek art.
8. **Identify** the three figures in **SOURCE 4**.
9. Read **SOURCE 5**.
   - a. **Explain** why the message from the oracle at Delphi could have many different meanings.
   - b. What can you **infer** about the kind of answers given to questions that were put to the oracle?
   - c. **Determine** why such answers might have been given.

Communicating

10. Using the information and sources in this lesson, **evaluate** the role of shared myths and shared gods in contributing to a sense of Greek identity.

LESSON
3.9 What were the Olympic Games?

LEARNING INTENTION

By the end of this lesson you should be able to describe the ancient Greek Olympics and explain their connection with Greek religion and their contribution to a sense of Greek identity.

TUNE IN

SOURCE 1 shows the entrance to the ancient stadium at Olympia in Greece. The arch was added by the Romans.

As a class, discuss the following:

- when the modern Olympics were first held
- where the Olympic Games originated in ancient times
- how different the modern Olympic Games are from the ancient Olympic Games
- whether anyone has watched any modern Olympic events live or on TV.

SOURCE 1 The entrance to the ancient stadium at Olympia.

3.9.1 The ancient Olympics

For modern athletes, the most important competition is the Olympic Games, which attracts top competitors from all over the world in a huge range of sports. These sports include running, high jump, swimming, soccer and discus throwing. For any modern athlete, to represent his or her country at the Olympic Games is considered the greatest honour. To win a medal at the Olympic Games is usually the peak of a top athlete's career. The idea for the modern games was taken from ancient Greece, but in many ways the ancient games were very different from those of today.

The ancient Greek city-states had many religious festivals but the most important of them was held every four years at Olympia, in the city-state of Elis, to honour the god Zeus. The Greeks regarded 776 BCE as the year of the first **Olympiad**. By the sixth century BCE, the Olympic festival was attracting competitors from all over the Greek world. During each Olympiad, a truce was declared between any city-states that were in conflict. As the Greeks were scattered over mainland Greece, the islands and colonies, these festivals contributed to a common sense of Greek identity. The Olympic festival continued to be held until 393 CE, when it was abolished by the Christian Roman emperor Theodosius I, who was opposed to all pagan festivals.

Olympiad a staging of the Olympic Games

SOURCE 2 From *History of the Peloponnesian War*, by the contemporary historian Thucydides

This summer were celebrated the Olympic Games . . . The Spartans were refused access to the temple by the Eleans and so prevented from sacrificing and competing in the games. This was because the Spartans had not paid the fine which had been imposed upon them by the Eleans according to the Olympic law. The Elean case was that the Spartans had made an attack . . . and had sent **hoplites** of theirs into Lepreum during the period of the Olympic truce.

hoplites Greek foot soldiers

3.9.2 The events

The main events in the ancient Olympics were running races. These included the stade (a sprint), the dolichos (a long-distance race) and a race in which the competitors ran in leg guards and helmets carrying their shields. Other events included boxing, wrestling and the pankration (see **SOURCE 3**). The pentathlon was the highlight of the festival. It included discus throwing, long jump, javelin throwing, running and wrestling. When chariot racing was added to the Olympics, it became the most spectacular of all events, with up to 40 chariots racing and turning at high speeds. The city-states gave many rewards to their athletic heroes but crowns of olive leaves were the only official Olympic prizes.

SOURCE 3 A fifth-century BCE Athenian vase depicting the pankration, a form of wrestling in which the only banned tactics were biting and eye-gouging

DID YOU KNOW?

Games were the main part of the ancient Olympic festival, which began with a religious ceremony and lasted five days. For the amusement of the crowds, there were also acrobats, plays and sideshows.

As the ancient games expanded, new events were added, including poetry and music competitions. Merchants attended the games to sell souvenirs. Athletes competed naked and only men were allowed to take part in the events. At first, women were not even allowed as spectators, although this changed later.

3.9 SKILL ACTIVITY: Historical perspectives and interpretations

Work in groups to find out why any modern country has been excluded from the Olympic Games or has chosen not to take part in them.

1. **Conduct research** on the internet and make notes on your findings.
2. **Evaluate** the information you find to answer the following questions:
   - How significant was it to people who lived at that time?
   - Who/what was affected by it?
   - How long-lasting were the consequences?
   - Do you think it has any effect on the Olympics today?
3. **Summarise** your evaluation and present it to the class.

3.9 Exercise

learnon

3.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4, 9	1, 5, 6	7, 8, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

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Check your understanding

1. Where did the idea for the modern Olympic Games come from?
2. **Identify** which date is given to the first Olympiad.
   - **A.** 393 CE
   - **B.** 776 BCE
   - **C.** 550 BCE
   - **D.** 290 CE
3. The god _____ was honoured at the ancient Olympic festival.
4. **Identify** three events from the ancient Olympics that are not in the modern Olympics.
   - **A.** Chariot racing
   - **B.** Boxing
   - **C.** A race in armour
   - **D.** The pankration
   - **E.** Wrestling
5. **Explain** why some events from the ancient Olympics would not be held in any modern Olympics.

Apply your understanding

Using historical sources

6. According to Thucydides in **SOURCE 2**:
   - **a.** Which Greek city-state was refused permission to attend the Olympic Games?
   - **b.** What evidence does this source give for reasons a city-state could be excluded from the ancient Olympics?
7. Study the depiction of the pankration in **SOURCE 3**. **Describe** what it and the other events not included in the modern Olympics might reveal about one purpose of the ancient Olympics.
8. **Evaluate** what **SOURCE 1** suggests about how the Romans came to regard the Olympics when they conquered Greece.

Communicating

9. **Compare** the ancient Greek Olympic Games and the modern Olympics by making a list of any differences that you know of between them. If you don't know much about the modern Olympics, have a guess at what you think the answers might be. You could organise your notes under the following headings:
   - Locations where the games are held
   - Nationalities and gender of the athletes
   - Events
   - Rewards for winners and place-getters
   - Purpose of the Olympics
   - Periods of time from the beginning to the end of one Olympic Games
10. Based on your work in this lesson, how would you **evaluate** the historical significance of the ancient Olympics?

LESSON
3.10 How was Greece changed by wars?

LEARNING INTENTION

By the end of this lesson you should be able to identify the events that briefly united the ancient Greeks, that tore them apart and that changed ancient Greece forever.

TUNE IN

The ancient leader in **SOURCE 1** is shown on a Roman mosaic (created with different shaped and coloured tiles) and was found in the Roman city of Pompei. However, he is not actually Roman.

1. Discuss who you think this leader could be.
2. Explain why you've chosen the leader you have, and consider why the Romans might have depicted him.

SOURCE 1 An ancient leader depicted fighting against forces of the Persian Empire in 333 BCE

3.10.1 The first Persian invasion, 492–490 BCE

The city-states of Greece were often at war with each other, but most of them united when the mighty Persian Empire attacked Greece in 490 BCE and again in 480–479 BCE. Together they saved Greece from being swallowed up by the Persian Empire. In the following century, Greece was again invaded, but this time by their northern neighbours the Macedonians, who would soon set out to conquer the known world.

In ancient times, Persia was the land we now call Iran. Under Cyrus the Great (559–529 BCE) and his successor, Cambyses, the Persians won a great empire that included Anatolia (modern Turkey), Palestine, Syria and Egypt. In 499 BCE, the Greek cities of Anatolia, with help from Athens, revolted against their Persian overlords. The revolt failed and Persia seized the offshore Greek islands.

The Battle of Marathon

To punish Athens for supporting the rebellion, King Darius I of Persia sent a fleet to invade the Greek mainland in 492 BCE, but the fleet was wrecked in a storm. Still Darius demanded that the Greeks submit to him. When Athens and Eretria refused, Darius sent another fleet carrying a large Persian army. His forces captured Eretria in 490 BCE and then sailed for Attica. They landed on the plain of Marathon, 40 kilometres from Athens (see **SOURCE 2**). There, 10 000 Athenians and their Plataean allies defeated 50 000 Persians in a surprise attack.

int-5985

SOURCE 2 Naval and land campaigns of the Persian Wars

Source: Map drawn by Spatial Vision.

3.10.2 The second invasion, 480–479 BCE

Darius died in 486 BCE but his son, Xerxes, spent several years organising a still greater invasion of Greece. His preparations included building a floating bridge to carry his army across the narrow strait called the Hellespont that separates Europe from Asia. A huge army of spearmen, archers and cavalry from all over the Persian Empire marched into Greece. It was supported by a great fleet sailing down the coast (see **SOURCE 2**). To meet the threat, 31 Greek states called off their quarrels and agreed to unite against the Persians.

Athens played the leading naval role in the conflict but Sparta led the Greek armies in major land battles. At Thermopylae in 480 BCE the Spartan king, Leonidas, held a narrow mountain pass against the Persian horde with just 300 Spartans and about 7000 other Greek hoplites. They were eventually defeated and killed, but they crucially delayed Xerxes' advance.

Naval battles

Shortly after the Battle of Thermopylae, at Artemisium, 60 kilometres from Thermopylae, a Greek fleet fought three battles against the much larger Persian fleet. Both sides suffered heavy losses, but the Persians were greatly weakened, having already lost hundreds of ships in two storms.

As the Persian fleet approached Attica, Athens was evacuated and left to be burned by the Persians. Then the Greek navy attacked the Persians at Salamis, where the sea was too narrow for the Great Fleet to be used effectively. This time the Persians were completely defeated.

SOURCE 3 A modern artist's impression of Greek and Persian infantry at Thermopylae in 480 BCE

The final clashes

At Plataea in 479 BCE, the Spartans led a Greek army of about 100 000 in destroying a much larger Persian force. Only a fraction of the once-mighty invading army survived to return to Persia. The Greek fleet then sailed for the island of Samos off the coast of Anatolia. They landed and defeated the Persian army at Cape Mycale. Although fighting continued for many more years, the Greeks no longer feared Persian invasion.

SOURCE 4 From the description of the Battle of Thermopylae in Herodotus, *The Histories*, Book VII, 227

Of all the Spartans and Thespians who fought so valiantly, the most signal proof of courage was given by the Spartan Dieneces. It is said that before the battle he was told by a native of Trachis that, when the Persians shot their arrows, there were so many of them that they hid the sun. Dieneces, however, quite unmoved by the thought of the strength of the Persian army, merely remarked: 'This is pleasant news that the stranger from Trachis brings us: if the Persians hide the sun, we shall have our battle in the shade.'

3.10.3 Alexander the Great

The Peloponnesian Wars

Cooperation among the Greeks did not last long. During the Peloponnesian Wars (460–445 BCE and 431–404 BCE), Greece was divided into two camps — the states and colonies dominated by Athens and those who allied with Sparta.

The second war finally ended when Sparta, with Persian help, forced Athens to surrender. Sparta came to dominate Greece until the Greek city-state of Thebes defeated the Spartans in 371 BCE.

Macedon conquers Greece

After so many years of fighting each other, the Greek city-states were too weak to withstand a new invasion when Philip of Macedon conquered Greece in 338 BCE. Two years later Philip was murdered and his son Alexander (356–323 BCE) became the ruler of Macedon and Greece. When Thebes again revolted, Alexander crushed the city ruthlessly, killing 6000 of its people and enslaving the rest.

Alexander creates an empire

In 334 BCE, Alexander led an army of Greeks and Macedonians eastward to invade the Persian Empire. They defeated King Darius III in battles at Issus and Gaugamela in 333 and 331 BCE (see **SOURCE 5**).

In 330 BCE, Alexander conquered Persepolis, the Persian capital, and seized control of the empire under the title 'Great King'. But his armies pressed on. By 326 BCE, Alexander had reached India and defeated the Indian king Porus, whose forces included troops on war elephants. In every land he conquered, Alexander had cities built to strengthen his control. Many were named Alexandria.

Alexander died of fever when he was only 32 years old. His huge empire fractured into three main parts: his homeland of Macedon included all of Greece; Egypt was ruled by one of Alexander's generals, Ptolemy Soter, and his descendants for three centuries; in the east, the Seleucid Empire stretched from Syria to Afghanistan.

The age of the Greek city-states ended with Alexander. But although he adopted many of the customs of the peoples he conquered, he was devoted to Greek culture, which he spread throughout much of the east. Alexander's conquests were one important way in which Greek ideas were spread far beyond Greek shores and passed down through time.

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SOURCE 5 The empire of Alexander the Great was established through an 11-year military campaign during which his army marched nearly 34 000 kilometres.

Source: Map drawn by Spatial Vision.

SOURCE 6 Two sides of a silver coin of Alexander the Great, probably made around 324 BCE. The figure on horseback is believed to be Alexander. The figure on the left is wearing a Macedonian cloak, Greek armour and a Persian headdress and carrying a thunderbolt. They are believed to be the only surviving images of Alexander from his lifetime.

SkillBuilders to support skill development

- 1.10 Analysing and corroborating ancient Greek sources

3.10 SKILL ACTIVITY: Questioning and researching, Communicating

Your task is to **identify** each significant event or change in this lesson and **explain** whether it was caused by an earlier event.

Remember that just because one event followed another that does not necessarily make the first event the cause of the second. For example, the Greek victory over the Persians did not cause the Peloponnesian Wars.

You could use a table similar to the following. The first entry has been provided as an example.

Event or change	Cause or causes	Effect or effects
Greek cities of Anatolia revolt against Persia.	Athens provided help to these Greeks who saw the chance to break away from the Persian Empire.	The revolt failed and Persia took the offshore Greek islands.

3.10 Exercise

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3.10 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4	1, 5, 6, 8	7, 9, 10

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Check your understanding

1. **Name** the modern countries that were part of the Persian Empire under Cambyses.
2. To prepare for the second Persian invasion of Greece, Xerxes built a floating _____ across the Hellespont, raised a huge _____ and readied a great _____ along the coast.
3. **Identify** why the Persian invasions of Greece failed.
   - A. The Greek army was larger.
   - B. The Persian fleet was wrecked in a storm.
   - C. Their army wasn't strong enough.
   - D. The Persian fleet was wrecked in an explosion.
4. Select the correct option to complete the statement.
   The Peloponnesian Wars lasted for a total of **33** / **42** / **47** / **52** years.
5. **Describe** how Alexander the Great treated Greek City-states that revolted against him.

Apply your understanding

Using historical sources

6. **Examine** the map in **SOURCE 2** and answer the following.
   - a. How close did Persian forces get to Athens in 490 BCE?
   - b. **Identify** who defeated the Persians at Marathon, ending the first Persian invasion attempt.
7. Read **SOURCE 4**. **Analyse** and **evaluate** it using the following questions:
   - a. Who wrote this source and why might it have been written?
   - b. As the Spartans were all killed in the battle, how could the writer have obtained this story?
   - c. How could we know that the story is reliable?
8. **Identify** what clue **SOURCE 3** provides about reasons the Spartans and other Greeks were able to delay the Persian army at Thermopylae.
9. Study **SOURCES 1** and **6**.
   - a. **Describe** the way that Alexander is depicted in these sources.
   - b. **Discuss** why you think he is depicted like that. (*Clue:* normally only a god would be shown holding a thunderbolt.)
10. Study the map in **SOURCE 5** and **compare** it with a modern map. **Identify** the modern countries that now occupy the places conquered by Alexander the Great.

LESSON
3.11 What is the heritage of ancient Greece?

LEARNING INTENTION

By the end of this lesson you should be able to describe the legacies left by ancient Greece for the modern world, in the fields of medicine, mathematics, science, philosophy, drama, poetry and architecture.

TUNE IN

Plato was a Greek philosopher born in Athens during the Classical period in Ancient Greece. Historians have suggested that Plato invented the first alarm clock. Of course, it wouldn't be like the alarm clocks we know today but rather a device used to wake someone. This invention is called a water clock.

As a class or in small groups, brainstorm how you think this invention might have worked, keeping in mind that there was no electricity back then!

You may want to create basic sketches of how you think the invention might have looked.

SOURCE 1 A modern artwork of Plato

3.11.1 Medicine, mathematics, science and philosophy

Along with the idea of democracy and the Olympic tradition, many ancient Greek ideas have influenced later times, even up to our present age. The heritage of ancient Greece includes developments in science, mathematics, architecture, medicine, philosophy, drama and poetry. Ancient Greek civilisation reached its high point in the fifth century BCE. By the fourth century BCE, Greek culture had spread as far east as India through the conquests of Alexander the Great. After the Romans conquered Greece in 146 BCE, Rome absorbed Greek culture and contributed to the passing down of Greek ideas through the ages.

Medicine

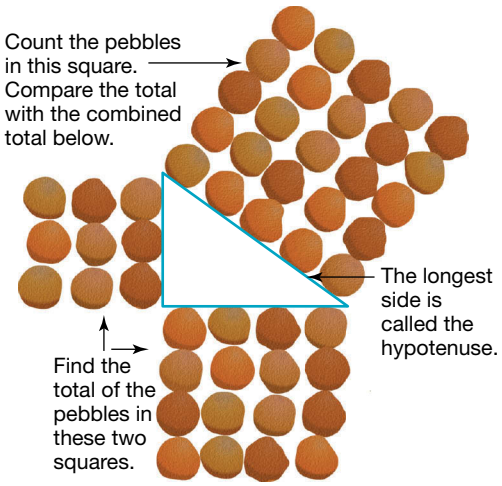
Most ancient Greeks thought that sickness or disability was a punishment from the gods. Hippocrates (c. 460–377 BCE) practised and taught medicine, changing many of its ideas and methods. Among his teachings was the then new idea that sickness was caused by problems in the body, including diet. His set of principles to guide the conduct of medical practitioners, the Hippocratic Oath, is still widely observed today.

Mathematics, science and philosophy

Ancient Greece produced some remarkable thinkers. Anaxagoras, Aristarchus and Eratosthenes developed ideas based on observations in **astronomy**, including the idea that the Earth orbited the sun. Pythagoras (c. 582–500 BCE) arranged pebbles to show the connections between space and numbers; he is remembered today for Pythagoras's theorem (see **SOURCE 2**). As well as numbers and geometry, he was also interested in astronomy (he concluded that the Earth was round), musical notes and matter. He believed all things were made up of four elements: earth, air, fire and water. Euclid also developed explanations that are still used in geometry. Thales (c. 624–546 BCE) discovered static electricity. Archimedes, who lived in the third century BCE, discovered important principles in physics.

Another achievement of the Greeks was the development of philosophy by thinkers such as Socrates, Plato and Aristotle. In the fourth century BCE, Aristotle taught that the other planets, the moon and the stars all moved around the Earth. This idea was mistakenly believed throughout Europe for nearly 2000 years after his death.

SOURCE 2 The philosopher and mathematician Pythagoras found that the square of the length of the hypotenuse (the side opposite the right angle) of a triangle was equal to the sum of the squares of the other two sides.



3.11.2 Architecture, drama and poetry

The Greeks developed building styles that are still used today. Many great modern buildings are influenced by ancient Greek styles; for example, St George's Hall in Perth has a **portico** like an ancient Greek temple.

astronomy study of the stars and planets

portico a roof supported by columns, usually attached as a porch to a building

SOURCE 3 The ruins of the Erechtheion, regarded by many as the most beautiful building on the Acropolis of ancient Athens

Theatre was very popular in ancient Greece. One of the most famous Greek playwrights is Aristophanes (c. 448–380 BCE). He wrote brilliant comic plays that are still performed today. Many ancient Greek sayings are also still used because they remain as relevant today as they were when first written. Among them are the words of the fable writer Aesop, who lived in the sixth century BCE. He wrote, for example, 'We hang petty thieves and appoint great ones to public office' and 'In union there is strength'.

3.11.3 Sappho of Lesbos: the most famous woman of ancient Greece

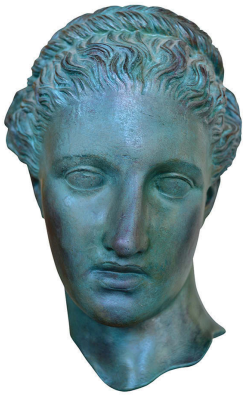
Ancient Greek women had few rights and were barred from any roles in public life, which meant that hardly any had the chance to achieve fame in ancient Greek society, or have their discoveries or creations considered part of the heritage of ancient Greece.

One who did was Sappho from the island of Lesbos. Sappho was part of an aristocratic family and that gave her opportunities denied to most other Greek women. She was born around 620 BCE and grew up on the island of Lesbos. She appears to have had a daughter called Cleis. In ancient times, Sappho was called 'the poetess', honored with statues and on coins and admired by the philosopher Plato (c. 428-348 BCE).

However, she was ridiculed by some ancient Greeks for supposedly being lesbian and was later attacked by several Christian writers for the same reason. Pope Gregory VII (in office 1073 to 1085 CE) ordered the burning of her writings. But in the nineteenth century CE, she was admired and translated by several great English poets, including Percy Shelley and Lord Byron.

Some of Sappho's poems were preserved on Egyptian papyrus (an early form of paper), but due to loss and decay only fragments remain. Many of her poems focus on intense emotions, individual experience, the power of sexual love and the heartbreak caused by loss of love. Over the past 70 years, her work and ideas have received much attention and praise in publications by scholars.

SOURCE 4 A Roman bronze replica of the head of Sappho



SOURCE 5 Some fragments of Sappho's poetry

And lovely laughing — oh it puts the heart in my chest on wings,

for me when I look at you, even a moment, no speaking

is left in me

no: tongue breaks and thin

fire is racing under skin

and in eyes no sight and drumming

. . . fills ears

and cold sweat holds me and shaking

grips me all . . .

SOURCE 6 From Judith Schalansky, 'What we know about Sappho', *The Paris Review*, 2020

In total, all the poems and fragments that have reached us, as brief, mutilated, and devoid of context as they are, add up to no more than six hundred lines. It has been calculated that [only] around 7 per cent of Sappho's work has survived.

SOURCE 7 From 'Sappho', Poetry Foundation website, 2022

Her celebration of love has echoed through the centuries not only in the work of translators and direct imitators, but also in all those other voices that have dared to declare their love to be radically important . . . Finally, she is widely recognized as one of the great poets of world literature . . .

3.11 SKILL ACTIVITY: Historical perspectives and interpretations

Complete the following.

1. Read **SOURCE 5** and **describe** the emotions expressed and their physical effects.
2. **Consider** what **SOURCE 6** tells us about why we will probably never have a more complete understanding of Sappho's talent and the reasons for her fame.
3. Read **SOURCE 7** and **explain** why the writer believes that Sappho's work deserves to be regarded as part of the heritage of ancient Greece and why she is one of the world's great poets.
4. Referring to **SOURCES 4, 5, 6** and **7**, discuss whether you think Sappho's achievements should be regarded as being of historical significance. **Justify** your answer.

3.11 Exercise

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3.11 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 4, 5	3, 6, 9	7, 8, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
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Check your understanding

1. **Identify** what most ancient Greeks believed to be the cause of sickness.
   - **A.** Bacteria
   - **B.** Punishments from the gods
   - **C.** Pollution
   - **D.** An evil spirit
2. Match each person in the following table with their achievement or mistake.

Person		Achievement or mistake
Hippocrates		a. Geometry
Pythagoras		b. Static electricity
Aristotle		c. Medicine
Thales		d. Physics
Archimedes		e. Philosophy

3. **Explain** how the ancient Greek idea about the elements differed from our modern understanding of the elements.
4. **Name** a building that has been influenced by ancient Greek styles.
5. Select the correct option to complete the sentence.
   Aristophanes was an ancient Greek **god** / **ruler** / **playwright** / **philosopher**.

Apply your understanding

Using historical sources

6. Study **SOURCE 3**.
   - **a. Describe** the surviving features of the Erechtheion.
   - **b. Explain** why you think it is regarded as an outstanding example of ancient Greek architecture.
7. Using **SOURCE 3**, **explain** what evidence the remains of the Erechtheion provide for the quality of ancient Greek building techniques.

Historical perspectives and interpretations

8. Is the observance of the Hippocratic Oath in modern times an example of continuity or change? **Justify** your answer.
9. **Identify** where and how ancient Greek plays are still performed today.

Communicating

10. **Explain** why only fragments of the poetry of Sappho of Lesbos survived into later times.

LESSON
3.12 INQUIRY: Contested histories — did the Spartans really kill their weak babies?

LEARNING INTENTION

By the end of this lesson you should be able to corroborate primary and secondary sources and ask questions to evaluate the accuracy of a proposed historical fact.

Background

To many people, the image in **SOURCE 1** represents what Spartan warriors were really like. As part of this myth, it is widely believed that the killing of weak or unhealthy children was carried out to ensure that Sparta could produce such warriors. At the same time, most people have regarded these killings as the most shocking fact about ancient Spartan society.

But does any reliable evidence exist that this really happened? Two versions of the story persisted until quite recently. One was that weak babies were thrown from a cliff of Mt Taygetus. The other is that they were abandoned in the wild to die from exposure to the elements.

We have a surprising lack of primary source evidence for this story. According to Plutarch and later writers, Lycurgus created the laws of Sparta, including the practice of killing weak babies. But these laws were supposed to have been created in the eighth century BCE. Plutarch lived between 46 CE and 120 CE.

SOURCE 1 A common image of a strong, fearless Spartan warrior attacking in battle dress

Reading the following sources will enable you to compare and consider some different judgements that have been made. You can also use the internet and/or your library to find other relevant secondary sources.

SOURCE 2 From Plutarch, *Life of Lycurgus*

[If] they found it [a child] stout and well-made, they gave orders for its rearing . . . but if they found it puny and ill-shaped, ordered it to be taken to what was called the Apothetae, a sort of chasm under Taygetus; as thinking it neither good for the infant itself, nor for the public interest, that it should be brought up . . .

SOURCE 3 From Evan Andrews, '8 reasons it wasn't easy being spartan', History Channel website, 2018

All Spartan infants were brought before a council of inspectors and examined for physical defects, and those who weren't up to standard were left to die . . . If a Spartan baby was judged to be unfit for its future duty as a soldier, it was most likely abandoned on a nearby hillside. Left alone, the child would either die of exposure or be rescued and adopted by strangers.

SOURCE 4 From Trikkaliotis, D and others, 'The fate of sickly and disabled new-born babies in ancient Greece (Sparta and Athens)', *PANR Journal*, 2020

Our ancient and only testimony [about the practice of killing weak babies] is the biographer Plutarch who lived seven centuries later from the period that the alleged cruel custom [of killing weak babies] took place . . . Plutarch does not mention his sources, even though he very often does it in other cases . . . Ancient Greek authors who wrote on Sparta, its constitution and education of young boys and girls seem to ignore this brutal and merciless practice . . . No bones have been found related to babies. It is evident that Plutarch's statement regarding the exposure of sickly infants is difficult and hard to accept.

For each of these sources, does the writer accept or challenge the claim that Spartans killed their weak or sickly children?

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Step 1: Questioning and researching

1. **Write** your inquiry question. It could be based on the following issues:
   a. Can we trust a source that was written centuries after the practices it describes and does not cite any earlier sources to support its claims?
   b. What is the difference between these three sources in relation to the way the children were killed and whether they were killed?
   c. Would such killings be consistent or inconsistent with everything you have learned about Sparta?
   d. What other views on this issue have been expressed by historians and archeologists?
2. **Conduct research** to find other sources besides the three provided in this lesson that can help you to answer your inquiry question.

Step 2: Using historical sources

3. **Analyse** the three sources provided and the others that you find. Make notes on them, pointing out anything you notice that helps to answer your question.

Step 3: Historical perspectives and interpretations

4. **Evaluate** the arguments in the sources. Do they accept or challenge the claim that Spartans killed their weak or sickly children?

Step 4: Communicating

5. What is your answer to your inquiry question? **Present** your findings in a format of your choosing. Support your answer with examples from your research, analysis and evaluation.

Complete your self-assessment using the **Inquiry rubric** or access the 3.12 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39368)

LESSON
3.13 Review

Hey students! Now that it's time to revise this topic, go online to:

- **Review your results**
- **Watch teacher-led videos**
- **Practise questions with immediate feedback**

Find all this and MORE in jacPLUS

3.13.1 Key knowledge summary

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

3.2 How do we know about ancient Greece?

- An abundance of archaeological evidence from ancient Greek civilisation has survived, including the remains of entire buildings, amphitheatres, statues, relief sculptures and vases.
- The ancient Greeks left many written sources, including histories, poetry and drama.

3.3 Who were the Minoans and Mycenaeans?

- Minoan civilisation developed on Crete from around 3000 BCE and was destroyed around 1575 BCE.
- Mycenaean civilisation flourished between 1400 and 1200 BCE.
- The Mycenaeans were legendary conquerors of Troy, as told in the *Iliad.*

3.4 What was the Greek 'Dark Age'?

- Geographical features shaped the kind of civilisation that developed in Greece and its patterns of trade.
- Most Mycenaean citadels were abandoned in this period and the art of writing was lost.
- Dorians occupied much of southern Greece.
- Many Greeks migrated from the Greek mainland.

3.5 How were Athens and Sparta governed?

- The city-states of Athens and Sparta developed very different forms of government.
- Under the Spartan system, power was concentrated in the hands of a few families.
- Athens adopted democracy from 508 BCE.

3.6 What was it like to live in Sparta?

- From around 650 BCE, Sparta became a harsh military state.
- Spartan enslavement of the Messenians made the Spartan way of life both possible and necessary.
- Spartan women had more power than Athenian women.

3.7 What was life like in Athens?

- From the fifth century BCE, Athens was a rich and beautiful city with a flourishing culture.
- Men ruled Athenian society. Women were denied education and had very few rights.
- Athenian burial customs reflected those of most of the ancient Greek world.

3.8 What do we know about Greek laws, myths, gods and oracles?

- Each Greek city-state appears to have had its own laws.
- The myths and gods of ancient Greece were common to all Greek city-states.
- The ancient Greeks believed in oracles, the most important of which was at Delphi.

3.9 What were the Olympic Games?

- The ancient Greek Olympic festival was held every four years to honour the god Zeus.
- The festival contributed to a common sense of Greek identity.
- The festival was very different from the modern Olympic Games.

3.10 How was Greece changed by wars?

- When the Persian Empire invaded Greece, many of the Greek city-states united and were able to inflict crushing defeats on the Persians.
- The Greek city-states were weakened by the Peloponnesian Wars and were conquered by King Philip of Macedon.
- Philip's son, Alexander the Great, became ruler of Macedon and Greece.
- Alexander invaded the Persian Empire and created a vast empire.

3.11 What is the heritage of ancient Greece?

- The heritage of ancient Greece includes the idea of democracy and the Olympic Games.
- Other legacies of ancient Greek culture were developments in science and the arts.
- Rome absorbed Greek culture and contributed to passing down Greek ideas through the ages.

3.12 INQUIRY: Contested histories — did the Spartans really kill their weak babies?

- Two different traditional accounts exist of Spartans killing their weak or sickly babies.
- No reliable evidence exists to support either of these accounts.

3.13.2 Key terms

acropolis a city, citadel or complex that sits on a high hill
agora large open space in the centre of a Greek city that served as a public meeting area and marketplace
astronomy study of the stars and planets
democracy a political system according to which citizens choose the way in which they are governed
Dorians tribes from the north of Greece who moved into the south during the Dark Age
entrails internal organs of an animal
Ephorate five-man ruling body in Sparta that advised the kings
helot slave of the Spartan state
hoplites Greek foot soldiers
immortals gods who lived forever
Iron Age period in which people learned to use iron to make tools and weapons
metic free man living in Athens but not born there; could not vote or own property but served in the army and paid taxes
metope rectangular space above an architrave of a Greek building that often had paintings or sculptures on it
mythology a body of myths
oligarchy governing council of rich aristocrats
Olympiad a staging of the Olympic Games
omen sign that predicts good or evil
ostracism the punishment of being banished from Athens
pan-Hellenic for all the Greeks
Parthenon Athenian temple dedicated to the goddess Athena
Peloponnese peninsula the southern part of mainland Greece, joined to the north by the narrow Isthmus of Corinth
perioeci peoples of Laconian towns around Sparta who could be required to fight for Sparta but were not citizens
polis (plural **poleis**) ancient Greek city-state
portico a roof supported by columns, usually attached as a porch to a building

3.13.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How do we know about ancient Greece, and what were its defining features, achievements and legacies?

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.

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10470)
Reflection (ewbk-10474)
Ancient Greece crossword 1 (ewbk-10472)
Ancient Greece crossword 2 (ewbk-10473)

Interactivity Ancient Greece crossword (int-7694)

3.13 Review exercise

Students, these questions are even better in jacPLUS

Receive immediate feedback and access sample responses

Access additional questions

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Multiple choice

1. Which of the following causes probably contributed to the collapse of the Minoan civilisation?
   - **A.** Lack of trade
   - **B.** A tsunami and earthquakes
   - **C.** Plagues
   - **D.** Floods
2. The earliest Mycenaean stories to appear in written sources are which of these?
   - **A.** The *Iliad* and *Odyssey*
   - **B.** The *Bible*
   - **C.** The *Koran*
   - **D.** The *Upanishads*
3. Many Greek city-states were isolated from each other due to which of these geographical features?
   - **A.** Rivers
   - **B.** Deserts
   - **C.** Mountains
   - **D.** Seas
4. In ancient Athens, ostracism meant which of the following fates?
   - **A.** Imprisonment
   - **B.** Torture
   - **C.** Enslavement
   - **D.** Exile
5. Which of the following people in Athens were excluded from the rights of citizens?
   - **A.** Farmers and soldiers
   - **B.** Poor people
   - **C.** Women, metics and slaves
   - **D.** Rich people
6. Which of the following resources did the ancient Greeks import?
   - **A.** Olive oil and grapes
   - **B.** Bronze and timber
   - **C.** Wine and beer
   - **D.** Pottery
7. Although Spartan women could not be citizens, what could they do?
   - **A.** Vote
   - **B.** Hold public office
   - **C.** Fight in wars
   - **D.** Own land

8. Helots were which of the following?
   - **A.** Messenians enslaved by the Spartans
   - **B.** Allies of the Athenians
   - **C.** Followers of Alexander the Great
   - **D.** Peoples of the Persian Empire
9. In Athens, what was the large temple dedicated to the goddess Athena called?
   - **A.** The Agora
   - **B.** Attica
   - **C.** The Parthenon
   - **D.** The Erechtheion
10. What event was part of the ancient Greek Olympic festival but not part of the modern Olympic Games?
   - **A.** Long distance running
   - **B.** The high jump
   - **C.** Discuss throwing
   - **D.** The pankration

Short answer

Using historical sources

11. **Write** an analysis of **SOURCE 1** based on the following questions.
   - **a.** What are the main details of the painting on the vase?
   - **b.** What types of skilled craft workers or artists would have created the vase?
   - **c.** Why would it have been created?
   - **d.** What evidence does it provide of ancient Greek artistic skills?
   - **e.** What evidence does it provide of ancient Greek beliefs and values?

Communicating

12. Alexander the Great is considered to be one of the most significant individuals not just in ancient Greek history but in ancient history generally.
Write a half- to one-page assessment of Alexander's significance using the following points as a guide:
   - how Alexander maintained his power in Greece
   - Alexander's invasion and defeat of the Persian Empire
   - the extent of his conquests by the time of his death
   - the effect of his rule on the Greek city-states
   - the significance of his role in spreading Greek culture.

SOURCE 1 A red-figured stamnos (a type of ancient Greek vase) from about 430–420 BCE. The mythical scene shows Helen being abducted by Theseus.

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Online Resources

on Resources

This is a summary of the digital resources you will find online for Topic 3 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

3.1 Overview

eWorkbook
- Customisable worksheets for this topic (ewbk-10470)

Video eLesson
- Ancient Greece (eles-1836)

Interactivity
- A timeline of ancient Greece (int-4294)

3.2 How do we know about ancient Greece?

Teacher-led video
- Analysing some of the main marble sculptures that once adorned the Parthenon (tlvd-10500)

3.4 What was the Greek 'Dark Age'?

Interactivity
- The origins of Greece (int-7757)

3.5 How were Athens and Sparta governed?

Teacher-led videos
- Exploring the government in Athens (tlvd-10501)
- Exploring the government in Sparta (tlvd-10502)

3.6 What was it like to live in Sparta?

Audios
- A description of the treatment of helots, by the ancient Greek writer Plutarch (aud-0410)
- A description of the treatment of helots by the ancient Greek writer Thucydides (aud-0411)
- An account of Spartan motives for suppressing the helots, from Sarah B Pomeroy, et al. (aud-0412)
- An account of Sparta recruiting helots as soldiers, from Antony Andrewes (aud-0413)

Interactivity
- Spartan males (int-5983)

3.7 What was life like in Athens?

Interactivity
- The agora (int-5984)

3.8 What do we know about Greek laws, myths, gods and oracles?

Audio
- Herodotus, The Histories, Book I, 66. (aud-0414)

3.10 How was Greece changed by wars?

Interactivities
- Naval and land campaigns of the Persian Wars (int-5985)
- The empire of Alexander the Great (int-5986)

3.12 INQUIRY: Contested histories — did the Spartans really kill their weak babies?

Digital document
- Inquiry rubric (doc-39368)

3.13 Review

eWorkbooks
- Customisable worksheets for this topic (ewbk-10470)
- Reflection (ewbk-10474)
- Ancient Greece crossword 1 (ewbk-10472)
- Ancient Greece crossword 2 (ewbk-10473)

Interactivity
- Ancient Greece crossword (int-7694)

To access these online resources, log on to **www.jacplus.com.au**.

4 Ancient Rome

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4.4 How did the Roman Empire grow? 119
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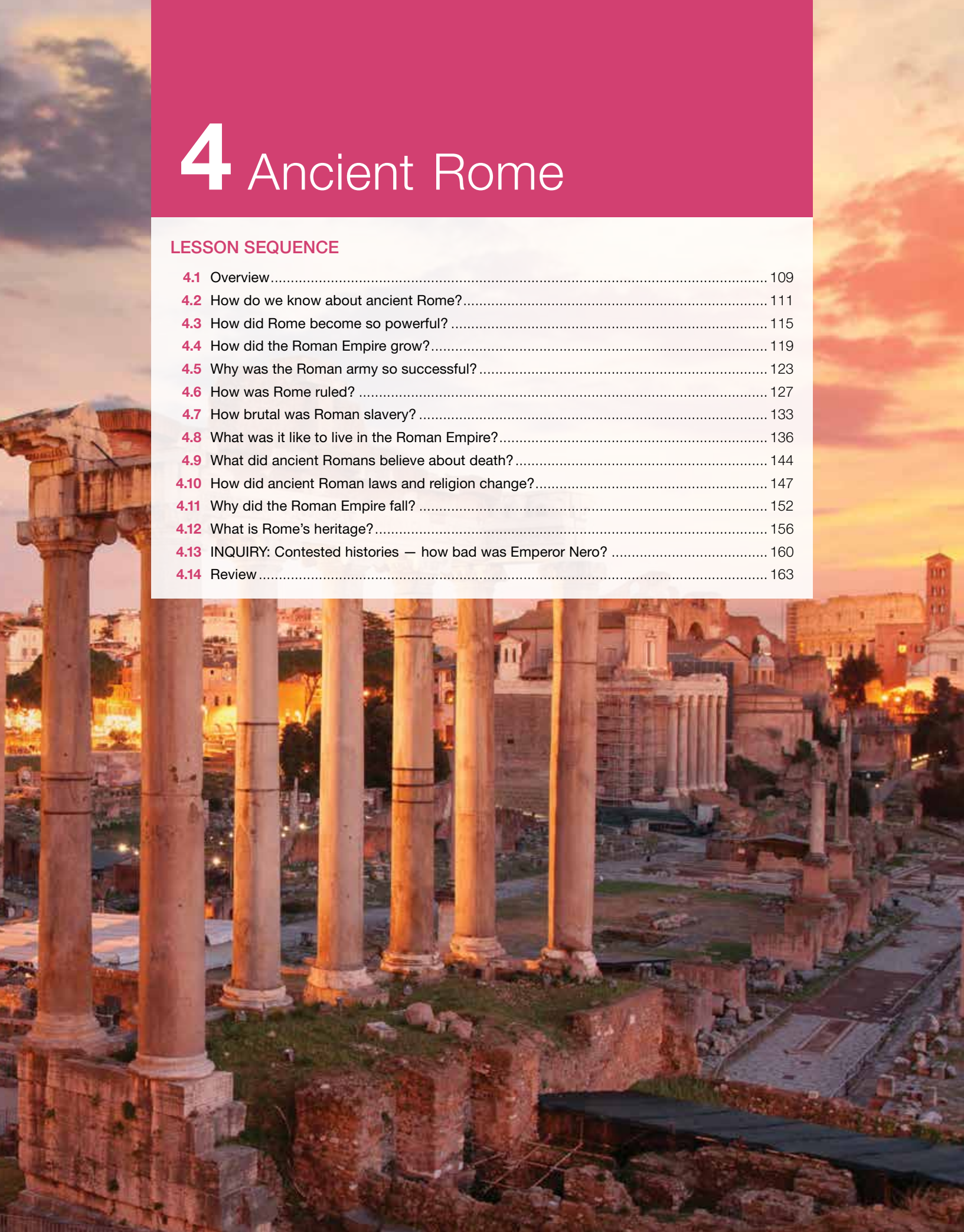

LESSON
4.1 Overview

Hey students! Bring these pages to life online

Watch videos

Engage with interactivities

Answer questions and check results

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When, where and why did ancient Rome develop, and what were its defining features, achievements and legacies?

4.1.1 Introduction

In the twenty-first century, we live in a world in which one superpower, the United States of America, has such enormous military power that it can dominate much of the world. The last time one power was so dominant was the age of the Roman Empire. Between the second century BCE and the second century CE, Rome came to control most of the known world. For some, Roman rule brought peace and prosperity; for others, it brought slavery and death. Rome was a violent society that spread its power through wars of conquest and entertained its people with cruel public exhibitions. But it was also a society that saw great achievements in science, engineering, politics, law and literature. In the fifth century CE, the Roman Empire collapsed, but many of its achievements lived on. Roman ideas have contributed in many ways to our own society. Today, largely because of the remaining traces of its ancient greatness, Rome continues to attract more visitors than almost any city in the modern world.

SOURCE 1 The Colosseum, where gladiators fought to the death in ancient Rome, continues to attract tourists today.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10482)

Video eLesson Ancient Rome (eles-1837)

int-4295

SOURCE 2 A timeline of ancient Rome

BCE

1000

900

800

753 BCE
Rome is founded, according to legend.

700

600

500

509 BCE
Rome becomes a republic.

400

390 BCE
The Gauls defeat the Roman army and sack Rome.

300

272 BCE
Rome dominates Italy.

264 BCE
The Punic Wars begin.

200

218 BCE
Hannibal invades Italy.

146 BCE
Rome destroys Carthage, ending the Punic Wars.

100

91–88 BCE
The Social War is fought between Rome and its Italian allies.

73–71 BCE
Spartacus leads the great slave revolt.

BCE
CE

27 BCE
Octavian ends the Roman Republic.

c. 30 CE
Jesus Christ is crucified.

100

43 CE
The Romans invade Britain.

200

212 CE
Roman citizenship is granted to free subjects of the empire.

303 CE
A great persecution of Christians occurs.

300

313 CE
Christianity is made legal.

378 CE
The Goths defeat a Roman army.

400

395 CE
The Roman Empire is divided into eastern and western empires.

410 CE
The Visigoths capture and sack Rome.

500

476 CE
The Western Roman Empire falls.

600

CE

LESSON
4.2 How do we know about ancient Rome?

LEARNING INTENTION

By the end of this lesson you should be able to identify and analyse a range of source material about ancient Roman history.

TUNE IN

In addition to the many written records, the Romans also left many archaeological remains.

SOURCE 1 Some of the many columns and sculptures that were created in ancient Rome

1. Describe what you can see in **SOURCE 1**.
2. How do you think columns and sculptures created around 2000 years ago are still in such good condition?
3. What does their condition tell us about the skills of ancient Romans?

4.2.1 How do we know about ancient Rome?

The Romans left many written records of their times. Among ancient Roman writers who are still read today are the historians Seneca (c. 4–65 CE), Tacitus (c. 55–117 CE) and Suetonius (c. 69–140 CE). The former Roman Empire is also rich in archaeological sources. Among the millions of visitors Italy receives each year, many travel to see traces of ancient Roman civilisation. These traces include columns and arches erected by the Roman emperors, buildings such as the Colosseum and the remains of the ancient Roman Forum.

Pompeii

Many also visit the ruins of Pompeii, which reveal a picture of what life was like for ancient Romans. Pompeii is near the Italian city of Naples. Along with the nearby town of Herculaneum, Pompeii was destroyed when Mount Vesuvius erupted on 24 August, 79 CE. The volcano threw pillars of ash and a soft porous rock called **pumice** into the air. Pompeii, its buildings and people were buried in volcanic ash more than three metres deep. Herculaneum was hit by a blast of superheated gas that killed everyone. The town was then covered in boiling ash, pumice and rocks.

When archaeologists led by Giuseppe Fiorelli excavated Pompeii in the nineteenth century, they unearthed the streets, shops, houses and other structures of the coastal resort town of 15 000 people, along with games, decorations and even graffiti, all of which were as if 'frozen in time'. They pumped plaster into cavities left by bodies in the hardened ash to create the forms you can see in **SOURCES 2** and **3**. Pompeii provides us with detailed evidence of Roman town life because:

- the town was destroyed very quickly and few people escaped
- those lucky enough to escape had no time to take their belongings
- the town was preserved undisturbed under metres of ash for more than 1700 years.

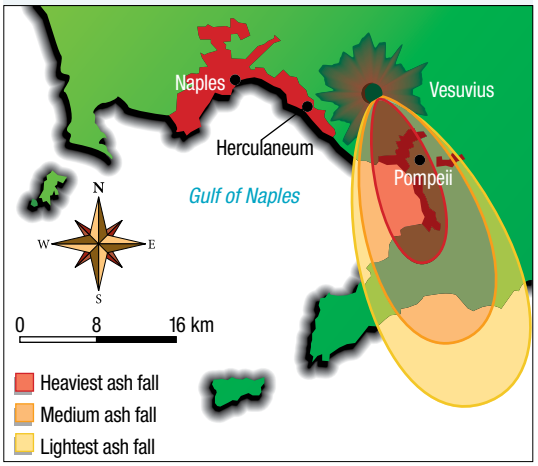
pumice lava ejected from a volcano that solidifies into a light, porous rock

tlvd-10503

SOURCE 2 Plaster casts of victims of the volcanic eruption that destroyed Pompeii

SOURCE 3 Plaster cast of a dog that was killed by the volcanic eruption

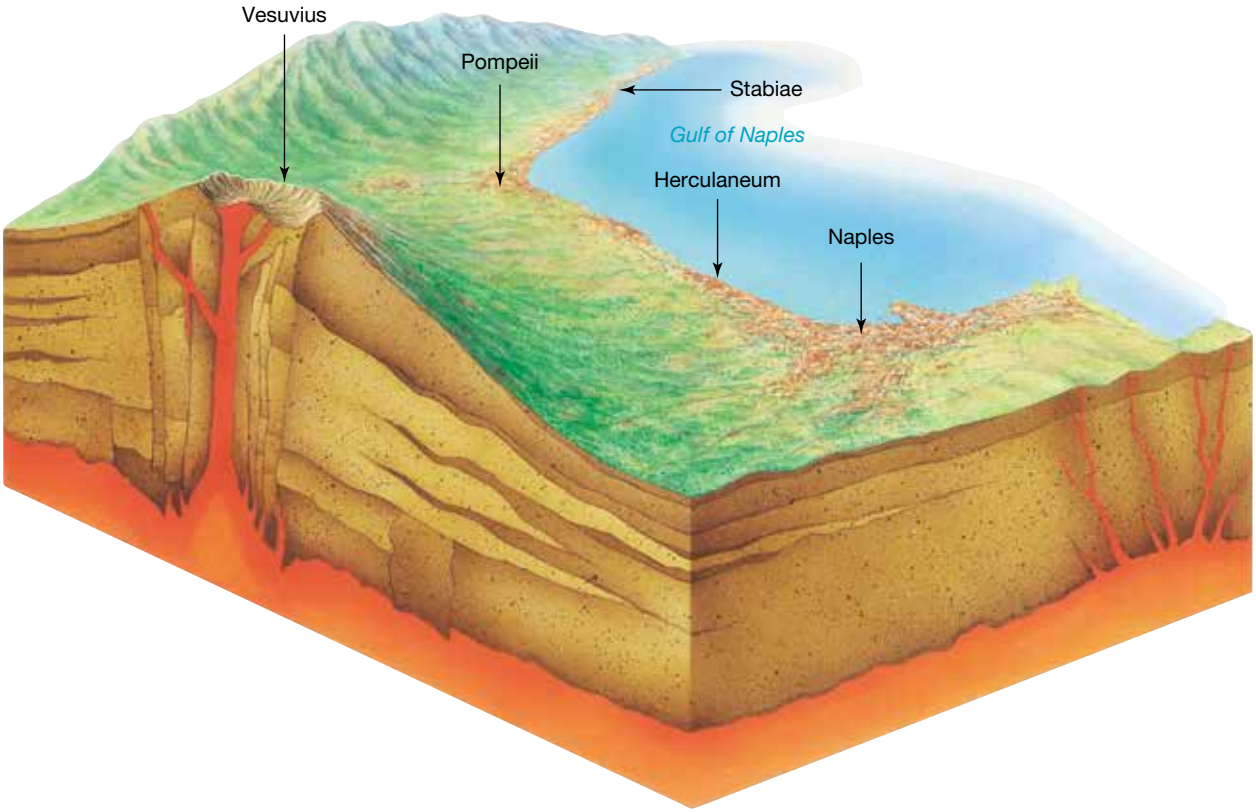
SOURCE 4 The eruption of Mt Vesuvius. The prevailing winds carried most of the fallout from the explosion south, and Pompeii was soon covered by three to four metres of ash and pumice.



Source: © Wiley composition services

int-5982

SOURCE 5 Pompeii and Herculaneum were totally destroyed by the eruption of Vesuvius. At first, the volcano spurted a column of ash and pumice high into the air, which fell back like rain. As the energy in the eruption weakened, the column collapsed into a glowing avalanche. Herculaneum, which had escaped the earlier fallout of ash, was covered by about 20 metres of boiling 'mud' — a mixture of hot ash, pumice and rocks.



4.2 SKILL ACTIVITY: Questioning and researching

SOURCE 6 is an account by someone who witnessed the eruption of Vesuvius and the devastation that followed.

1. Carefully read **SOURCE 6** to answer the following questions.
   - **a.** According to Pliny the Younger's description, what was falling on the people trying to flee in boats?
   - **b.** How do we know that the eruption of Vesuvius was followed by earth tremors?
   - **c.** How does Pliny convey the sheer horror of the destruction of Pompeii?
   - **d.** What kinds of evidence could be used to support Pliny's eye-witness account?

SOURCE 6 From an account by Pliny the Younger, who, as a young man, witnessed the destruction of Pompeii

By now ash, which became hotter and thicker . . . was falling on the boats. This was followed by pieces of tufa [porous rock] and stones blackened, burnt and cracked by the fire . . . Meanwhile sheets of flame and tall columns of fire were belching forth from several parts of Vesuvius, their flashing and intensity heightened by the darkness of the night . . . The buildings were being frequently and violently shaken and seemed as they tottered backwards and forwards to being moved from their foundations . . .

4.2 Exercise

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4.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 4, 5	2, 6, 7, 8	9, 10

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Check your understanding

1. **Recall** what destroyed Pompeii.
   - **A.** Fire
   - **B.** War
   - **C.** Eruption of Mount Vesuvius
   - **D.** Tidal waves
2. **State** the year that the eruption of Vesuvius took place.
3. **Identify** when Pompeii was excavated.
   - **A.** Seventeenth century
   - **B.** Eighteenth century
   - **C.** Nineteenth century
   - **D.** Twentieth century
   - **E.** Twenty-first century
4. **State** the approximate number of metres of ash and pumice that covered Pompeii.
5. Which three pieces of evidence do the ruins of Pompeii provide for us?
   - **A.** Few people escaped.
   - **B.** Survivors provided details of daily life.
   - **C.** There was no time to remove belongings.
   - **D.** The town was preserved undisturbed for more than 1700 years.

Apply your understanding

Using historical sources

6. **Describe** the position of the bodies in **SOURCE 2**. Do you think they died quickly or slowly? Give reasons for your answer.
7. **Describe** how the archaeologists created the forms we see in **SOURCES 2** and **3**.
8. **Analyse SOURCES 4** and **5**. How was the destruction of Herculaneum different from that of Pompeii?
9. **List** three questions you would ask about each of **SOURCES 2, 3, 4** and **5** if you were using them as evidence for the destruction of Pompeii.

Communicating

10. **Explain** why Pompeii is considered to be one of our most valuable sources of evidence for everyday life in the Roman Empire.

LESSON
4.3 How did Rome become so powerful?

LEARNING INTENTION

By the end of this lesson you should be able to explain why Rome became the great power of the ancient Mediterranean world and describe the tactics they used to attain dominance.

TUNE IN

Power is something that some modern nations have. It can take different forms. Australia is considered to be a middle-ranking power, similar to quite a few other countries. The United States and China are regarded as big powers. Many modern countries are not regarded as powers at all.

Discuss the following:

What gives a country power? Is it population size? Is it economic strength? Is it to do with its education system? Is it more to do with military strength?

SOURCE 1 What makes some countries more powerful than others?

4.3.1 Rome's origins

Ancient Rome has a very long history — from at least 753 BCE, and possibly earlier, to the collapse of the Roman Empire in 476 CE. Historians call the period 509 BCE to 27 BCE the Roman Republic and the following period the Roman Empire, because Rome was then ruled by emperors. However, Rome had been building an empire long before it was ruled by emperors.

The ancient Romans explained their origins through myths. In the myth of Romulus and Remus, twin boys were raised by a she-wolf. When they grew up, they decided to establish a town on the site where the she-wolf found them. In 753 BCE, after killing his brother Remus during an argument, Romulus became the first ruler of a collection of villages on the site of present-day Rome. Over the following century, these villages grew into a city, and the wolf became its symbol.

The Romans and their neighbouring tribes were Latins. They lived on the plain of Latium, which had a mild climate, fertile soils and a reliable water supply from the Tiber River. The city is located where the Tiber is easy to cross and close to salt flats (salt was a very important commodity in ancient times). Rome's central location in Italy would make it easy for Roman armies to travel in several directions to combat enemies. During the sixth century BCE, Etruscan kings (from Etruria to the north) ruled Rome brutally. In 509 BCE the Romans rebelled. They expelled their last Etruscan king and developed a system of government unlike that of other city-states: Rome became a **republic**. By this time, Rome was the most powerful city-state on the plain of Latium.

SOURCE 2 These items were found in a Latin (possibly Roman) tomb of a military commander who was buried about 475 BCE, soon after Rome became a republic. They include his bronze body armour, helmet, axe and spearheads (held in the National Archaeological Museum of Rome).

4.3.2 Rome's growing power

Over the next two centuries, Rome expanded its power through war. In 493 BCE, Rome made a treaty with the other Latin tribes to subdue the Aequi and Volsci, hill tribes that raided the plain of Latium. In 396 BCE, Rome captured the powerful Etruscan city of Veii. But a few years later, the Gauls from the north defeated the Roman army and destroyed much of Rome. In time the Romans set about rebuilding their power, and by 272 BCE they had inflicted more defeats on the hill tribes and the **Etruscans**, suppressed revolts by their former Latin allies, crushed the **Samnites** and taken control of the Greek colonies in the south.

Tactics of power

By 272 BCE, Rome had almost 150 000 inhabitants and controlled most of Italy. It had become wealthy through plundering and taxing those it defeated. To control such a vast area, the Romans:

- used conquered peoples against one another
- made alliances with former rivals
- sold defeated enemies into slavery
- allowed conquered cities to keep their own local government, but forced them to supply troops for Rome
- colonised strategically important places with Roman citizens.

republic system of government in which the head of state is not a monarch

Etruscans advanced, civilised people who dominated early Rome from about 575 BCE to about 396 BCE

Samnites a mountain tribe of central Italy

DID YOU KNOW?

In the early Roman Republic, most political power was held by the heads of a few powerful families. The most powerful position was consul. There were two consuls, who commanded the military and dealt with legal disputes. The republic lasted for almost 500 years.

int-5987

SOURCE 3 Italy in the sixth century BCE

Source: Map drawn by Spatial Vision.

4.3 SKILL ACTIVITY: Using historical sources

SOURCE 4 From a description by the ancient Roman historian Livy of a Roman victory over the Volscians in 385 BCE

The large enemy forces, relying only on their numbers… were bold only in battle cry, throwing of missiles and the first onrush of the battle; sword-fighting, holding ground, an enemy's face flashing in its fury they could not stand up to. Their front lines were driven in and panic spread to the supporting troops…then the ranks were broken in many places… After that, as the first lines collapsed and everyone saw his own turn to be killed was coming to him, they turned and ran. The Romans followed hard on their heels, and so long as they kept their weapons and fled in a packed crowd, it was the infantry's task to keep up the pursuit. But when the enemy were seen to be throwing away their weapons and scattering widely over the land, then came the moment for the cavalry squadrons to be let loose…and by riding across their path hold the column until the infantry could catch up and finish the enemy off with a regular massacre.

1. How does Livy describe the actions of the Volscians (hill tribes) in his first three sentences?
2. What attitude to the Volscians do these three sentences convey?
3. How would you **describe** the tactics used by the Romans once the Volscians were running?
4. Is it likely that Livy was an eye-witness to this battle? If not, from whom would he have got this information?
5. Titus Livy (born 59 BCE) spent more than 40 years in Rome while writing his history of Rome. What do you think would have been his purpose in writing this account?
6. Could Livy have been biased? Give the reasons for your answer.

4.3 Exercise

learnon

4.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 6	1, 5	4, 7

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- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. According to legend, **explain** why the wolf became a symbol of Rome.
2. Which of the following was *not* one of Rome's geographical advantages?
   - A. A mild climate
   - B. A mountainous location made it difficult to attack
   - C. A reliable water supply
   - D. Fertile soil
3. Why was Rome involved in several wars between 493 BCE and 272 BCE?
   - A. Desire for expansion and power
   - B. To improve the skills of their armies
   - C. To uphold honour
   - D. Continuous attacks by enemies
4. **Explain** the effects of war on Rome's power.

Apply your understanding

Using historical sources

5. **Compare SOURCE 2** with images of Greek soldiers in topic 3. **Identify** items in **SOURCE 2** that indicate that the Latins, including Romans, were influenced by ancient Greeks.
6. Use **SOURCE 3** to **list** the peoples the Romans defeated to gain control of Italy.

Historical perspectives and interpretations

7. Using the sources and other information in this lesson, **identify** ways in which Rome changed between 509 and 272 BCE and **explain** how they achieved these changes.

LESSON
4.4 How did the Roman Empire grow?

LEARNING INTENTION

By the end of this lesson you should be able to explain how ancient Rome gained power through the defeat of its great rival Carthage.

TUNE IN

Analyse **SOURCE 1** to begin exploring the Roman soldiers' resourcefulness and how it assisted them in battle.

SOURCE 1 Remains of Chester's Roman Wall Fort, northern England

1. What can you see in **SOURCE 1** that suggests to you that Roman soldiers were capable builders?
2. The Romans built a long wall with forts like this one to keep Scottish warriors out of England after they found they could not defeat the Scottish tribes. Why do you think they could not defeat the Scottish tribes?

4.4.1 Building the empire through war

Over the following centuries, the Romans continued to expand their empire. By 146 BCE, Rome was the strongest power in the area around the Mediterranean Sea. Its empire continued to grow, reaching its greatest extent in the late second century CE.

The Punic Wars

In the First Punic War (264–241 BCE), the Romans defeated Carthage, a powerful North African naval and trading city that had colonies around the Mediterranean. Rome's victory gave it control of Sardinia and Sicily, and weakened a trading rival.

The Second Punic War (218–202 BCE) began when the Carthaginian general Hannibal led an invading army, including 40 elephants, over the freezing Alps and down into Italy (see **SOURCE 2**). In major battles at Trebia, Lake Trasimene and Cannae, Hannibal's forces defeated Roman armies and gained allies in Italy. However, the Romans would not give in. On the advice of the general and consul Fabius Maximus, the Romans avoided further formal battles. When Rome launched counterattacks on Carthaginian Spain and North Africa, Hannibal's army had to return to defend Carthage. The Second Punic War ended with Hannibal's defeat at Zama in 202 BCE.

At the end of the Third Punic War in 146 BCE, following a long siege, the Romans finally captured Carthage. They destroyed the city totally. Every one of its people was killed or sold into slavery.

int-5988

SOURCE 2 Hannibal's route and major battles in the Second Punic War

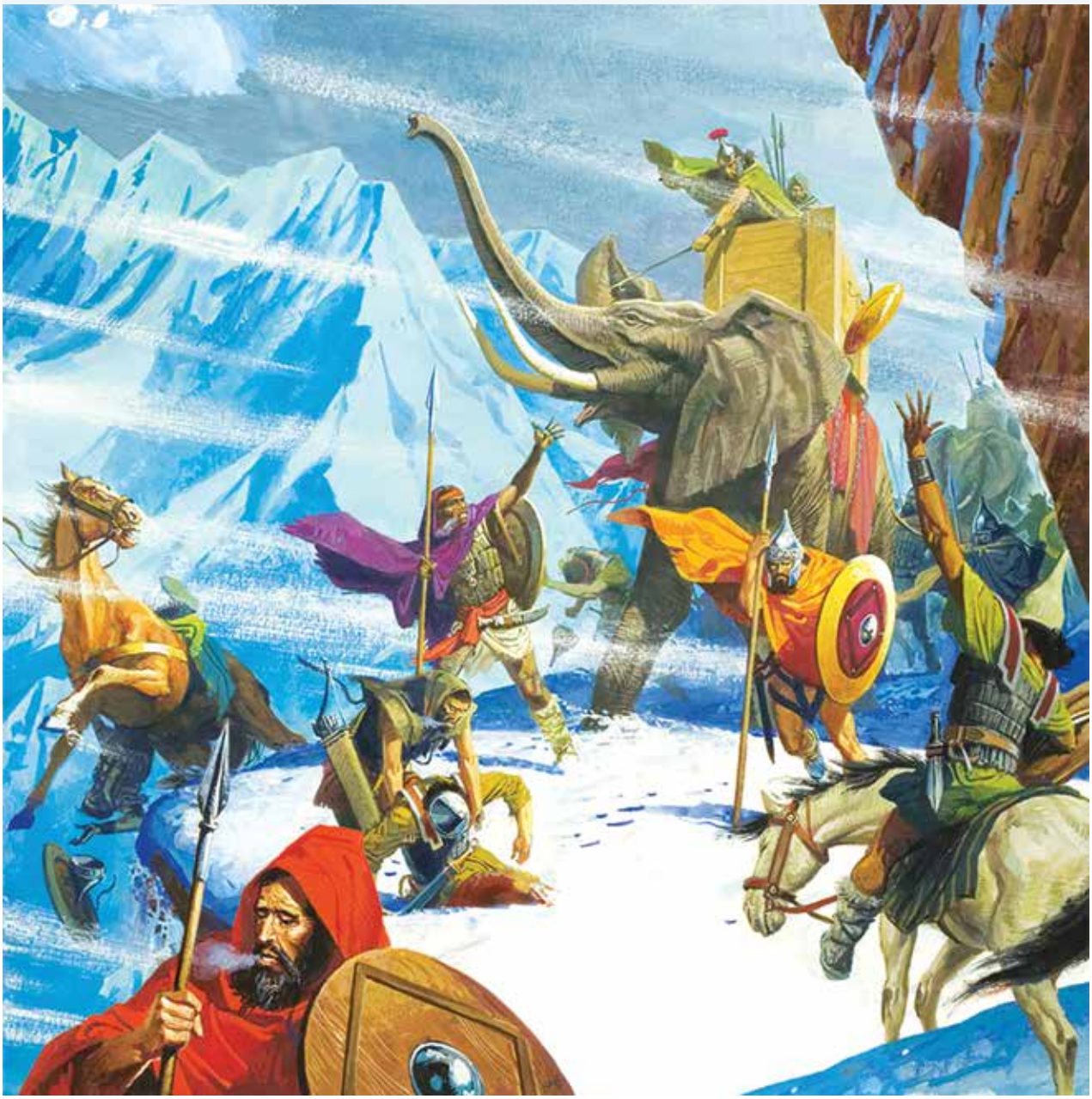
Source: Map drawn by Spatial Vision.

The Social War and the growing empire

In 91 BCE, Rome's Italian allies united against it. Their main grievance was that Rome would not allow them to become Roman citizens even though they provided most of the empire's soldiers. This conflict is known as the Social War. While the Italian allies lost the war, they won the right to be Roman citizens.

By about 30 BCE, the Roman Empire had grown to include most lands around the Mediterranean. It was extended far to the north when the Romans invaded Britain in 43 CE. They defeated the British tribes but were unable to defeat the tribes of Scotland. By 96 CE, the empire extended to the Rhine and Danube rivers in northern Europe, and to Armenia and Mesopotamia in the east (see the map in lesson 4.6).

SOURCE 3 A modern artist's impression of Hannibal's forces crossing the Alps



4.4 SKILL ACTIVITY: Using historical sources

1. **Create** a timeline of events and developments in this lesson, noting approximate dates or ranges of dates from around 146 BCE to 96 CE.
2. Note on your timeline any developments that could be considered turning points.
3. **Describe** the broad changes that occurred in the Roman Empire over this period.

4.4 Exercise

learnon

4.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 4, 5	2, 6, 7	8, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

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Check your understanding

1. **Select** the three major battles in which Hannibal defeated the Romans.
   - **A.** Trebia
   - **B.** The First Punic War
   - **C.** Lake Trasimene
   - **D.** Lake Cannae
   - **E.** Zama
2. **Explain** how Fabius Maximus outmaneuvered Hannibal.
3. The Social War was caused by Roman citizens rebelling against social injustice. True or false?
4. **State** how far north the Roman Empire extended by 43 CE.
5. When did the Roman Empire reach its greatest extent?
   - **A.** Late first century CE
   - **B.** Early second century CE
   - **C.** Late second century CE
   - **D.** Early third century CE

Apply your understanding

Using historical sources

6. Use **SOURCE 2** and an atlas to **list** the modern countries through which Hannibal's forces would have reached Italy.
7. Use **SOURCE 3** to **describe** the hazards of Hannibal's journey across the Alps.
8. **Infer** what **SOURCES 2** and **3** might tell us about Hannibal's significance as a military leader.

Historical perspectives and interpretations

9. In modern times, **describe** how we would view a power that massacred or enslaved the entire population of a defeated city, as the Romans did to Carthage.

Communicating

10. **Suggest** the trading advantages, especially in sea trade, that Rome would have gained by destroying Carthage.

LESSON
4.5 Why was the Roman army so successful?

LEARNING INTENTION

By the end of this lesson you should be able to identify the key features of the Roman army and describe its role in expanding and maintaining the power of the Roman state.

TUNE IN

You are probably wondering what made Roman soldiers so intimidating in battle. Was it just that they were highly trained or was it also that they were very brave?

The reality is that they were subject to such brutal discipline that they were probably more frightened of what their own officers could order to be done to them than they were of their enemies.

The harshest punishment in the Roman army was decimation. It means 'removal of a tenth'. If a unit of the army was considered guilty of cowardice or mutiny, its soldiers were divided into groups of ten. Each group drew lots to decide which one would be killed. The remaining nine soldiers then had to kill their unfortunate comrade, usually by clubbing or stoning him.

1. How would you feel having to kill somebody who had fought alongside you?
2. Why would anyone want to join the Roman army?

SOURCE 1 Roman soldiers were subject to harsh discipline.

4.5.1 Roman army weapons and tactics

Until the end of the first century BCE, the Roman army was made up of citizens who owned land. They had to provide their own equipment and armour. The fighting season was from late spring until early autumn, after which the soldiers returned to their lives as farmers. Fighting was popular among Romans, because a successful general could earn much glory and become very wealthy.

As the area under Roman control grew, a bigger and better organised fighting force was needed. In 396 BCE, soldiers began to be paid, marking the start of Rome's professional army.

The Roman army was one of the most disciplined military forces that has ever existed. Men between the ages of 17 and 22 enlisted for around 20 years. They had to be fit.

int-5989

SOURCE 2 Roman soldiers were well trained and well equipped.

A Each legion marched into battle behind a standard — a tall pole with a silver eagle at the top. This symbol of the 'king of the birds' represented the legion's power.

B Sandals had to be strong and well ventilated to stand up to long marches. A special pattern of iron studs was hammered into the leather soles to support the weight of the soldier evenly, and help protect the soles.

C The dagger had a double-edged blade.

D These tall, crested helmets helped soldiers see their leaders in battle.

E Roman forts were often protected against attack by palisades — sharp stakes of wood dug into the ground (some with barbs attached).

F Soldiers often stood side by side and overlapped their shields to form a protective cover called a testudo. The word ‘testudo’ comes from the Latin word for tortoise.

G The head of the heavy javelin was connected to the shaft by a long, thin strip of soft iron. When the point penetrated an enemy’s shield, this strip would bend, making the javelin impossible to remove.

H The decorated leather strips on these belts showed the rank of a soldier. They also helped to protect against a groin injury.

I The short sword, about 60 cm long, was used to stab rather than slash. It was a very effective killing device at close quarters.

J The upper body armour was made up of metal strips held together by leather straps. It was very heavy.

4.5.2 A Roman soldier's harsh life

Roman soldiers were not supposed to marry, although many did in secret. As well, their food and equipment had to be paid for from their wages. Extra soldiers, called **auxiliaries**, were provided by the countries Rome had conquered.

When not marching or fighting, the soldiers, called legionaries, built camps, roads, walls and **aqueducts**. Sometimes camps were temporary; at other times, they became permanent forts that often developed into towns. They were always laid out the same way. This meant that soldiers knew how to build them and find their way around them.

Soldiers were often allowed to share the **loot** from a battle. Many were also given land when they retired. Such rewards helped to win support for military leaders who sought political power.

Organisation of the Roman army	
Unit	**Composition**
Century	About 80–100 men
Cohort	Six centuries
Legion	Ten cohorts

auxiliaries soldiers in the Roman army drawn from areas conquered by Rome and made part of its empire

aqueduct structure built to carry water long distances

loot goods or property taken from a defeated enemy after a battle

4.5 SKILL ACTIVITY: Questioning and researching, Using historical sources

Read **SOURCE 3**. What questions can we ask of Polybius to unpack what he's trying to say about the discipline in the army? Write four questions you could use to **analyse SOURCE 3**. For example, why was being careless on patrol so bad that it would lead to such a brutal and public death?

SOURCE 3 The Roman historian Polybius reports that discipline in the army was harsh, with penalties that included death.

> A court martial composed of the tribunes is convened at once to try [a soldier for being careless on patrol duty]. If he is found guilty he is punished by the bastinado. This is inflicted as follows: the tribune takes a cudgel [short, heavy stick] and just touches the condemned man with it, after which all in the camp beat or stone him, in most cases dispatching [killing] him in the camp itself.

4.5 Exercise

learnon

4.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 4, 5	2, 6, 7, 8	9, 10

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- Receive immediate feedback
- Access sample responses
- Track results and progress

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Check your understanding

1. The Roman army originally fought only between spring and autumn because this was the best weather to fight in. True or false?
2. **Explain** what began to change in the Roman army from 396 BCE and why.

3. What did Roman soldiers have to pay for out of their own wages?
   - **A.** Time to farm their land
   - **B.** Soldiers did not get wages.
   - **C.** Their own equipment and armour
   - **D.** Nothing
4. How were Roman soldiers employed when not fighting? Select all that apply.
   - **A.** As teachers and scholars
   - **B.** Building camps and roads
   - **C.** As merchants and traders
   - **D.** Building walls and aqueducts
5. **Define** the following terms: 'auxiliaries', 'aqueduct', 'loot'.

Apply your understanding

Communicating

6. Use **SOURCE 2** to **sketch** and label a diagram of a testudo.

Using historical sources

7. Using **SOURCE 2**, **explain** what was meant to happen when a Roman javelin pierced an enemy's shield.
8. **Explain** why the tactics shown in **SOURCE 2** made the Romans powerful enemies.
9. **State** what benefits Roman soldiers could receive from their leaders.
10. Rome's military leaders gained popular support by granting loot from battles to soldiers. **Identify** what dangers this practice could have presented to Rome.

LESSON
4.6 How was Rome ruled?

LEARNING INTENTION

By the end of this lesson you should be able to describe Rome's changing system of government from republic to empire, and explain the significance of the class groups that the people of Rome were divided into.

TUNE IN

The government in ancient Rome was responsible for governing the people and bringing prosperity. However, not everyone was represented equally.

1. How is the patrician in **SOURCE 1** dressed?
2. Would it have been possible for anyone dressed that way to perform any kind of manual work?
3. What conclusions can you draw from his attire about the social status of patricians?
4. How might patricians have risen to this level in society?

SOURCE 1 A statue of a Roman patrician

4.6.1 Social divisions

After the Romans had expelled the last Etruscan king (c. 509 BCE), they introduced a system of government called a republic. In theory, all Roman citizens had a say in how the city was to be run. In practice, power was controlled by the rich upper classes. Over the next 500 years, however, more of the people got a say, although women and slaves still had no voice at all.

To qualify as a Roman citizen you had to be 25 or older, a male and freeborn (not born a slave). Whether or not you were classed as a slave depended on the status of your mother: if she was freeborn, so were you. Citizens could vote on the way Rome was ruled. They were also protected by Roman laws.

Roman citizens were divided into two classes — **patricians** and **plebeians** (see **SOURCE 2**). Patricians came from the small number of aristocratic families who had founded the Republic, and tended to have both wealth and influence. Everyone else was a plebeian. This didn't stop some plebeians becoming very rich, but they rarely won the same influence as patricians.

patricians members of the aristocratic families who founded the Roman Republic

plebeians all non-patrician citizens of Rome

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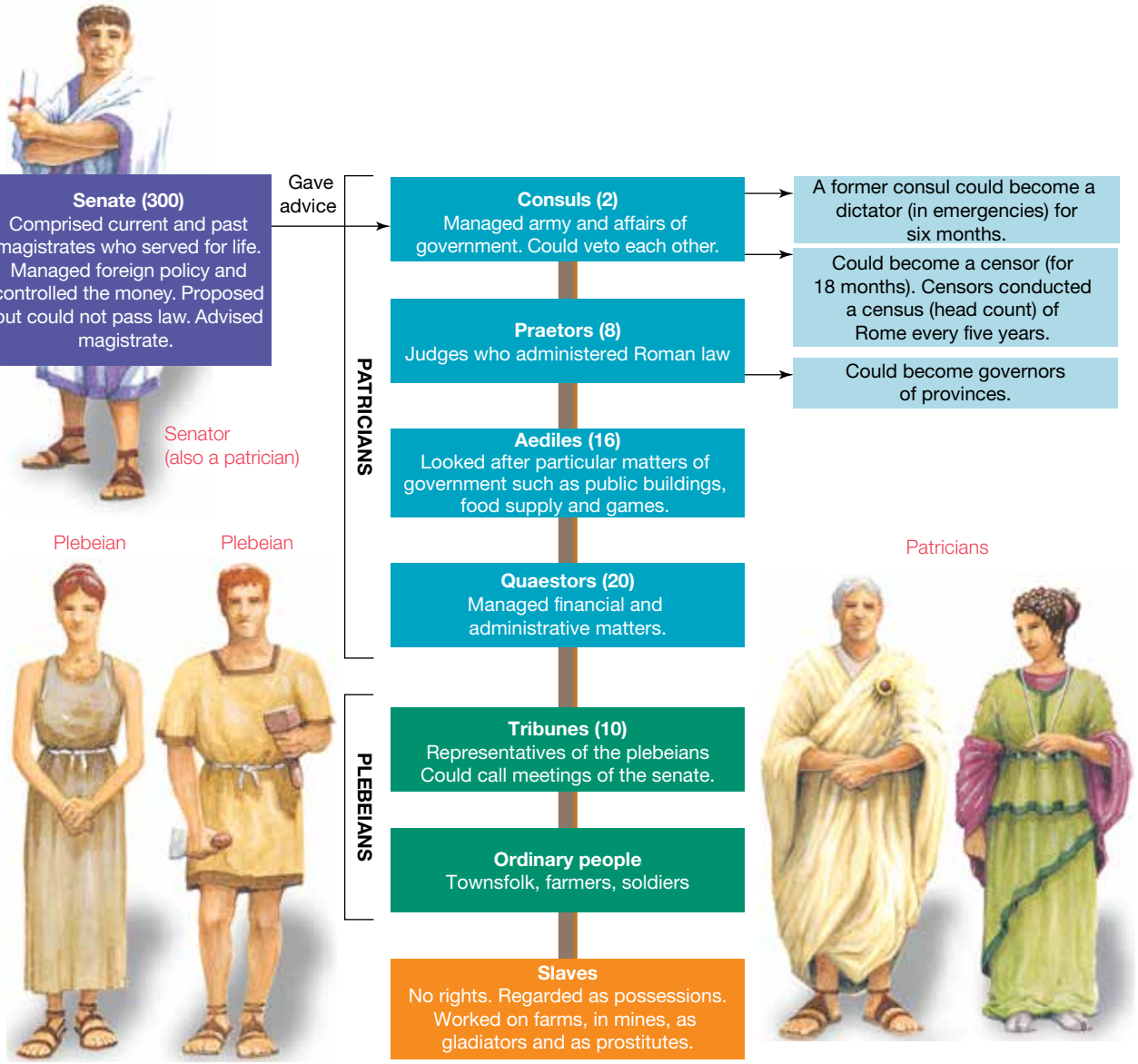
SOURCE 2 The structure of the Roman class system



There were many more plebeians than patricians, though, and in the fourth century the plebeians even went on strike to force the patricians to surrender some of their power!

One thing the plebeians won from this strike was the right to elect ten men every year as tribunes, or 'protectors of the people'. The tribunes could *veto* (Latin for 'I forbid') what any other politician was trying to do. In theory, this veto was used to protect the interests of the ordinary people.

SOURCE 3 Romans from the first century CE, depicted on an altar held in the National Museum of Rome

4.6.2 Ruling the Roman Republic

Every year, Rome would elect more than 50 men to run the city. These men were known as **magistrates**, but they held office for only one year and they always had one or more colleague with the same degree of power. Roman politicians competed to get elected as more and more powerful magistrates. Once a man had held office as a magistrate, he became a member of the **Senate**. (The word *Senate* derives from the Latin *senex*, meaning 'old man'.) In theory, the Senate acted as a council of advisers to the consuls, but in reality they held much direct power. Meetings of the Senate were controlled by the consuls, the most senior magistrates.

Voting in the Roman Republic

All citizens had the right to express their opinion by voting in one of several assemblies. These assemblies also elected the magistrates every year. Originally voting was by a show of hands, but eventually this public expression was replaced by a secret ballot. Citizens carved either 'V' (disagree) or 'A' (agree) on a small piece of wax. The pieces were then put in a container to be counted.

Democracy or not?

Although it might seem that the Roman Republic was a democracy, in reality it was not. When the republic first started, the plebeians, although citizens, had no real say, because their votes did not count as much as those of the patricians. This made the plebeians angry. In time, they set up their own assembly. The patricians were worried by this, because they knew that the plebeians (who had far greater numbers) could revolt and overrun them. So, eventually, the patricians let them elect tribunes to put forward their views. In 366 BCE, a tribune became a consul for the first time; consul was the highest rank in the republic. By 287 BCE, all decisions of the plebeians' assembly were seen as lawful. Even so, the plebeians only ever had limited power compared with that of the patricians.

magistrates men elected by the citizens to run Rome for a year

Senate governing body in ancient Rome; (in theory) an advisory body of ex-magistrates

DID YOU KNOW?

Every Roman province had to pay taxes to the Roman authorities. In 212 CE, Roman citizenship was granted to all free subjects of the empire. The empire's growth meant slavery for many. On the other hand, conquered people often adopted Roman ways, including styles of housing and dress, and many benefited from peace and increased trade. This peace imposed by the conquerors was called the *Pax Romana*.

4.6.3 From republic to empire

With increased wealth and opportunity, competition for power among the patricians intensified, plunging the city into chaos. In 27 BCE, the Roman Republic collapsed. So began the age of the emperors (a single ruler, often chosen by the Senate, but ruling much like a king). Although Julius Caesar (100–44 BCE) was not an emperor, his career marks the turning point from republic to empire (see **SOURCE 4**).

Julius Caesar

Julius Caesar outsmarted his political rivals and proved himself to be a brilliant general. His willingness to share the hardships of war, as well as the loot of battle, made him very popular with his soldiers. Using his loyal troops, Caesar seized power in 49 BCE by attacking the most powerful man in Rome, his great rival (and former friend) Pompey. In the ensuing **civil war** Caesar won control of Rome, and in 44 BCE he had himself appointed Dictator for Life.

Caesar or rex?

After Caesar's defeat of Pompey and seizure of power, some senators accused him of acting like a king. Perhaps this is why he chose not to take the title of *rex*. (*Rex* is the Latin word for king.) Some of the senators who had survived the civil war decided they could not permit Caesar's power grab. They arranged for his murder on 15 March, 44 BCE. Among those involved in stabbing him to death were old and trusted friends such as Marcus Brutus.

civil war war between rival factions within one state or country

SOURCE 4 Profile of Gaius Julius Caesar (based on the writings of the Roman historian Suetonius)

Born 100 BCE; died 44 BCE. Class: patrician

Well built, tall, fair hair, balding (combed his hair forward), dark brown eyes

Very fit, but sometimes had epileptic fits

Ambitious, but fair man who judged men on their fighting record

Good at sword fighting, horse riding, public speaking, writing

Often wore a wreath of laurel leaves on his head (as a sign of victory)

Introduced the Julian Calendar, used for more than 1500 years

Introduced a number of land, law, tax and social justice reforms

SOURCE 5 Suetonius's description of Caesar's assassination (Suetonius lived about 69–140 CE)

As soon as Caesar took his seat [in the Senate House], the conspirators crowded around him as if to pay their respects. Tillius Cimber . . . came up close, pretending to ask a question . . . caught hold of [Caesar's] shoulders. 'This is violence!' Caesar cried, and at that moment one of the Casca brothers slipped behind and with a sweep of the dagger stabbed him just below the throat. Caesar grasped Casca's arm and ran it through with his stylus; he was leaping away when another dagger caught him in the breast. Confronted by a ring of drawn daggers, he drew the top of his gown over his face . . . Twenty-three dagger thrusts went home as he stood there.

The Roman Empire

After Caesar's assassination, his great-nephew Octavian (later called Augustus) took control of Rome. Eventually, following a period spent eliminating his rivals, he declared himself emperor. As Augustus, he founded a dynasty (family of leaders) that ruled the empire until 68 CE.

The Roman Empire endured until 476 CE under a series of emperors who either were given the title by the Senate or simply seized power.

int-8932

SOURCE 6 The Roman Empire at its peak. The empire consisted of a number of provinces, each ruled by a governor.

Source: Map drawn by Spatial Vision.

4.6 SKILL ACTIVITY: Questioning and researching

Australia and many other modern nations are representative democracies. That means that all citizens have the right to vote regardless of their gender, race or income.

They can also have their own opinions and express them freely. In elections, citizens aged 18 and over must vote for politicians to represent them. Elections for the federal parliament are usually held every three years. Voting is in a secret ballot so nobody knows who an individual citizen voted for unless that citizen tells them.

Your task is to use information in this lesson, including **SOURCE 2,** to **compare** democratic rights in modern Australia with rights in the Roman Republic by copying and completing the following table.

Comparisons	Modern Australia	Roman Republic
Who could vote?		
Did all citizens have the same voting rights?		
What was the highest position in government?		
How were people chosen for the highest position in government?		
Could an elected politician legally become a dictator?		

4.6 Exercise

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4.6 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 4, 5	3, 6, 7, 8	9, 10

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Check your understanding

1. What were the requirements to qualify as a Roman citizen? **Select** all that apply.
   - **A.** Any gender
   - **B.** Male
   - **C.** 18 or older
   - **D.** 25 or older
   - **E.** Freeborn
2. In practice, which social class had the most power?
   - **A.** Citizens
   - **B.** Patricians
   - **C.** Plebeians
   - **D.** Magistrates
   - **E.** Males
3. **Explain** how the plebeians gained some power.
4. **Identify** what powers the Senate had in the Roman Republic.
5. The Roman Republic collapsed in 27 CE. True or false?

Apply your understanding

Using historical sources

6. Look carefully at **SOURCE 3**. **Suggest** which social class these Romans would have belonged to.
7. Look at **SOURCE 4**. **Identify** characteristics that may have helped Julius Caesar become Dictator for Life.
8. **Analyse SOURCE 5**. According to Suetonius, how many Romans must have taken part in Caesar's assassination?
9. **Explain** how you could test the reliability of **SOURCE 5.**

Historical perspectives and interpretations

10. Using the sources and other information in this lesson, **identify** what features of Rome's society, political system and the growth of its empire would have made it difficult for it to remain a republic.

LESSON
4.7 How brutal was Roman slavery?

LEARNING INTENTION

By the end of this lesson you should be able to describe the extent and suffering of slaves in the Roman Empire, and the causes and consequences of the great slave uprising.

TUNE IN

Slavery existed in most ancient societies but was more extensive in Roman society and throughout the Roman Empire. Generally, Roman slavery was more brutal than in many other ancient societies.

SOURCE 1 A Roman stele (funerary monument) of a freedman (former slave), dressed in a toga, and his freedwoman wife

1. Why do you think the Roman Empire had so many slaves?
2. How do you think they were treated?
3. Is slavery completely gone from the modern world?

4.7.1 Slavery in ancient Rome

As the Roman Empire grew, so did the number of captives who were sold into slavery. Rome's wealth was built on slavery, and slaves usually had the most miserable lives of all people in its empire. Many slaves worked on the estates of rich Romans. Others were servants. For the slightest act of rebellion, a slave could be put to death by being **crucified**.

Those who suffered most were miners, prostitutes and gladiators. Mineworkers rarely lived past the age of 21. Prostitutes often died young from abuse or disease. Few gladiators lived for long, because they were trained to fight to the death for the amusement of Roman crowds (see **SOURCES 2** and **3**). Unlike many slaves, however, gladiators knew how to fight.

crucified killed by crucifixion, an ancient form of execution in which the victim was tied or nailed to a pole or (as was Jesus) a cross and left to die slowly in agony

SOURCE 2 From an account of gladiators in combat by the Roman historian Seneca (4–65 CE)

I arrived at the Colosseum in the middle of the day… No sooner has a man killed his rival than the crowd shout for him to kill another, or be killed. In the end every fighter dies… why watch their sufferings?

4.7.2 The great slave rebellion

In 73 BCE, at Capua, south of Rome, an event took place that started a rebellion that shook the Roman Empire. It began when a group of gladiators overpowered their guards and escaped. Their main leader was a **Thracian** gladiator called Spartacus. Their numbers soon grew to thousands as they freed other slaves and taught them how to fight. They defeated each Roman legion that was sent to crush them, and by the following year the rebel force numbered about 10 000 and was growing fast as it raided Roman towns and freed more slaves. Panic spread throughout Rome.

Thracian a native of the Roman province of Thracia

The rebels were eventually defeated. Two of their groups were wiped out by Roman legions. The main rebel force under Spartacus was at last defeated in a pitched battle in which as many as 60 000 rebels may have died fighting (see **SOURCES 4** and **5**). Over 6000 were taken prisoner. To serve as an example to others who might consider rebellion, the entire 6000 were crucified along the road from Capua to Rome.

SOURCE 3 A relief sculpture depicting two gladiators named Scholasticus and Damascenus from the third century CE. The sign indicates that Damascenus died in the fight. Most gladiators' lives ended this way, although a few very successful fighters were able to buy their freedom.

SOURCE 4 From an account of the slave revolt by the Greek historian Plutarch (c. 46–120 CE)

Spartacus… was a Thracian from the nomadic tribes and not only had a great spirit and great physical strength, but was… most intelligent and cultured… Spartacus had grown to be a great and formidable power but… could not expect to prove superior to the whole power of Rome, and so he began to lead his army towards the Alps… His men, however, would not listen to him. They were strong in numbers and full of confidence…

…both consuls were sent out to deal with what was considered a major war and a most difficult one to fight…

SOURCE 5 From Plutarch's description of the final battles of the revolt

Crassus's troops killed 12 300 men, but he found only two of them who were wounded in the back. All the rest died… fighting back against the Romans.

…Spartacus… surrounded by enemies, still stood his ground and died fighting to the last.

DID YOU KNOW?

Slaves had no rights at all until a law enacted by Emperor Claudius banned the practice of torturing or killing them. In reality, however, this law often failed to protect them. A few educated slaves led fairly comfortable lives and some slaves were granted their freedom or were able to save enough money to buy it, but for most slaves life was harsh.

4.7 SKILL ACTIVITY: Historical perspectives and interpretations

Spartacus was a leader of the great slave revolt that began in 73 BCE and had such successes against Roman legions that Rome's rulers were sent into panic. The uprising, which the Romans called the Third Servile War, was eventually crushed with great brutality by eight Roman legions in 71 BCE. But Spartacus became a legend who inspired many political thinkers. In the twentieth century, the story became the subject of the novel *Spartacus* by American author Howard Fast (and a 1960 Hollywood movie *Spartacus* starring Kirk Douglas, based closely on the novel), as well as a Russian opera and part of the Netflix TV series *The Roman Empire*.

State your view on whether Spartacus should be regarded as having historical significance. **Consider** the following.

1. How significant was the rebellion he led to people at the time?
2. How many people were affected?
3. To what extent were people's lives changed?
4. How long-lasting were the consequences?

4.7 Exercise

learnon

4.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 8	7, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

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Check your understanding

1. Which group in Roman society benefited the most from slavery?
   - A. Magistrates
   - B. Slaves
   - C. Wealthy, free citizens
   - D. Women
2. **Identify** what you think would have been the worst jobs for slaves.
3. Which of the following is *not* a reason gladiators were able to launch a slave uprising?
   - A. They were experienced in combat and had fighting skills.
   - B. They had a strong leader in Spartacus.
   - C. It was easy for them to escape from their masters.
   - D. There was widespread anger about how they were treated.
4. The 6000 captured rebels were executed by crucifixion. True or false?
5. **Identify** what reforms to slavery were made by Emperor Claudius and **explain** how effective they were.

Apply your understanding

Using historical sources

6. **Examine SOURCE 1**. Freedmen and freedwomen were former slaves. The toga was a sign of Roman citizenship. How does **SOURCE 1** provide evidence that some former slaves were able to advance in Roman society?
7. Read **SOURCE 2**.
   - a. **Explain** how you can tell that not all Romans approved of gladiatorial combats.
   - b. Do you think that many Romans would have shared Seneca's perspective? **Justify** your response.
8. Using **SOURCE 3** as your evidence, **suggest** how long you think a gladiator's career was likely to last.
9. **Analyse SOURCE 4**. According to Plutarch, how big a threat to their power did Rome's rulers consider the slave revolt to be?
10. In **SOURCES 4** and **5**, **explain** what Plutarch says about the following.
    - a. Why Spartacus was eventually defeated
    - b. The courage of Spartacus and the other rebels

LESSON
4.8 What was it like to live in the Roman Empire?

LEARNING INTENTION

By the end of this lesson you should be able to describe daily life for Roman citizens, both rich and poor, and identify the social and cultural changes that came as the Roman Empire expanded.

TUNE IN

An old saying is that in unequal societies, the rich and powerful keep the poor from rebelling by giving them 'bread and circuses'.

SOURCE 1 Circus Maximus in Rome

1. Do you think this saying might refer to the Roman ruling class keeping poorer plebeians contented?
2. Bread was provided to keep the poor from becoming rebellious due to hunger. But what do you think 'circuses' refers to? Based on what you've learned so far, what do you think a 'circus' was in ancient Rome?

4.8.1 Changing Roman society

Around 90 per cent of people in the Roman Empire were peasants who lived on farms or in villages. Far fewer lived in towns and cities. Wherever they were, the poor lived very differently from wealthy Romans. Some plebeians became wealthy through trade but most were skilled or unskilled workers, shopkeepers or **tenant farmers**. As more slaves were used as workers, increasing numbers of poor citizens became unemployed.

By contrast, wealthy Romans usually did no physical work and lived in luxurious villas with baths and even underfloor heating. As the empire grew, so did the gap between the rich and the vast numbers of the poor.

tenant farmers poor farmers who rented small plots of land

Large Roman towns were well planned, with government buildings and a **forum** where the citizens could gather. Within the city of Rome were expensive villas for the rich and fine government buildings. The rich feasted at banquets where they ate lying on their sides on couches while being entertained by dancers and musicians. Some made it a habit to overeat and then vomit so they could continue to feast.

Meanwhile, the poor survived on bread and porridge and lived in rented slums without kitchens, toilets, heating or running water (see **SOURCE 2**). Their drinking water came from public fountains and they washed in public baths. To keep the poor from rebelling, the ruling classes provided free grain, public baths and toilets, and cruel forms of entertainment, such as brutal gladiator fights. They also encouraged the poor to live in colonies in conquered lands.

forum open meeting place of a town or city

SOURCE 2 From a description of housing conditions of the poor by the Roman writer Juvenal, first century CE.

We live in a city shored up with slender props…for that is how the landlords stop the houses from falling down.

The impact of slavery on social change

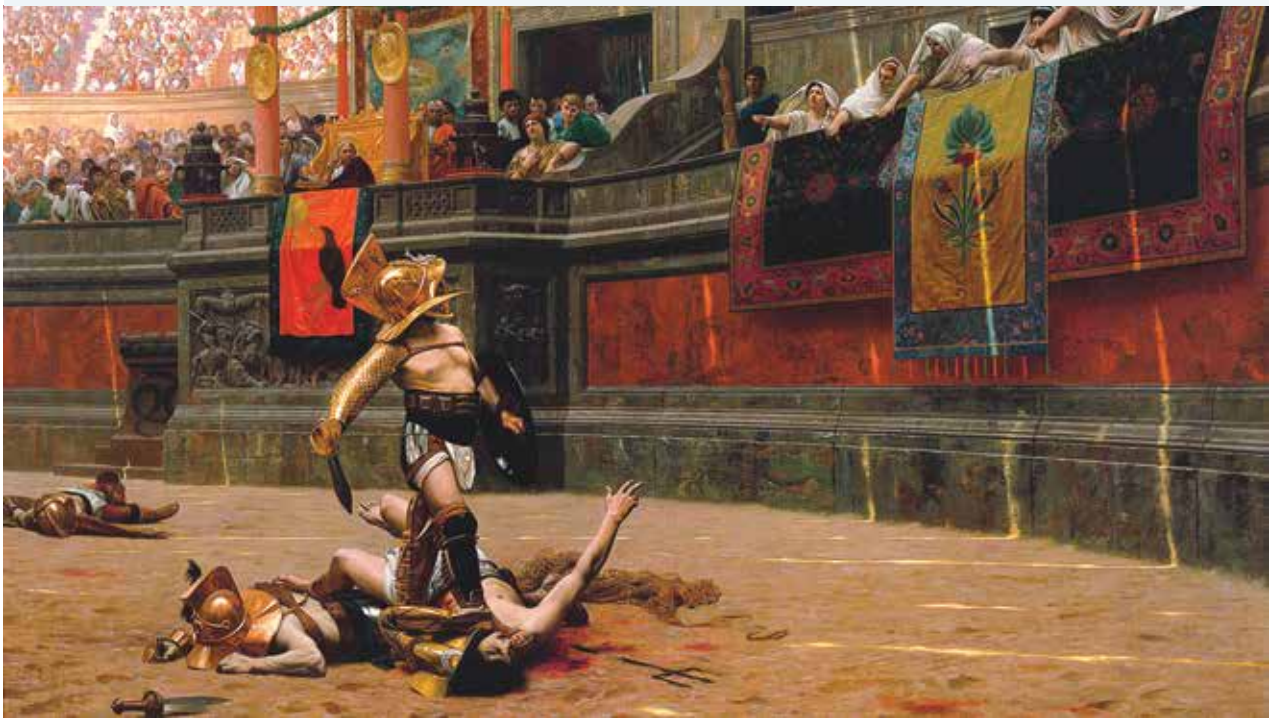
The main reason for the existence of large numbers of poor citizens in Roman towns was the vast number of conquered peoples who became slaves. The increased use of slave labour changed Rome from a society based mainly on small farmers to one based more on large agricultural estates owned by the very rich and worked by slaves. Many of the city-dwelling poor were displaced Roman citizens who moved from the countryside to towns and survived on casual work or on the dole.

DID YOU KNOW?

Public entertainments included executions, live animal hunts, fights between tormented animals and contests between gladiators and animals.

So many lions were captured for wild animal shows that the species disappeared in the Middle East.

SOURCE 3 Public entertainments included fights between gladiators, and between gladiators and animals.



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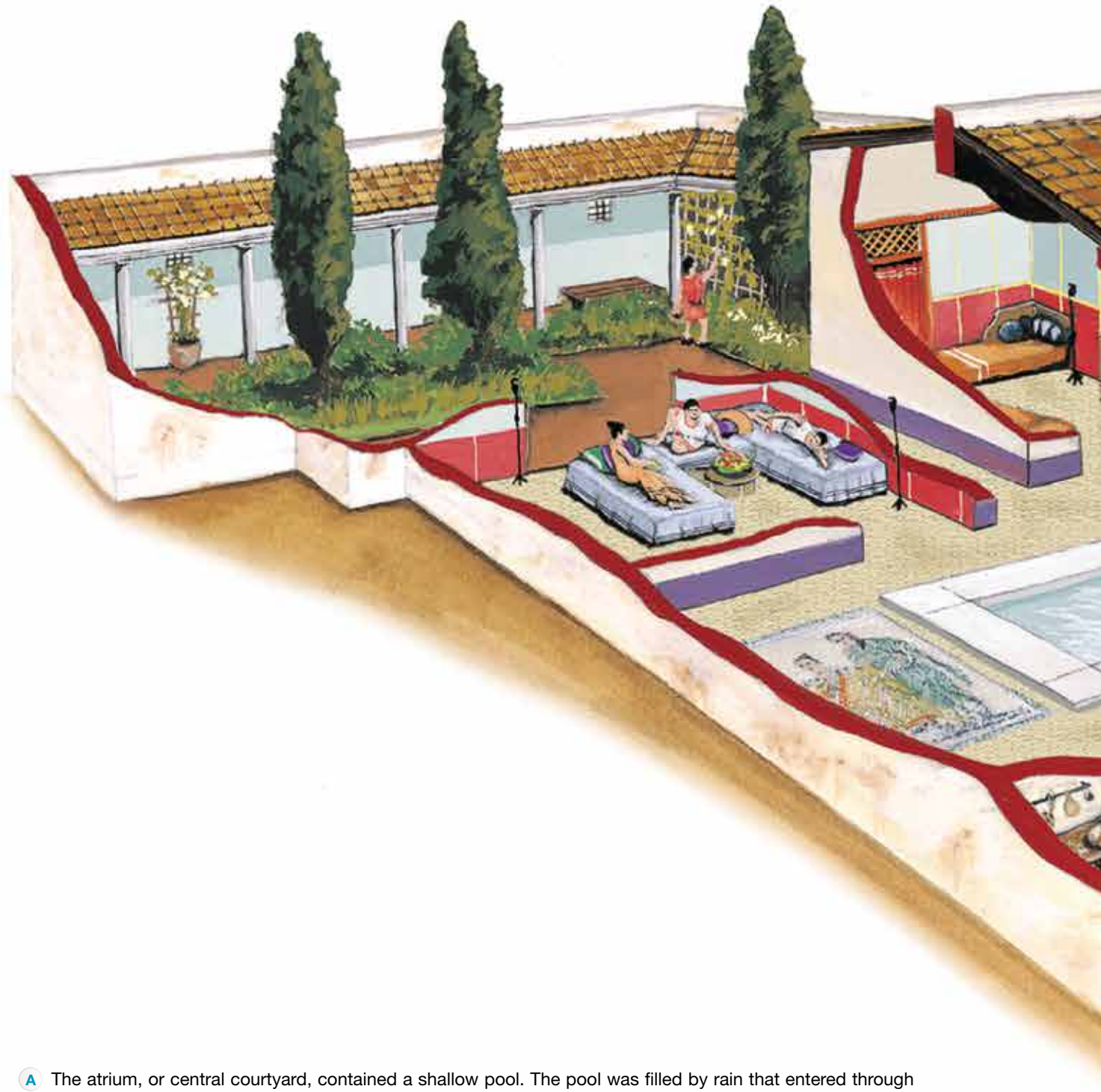
SOURCE 4 A typical villa of the type occupied by wealthy Romans

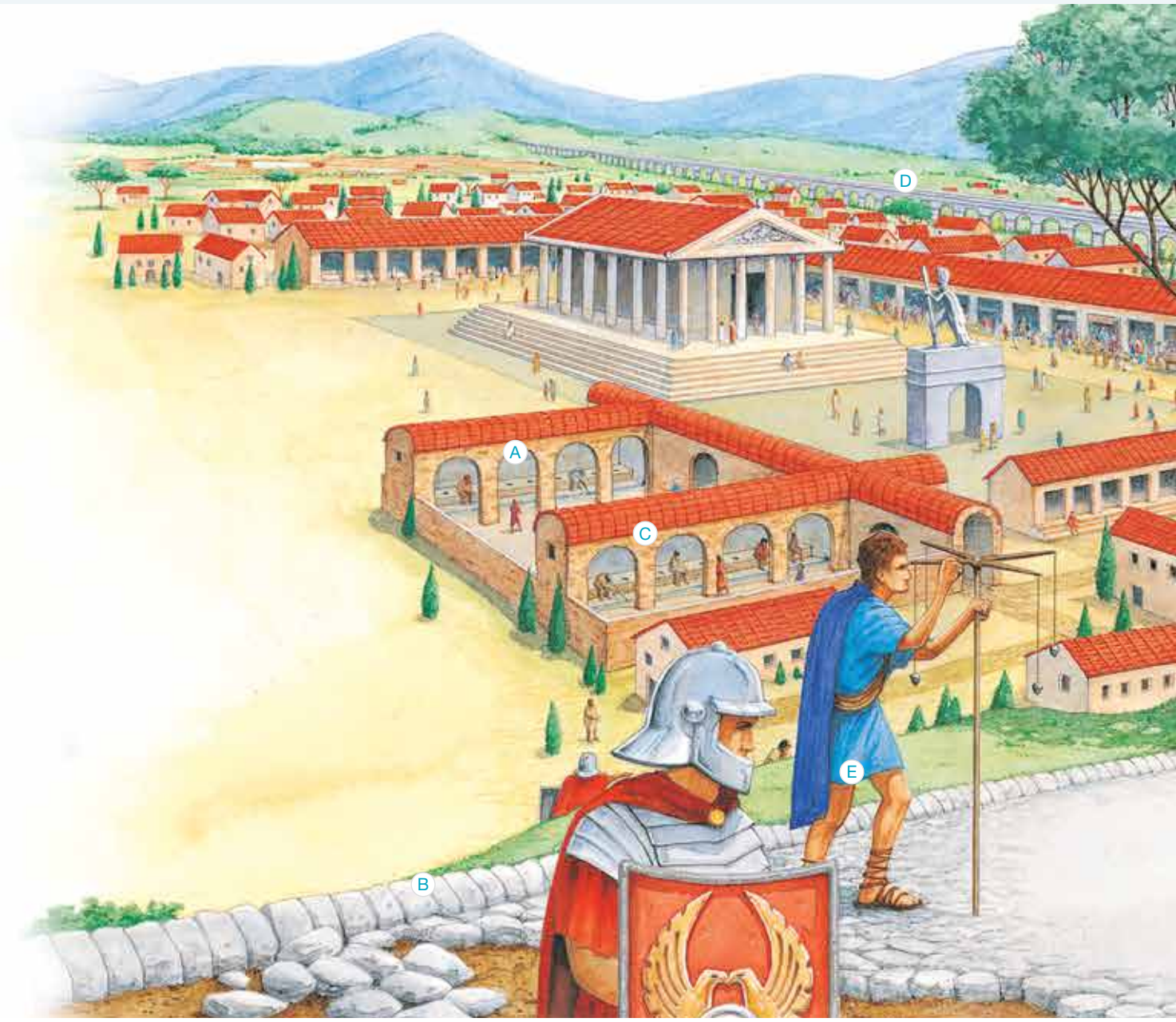


- **A** The atrium, or central courtyard, contained a shallow pool. The pool was filled by rain that entered through an opening in the roof (through which light also entered).
- **B** The solid high external walls had few or no windows.
- **C** The lararium, or household shrine, was also usually erected in the atrium.
- **D** Small olive oil lamps made of pottery or bronze provided lighting in the evening.
- **E** Furniture consisted mainly of beds, couches, low tables and chairs, which sat on a mosaic or tiled floor. The floor was sometimes heated from beneath.

A
B
C
D
E

int-5992

SOURCE 5 The general layout of cities throughout the Roman Empire followed the pattern set for the city of Rome.



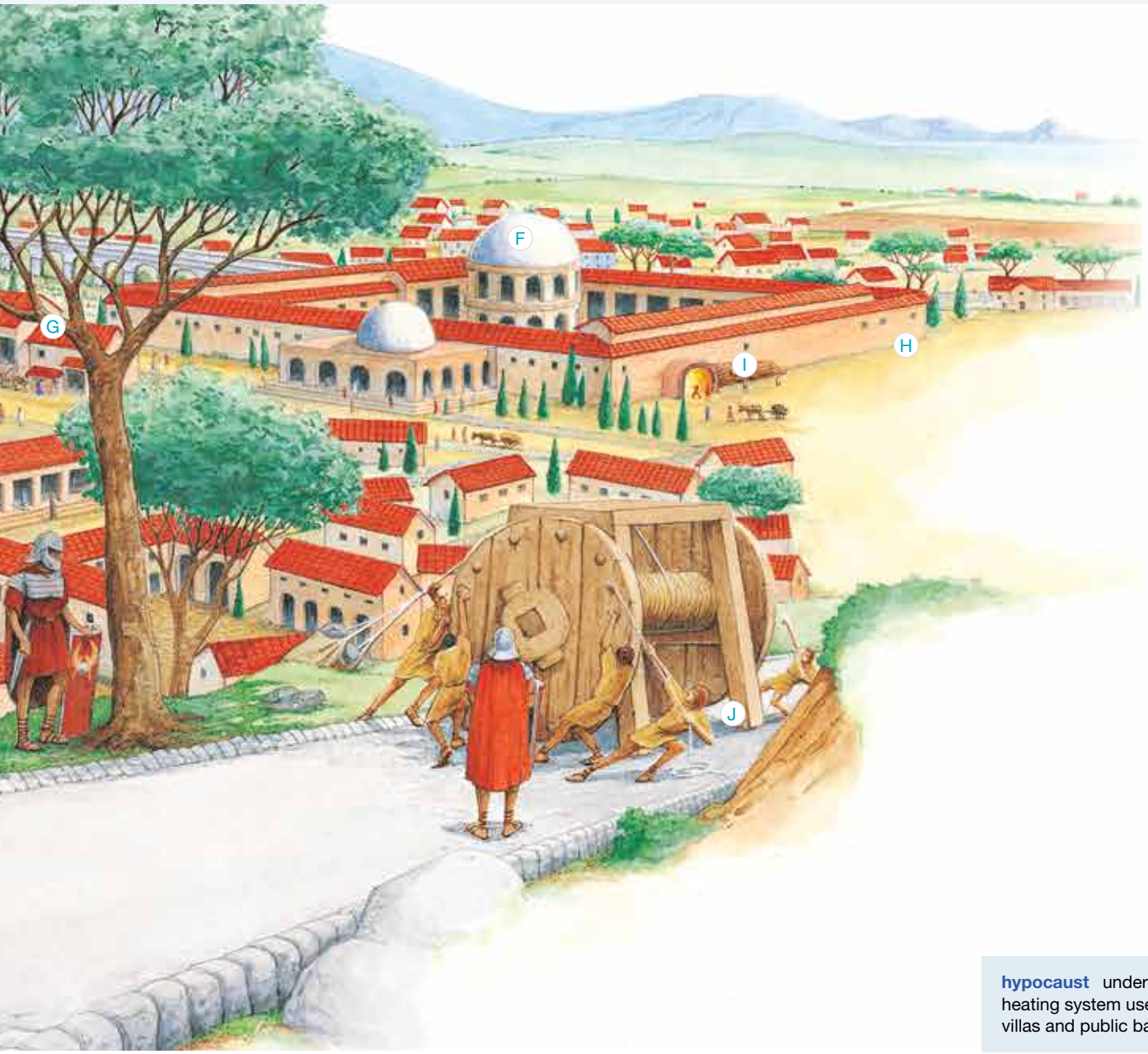
A Roman public toilets consisted of stone or concrete benches with holes in them. A channel of running water under the holes removed human waste. A sponge on the end of a stick was used for cleaning.

B Roman roads were usually straight, and often very long. They were usually laid on a bed of rubble, over which was poured a layer of concrete or gravel. Sometimes stone slabs were placed on top. They were slightly higher in the middle so that water and debris could wash off easily.

C The Romans further developed the Etruscans' arch to produce, first, the single-tunnel vault (many arches joined together, one behind the other), then the cross-vault (two tunnel vaults crossing at right angles) and then the revolutionary dome.

D Aqueducts allowed water to flow down to a settlement by means of gravity. To ensure that the water flow did not stop, they had to be built very precisely.

E The Romans were also able to fire bricks, and to use building tools such as rulers, chisels, squares (to measure angles) and a surveying instrument called a groma. By lining up the two weighted strings on the end of each bar of the groma with landmarks, engineers were able to build roads that were straight and level.



hypocaust underfloor and water heating system used in Roman villas and public baths

F Domes were used on many public buildings, including some baths. The most spectacular example is the dome on the Pantheon, a temple built to all the gods in around 120 CE. Spanning 43 metres in diameter, it is still the second biggest in the world.

G Building was revolutionised when the Romans found out how to make concrete. It was discovered that when a volcanic dust called pozzolana was mixed with lime and water, it set into a hard material.

H People went to the public baths every day to wash and to socialise. The complexes contained hot and cold pools, saunas, reading rooms, hair salons, dressing rooms, exercise yards and shops. Some of them held thousands of people.

I The water in the public baths was heated by a **hypocaust**. Slaves kept large fires burning in the basements of buildings or outside them. The hot air was fed under the floors and up through a series of tunnels to heat some of the pools.

J Roman cranes were large wooden structures, powered by a big wheel turned by slaves.

4.8.2 Roman culture

Ancient Rome produced a rich culture, but it was probably enjoyed by fewer than five per cent of the population. These Romans were influenced by the cultures of some of the peoples they conquered, especially the Greeks. From Greece, the Roman armies brought back paintings and statues. Rich Romans used Greek slaves to educate their children and to decorate their homes and public buildings with paintings, sculptures and statues. Many Roman statues of Roman leaders and gods were copies of Greek statues.

The Romans adopted and imitated Greek literature. Homer's *Odyssey* was translated into Latin and plays were performed at festivals. Many of these plays were comedies that ridiculed everyday events. Roman writers produced histories, poetry and books on military tactics, law and medicine. Among the most famous was the poet Virgil. His greatest work was the *Aeneid*, which tells the story of Aeneas, who, according to legend, fled from the destruction of Troy and founded Rome. Virgil's success showed that some Romans could rise from poor backgrounds. He was the son of a peasant. Horace, another great Roman poet, was the son of an ex-slave. Both were encouraged by Augustus and benefited from the tradition of noble **patronage**.

Virtues

Among the ideas of the ancient Romans, **virtue** was considered very important. Roman writers and philosophers praised such virtues as family values, patriotism and justice. In schools, boys were taught to read, write and use Roman numerals. They also learned **rhetoric** and logical thinking and studied the works of great classical writers.

DID YOU KNOW?

Roman fathers had total power over their families, including the power to kill their children or sell them into slavery. Girls received little schooling other than in household skills. Married women had few rights and could be killed if they committed adultery.

4.8.3 Roman technology

The Romans built some 84 000 kilometres of roads, as well as countless bridges, walls, aqueducts, temples and public buildings, including baths. They had no earthmoving equipment, steel cranes, power tools or computer-aided design, yet the way they built many of these structures was not bettered for nearly 2000 years.

As the Roman Empire expanded, it became important to master the skills needed to build it, protect it and connect and service its various parts. Roads, walls and towns had to be built, and towns needed facilities such as water supply, toilets and **public baths**. Much of the work was done by the army. The Romans became so good at engineering and construction that many of their structures are still used today.

patronage supporting and encouraging authors and artists
virtue moral standard or value
rhetoric the art of public speaking
public bath a public building complex containing baths of varying temperatures, and sports and beauty facilities; a popular meeting place for Roman citizens

DID YOU KNOW?

Roman engineering was so good that many Roman public buildings still stand. They supplied running water and sewerage to the homes of wealthy people who could afford pipes, taps and flushing toilets. Some blocks of flats for the poor, on the other hand, were so badly built that they fell down within a few years. Fires were such a problem in Rome that in the year 6 CE a fire-fighting force, called the Cohortes Vigilium, was set up.

4.8 SKILL ACTIVITY: Communicating

Clearly, ancient Roman society had many achievements such as in town planning, construction, infrastructure, literature and other arts. Yet it was also extremely cruel — not only in its treatment of slaves, and in the punishments it used and in its public entertainments, but also in what its laws allowed regarding the treatment of women and children.

1. **Create** a mind map of the positive and negative aspects of ancient Roman society.
2. Based on your mind map, write a short **explanation** of how you think Roman society was capable of such contradictions.

4.8 Exercise

learnon

4.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4, 5	3, 6, 7, 8	9, 10

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- Receive immediate feedback
- Access sample responses
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Check your understanding

1. **State** the occupations that most plebeians were employed in.
2. Why did large numbers of plebeians become unemployed?
   - A. They no longer needed wages due to the success of farming.
   - B. Their skill level was not high enough for advancing technologies.
   - C. The workload decreased due to the introduction of machinery.
   - D. They were replaced by the unpaid labour of slaves.
3. **Describe** ways in which privileged Romans were influenced by Greek culture.
4. What virtues were praised by Roman writers and philosophers? **Select** all that apply.
   - A. Courage
   - B. Family values
   - C. Modesty
   - D. Patriotism
   - E. Justice
5. The education of boys was the same as that of girls. True or false?
6. **Describe** the facilities that were needed in Roman towns.

Apply your understanding

Using historical sources

7. **Identify** what evidence **SOURCE 2** provides about the housing of the poor.
8. Imagine you are a member of the wealthy Roman family who own the villa depicted in **SOURCE 4**. **Describe** how you would decorate and furnish it.
9. Examine **SOURCE 5**.
   - a. **Describe** a Roman public toilet.
   - b. **Explain** how aqueducts worked.
   - c. **Explain** how public baths were heated.
   - d. **Draw** and label a diagram to show how Roman roads were built.

Historical perspectives and interpretations

10. Referring to the sources and other information in this lesson, **explain** how the growth of the Roman Empire changed Roman society.

LESSON
4.9 What did ancient Romans believe about death?

LEARNING INTENTION

By the end of this lesson you should be able to describe death and burial practices in ancient Rome, and identify the significance of commemorations of the dead as an expression of family identity and status.

TUNE IN

Losing someone can have a big impact on those left behind, and many people choose to remember or celebrate that person in different ways. Think about what might have happened in ancient Rome after the loss of someone close.

1. What do you think most people in modern times believe about what happens after death?
2. Do religious people have different beliefs about life after death to the beliefs of people who do not follow a religion?
3. Do you think different religions have different beliefs about death?
4. Do you think the ancient Romans would have cremated or buried the dead?
5. Do you think they would have had anything like modern funerals?

SOURCE 1 This stele (upright stone slab) served as the grave marker of a Roman family group of former slaves with a male child.

4.9.1 Beliefs and funeral customs

Death and the customs associated with funerals provide an enormous amount of primary source evidence for ancient Roman society and its values and beliefs. Roman cemeteries were located outside the boundaries of cities. The inscriptions and sculptures on tombs and altars, along with writings about death, reveal a lot of what Romans believed about honouring the dead and about souls and an afterlife.

On Roman ideas about life after death, we have the writings of just a few highly educated Romans, and they expressed various beliefs. However, at least some and possibly many Romans appear to have believed that souls went on living after the death of a body and that they might be judged in an afterlife. Sometimes a coin was placed in or over the dead person's mouth. This custom appears to have been adopted from the Greeks, who believed a coin was needed to pay the ferryman who transported souls of the newly dead across a river that separated the underworld from the world of the living.

Regardless of beliefs about an afterlife, Romans thought that they had a duty to care for their dead ancestors. When a family member died, their closest relative would close the eyes of the deceased and all family members would mourn, calling out the dead person's name. After the deceased person's body was washed and anointed, it would be dressed in clothes that reflected their position in Roman society; for example, a deceased male citizen would be dressed in a toga.

Funeral processions took place between the deceased's home and the cemetery. Ceremonies were held at both places. They included chanting and a eulogy, which was a formal speech honouring the deceased. Families who could afford it would also sacrifice an animal in the presence of the dead body.

4.9.2 Tombs and commemorations

Throughout most of the period of the Roman Empire, dead bodies were usually cremated and the ashes were kept in urns. But this was later mostly replaced by burial. If they could afford it, people would have the body of a dead family member placed in a sarcophagus (a stone coffin). Wealthy Romans often owned very grand tombs that had several chambers for family visits.

Poorer Romans had small, simple tombs. In the city of Rome, those who could not afford tombs used the catacombs. These were large networks of tunnels cut into soft rock below the city.

Following funerals, the dead continued to be commemorated in several ways. An epitaph would be inscribed on the tomb, often recording the deceased's span of life and information about their family relationships, occupations and any public offices they held. Each year, the dead were honoured during the nine-day festival called the Parentalia. In addition, portrait busts of a dead family member were often made of bronze or stone to be displayed in homes of wealthy families.

SOURCE 2 An inscription on this sarcophagus reveals that it was donated by two Roman citizens to their friend. The figures on the sarcophagus are a cobbler (shoemaker) and a spinner (a maker of thread for cloth). It is probable that one of these occupations was that of the deceased and the other was that of the donors.

SkillBuilders to support skill development

- 1.11 Analysing and corroborating ancient Roman sources

4.9 SKILL ACTIVITY: Using historical sources, Communicating

At least 40 networks of ancient catacombs lie under the city of Rome, often decorated with wall paintings.

1. **Conduct research** on these catacombs, making notes on anything that refers to their importance to the study of Roman history.
2. **Produce** a short explanation of why the catacombs are important to historians and archaeologists. Many websites provide useful information. You could include some illustrations in your report.

4.9 Exercise

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4.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
3, 4, 5, 6	1, 2, 7	8, 9, 10

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Check your understanding

1. **Describe** what Roman family members did at home and at the cemetery following a family member's death.
2. **Explain** what the custom of placing a coin on or in a dead person's mouth reveals about the following.
   a. The influence of Greek myths on Roman ideas
   b. The belief, held by at least some Romans, in a life after death
3. Where did funeral ceremonies take place? **Select** all that apply.
   A. In the town centre
   B. At the deceased's home
   C. Funeral ceremonies did not occur
   D. At the cemetery
4. What was a sarcophagus?
   A. A traditional dress
   B. An animal
   C. A coffin
   D. A funeral rite
5. The tombs and burial places of the rich and poor were similar. True or false?

Apply your understanding

Using historical sources

6. The child in **SOURCE 1** is wearing a toga. **Explain** what this tells you about Roman society.
7. Form a **hypothesis** that might explain the gift of the sarcophagus in **SOURCE 2**.

Communicating

8. In a style that would appeal to their families, **write** a eulogy for any one of the figures in **SOURCE 1** or **SOURCE 2**.

Historical perspectives and interpretations

9. Use the sources and other information in this lesson to **explain** what we could discover about Roman society from evidence of funeral customs. Use the following headings: attitudes to the dead; beliefs about an afterlife; occupations; social classes; movement between social classes.
10. Why would the change from cremations to burials have provided more evidence of Roman inequality?

LESSON
4.10 How did ancient Roman laws and religion change?

LEARNING INTENTION

By the end of this lesson you should be able to explain the significance of Roman religion and laws to Roman government, daily life and values.

TUNE IN

Demeter was the ancient Greek goddess of agriculture, grain and bread. In Roman times, worship of Demeter was merged with worship of Ceres, the Roman goddess of agriculture.

1. As you already know, women had almost no rights in Roman society. How do you think it came about that ancient Rome had many goddesses as well as gods?
2. Are you aware of any other ancient Roman goddesses?
3. How do you think ancient Roman gods and goddesses featured in daily life?

SOURCE 1 An ancient clay statue of the goddess Demeter

4.10.1 Roman law

During the period of over 1200 years between Rome's foundation in 753 BCE and the fall of the Western Roman Empire in 476 CE, many changes affected Roman society. None were more important than the changes in law and religion.

When Rome was ruled by Etruscan kings, no laws probably existed other than a king's decisions. However, the system of government in the Roman Republic created the need for written laws to prevent the patrician class from always dominating matters of law and magistrates from interpreting the law unfairly.

According to ancient Roman historians, in 451 BCE, ten Roman citizens were given the job of recording the laws that were in practice. These laws were approved and adopted in 450 BCE as the Twelve Tables (see **SOURCE 2**). These dealt mostly with the rights of citizens, because women, children and slaves came under the authority of the male head of the family.

SOURCE 2 Three laws from the Twelve Tables

Table IV, law 2: If a father sell his son three times, the son shall be free from his father.

Table V, law 1: Females shall remain in guardianship [under the control of their fathers] even when they have attained their majority [became adults].

Table XI, law 1: Marriages should not take place between plebeians and patricians.

As Rome's society and economy became more complicated, new laws were added as the need arose. Roman law came to cover a huge range of matters that affected everyday life. These included crime and punishment, property, trade, industries, sex, slavery and politics. Although all Roman citizens were supposed to have the same rights under the law, the rich could often use bribery to get an advantage (see **SOURCE 3**).

SOURCE 3 From the Roman writer Petronius, who lived in the first century CE

What use are laws when money calls the tunes and people without a gentleman's income have no real rights at all?

Changing laws

Over the many centuries of the Roman Empire, Roman law changed by many means. These included magistrates' decisions, decrees of the Senate, votes in the assembly, decisions of the jurists (a small group who were responsible for giving expert legal opinions) and edicts (orders) of emperors. Emperors increasingly assumed powers to create completely new laws. For example, in 212 CE, Emperor Caracalla issued an edict giving Roman citizenship to all free people within the Roman Empire. During the age of the emperors, Roman law became less harsh. New laws gave some protection to women, children and the poor.

4.10.2 Roman religion

The Romans believed in hundreds of gods and goddesses. They usually tolerated the religions of people they conquered as long as those people were willing to pay homage to the Roman emperor. Romans believed that religion was closely related to government and that other religions were a danger only if they threatened Rome's authority. Roman religion did not tell people how to live better lives and provided no fixed belief about an afterlife. It was more concerned with performing rituals in return for protection from misfortune.

Roman state religion

The ancient Roman authorities built temples to the gods, conducted regular rituals to please them, and organised religious festivals with processions, music and animal sacrifices. Roman homes also had shrines at which families sacrificed to their household gods.

Romans believed that it was important to know the will of the gods before political decisions were made.

They believed that the gods sent signs, or omens; the skill of reading them was called **divination**. Methods of divination included studying the entrails of sacrificed animals, rolling dice, **astrology** and consulting oracles. Some oracles were inscriptions written on tablets. These were shuffled like cards by a child, who then gave one to the person seeking to discover the will of the gods.

Adopted gods

As the empire expanded, Romans adopted more gods from the people they conquered, especially the Greeks. The Greek sea god Poseidon was identified with Neptune, the Roman god of water. The Greek god Zeus was identified with Jupiter, the most important of all Roman gods. Several Egyptian and Persian gods were also adopted.

Mithraism, the cult of Mithras, the Persian god of light, held that there was life after death. Mithras was especially popular among Roman soldiers. When the Romans decided to worship Sulis, a goddess of the Celts, they equated her with the Roman goddess Minerva and changed her name to Sulis Minerva.

divination the skill of reading omens

astrology interpreting the influence of the stars on human affairs

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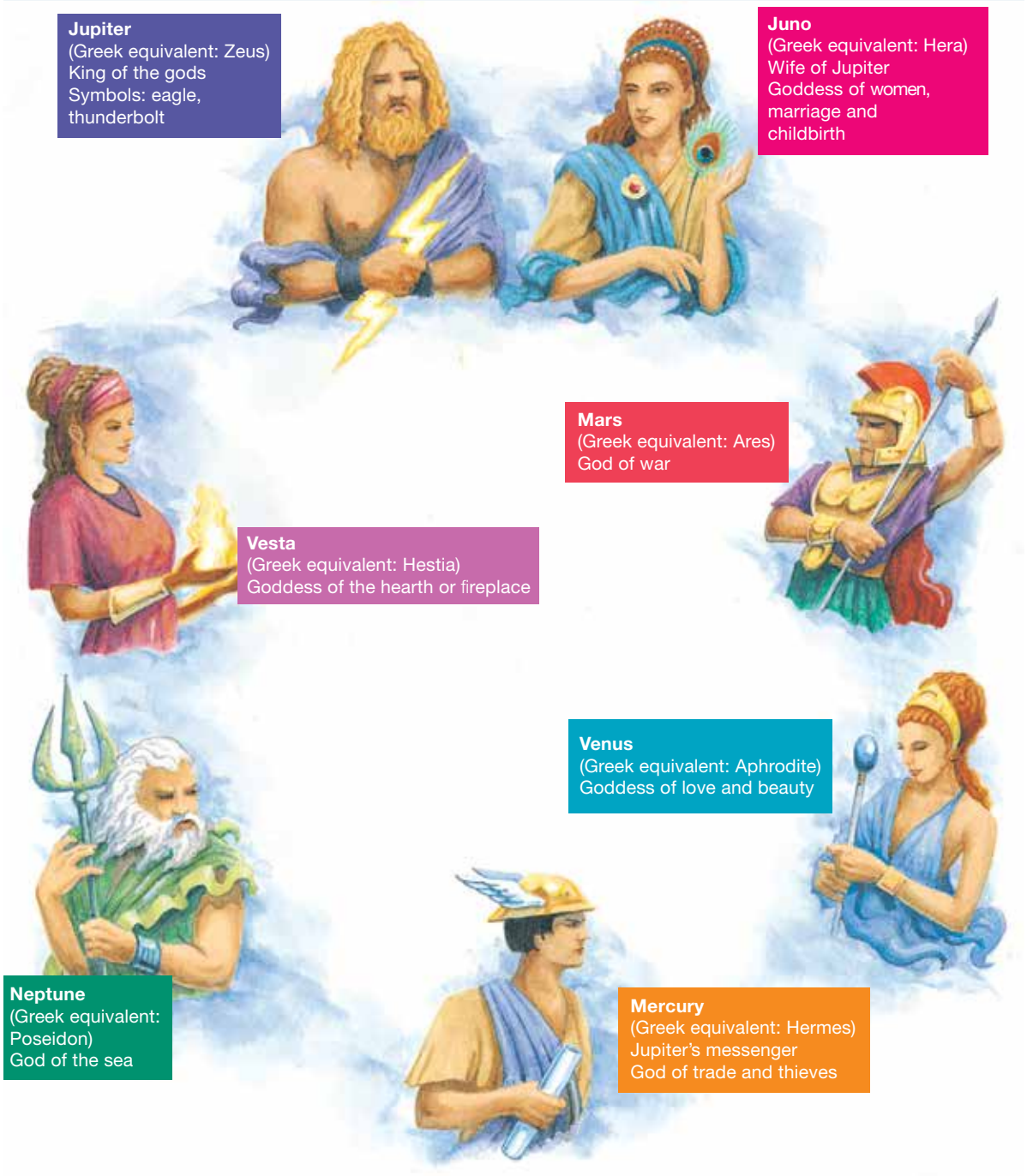
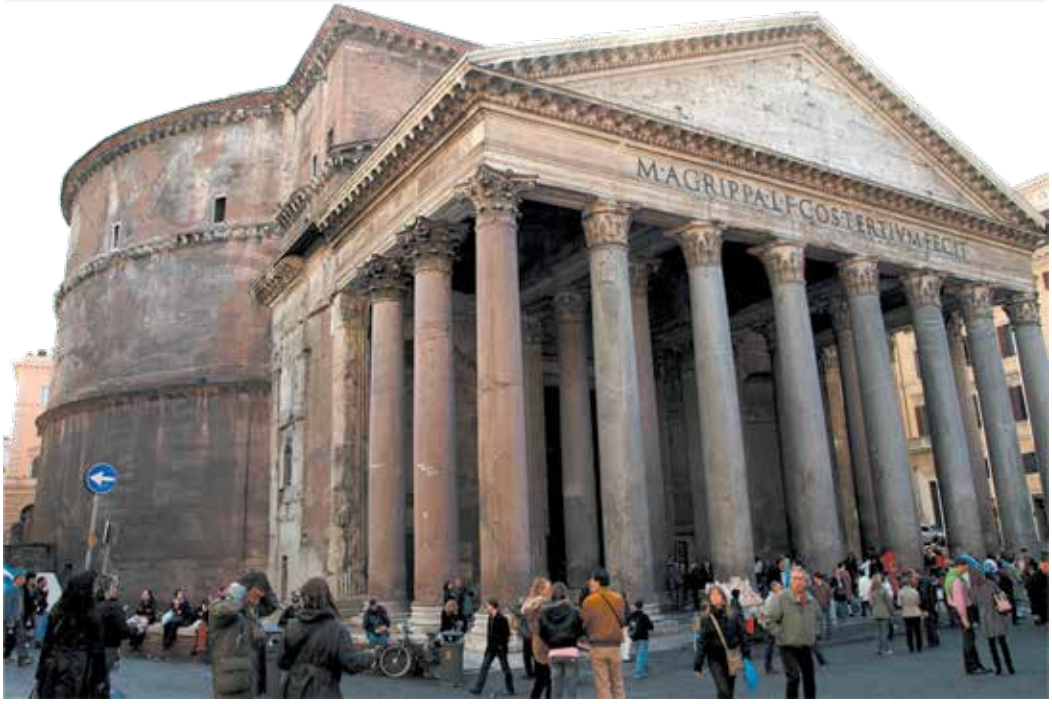
SOURCE 4 Some Roman gods and goddesses and their Greek equivalents



DID YOU KNOW?

Roman priests and priestesses were state officials who performed rituals to maintain the goodwill of the gods towards the Roman state. The most important priestesses were the Vestal Virgins, who kept the fire burning on the altar of the goddess Vesta. Vestal Virgins could be executed if they were found to have had sexual relationships.

SOURCE 5 The Pantheon, the largest Roman temple. It was built between 118 and 128 CE.



4.10.3 The spread of Christianity

Christianity arose in Roman Palestine (Judea) In the first century CE. It was based on the teachings of Jesus of Nazareth (Jesus Christ), a Jewish man who preached that he was the son of God and that through faith people could receive forgiveness of their sins and gain eternal life. His main message to his followers was compassion for others. However, some thought what he said was **blasphemous** and Jesus was arrested. He was handed to the Roman governor of Judea, Pontius Pilate, who had him executed by crucifixion.

Jesus' followers continued to spread his teachings, which offered hope especially to slaves and the poor. Christianity did not encourage rebellion, but the Romans saw it as a threat because Christians refused to worship the emperor, recognising only the Christian god. Several emperors ordered persecutions of the Christians, including mass executions. This persecution ended when, in 313 CE, Emperor Constantine legalised Christianity. It became the state religion of the Roman Empire in 391 CE.

blasphemous great disrespect shown to God or to something holy, or something said or done that shows this kind of disrespect

SOURCE 6 Account by the Roman historian Tacitus (c. 55–117 CE) of the persecution of Christians by the Emperor Nero

Dressed in wild animals' skins [the Christians] were torn to pieces by dogs, or crucified, or made into torches to be ignited after dark. Nero provided his Gardens for the spectacle, and . . . mingled with the crowd . . . Despite their guilt as Christians, and the ruthless punishment it deserved, the victims were pitied. For it was felt that they were being sacrificed to one man's brutality rather than to the nation's interest.

SOURCE 7 From the Edict of Milan, in which Emperor Constantine granted religious freedom. An edict is a formal command.

. . . no one whatsoever should be denied freedom to devote himself either to the cult of the Christians or to such religion as he deems best suited for himself . . .

4.10 SKILL ACTIVITY: Historical perspectives and interpretations

Billions of people worldwide who identify as Christians believe that Jesus of Nazareth was the most significant person in world history. Many who follow other religions or no religion at all do not believe that he is the son of God. However, many of them would see him as significant.

State your view on whether Jesus should be regarded as having great historical significance.

Consider the following:

1. How significant was his teaching to people at the time?
2. Were large numbers of people influenced by him in later times?
3. To what extent were people's lives changed by his teachings and influence?
4. How long-lasting has his influence been?

4.10 Exercise

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4.10 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5, 7	3, 4, 8	6, 9, 10

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Check your understanding

1. Answer the following.
   a. Why did the Roman Republic need written laws? **Select** all that apply.
      A. To prevent magistrates from interpreting the laws unfairly
      B. To prevent slaves from ever reaching freedom
      C. To prevent patricians from dominating matters of law
      D. To prevent emperors from creating new laws
   b. **Explain** how law-making changed under the emperors.
2. The purposes of Roman religious rituals and festivals were for the entertainment of the people. True or false?
3. **Explain** how Roman religion changed as the empire expanded.
4. **Identify** why Christianity had a special appeal for slaves and the poor.
5. The Romans were tolerant of other religions. So why did they persecute Christians?
   A. They were at war with Christians.
   B. The Christians were starting uprisings.
   C. They did not believe in the Christian god.
   D. The Christians refused to worship the Roman emperor.

Apply your understanding

Using historical sources

6. Read **SOURCES 2** and **3**, and **identify** what these extracts reveal about the powers of fathers, the rich and patricians.
7. Using **SOURCE 4**, **list** three Greek gods and/or goddesses and their Roman equivalents.
8. The Pantheon (**SOURCE 5**) is considered an architectural wonder. **Explain** what the construction of such a building suggests about the importance of religion to the Romans.
9. **Analyse SOURCE 6**. **Identify** what kinds of punishments were suffered by Christians.

Historical perspectives and interpretations

10. Read **SOURCE 7** and **explain** why the Edict of Milan was a turning point in Roman history.

LESSON
4.11 Why did the Roman Empire fall?

LEARNING INTENTION

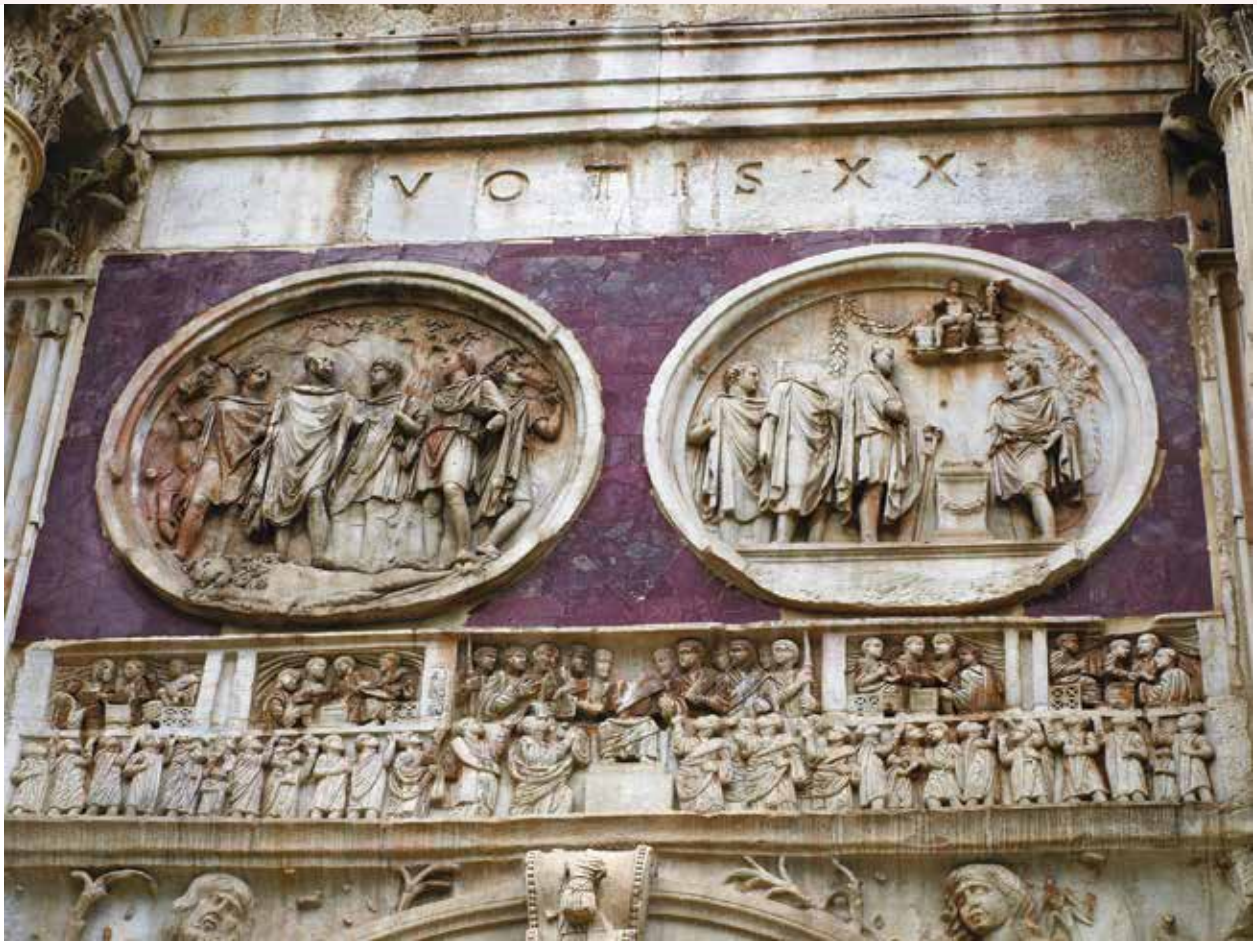
By the end of this lesson you should be able to describe the power struggles within Rome that gradually destroyed its unity, economy and ability to defend itself from invasion.

TUNE IN

The arch shown in **SOURCE 1** was commissioned by the Roman Senate and was erected in Rome to honour Emperor Constantine's victory over his rival Maxentius in 312 CE.

In 315 CE when the arch was completed, the Roman Empire appeared to be strong, but it was already showing signs of weakness. Discuss what you think could bring it down.

SOURCE 1 Some of the details on the Arch of Constantine



4.11.1 A weakening empire

The Roman Empire began to weaken from about 180 CE as rival Roman army generals fought each other for power. Trade that had enriched the empire began to decline as transport over long distances became more dangerous and tribes of **barbarians** increased their raids into the empire's lands.

In 284 CE, Emperor Diocletian, a Roman general who had won power through his soldiers, divided Rome into Eastern and Western empires under two separate emperors. Diocletian believed this would create stronger government, but the problems remained.

From 307 to 310 CE civil war raged as six rival emperors competed for power. The victor, Constantine, ordered the building of a new capital, to be called New Rome, on the site of the old Greek city of Byzantium. The city was soon renamed Constantinople (Istanbul in modern Türkiye).

In 378 CE, the Visigoths defeated Rome's armies. Emperor Theodosius (379–395 CE) agreed to allow them to form a separate state within the Roman Empire, while the Visigoths pledged to defend the empire's frontiers. Theodosius was more successful in reuniting the empire in 394 CE after the Western Empire broke away under a rival emperor. However, following the death of Theodosius the split into Eastern and Western empires became permanent.

barbarians the Roman term for all peoples who lived beyond the borders of the empire

int-8933

SOURCE 2 The weakening of the Western Roman Empire. The arrows show the directions from which different barbarian groups invaded the empire.

Source: Map drawn by Spatial Vision.

4.11.2 The empire falls

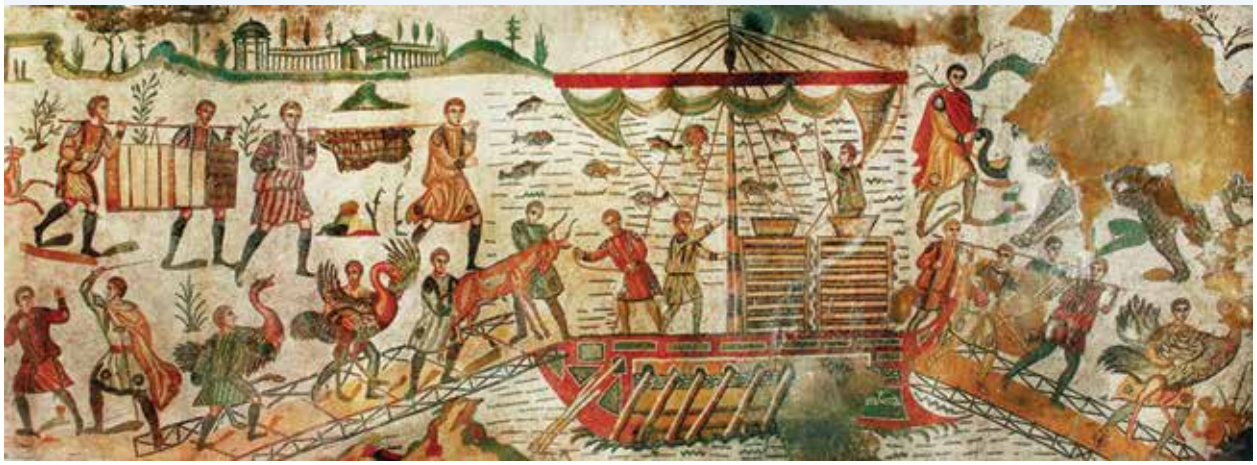
Vast movements of peoples occurred through Europe in the fifth century CE. Burgundians and other 'barbarian' tribes invaded Gaul, while Angles, Saxons and Jutes from Germany and Denmark attacked Britain, and Vandals, another Germanic tribe, invaded Spain. The Roman armies left Britain in 410 to defend the city of Rome, which was sacked by the Visigoths that same year.

These invasions were not part of any general plan. Several barbarian groups who swept into the Roman Empire were fleeing other hostile tribes. For example, the Ostrogoths from eastern Europe were retreating before the Huns, who had overrun their homelands. This made it possible for Rome to form alliances with some groups against others. In 451, an alliance of Romans, Visigoths and Burgundians defeated the Huns. However, in 455 Rome was pillaged by the Vandals, and in 476 the last Western Roman emperor, Romulus Augustulus, was deposed by Odoacer, a German chief.

Historians past and present have suggested several reasons for the fall of the Roman Empire. The mind map shown in **SOURCE 4** outlines some of them. War and economic collapse stand out as the key reasons.

tlvd-10504

SOURCE 3 Detail from The Big Game Hunt, a mosaic of the third to fourth century CE found at the Villa dei Casale, Piazza Armerina, Sicily



SOURCE 4 Reasons for the fall of the Roman Empire

Reasons for the fall of the Roman Empire

Civil wars
The involvement of Roman army legions in civil wars reduced Rome's ability to hold its frontiers.

Christianity
Some early writers claimed that Christianity weakened Rome because it made many people into pacifists.

Declining health
Some writers argued that lead poisoning through water carried in lead pipes caused a decline in Roman health and intelligence.

The changing Roman army
As attacks on the empire increased, ever more barbarians were recruited into the Roman army. The army's loyalty could no longer be taken for granted. Roman legions were essential for the empire's survival, but they were rebellious and a huge drain on Rome's finances.

Economic collapse
Farm labour was increasingly performed by slaves, which threatened the livelihoods of small farmers and farm workers. These citizens became an unproductive burden on the state. As Rome lost control in the provinces, trade became more difficult and Rome lost the taxes it had received from these areas.

The barbarians
Pressures from large groups of barbarians on several of the empire's frontiers were increasingly hard to withstand.

Moral decline and corruption
Some early writers pointed to a decline in morals. Roman emperors increasingly came to power through corrupt means, and several of them were assassinated.

4.11 SKILL ACTIVITY: Questioning and researching, Communicating

Several barbarian groups contributed to the fall of the Roman Empire.

1. **Choose** one of these groups to focus on.
2. **Conduct research** on your chosen group, making notes on any points that explain how they contributed to the fall of the Roman Empire. Many websites provide useful information in this area.
3. **Select** at least three sources that help to provide evidence for your explanation. Make sure you keep a list of all sites or sources you use for your bibliography.
4. **Create** a report to present to the class. You could include some illustrations in your report or support it with a PowerPoint presentation.

4.11 Exercise

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4.11 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 4, 5	2, 6, 7, 8	9, 10

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Check your understanding

1. **State** around what year the Roman Empire began to weaken.
2. **Explain** why Diocletian divided the Roman Empire.
3. What event in 378 CE showed Rome's weakness?
   - A. Raids by barbarians into the empire's lands
   - B. The division of Rome into Eastern and Western empires
   - C. Defeat of Roman armies by the Visigoths
   - D. The death of Theodosius
4. The Romans abandoned Britain in 410 CE to defend Rome. True or false?
5. **Select** the correct definition of the term 'barbarians'.
   - A. Soldiers in the Roman army
   - B. All peoples who lived beyond the borders of the Roman Empire
   - C. Advanced, civilised people who dominated early Rome from about 575 BCE to about 396 BCE
   - D. Members of the aristocratic families that founded the Roman Republic
   - E. A mountain tribe of central Italy

Apply your understanding

Using historical sources

6. Study **SOURCE 2** and **identify** the various groups of barbarians who threatened the Roman Empire.
7. With reference to **SOURCE 2**, **explain** why the different directions of these separate attacks would have made it difficult to defend against them.
8. **SOURCE 3** depicts traders loading boats.
   - a. **Describe** the scene.
   - b. **Explain** why declining trade would have been both a cause and an effect of the weakening of the Roman Empire.

Communicating

9. **Create** a timeline of events leading to the fall of the Western Roman Empire.

Using historical sources

10. **Identify** reasons in **SOURCE 4** that you think would have contributed the most to the empire's fall.

LESSON
4.12 What is Rome's heritage?

LEARNING INTENTION

By the end of this lesson you should be able to explain how the spread of Christianity and the survival of Roman power in the Eastern Empire helped to preserve Roman culture, despite its decline in western Europe, and evaluate the reasons for Rome's fall and its legacy.

TUNE IN

We all know that visitors flock to Rome and other parts of Italy to see traces of ancient Roman civilisation — such as the Colosseum and remains of the Roman Forum — and that other remains can be seen throughout parts of Europe and the Middle East. These are all part of ancient Rome's heritage.

Discuss what else you think could be part of Rome's heritage.

SOURCE 1 The Colosseum is a popular piece of ancient Roman heritage.

4.12.1 The Eastern Roman Empire and Christianity

As the Western Roman Empire collapsed, it broke up into kingdoms ruled by non-Romans, although many people in these states continued to see themselves as Roman. Europe was entering what have been called the Dark Ages. Wars were frequent, population levels fell and cities almost disappeared, along with long-distance trade and literacy. However, the Eastern Roman Empire lived on for almost 1000 years, and Roman legacies survived to influence later ages.

When Odoacer deposed Romulus Augustulus, he had no wish to become emperor. Rather, he recognised the authority of the Eastern Roman emperor in Constantinople. The Eastern Roman Empire maintained Roman law along with its heritage of Greek and Roman culture. It kept Latin as the language of its court. In the sixth century, the Eastern emperor Justinian tried to restore the Western Empire. He was successful, but only briefly. As the **medieval** Byzantine Empire, the Eastern Roman Empire lasted until 1453 CE, when Constantinople was overrun by the Ottoman Turks.

medieval of the Middle Ages

Roman Christianity

The adoption of Christianity as the Roman state religion changed the Christian Church more than it changed the Roman Empire. The power of Roman Christianity was now supported by the power of Christian Roman emperors. Until the late fourth century, many Romans continued to hold **pagan** beliefs, and several different sets of beliefs existed within the Christian Church. Church leaders used the support of emperors to suppress rival interpretations of the Christian gospels, which were declared to be **heresy**. The continuing power of the Roman Christian Church was secured when Clovis, king of the Germanic Franks, gained control of Gaul and converted to Roman Christianity in the 490s. Because the Christian Church outlived the Roman Empire, it helped to conserve Roman culture, which continued to be an important influence on ideas in medieval Europe.

SOURCE 2 From Hugh Trevor-Roper, *The Rise of Christian Europe*, 1966

In . . . some respects . . . the barbarians preserved rather than destroyed the Empire . . . The barbarian Christian kings who rule over Italy, France and Spain in the fifth and sixth centuries still regard themselves as Roman . . . they still acknowledge themselves subject to the emperor in the East; they still respect Roman traditions, Roman methods.

SOURCE 3 A mosaic in the Hagia Sophia, in Istanbul. This church was built on the orders of the great Eastern Roman emperor Justinian I (527–565 CE). The mosaic shows Emperor Constantine presenting the Virgin Mary with the city of Constantinople and Justinian presenting her with the Church.

DID YOU KNOW?

Roman law continued to form the basis of law codes in much of Europe in the Middle Ages and even in modern times. The Roman language, Latin, is the basis of modern Italian, French, Spanish and Portuguese. Many Latin words are also used in English.

pagan name used to refer to people who believed in non-Christian gods

heresy an opinion or belief that contradicts orthodox beliefs, especially in religion

Middle Ages between ancient and modern historical periods (generally between the fifth and fifteenth centuries)

4.12.2 Passing on the culture

The classical books of ancient Roman writers influenced later writers. In the **Middle Ages**, Christian monks toiled at copying these books by hand. Many of these ancient writers are still widely read today. As Greek learning had been adopted by the Romans, the ideas of ancient Greece were also passed on. Latin, the language of the Roman Christian Church, became the language of the Church and of scholars in the Middle Ages.

Despite the barriers caused by differing national languages, all educated writers and thinkers could communicate in Latin. Even today some sciences use Latin terms. For example, in botany they are used to classify plants.

In the fifteenth century, the Renaissance brought a revival of interest in Roman ideas, arts and architecture. Roman influences can be seen in many buildings constructed from that time until the twentieth century. In the eighteenth century, ideas and institutions from the ancient Roman Republic influenced leaders who adopted new republican forms of government.

European unity

The Roman Empire was replaced by many different states. However, the idea of some kind of European unity was a legacy of the Romans. Around 800 CE, a powerful king called Charlemagne united much of Europe in a huge empire that he tried to base on the Roman model. This empire fell apart soon after his death, but in the twentieth century Europe was again unified through the European Union.

SOURCE 4 When the Pantheon was given to the Christians in 608, it was preserved with few changes apart from additions such as this Christian altar.

DID YOU KNOW?

In the Roman calendar, the year was divided into 12 months, named after gods, emperors and numbers. The names we use for the months are based on theirs. For example, August is named after the emperor Augustus.

4.12 SKILL ACTIVITY: Communicating

In history, we 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 is said to follow from the other sentences that are called the premises.

A **logical argument** is one in which the conclusion does follow from the premises.

A **fallacy** is a misleading argument, or an argument based on reasoning errors.

One of the most common reasoning errors is assuming that because one event or change came before another event or change, 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: In 284 CE, the Roman Emperor Diocletian divided Rome into Eastern and Western empires under two separate emperors.

Premise 2: The Western Roman Empire declined and fell during the following two centuries.

Conclusion: Dividing the Roman Empire caused the Western Roman 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: The team ate big servings of oranges during half-time in the game.

Premise 2: The team scored its winning goals in the second half of the game.

Conclusion: Eating oranges caused the team to win.

The reasoning error with both arguments is assuming that the first event must be the cause of the second event without demonstrating any causal link between the two events.

Develop a logical argument with at least two premises and a conclusion to show how ancient Greek culture was passed on to the modern world through Roman culture.

4.12 Exercise

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4.12 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5	3, 4, 6, 8	7, 9, 10

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Check your understanding

1. As the Western Roman Empire collapsed, Europe was entering what have been called the **Medieval** / **Dark** / **Middle** Ages.
2. How did the Eastern Roman Empire maintain Roman civilisation after the fall of the Western Roman Empire? **Select** all that apply.
   - A. Removed Roman Christianity
   - B. Maintained Roman law
   - C. Maintained Roman culture
   - D. Altered Roman law
   - E. Maintained Roman Christianity
3. **Explain** how the power of the Roman Christian Church was maintained.
4. **Describe** the roles in preserving Rome's cultural heritage played by the following.
   - a. Christian monks and scholars in the Middle Ages
   - b. The fifteenth century Renaissance
5. What political idea from ancient Rome influenced thinkers in the eighteenth century?

Apply your understanding

Using historical sources

6. The Emperor Justinian used religion to create political unity. **Describe** the scene in **SOURCE 3** and explain the message it gave to early Christians.
7. **Describe** ways in which **SOURCE 2** provides evidence of the continuation of Roman culture after the fall of Rome.
8. Look closely at **SOURCE 4** and **explain** how it provides an example of ways in which Rome's heritage has been preserved.

Communicating

9. Using the sources and information in this lesson, **create** a mind map to show what Roman influences continued after the fall of Rome.

Historical perspectives and interpretations

10. The European Union (EU) has removed economic barriers between member states and encouraged free trade across its borders. **Suggest** how this could be seen as a legacy of the ancient Roman Empire.

LESSON
4.13 INQUIRY: Contested histories — how bad was Emperor Nero?

LEARNING INTENTION

By the end of this lesson you should be able to corroborate primary and secondary sources and ask questions to evaluate the accuracy of different interpretations.

Background

In this inquiry, you will use skills in corroborating primary and secondary sources and asking questions about their accuracy and usefulness to draw conclusions and use as evidence.

SOURCE 1 The site of Rome's Circus Maximus, where, according to Suetonius, Nero drove a chariot in a race

SOURCE 2 An account of Nero's lifestyle by the ancient Roman writer Suetonius (c. 69–140 CE)

He gave an immense variety of entertainments . . . parties, chariot races in the Circus, stage plays, a gladiatorial show . . . and actually raced four-camel chariots! At the Great Festival, as he called the series of plays devoted to the eternity of the Empire . . . all kinds of gifts were scattered to the people . . .

Nero practiced every kind of obscenity, and . . . finally invented a novel game: he was released from a cage dressed in the skins of wild animals, and attacked the private parts of men and women who stood bound to stakes.

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Conflicting interpretations in secondary sources

Nero Claudius Caesar Germanicus was the adopted son of Emperor Claudius and was just 17 when he became emperor in 54 CE after his mother had Claudius poisoned. Within five years as emperor, Nero had murdered his step-brother and his mother and divorced his wife and step-sister, whom he later murdered. According to ancient writers, he had high-ranking senators tortured and killed for treason so that he could confiscate their property to fund his wasteful lifestyle. But he won popularity by spending money on parties and public spectacles. By 68 CE, the provinces rebelled against him. Fearing execution, he committed suicide.

In our times, many people regard Nero as an exceptionally cruel Roman emperor. That popular image can be traced back to a Hollywood movie *Quo Vadis* released in 1951. The movie was based on a novel of that name published in 1895. The novel and film portrayed Nero as the first and main persecutor of Christians. They drew on much earlier ideas about Nero's responsibility for those events. Many people also still believe that Nero burned down the city of Rome.

Read the following secondary sources.

SOURCE 3 From Robert Draper, 'Rethinking Nero', *National Geographic*, 2014

The case against Nero . . . would appear to be open and shut. And yet . . . his death was followed by outpourings of public grief . . . . mourners long continued to bring flowers to his tomb . . . The dead do not write their own history. Nero's first two biographers, Suetonius and Tacitus, had ties to the Senate and would memorialise his reign with lavish contempt . . .

SOURCE 4 From Alexander Canduci, *Triumph and Tragedy*, 2010

His creative and artistic side sat uneasily next to his bloodthirsty [side] and . . . disregard for others . . . in the aftermath of the fire rumours spread that Nero was the culprit who had started it. In order to throw suspicion off himself . . . Nero began a campaign against the Christians . . . feeding them to the beasts at the Great Games, crucifying them and setting them alight.

aud-0420

SOURCE 5 From Shushma Malik and Caillan Davenport, 'Mythbusting Ancient Rome: Throwing Christians to the lions', *The Conversation*, 2019

The myth of constant persecution [of Christians] largely stems from two works written in the early fourth century A.D., *On the Deaths of the Persecutors* by Lactantius, a Christian professor of Latin, and the *Church History* of Eusebius, Bishop of Caesarea . . . Those authors were living in the reign of Constantine, the first Christian emperor . . . In both their works, the torture and execution of Christians in preceding centuries is associated with the emperors under whom they occurred. But the reality is that the punishment of Christians in the first three centuries A.D. was not directed by imperial policy. The emperor Nero is referred to as the first persecutor of the Christians by Lactantius . . . However, the initiative to punish Christians did not come from the emperors at all, but from below.

aud-0421

SOURCE 6 From Caillan Davenport and Shushma Malik, 'Mythbusting Ancient Rome: The emperor Nero', *The Conversation*, September 2016; on the allegation that Nero was responsible for the Great Fire of Rome (64 CE)

But are any of these stories . . . of the emperor Nero actually true? . . . These tales can be found in our ancient historical sources (all of which were written at least a generation after Nero's death) but should not be taken at face value. This is because they are reported by sources as rumours, rather than facts . . . While most scholars now agree that Nero was not responsible for the fire, the modern-day rumour mill (as represented by the internet) is loath to exonerate the emperor. There are two reasons usually given for why Nero set fire to Rome. The first is that he was a mad megalomaniac who burned down the city simply because he could. The second . . . is that Nero wanted to rebuild Rome according to his own plans, which included a sumptuous new residence for himself, the 'Golden House' . . . There is a modern myth that the new palace was built solely for parties and orgies.

If we examine our historical accounts closely, the only evidence for Nero the arsonist comes from rumour and hearsay. This is freely admitted by the historian Tacitus: even though Nero was out of Rome when the fire started… Our ancient sources are clear about the fact that they are reporting rumours…Rumours, even if ultimately untrue, helped to define the expectations of a good emperor in the minds of the readers.

Consider the following questions.

1. Read **SOURCE 2**. What did Suetonius think of Nero?
2. Read **SOURCE 3** and **describe** Robert Draper's view.
3. In **SOURCE 4**, what judgement of Nero does Alexander Canduci make?
4. Read **SOURCES 5** and **6**. **Explain** how these sources account for the popular belief that Nero was responsible for Roman persecution of Christians and who the authors regard as really responsible. What point are the authors making about the role of rumours in creating Nero's terrible reputation?
5. For each of these sources, does the writer accept or challenge the view that Nero was a monster?

Reading these sources will enable you to compare different judgements that have been made. You can also use the internet and/or your library to find other relevant secondary sources.

Inquiry steps

Step 1: Questioning and researching

Write your **inquiry question**. It could be based on something like the following issues.

a. Can we trust a source that does not cite earlier sources to support its claims?
b. What is the difference between these sources in relation to the way they judge Nero?
c. Would Nero's behaviour have been worse than other Roman rulers?
d. What other views on this issue have been expressed by historians?

Research your question.

SOURCE 7 Emperor Nero

Step 2: Using historical sources

Analyse the sources provided and others that you find.

Step 3: Historical perspectives and interpretations

Evaluate the arguments in the sources.

Step 4: Communicating

What is your answer to your inquiry question? **Present** your findings in a format of your choosing. Support your answer with examples from your research, analysis and evaluation.

Complete your self-assessment using the **Inquiry rubric** or access the 4.13 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39369)

LESSON
4.14 Review

Hey students! Now that it's time to revise this topic, go online to:

- **Review your results**
- **Watch teacher-led videos**
- **Practise questions with immediate feedback**

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4.14.1 Key knowledge summary

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

4.2 How do we know about ancient Rome?

- Ancient Romans left vast amounts of written evidence.
- Rome is also rich in archaeological evidence, ranging from artworks to entire cities.

4.3 How did Rome become so powerful?

- According to legend, Rome was founded in 753 BCE.
- In 509 BCE, the Romans rebelled against their Etruscan kings and founded a republic.
- Over the next two centuries, Rome expanded its power through alliances, wars, exploiting those it defeated and colonising strategically important places.

4.4 How did the Roman Empire grow?

- Through the Punic Wars, between 264 and 146 BCE, Rome eliminated a major rival and became the strongest power in the Mediterranean region.
- By 96 CE, Rome had extended its empire into northern Europe and to the Black Sea.

4.5 Why was the Roman army so successful?

- From 396 BCE, the Roman army became a professional fighting force.
- Roman army discipline was harsh.
- Rewards given to legionaries helped to win support for military leaders who sought political power.

4.6 How was Rome ruled?

- Roman citizens were divided into patricians and plebeians.
- Julius Caesar used his loyal troops to seize power in 49 BCE, but he was assassinated by a group of Roman senators.
- Caesar's great-nephew, Octavian, took control of Rome, ending the republic in 27 BCE.

4.7 How brutal was Roman slavery?

- Spartacus, a gladiator, led a slave revolt in 73 BCE. The rebels defeated several Roman legions before they were defeated in a huge battle.
- Slaves could be treated with great brutality.

4.8 What was it like to live in the Roman Empire?

- Widespread use of slave labour changed Roman society.
- Vast differences existed between the lives of rich and poor Romans.
- Greek culture influenced the lives of the more privileged Romans.
- Roman technology created many impressive structures that are still standing today.

4.9 What did the ancient Romans believe about death?

- Customs associated with funerals provide a huge amount of evidence for ancient Roman beliefs and values.
- Care for dead ancestors was considered a duty and the dead were honoured in many ways.

4.10 How did Roman laws and religion change?

- Roman law dealt mainly with the rights of men as citizens.
- Women, children and slaves were considered to be under the authority of the male head of a family.
- After the republic ended, laws were increasingly made through decrees of emperors.
- Romans worshipped hundreds of gods and goddesses.
- Christianity went from being a persecuted religion to the state religion of the empire in 391 CE.

4.11 Why did the Roman Empire fall?

- From around 180 CE, the empire began to weaken.
- Civil wars and barbarian invasions eventually led to the collapse of the Western Roman Empire.
- Historians have suggested many different reasons for Rome's fall.

4.12 What is Rome's heritage?

- The Eastern Roman Empire lived on for almost another 1000 years.
- The Roman Christian Church helped to preserve Roman culture.
- The idea of European unity is one of many legacies of ancient Rome.

4.13 INQUIRY: Contested histories — how bad was Emperor Nero?

- Historians have made very different judgements about Emperor Nero.
- Some have seen Nero as a monster.
- Some have argued that the worst judgements of Nero have been based on rumours.

4.14.2 Key terms

aqueduct structure built to carry water long distances
astrology interpreting the influence of the stars on human affairs
auxiliaries soldiers in the Roman army drawn from areas conquered by Rome and made part of its empire
barbarians the Roman term for all peoples who lived beyond the borders of the empire
blasphemous great disrespect shown to God or to something holy, or something said or done that shows this kind of disrespect
civil war war between rival factions within one state or country
crucified killed by crucifixion, an ancient form of execution in which the victim was tied or nailed to a pole or (as was Jesus) a cross and left to die slowly in agony
divination the skill of reading omens
Etruscans advanced, civilised people who dominated early Rome from about 575 BCE to about 396 BCE
forum open meeting place of a town or city
heresy an opinion or belief that contradicts orthodox beliefs, especially in religion
hypocaust underfloor and water heating system used in Roman villas and public baths
loot goods or property taken from a defeated enemy after a battle
magistrates men elected by the citizens to run Rome for a year
medieval of the Middle Ages
Middle Ages between ancient and modern historical periods (generally between the fifth and fifteenth centuries)
pagan name used to refer to people who believed in non-Christian gods
patricians members of the aristocratic families who founded the Roman Republic
patronage supporting and encouraging authors and artists
plebeians all non-patrician citizens of Rome
public bath a public building complex containing baths of varying temperatures, and sports and beauty facilities; a popular meeting place for Roman citizens
pumice lava ejected from a volcano that solidifies into a light, porous rock

republic system of government in which the head of state is not a monarch
rhetoric the art of public speaking
Samnites a mountain tribe of central Italy
Senate governing body in ancient Rome; (in theory) an advisory body of ex-magistrates
tenant farmers poor farmers who rented small plots of land
Thracian a native of the Roman province of Thracia
virtue moral standard or value

4.14.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

When, where and why did Rome develop, and what were its defining features, achievements and legacies?

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.

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10482)
Reflection (ewbk-10491)
Ancient Rome crossword (ewbk-10490)

Interactivity Ancient Rome crossword (int-7695)

4.14 Review exercise

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Multiple choice

1. Who were Rome's enemies in the Punic Wars?
   - A. Etruscans
   - B. Gauls
   - C. Visigoths
   - D. Carthaginians
2. How was Pompeii destroyed in 79 CE?
   - A. Invasion
   - B. Volcanic eruption
   - C. Tsunami
   - D. Disease
3. What tactics were employed by the Romans to control their empire?
   - A. Allowing conquered peoples to run the empire
   - B. Giving gifts to those they conquered
   - C. Using conquered peoples against one another
   - D. Killing everyone they defeated
4. In Roman society, what group of people were patricians?
   - A. Rich people
   - B. The poor
   - C. Slaves
   - D. Aristocrats
5. What was the period from 509 BCE to 27 BCE known as?
   - A. Roman Republic
   - B. Roman Kingdom
   - C. Roman Empire
   - D. People's Republic of Rome
6. The Roman invasion of Britain took place in which of these years?
   - A. 390 BCE
   - B. 146 BCE
   - C. 43 CE
   - D. 378 CE
7. People in Roman towns were supplied with which of these?
   - A. Water, public toilets and public baths
   - B. Free housing
   - C. Banquets
   - D. Transport

8. Who was Spartacus?
   - A. A former Roman general
   - B. A gladiator
   - C. A Christian
   - D. A Visigoth
9. What was the main reason the Romans persecuted Christians?
   - A. Christians refused to worship the Roman emperors.
   - B. Romans were intolerant of other religions.
   - C. Romans already had too many gods.
   - D. Christians stirred up rebellions.
10. Christianity was made legal under which of these Roman emperors?
   - A. Augustus
   - B. Nero
   - C. Diocletian
   - D. Constantine

Short answer

Using historical sources

11. a. **Describe** the features of the building in **SOURCE 1**.
   - b. Why would such public facilities have been very important to the poor citizens of Rome?
   - c. What would have motivated Roman politicians and rulers to build such facilities?
   - d. **Explain** how this building is a useful source of evidence for Roman society.

Communicating

12. **Form** a hypothesis about Roman building skills based on the fact that the building in **SOURCE 1** is still standing in Rome.

SOURCE 1 The Baths of Diocletian, in Rome

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5 Ancient Egypt

LESSON SEQUENCE

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LESSON
5.1 Overview

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How do we know about ancient Egypt, and what were its defining features, achievements and legacies?

5.1.1 Introduction

Modern Egypt is one of the world's poorer countries. Unlike several other neighbouring nations, it lacks oil and other natural resources. Despite such disadvantages, until recently, vast numbers of visitors flocked to Egypt to marvel at traces of its glorious ancient past. They looked in awe at the pyramids at Giza and the royal tombs in the Valley of the Kings; they puzzled over questions such as why the ancient Egyptians were so fascinated by death and how the mighty pyramids were built without any modern construction devices.

When Egypt erupted in political conflict in early 2011, visitor numbers fell dramatically. Egypt is now considered a very volatile place. There have been many oppressive acts by its authorities, violent clashes between protestors and police and soldiers, and several terrorist attacks. However, thanks to improvements in security, Egypt's tourism economy is showing signs of recovery, with visitor numbers increasing since 2017. And, despite great dangers, archaeologists have continued the exciting work of discovering Egypt's tombs, mummies and other clues about the fascinating ancient history of this land.

SOURCE 1 The Sphinx depicts a creature with the head of a human, body of a lion and wings of a falcon.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10493)

Video eLesson Ancient Egypt (eles-1835)

int-4293

tlvd-0874

SOURCE 2 A timeline of ancient Egypt

BCE

5000

4500

4000

3500

3000

2500

2000

1500

1000

500

BCE
CE

CE

c. 5000–3100
People settle along the Nile and learn to use bronze. At least two separate states develop.

c. 3100
King Narmer unites Egypt. The Archaic period, also called Early Dynastic Period (to c. 2686 BCE), begins.

c. 2551–2528
Khufu rules.
The Great Pyramid is built.

c. 2686–2181
The Old Kingdom: a long period of peace and order

c. 2181–2025
The First Intermediate Period: a time of disorder and division as rival leaders fight for control

c. 2025–1650
The Middle Kingdom: Egypt is united under strong rulers. Nubia is conquered.

c. 1650–1550
Second Intermediate Period: the Hyksos invade and occupy Egypt.

c. 1550–1069
The New Kingdom: the Hyksos are driven out. Egypt dominates neighbouring lands.

c. 1479–1458
Hatshepsut rules.

c. 1279–1212
Rameses II rules.

c. 1069–332
The Late Dynastic Period: Egypt is invaded and ruled in turn by Nubians, Assyrians and Persians.

c. 332–30
Alexander the Great conquers Egypt. One of his generals founds the Ptolemaic Dynasty. The Ptolemaic Period lasts until Rome takes over.

30
Romans take control of Egypt.

LESSON
5.2 How do we know about ancient Egypt?

LEARNING INTENTION

By the end of this lesson you should be able to describe how historians have utilised hieroglyphics and other sources to understand ancient Egyptian history and analyse the usefulness of important discoveries.

TUNE IN

tlvd-10505

SOURCE 1 shows the Rosetta Stone which was discovered in Egypt around 1799. It has been located at the British Museum since 1802.

The stone is black granite inscribed with three versions of a decree issued in Memphis, Egypt, in 196 BCE.

The top band has hieroglyphics, the middle band has demotic text (a simplified form of hieroglyphics), and the bottom band has ancient Greek.

Before this stone was discovered, no-one knew how to read ancient Egyptian texts.

1. In small groups, discuss how you think this stone allowed historians to crack the code.
2. Consider the kinds of things we wouldn't know today if the stone hadn't been found and deciphered.

SOURCE 1 The Rosetta Stone.

5.2.1 How do we know about ancient Egypt?

The ancient Egyptians left large amounts of primary source evidence. As in Mesopotamia, most Egyptian houses were made of mud bricks so they left few traces, but their temples were made of stone as were pyramids and tombs, which contained mummies and artworks. Colossal stone statues and amazing painted wall panels were also produced.

5.2.2 How can we read ancient Egyptian writing?

The Egyptians used writing over 5000 years ago, possibly as early as 3100 BCE. At first, they used simple drawings and symbols to represent each word. They wrote on stone, pottery and paper, which they made from papyrus reeds. When the Greeks came to Egypt in the fourth century BCE and saw this writing on temple walls, they called the symbols hieroglyphs, which meant ‘sacred writing’.

Around the fourth century CE, the secret of reading hieroglyphs was lost, and it remained lost for centuries. But in 1799, a French soldier discovered a large black stone at the Egyptian town of Rosetta (now called Rashid). The stone had a written message carved in three different scripts. The scripts were ancient Egyptian hieroglyphs, a later simplified form of hieroglyphs known as demotic, and, very importantly, ancient Greek, which could still be read and understood. So the 'Rosetta Stone', as it became known, made it possible to unlock the mystery of hieroglyphs. Thanks to many years spent by Thomas Young, an English scientist, and a Frenchman named Jean François Champollion, the code was broken.

Scholars could now read the many records that the ancient Egyptians had written. These included the king lists, which were kept by priests and listed the pharaohs and how long they had reigned, as well as myths, legends, hymns, medical and legal documents, and even graffiti.

5.2.3 Writing and reading in ancient Egypt

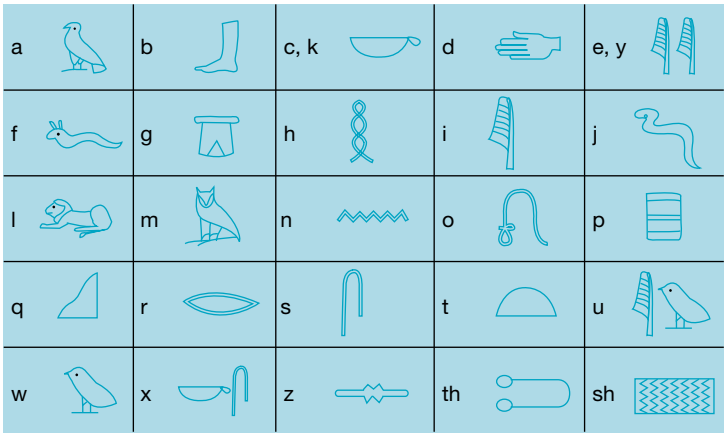
The hieroglyphic 'alphabet' was much larger than ours — it was made up of more than 700 symbols. Some of these were simple drawings, such as a bird, and others were shapes, such as a semicircle.

At first, each symbol stood for a word. As the written language became more complex, some symbols came also to stand for other language elements besides single words, such as:

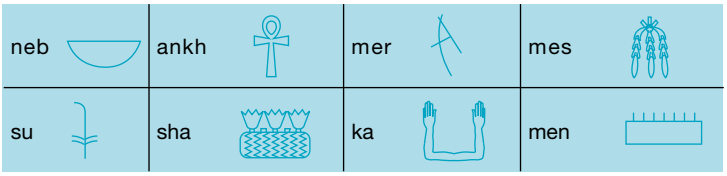
- the sound of a consonant (for example, the symbol for an owl also stood for the sound of the letter *m*)
- ideas or actions (for example, the symbol for a leg shown twice stood for the idea of movement).

SOURCE 2 Translators have been able to link hieroglyphic symbols with most of the letters of our alphabet.

Symbols for single sounds



Symbols for syllables



SOURCE 3 A cartouche is an oval frame that surrounds the name of an Egyptian god in hieroglyphs

Reading hieroglyphs

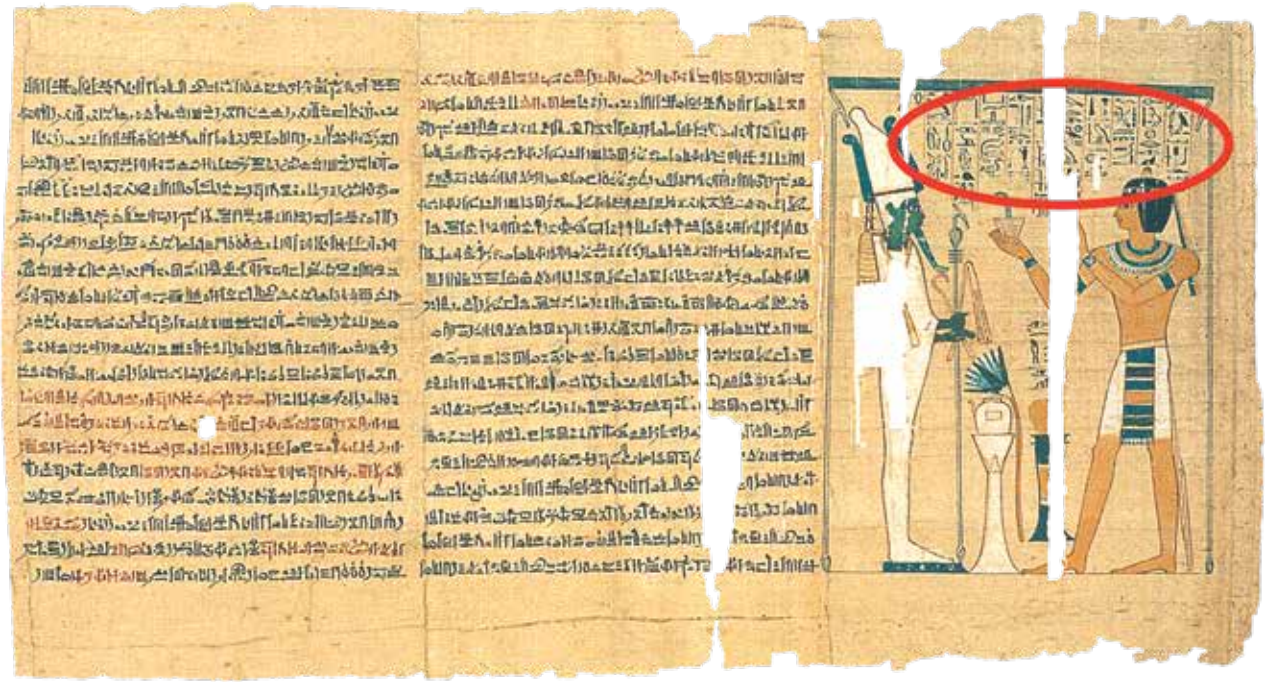
At first, hieroglyphic symbols were laid out in columns. People read down each column, from top to bottom. From about 2000 BCE, the symbols were arranged in rows, more like our writing. Sometimes they were read from left to right (as we read) and other times from right to left. The name of a pharaoh was always enclosed in a cartouche — a bullet-shaped oval (see **SOURCE 3**).

Hieroglyphs were used mainly for religious purposes and in official documents. Priests and scribes could write and read using the system. This is why they can be found in tombs. But hieroglyphs took a lot of time to produce, so simpler, faster scripts were developed. Two other scripts — **hieratic script** (**SOURCE 4**) and **demotic script** — were used by ordinary people. Both these scripts used hieroglyphic symbols but in simpler forms.

hieratic script Egyptian script that was less decorative and complex than hieroglyphs

demotic script the simplest of the ancient Egyptian scripts; almost like handwriting

SOURCE 4 This papyrus sheet shows an Egyptian high priest presenting an offering to Osiris, the god of the afterlife. It contains both the hieroglyphic script (circled) and the simpler hieratic script (left and centre).



5.2 SKILL ACTIVITY: Questioning and researching, Historical perspectives and interpretations

1. Use the **5 Important Egyptian Archaeological Discoveries** weblink in your online Resources to speed **research** each discovery listed and complete the first two columns in the provided table in note form together as you read.
2. Work together to **rank** the five discoveries in order of significance. You must **justify** each of your choices. Copy the provided table into your workbook or download a Word version from the Resources tab.

	What did we learn from this discovery?	What impact did this discovery have?	How significant is it? (Rank 1 to 5)
The Rosetta Stone			
The Oxyrhynchus Papyri			
Tutankhamun's tomb			
Meteoric Jewellery			
The excavation of Luxor and the 'Plague of Cyprian'			

Resources

Weblink 5 Important Egyptian Archaeological Discoveries

Digital document 5 Important Egyptian archaeological discoveries table (doc-39370)

SkillBuilders to support skill development

- 1.12 Analysing and corroborating ancient Egyptian sources

5.2 Exercise

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5.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 4, 5	1, 3, 6, 7, 9	8, 10

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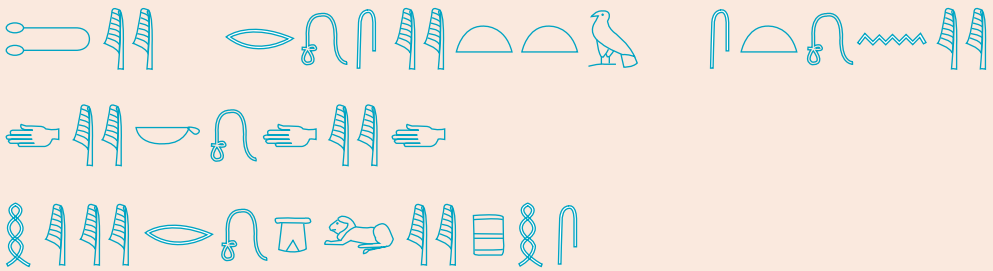
Check your understanding

1. Look at **SOURCE 1**. **Describe** the feature of the Rosetta Stone that made it possible to unlock the mystery of hieroglyphs.
2. What kinds of information have we learnt now that historians can read ancient Egyptian languages?
3. The ancient Egyptians built many of their important buildings from stone. **Explain** why this is significant for historians.
4. The Egyptians used writing over _____ years ago
5. **Identify** the meaning of the Greek word 'hieroglyph'?
   - **A.** Sacred symbols
   - **B.** Language
   - **C.** Sacred writing
   - **D.** Pictographs

Apply your understanding

Using historical sources

6. Use **SOURCE 2** to decode this message.



7. **Explain** why hieroglyphs can be found in tombs.

Historical perspectives and interpretations

8. **Compare** the discovery of Tutankhamun's tomb with the Rosetta Stone. Which discovery was more significant and why?
9. **Explain** why ancient Egyptians would have needed to have gradually developed scripts that were more like modern writing than the earlier hieroglyphs.
10. In 2022, archaeologists unearthed over 18000 pottery shards used as writing materials in ancient Egypt at a location that could be an ancient school. On some of these shards were lines of repeated words and sentences. **Propose** a theory for what you think these lines might be.

LESSON
5.3 Why was the Nile so important?

LEARNING INTENTION

By the end of this lesson you should be able to describe how the river Nile influenced the development of Egypt in terms of farming, transportation, defence and religion, and compare how the Nile is used today.

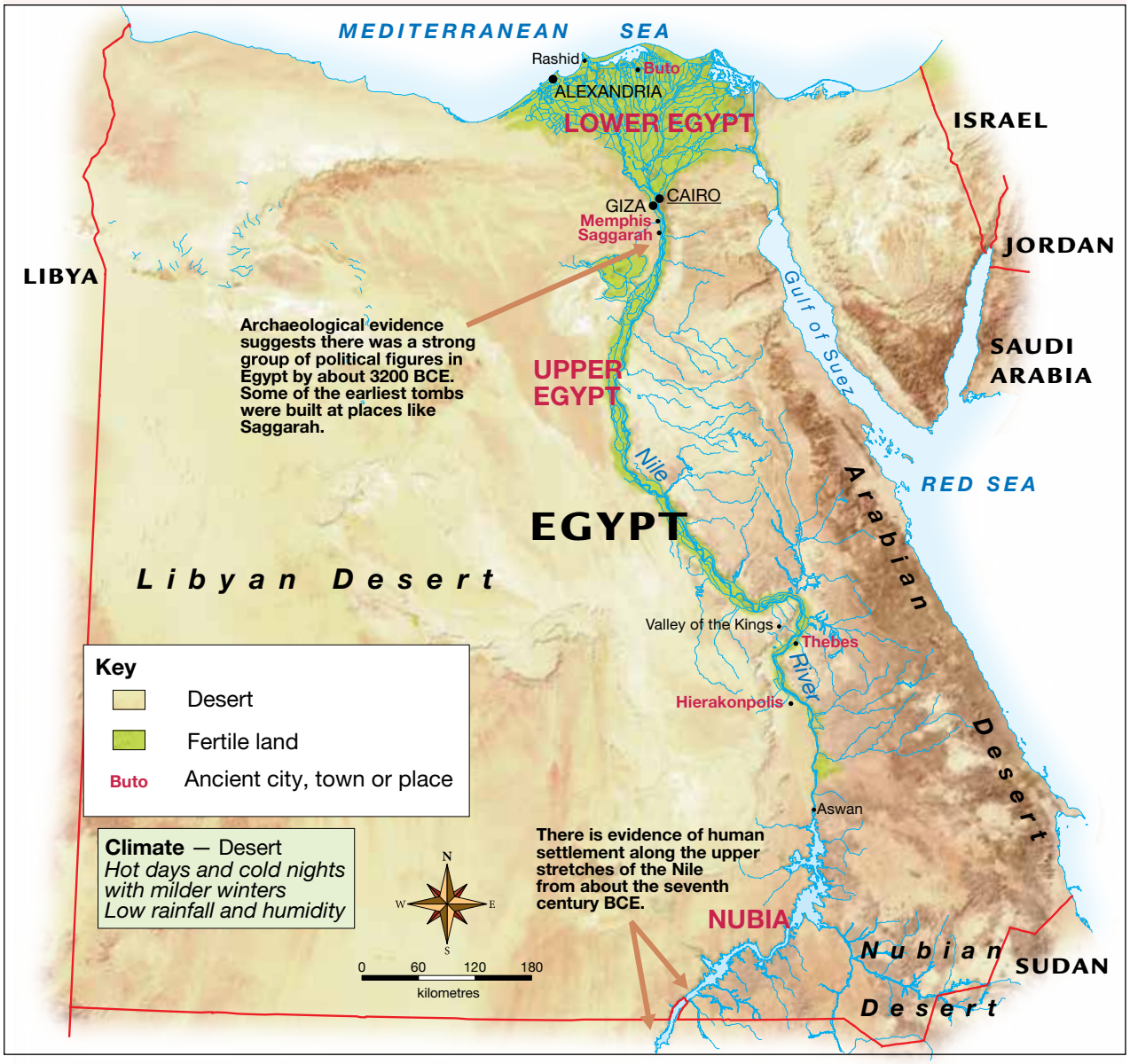
TUNE IN

SOURCE 1 shows the main geographical features and key sites of ancient Egypt.

1. Locate the main ancient cities on the map. What pattern can you see?
2. Why do you think the River Nile would have been so important? Think of two uses.

tlvd-10506

SOURCE 1 Ancient Egypt — How would you describe the environment of Egypt?



Source: Map drawn by MAPgraphics

5.3.1 Farming and the Nile

Like many other ancient civilisations, Egypt developed along a river — the Nile. The waters of the Nile are what made civilisation possible in Egypt's hot, dry, sun-baked land. The Nile is formed by the joining of two rivers, the White Nile and the Blue Nile, which flow north from the wet highlands of central Africa.

The Nile flows through the deserts and finally empties through a long **delta** into the Mediterranean Sea. The people of ancient Egypt lived in 'the Black Lands', the river's floodplain. These parts of the land were covered by water whenever the Nile flooded.

Each year, between June and September, heavy rains in central Africa caused the Nile to flood. The annual flooding provided a layer of fertile soil. Without this flooding, civilisation would not have developed in Egypt.

People began to live along the Nile from about 5000 BCE. Its waters, the plants that grew in the soil on its banks, and the birds, fish and mammals that lived around it provided all that they needed (see **SOURCE 2**).

SOURCE 2 A wall painting from the tomb of Nebamun at Thebes (c. 1400 BCE), showing him hunting birds in the marshes with a throwing stick. With him are his wife, daughter and cat.

People domesticated cattle, sheep, goats and geese, and grew crops in the floodplains. The river provided reeds to make boats, roofs, baskets and **papyrus**. The fertile soils allowed Egyptians to cultivate crops for food and beer, and grow flax that was used to weave linen for cloth.

The annual flooding also helped set Egypt's calendar. The **Inundation**, the period of flooding, was regarded as the start of each year.

To use the Nile's waters more efficiently, the Egyptians invented a way of irrigating their crops by lifting the water from the river and moving it through ditches in their fields. To do this, they used a bucket device called a **shadoof**, in a method that is still used today. Most importantly, irrigation enabled a smaller part of the population to produce enough food for the whole population. This freed others to do more specialised work, taking up new jobs such as scribes, and becoming artisans such as jewellers. Better food production also allowed for more time for leisure activities such as hunting, games and music.

delta low, triangular area where a river fans out as it nears the sea

papyrus paper made from crushing reeds

Inundation the seasonal flooding of the Nile

shadoof irrigation device used to lift water from the river

DID YOU KNOW?

Away from the floodplain of the Nile, 90 per cent of Egypt is desert. The arid deserts provided little to sustain the Egyptians, but deserts were difficult to cross and, for centuries, they allowed Egypt to thrive because they protected the civilisation from being invaded.

5.3.2 Transport and the Nile

The Nile provided a transport and trade route. It was like a long highway. Travel by land was on rough paths across desert. Because it was slow and difficult, boats became the main means of transport for people and goods. Winds helped boats to sail south. The current helped boats to be rowed north.

SOURCE 3 From *The Histories*, written by the ancient Greek historian Herodotus, who visited Egypt in 475 BCE

. . . it is clear to any intelligent observer . . . that the Egypt to which we sail nowadays is . . . the gift of the Nile . . . When the Nile overflows, the whole country is converted into a sea, and the towns, which alone remain above water, look like islands. At these times water transport is used all over the country instead of merely along the course of the river.

5.3.3 Defence and the Nile

Egypt was protected by fortifications (large defensive walls) built at the Nile **cataracts** (rapids) to prevent invasion from Nubia (see **SOURCE 1**). A large network of such fortifications was built through much of ancient Egypt's history. The Mediterranean Sea, where the Nile emptied, also formed a natural barrier to invasion.

5.3.4 Religion and the Nile

Ancient Egyptians had many gods and goddesses, and three in particular were associated with the Nile.

- Hapi was the god of the Inundation, which brought fresh silt each year replenishing the soil for farming. He was celebrated as the lord of the fish and birds of the marshes. Hapi's priests carried out rituals to ensure the best levels of the annual flood.
- Khnum was a god of fertility. He was associated with water and was believed to have created humans out of clay.
- Satet was a warrior goddess who protected Egypt's southern borders as guardian of the Nile cataracts. Satet was also believed to cause the Inundation.

cataracts rapids, where the river's surface is broken by rocks

aud-0422

SOURCE 4 This *Hymn to the Nile*, probably from the nineteenth and twentieth dynasties in the New Kingdom, expresses the gratitude Egyptians felt for the Nile.

Hymn to the Nile

Hail to you, O Nile, that issues from the earth and comes to keep Egypt alive! He that waters the meadows which Re created, in order to keep every kid alive. He that makes to drink the desert and the place distant from water: that is his dew coming down from heaven. The lord of fishes, he who makes the marsh-birds to go upstream. He who makes barley and brings emmer [wheat] into being, that he may make the temples festive. If he is sluggish, then nostrils are stopped up, and everybody is poor. When he rises, then the land is in jubilation, then every belly is in joy, every backbone takes on laughter, and every tooth is exposed. The bringer of good, rich in provisions, creator of all good, lord of majesty, sweet of fragrance. He who makes every beloved tree to grow, without lack of them.

5.3 SKILL ACTIVITY: Questioning and researching, Communicating

Consider these two questions:

- Is the Nile still as important today as it was in ancient times?
- What has changed and what has stayed the same?

Use the **National Geographic** weblink in the Resources panel, your own research and what you have learnt in this lesson to complete the following two tasks.

SOURCE 5 The Nile today

1. **Compare** the role of the Nile in the past to its present role by completing the following table with notes from your research.

	The Nile during ancient Egypt	The Nile in contemporary Egypt	Similar or different?
Where most people live			
Food and water			
Transportation			
Trade route			
Defence			
Religion			
Energy			
Annual flooding			

2. **Discuss**, using your research, how and why the Nile is changing. Do the benefits outweigh the drawbacks? Are rivers as significant today as they were in the past? **Explain** your answers.

on Resources

Weblink National Geographic

5.3 Exercise

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5.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
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Check your understanding

1. a. Using a scale of 1 to 5, **evaluate** how significant the Nile was for the development of ancient Egypt.
   b. **Explain** your answer.
2. Flooding was disastrous for Ancient Egyptians. True or false?
3. Match the words to the definition provided by writing the correct definition number in the answer column.

Answer number	Term	Definition
	a. The Nile	1. A shallow stretch of turbulent waters formed where flowing waters break over rocky outcrops.
	b. Delta	2. An Egyptian warrior goddess who was the guardian of the Nile cataracts.
	c. Papyrus	3. The river that originates in central Africa and flows through Egypt to the Mediterranean Sea.
	d. The Nile Inundation	4. The Egyptian god with a ram's head who made sure that the Inundation deposited enough silt onto the river banks to make them fertile.
	e. Shadoof	5. A wetland that forms as a river empties its water and sediment into another body of water, such as an ocean, a lake or another river.
	f. Cataracts	6. An irrigation tool comprising of a pole with a bucket and counterpoise used in Egypt for raising water.
	g. Hapi	7. The Egyptian god who brought fertility to the land. This god symbolises the annual inundation of the Nile.
	h. Khnum	8. An early form of paper made from the reeds that often grow along a river.
	i. Satet	9. An annual flood of the Nile that deposited a fertile layer of silt on the surrounding lands, allowing crops to grow.

4. **Explain** how the invention of Egypt's irrigation system helped its civilisation develop.
5. **Explain** how Egypt's geography played a key role in its defences.

Apply your understanding

Using historical sources

6. Read **SOURCE 3**. Explain why Herodotus called Egypt 'the gift of the Nile'.
7. **Interpret** what **SOURCE 2** can tell us about all the ways the Nile provided for the needs of ancient Egyptians
8. **Identify** an example from the text to show how ancient Egyptians saw a direct link between nature and their religion.
9. Look at **SOURCE 4**. **Identify** four ways mentioned in this hymn that tell us that the Nile was seen as useful and significant to ancient Egyptians. You can directly quote or paraphrase from the hymn.
10. Look at **SOURCE 4**, especially the line, 'Hail to you, O Nile'. What can you **infer** about how ancient Egyptians felt about the Nile from the opening line of the hymn? Look up the meaning of 'O hail' if you are unsure.

LESSON
5.4 What was Egyptian society like?

LEARNING INTENTION

By the end of this lesson you should be able to explain the social structure of ancient Egypt, including the perspectives and roles of different groups and the extent to which they were able to influence society.

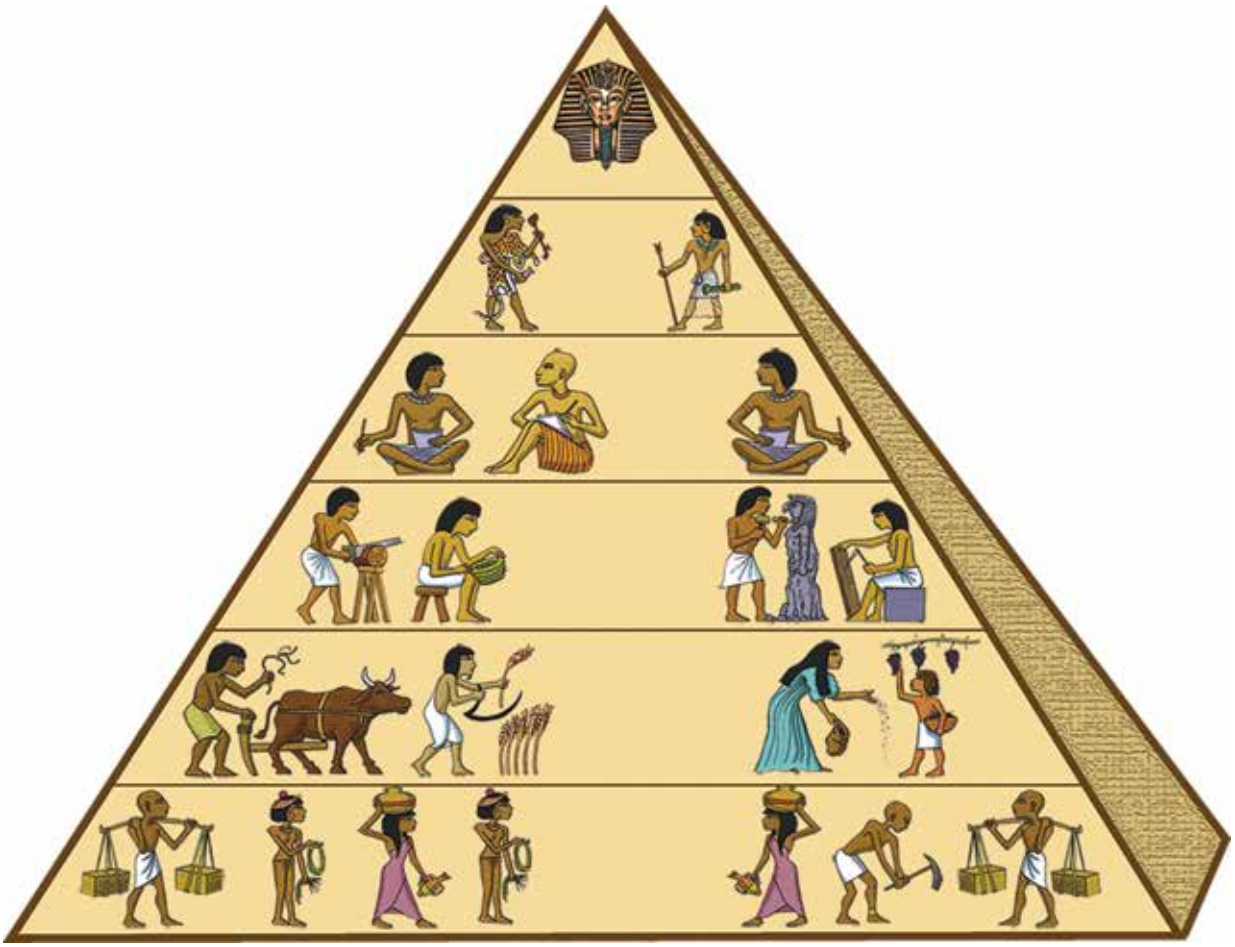
TUNE IN

How important were the following people in ancient Egyptian society? Try to guess by labelling the social pyramid shown in **SOURCE 1** with the provided list of social groups in order of importance.

- Scribes
- Peasants
- Servants
- The vizier (prime minister)
- Slaves
- Labourers
- Nobles
- Generals
- The pharaoh (king/god)
- Artisans such as stonemasons
- Priests
- Merchants
- Nomarchs (governors, officials)

tlvd-10507

SOURCE 1 A social pyramid showing where each class ranked in ancient Egypt



5.4.1 The pharaoh

tlvd-10508

The wealthiest, most powerful person in ancient Egypt was the pharaoh. He had the support of an army and a host of priests, scribes and officials, but the pharaoh alone decided how Egypt would be ruled. The people saw him as a god.

Power and responsibility

Heavenly powers

The ancient Egyptians saw their pharaoh as a man with supernatural powers. He was believed to descend from the sun god, Amun-Ra, and to have the sky god, Horus, living within him.

Egyptians believed that the laws the pharaoh made applied to the whole universe. They believed he made the Nile River flood and helped the land to produce good harvests. As a mark of respect, they did not call him by his name. Rather, they used the word 'pharaoh', which in ancient Egyptian meant 'great house'.

Earthly responsibilities

The people of ancient Egypt expected their pharaoh to protect and feed them, and to maintain a fair justice system and a peaceful society. He drew up the laws of the land and controlled the government and the army. In artworks, he was often portrayed as a military hero (see **SOURCE 2**). Exactly what laws the pharaohs made for their people is something for which we have very little evidence. No written code of laws has survived from ancient Egypt. Nor has any evidence survived of a system of law courts. Rather, law cases appear to have been judged by officials who had many other responsibilities.

SOURCE 2 The pharaoh's power was evident in his appearance. He wore a false beard and a bull's tail (symbols of pharaonic power), and carried a flail (symbol of Osiris) and shepherd's crook (the hieroglyphic sign for a crook meant 'king').

SOURCE 3 A gold emblem showing Pharaoh Tutankhamun returning from war. This was one of many priceless objects found in his tomb.

The pharaoh was also in charge of temple building, tax collection, mines, irrigation, trade, important religious ceremonies and the appointment of officials and priests. His huge wealth came from the labour and produce that the people provided as their taxes. Thousands of ordinary people worked the huge farms he owned or helped in the running of his palace. There they worked as cooks, cleaners, dancers, stable workers, craftsmen, weavers and wigmakers.

DID YOU KNOW?

Relief carvings show that after battles Egyptian soldiers cut a hand off the body of each dead enemy. These were then heaped into piles, counted by scribes and included in the records to glorify the pharaoh's victories.

5.4.2 Nobles, priests, officials and scribes

Nobles formed a wealthy class in ancient Egyptian society. These landowning families lived privileged lives while their large estates were farmed by peasants and labourers. Priests controlled the temples and this role gave them enormous power. The work of administering Egypt and ensuring that the pharaoh's wishes were carried out was done by officials.

Most high officials were nobles but some were common people who worked their way up as scribes. Egypt's many scribes, like the man in **SOURCE 4**, ranked below the ruling classes of nobles, priests and officials but above the common people. Because they had been trained to read and write, scribes were employed to keep state records including records of taxes.

SOURCE 4 A scribe sitting with a papyrus on his lap. It took 12 years of study to become a scribe. This statue depicts Nespekasut, a senior scribe of Karnak, in Upper Egypt.

5.4.3 The ordinary people

Artisans and merchants

Among the common people, **artisans** formed a large group. Young men learned their craft from their fathers. Craftsmen included:

- stonemasons, who made temples, tombs, statues and monuments
- painters, who decorated temples, tombs, coffins and canopic jars
- woodworkers, who carved furniture and other objects
- wigmakers, who made wigs and false beards
- metalworkers
- weavers
- musical instrument makers
- paper makers, who made sheets of papyrus
- jewellers.

Because money was not used in Egypt until the fourth century BCE, craftsmen were paid in food and beer.

Among the more prosperous commoners were merchants, who conducted trade.

artisans skilled craftspeople

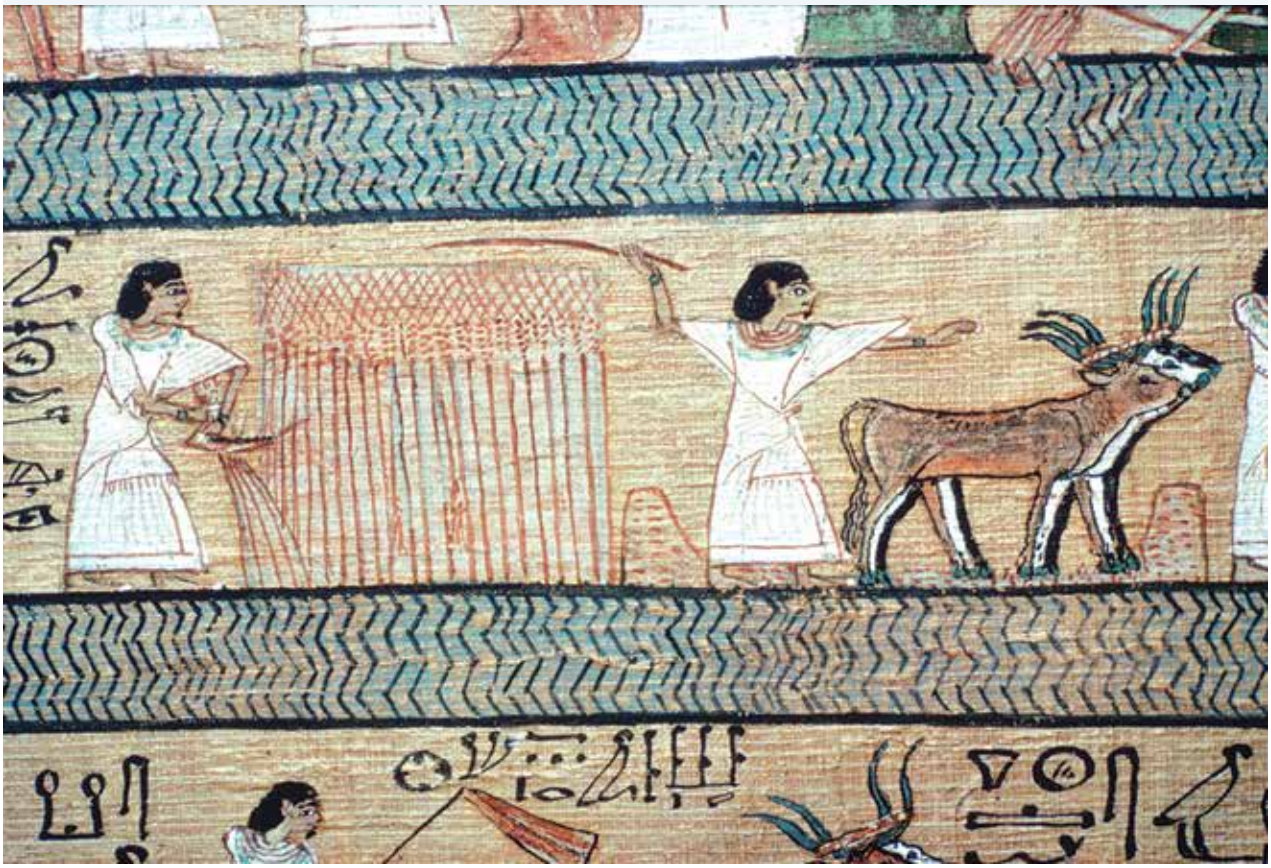
Peasants

Peasants were by far the largest group in ancient Egypt. They were mostly tenant farmers who worked the land owned by the pharaoh, priests and nobles. Most of what they produced went to their landlords or was paid to the state in taxes. Usually their lives were an unchanging cycle of ploughing, planting, harvesting and other farm work.

During the flood, they were sometimes expected to labour on the construction of pyramids, temples or the pharaoh's other building projects. There were also many labourers, servants and some slaves.

Ordinary Egyptians were expected to know their place in society. Egyptians believed this created social harmony, or *ma'at* as they called it, which ensured that the world functioned according to the will of the gods.

SOURCE 5 An Egyptian papyrus depicting farming work

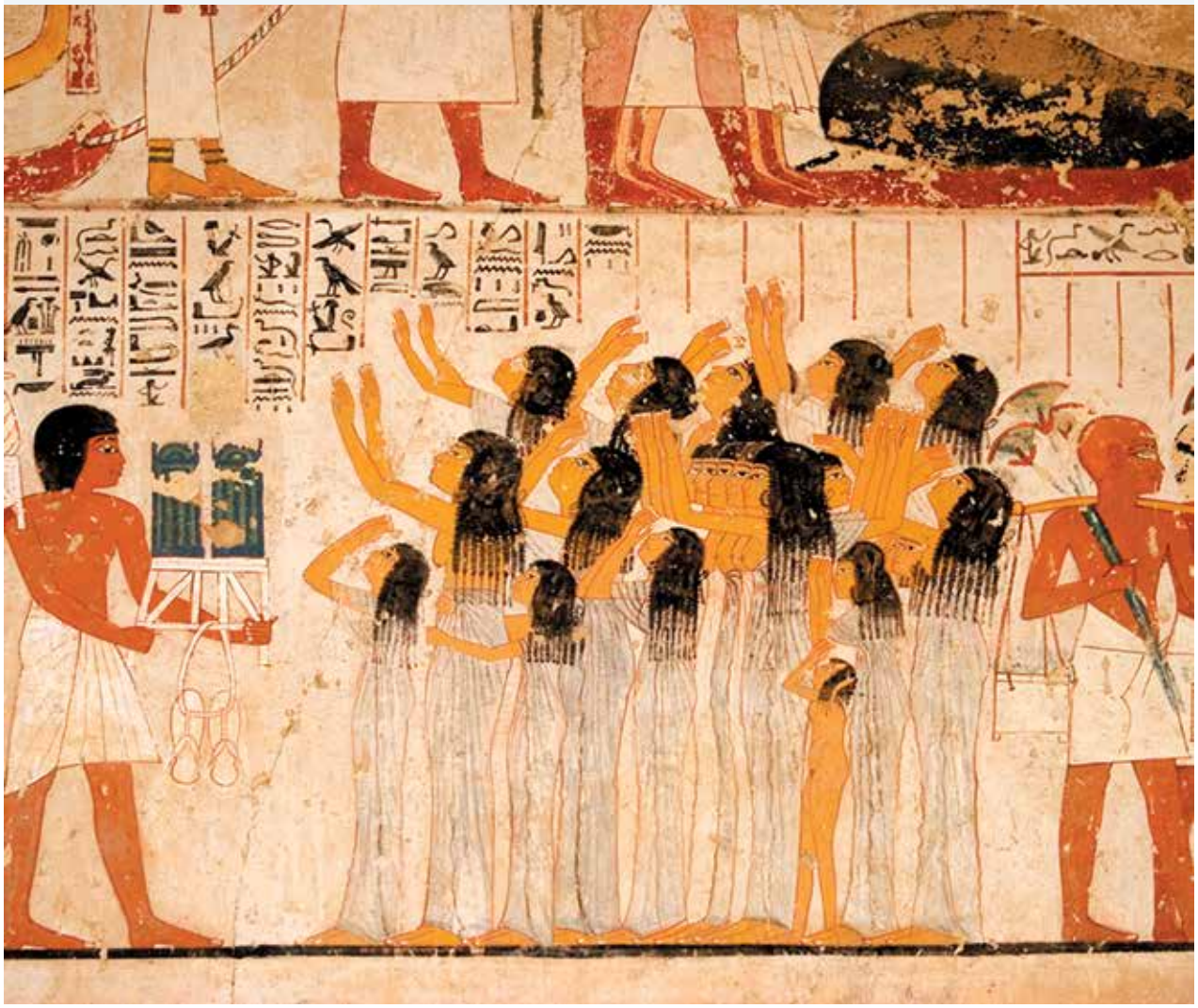


5.4.4 Women

Ordinary women

Women in ancient Egypt did not have the same rights as men. In all lower-class families, women were responsible for preparing food, including making bread and beer, and caring for children. In peasant families, they also worked in the fields. They were usually not taught to read and write. Apart from work as singers, dancers, musicians, servants, nurses and funeral mourners (people paid to weep and wail at funerals), few careers were open to women. Despite this, they had more freedom than in most other ancient societies, where women were treated as the property of men.

SOURCE 6 Mourners painted on the tomb of the vizier Ramoseh



Upper-class women

In ancient Egypt, a woman's rank in society depended on her husband's rank, but high status could also be achieved by being the mother of a high-ranking man. Wives and daughters of pharaohs and nobles led privileged lives with fine clothes and many servants. By the beginning of the New Kingdom, about 1550 BCE, such women could inherit, own and sell property. They could work as part-time priestesses and decide whether to marry or divorce.

However, marriages between wealthy families were often treated as business arrangements, and some wealthy men had several wives. Frequently, pharaohs married their own sisters but they had other wives as well.

Some upper-class women became high officials. A woman named Nebet became vizier under Pharaoh Pepy I. Another upper-class Egyptian woman who had great influence was Nefertiti. She was the main wife of Pharaoh Akhenaten (ruled c. 1351–1336 BCE). Queens were less important than pharaohs, but images depict Nefertiti as a very beautiful queen who accompanied her husband at ceremonies and on official occasions. Some images even show her in a war chariot.

SOURCE 7 A painted limestone statue of a woman, called Merseankh, and her husband, Raherka, from about 2500–2350 BCE

SOURCE 8 From a New Kingdom love poem in which the poet expresses his feelings for a woman he has been parted from for a week

She is more to me than the collected writings . . .

When I see her, then I am well.

If she opens her eye, my body is young again;

If she speaks, then I am strong again;

When I embrace her, she drives all evil away from me . . .

But she has gone forth from me for seven days!

DID YOU KNOW?

Upper-class women in ancient Egypt possessed a great range of cosmetics and jewellery. Items found include pots for holding kohl (eye liner), hair curlers, hair tweezers, combs, cosmetics boxes, rings, bead necklaces and collars, amulets, and palettes and stones for grinding cosmetics.

SOURCE 9 Bottles like these held eyeliner.

5.4 SKILL ACTIVITY: Questioning and researching, Historical perspectives and interpretations

Inscriptions and paintings in tombs of pharaohs and officials depict a harmonious society in which ordinary Egyptians worked contentedly in the fields or at their skilled crafts under the rule of the pharaoh. They depict an image of a stable society in which everyone accepted their place and never questioned those above them. But how realistic was this?

1. What impression of workers' lives does **SOURCE 10** suggest? For what purpose was it made?
2. What does **SOURCE 11** suggest about the lives of workers?
3. **Explain** why you think the two sources tell two different stories.

4. Experts estimate that at least 95 per cent of ancient Egyptians were illiterate; probably all those below the rank of scribe. **Discuss** what problems this would pose for historians trying to discover the thoughts and feelings of ordinary Egyptians.

SOURCE 10 Tomb of Nebamun and Ipuky, *circa* 1390–1349 BCE

SOURCE 11 An ancient scribe's record of the strike of workers employed to construct and decorate the tomb of Rameses III

[The] gang walked out [of the tomb] because they were hungry; there is no wood, no vegetables, no fish. So they went to consult the magistrate . . . who declared, '[the people of the Tomb]' are in the right'.

on Resources

Weblink Ancient Egyptians strike!

5.4 Exercise

learnon

5.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7, 8	9, 10

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Check your understanding

1. Place each of the following groups in the order in which they ranked in ancient Egypt: artisans, nobles, scribes, peasants, pharaohs.
2. Ancient Egyptians believed that the pharaoh could influence or control nature. True or false?
3. The pharaoh did nothing for his people. True or false?
4. **Identify** an example that shows it was sometimes possible for a person to improve their position in society.

5. Match the person with the description provided by writing the correct definition number in the Answer column.

Answer	Person	Description
	a. Pharaoh	1. Common people who had a craft
	b. Noble	2. Looked on as a god; The ruler of the kingdom
	c. Priest	3. Trained to read and write, so kept state records including tax records
	d. Official	4. Farmed the land owned by the pharaoh, priests and nobles
	e. Scribe	5. Wealthy commoners who traded goods
	f. Artisan	6. The administrators; carried out the pharaoh's wishes and judged law cases
	g. Merchant	7. Controlled the temples so had a lot of power
	h. Peasant	8. The wealthy class; owned land

Apply your understanding

Using historical sources

6. **Interpret SOURCES 2** and **3** to **describe** how pharaohs wanted to be seen by their people.
7. **Examine SOURCE 4** and **explain** what it suggests about the status of scribes.
8. **Identify** the features of **SOURCE 5** that tell us about the work of peasants.
9. Use evidence from **SOURCES 7** and **10** to **compare** the lives of ordinary women and upper-class women in ancient Egypt.
10. Using **SOURCES 7, 8** and **9** for evidence, **form** a hypothesis about relationships between women and men in ancient Egypt. **Describe** the kinds of evidence you would need to test your hypothesis.

LESSON
5.5 What did ancient Egyptians believe?

LEARNING INTENTION

By the end of this lesson you should be able to describe what Egyptians believed about an afterlife, their reasons for making mummies, and identify and explain some key religious symbols that appear in primary sources.

TUNE IN

Mummies have told historians a lot about the way of life of the ancient Egyptians.

1. In one minute, brainstorm any questions you would like to ask about the **SOURCE 1** image.
2. How do you think the below custom compares to the funerary practices in your own community?

SOURCE 1 An ancient Egyptian found buried in the desert sands

5.5.1 The journey to the afterlife

Death was a very important event for ancient Egyptians. It connected life on Earth with their understanding of eternal life, so a lot of effort was spent preparing for it. This focus on death has been valuable to historians, because most of what we know about ancient Egypt comes from what has been found in tombs. Many of the **deities** of ancient Egypt, whether good or bad, played a role in a person's journey to the afterlife.

The ancient Egyptians believed the next world was a fantastic place. However, it was a long way away, and reaching it was not easy. First, the dead person had to cross a wide river. Then he or she had to chant secret spells to get through seven gates guarded by fierce monsters, all the while looking out for traps set by evil gods and attacks by savage crocodiles and venomous snakes. Then the dead person's heart was weighed on scales against a feather to see if it was 'heavy with sin'. The outcome was decided by 42 judges.

Preparing for the journey of the soul

The ancient Egyptians believed that a dead person had a number of souls. Two of these were the *ka* and the *ba*. The ka, the person's life force, stayed within the tomb, getting strength from the food and drink left there. The ba, the person's character, set off on its journey towards the afterlife, returning to the tomb to rest each night. To do these things, the soul needed a body. So dead people's bodies were carefully preserved, or embalmed, so they did not rot. An embalmed body is called a **mummy**.

Mummies were buried with lots of the possessions the person's soul might need in the afterlife. They included food and drink, clothing, perfume, furniture, jewellery and special charms called **amulets**. Sometimes small wooden or stone figures representing servants doing activities such as making bread, ploughing a field or sailing a ship were placed in tombs. As well, prayers, hymns and magic spells from the 200 such texts in the *Book of the Dead* were often written on a scroll of papyrus and buried with the mummy or carved in hieroglyphs on the walls of the tomb. These texts were thought to protect the soul from evil and guide it through the afterlife.

After a dead person's body was mummified, a funeral ceremony was held. The body was carried in a boat across the Nile and buried on the western bank, where the sun set. This was the direction in which the next world was believed to lie. Important people, such as pharaohs, were buried in elaborate underground tombs consisting of many rooms and tunnels. Poorer people were buried in the hot, dry sands to help preserve their bodies.

deity god or goddess
mummy body that has been embalmed
amulet charm believed to protect against evil

tlvd-10509

SOURCE 2 Scenes from the *Book of the Dead of Hunefer*, which dates from around 1310 BCE. It is painted on papyrus. The Egyptians made books of the dead to protect their owners from the perils of the journey to the afterlife. If a heart was found to be 'as light as a feather', its owner joined the god Osiris in the afterlife. If heavy, it was chewed up by a monster god that was a cross between a lion or cheetah, a hippopotamus and a crocodile.

5.5.2 The gods of the ancient Egyptians

Ancient Egypt had hundreds of deities, each looking after some particular area of people's lives. For example, the god Hapi was responsible for the Nile River. Some gods were portrayed as humans and some as animals. Others were a mixture of both — usually animal heads on human bodies. The gods and goddesses were at first peculiar to each settlement. But, as contacts grew between settlements, deities came to be worshipped in more places.

SOURCE 3 Figurines were thought to come to life in the tomb and carry out the wishes of the dead person.

SOURCE 4 Some ancient Egyptian gods

Anubis Osiris Horus Hathor Thoth

Name of god	Responsibility	Associated animal or symbol
Amun-Ra	God of creation; god of the sun and king of the gods	The sun
Osiris	God of the dead; god of the afterlife; a judge in the underworld	Pharaoh mummy
Seth	God of confusion and chaos	Hippopotamus
Isis	Mother goddess; goddess of fertility; wife of Osiris	Woman wearing a throne as a crown
Horus	God of the sky; guardian of the pharaoh	Falcon
Hathor	Goddess of beauty and love; goddess of the sky, fertility, music, dance and alcohol	Woman with cow horns on her head
Thoth	God of the scribes; god of wisdom and knowledge; god of time	Man with the head of an ibis
Anubis	God of embalming; god of tombs and burials	Man with the head of a jackal

SOURCE 5 Ancient Greek historian Herodotus observed how important cats were to the ancient Egyptians. They were thought to protect people's homes. It is no wonder they were chosen as one of the animals to be associated with a god.

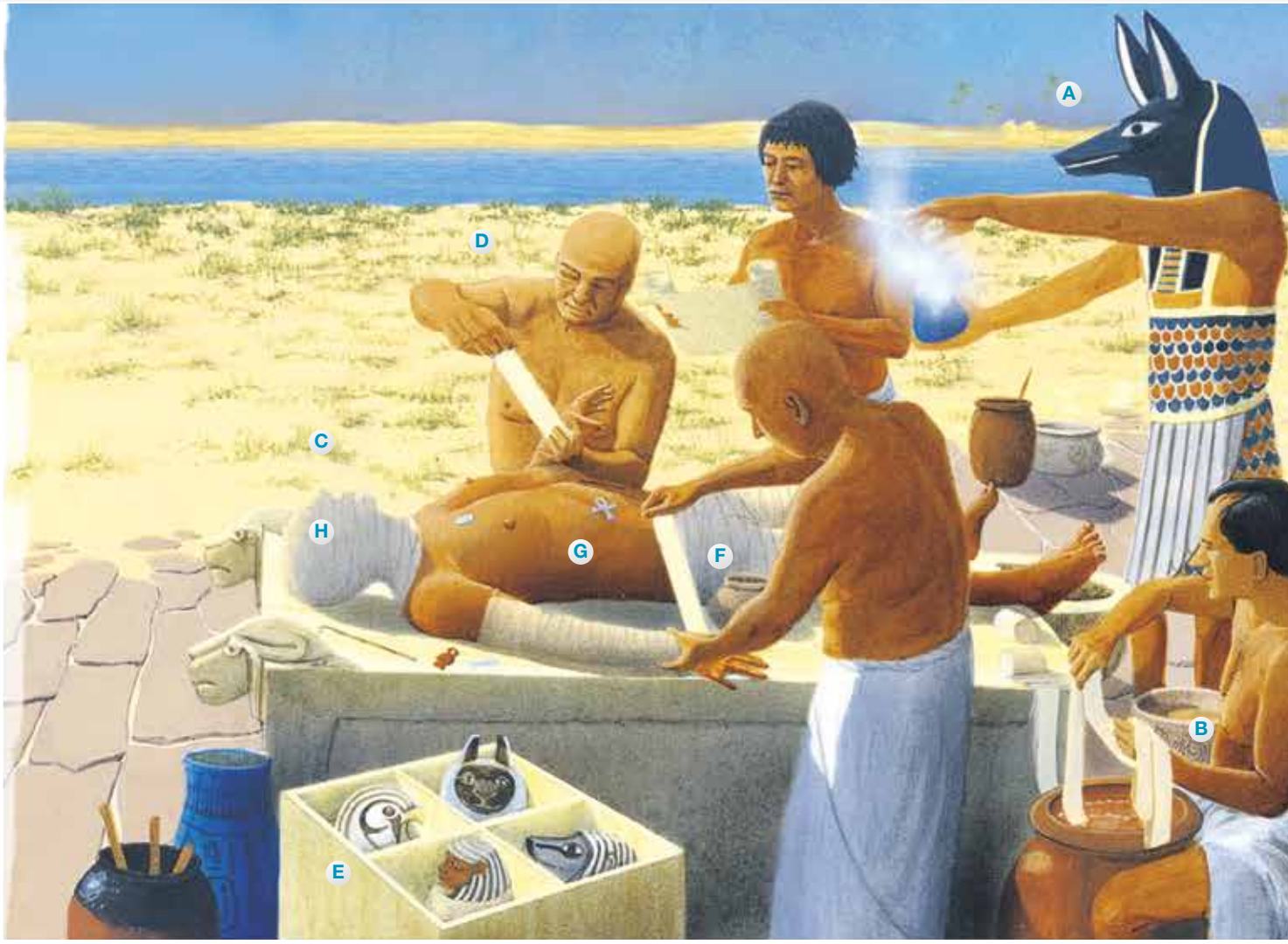
What happens when a house catches fire is most extraordinary: nobody takes the least trouble to put it out, for it is only the cats that matter; everyone stands in a row, a little distance from his neighbour, trying to protect the cats, who nevertheless slip through the line, or jump over it, and hurl themselves into the flames. This causes the Egyptians deep distress. All the inmates of a house where a cat has died a natural death shave their eyebrows . . .

5.5.3 Dead mummies do tell tales!

The art and hieroglyphs found on the tomb walls of ancient Egyptians, and the mummies made of their dead bodies, have told historians a lot about the way of life of the ancient Egyptians.

int-5977

SOURCE 6 Instructions to a priest for preparing a mummy



- **A** Have your jackal mask ready so you can dress up as the god Anubis. Learn the prayers and magic spells from the *Book of the Dead*. You will need to chant these over the dead body as you work.
- **B** Wash the dead body with water or palm wine.
- **C** Use a long hook to pull out the brains through the left nostril. Throw them away.
- **D** Cut open the left side of the stomach and remove the liver, lungs, intestines and stomach. Don't remove the heart as it contains the personality.
- **E** Cover the internal organs with **natron** to absorb all moisture. Rub the dried organs with oils and resin and wrap them in linen bandages. Then push them into **canopic jars**. Make sure you put each organ in the right jar.
- **F** Cover the body with natron for 40 days to dry it out. Then rub the dried skin with palm oils and ointments. Pack the stomach cavity with perfumed linen and sew up the wound.

natron a mineral salt used to dry out dead bodies

canopic jars used to store the liver, lungs, intestines and stomach of the person being mummified

SOURCE 7 The mummy of Katebet, a woman of wealth and high status who died around 1300 BCE

G Place a magic charm over the stomach wound and a scarab (beetle-shaped charm) over the heart. Then wrap the body with linen bandages dipped in gum. Wrap every part separately. You will need about 370 square metres of linen. Wrap amulets and magic charms such as ankhs (♀) in with the bandages. The dead person's soul will need these during its journey to the Kingdom of Osiris.

H Place a mask made from linen and glue over the person's head and shoulders. If you have time, paint this or cover it in gold leaf. Also place a panel across the top part of the body, decorated with protective magic symbols and drawings.

I Place the wrapped mummy in a body-shaped coffin that has been decorated with jewels, paintings and inscriptions of spells. Paint the coffin so it looks a bit like the person when he or she was alive. Be flattering!

J Tell the relatives the mummy and the canopic jars are ready for burial. Your chief priest will need to accompany the funeral procession to the tomb so he can conduct the ceremony to open the mummy's mouth. The person's soul needs to talk in the afterlife. Remember, the professional mourners will be noisy!

At first, all ancient Egyptians buried their dead in the hot desert sands. However, in time wealthier Egyptians, especially pharaohs, began to build elaborate tombs. They would also mummify bodies so their souls would always have a 'home' to rest in, and be able to 'eat and drink'.

Mummies allow us to have some idea of what famous pharaohs looked like. Scientists and historians can also find out details such as their age, their body shape, whether they had had children, what diseases and health problems they suffered — even, sometimes, what caused their deaths. Researchers have found, for example, that cancer was probably rare or non-existent in ancient Egypt. On the other hand, broken and worn teeth were very common because of their crunching on sand grit and hard pieces of corn that were mixed up in bread.

5.5 SKILL ACTIVITY: Questioning and researching, Using historical sources

Research online to complete the following tasks.

1. Locate the four symbols in the provided table on the mummy in **SOURCE 7**.
2. Using a table like the below, **explain** why each symbol would be on a mummy.

Symbol	Reason it is placed on a mummy
Isis	
Scarab	
Anubis	
Shabti figurine	

5.5 Exercise

learnon

5.5 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 4, 7	5, 8, 10	3, 6, 9, 11

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Check your understanding

1. Look at **SOURCE 1**. **Explain** how this body was preserved.
2. Look at **SOURCE 2**. **Describe** what is happening.
3. **Explain** why Egyptians were buried with possessions such as those shown in **SOURCE 3**.
4. Which two gods mentioned in this lesson were associated with death?
5. **Describe** what historians have learned about ancient Egyptians by studying mummies.
6. Study **SOURCE 6** and complete the sentences by matching the left and right columns.

A mummy is	to assist the journey of the dead person's soul.
Natron is	to store organs that were removed from the body.
Bodies were mummified	a body that has been preserved by drying and wrapping.
Canopic jars were used	so that their souls would have a place to rest in.
Magic charms were wrapped in with the bandages	a mineral salt used to dry out dead bodies.

Apply your understanding

Using historical sources

7. Look at **SOURCE 5**. How do we know that Egyptians viewed cats as important?
8. Study **SOURCE 1**.
   a. The body of this boy is thousands of years old. What do you think would remain of it had it not been mummified?
   b. Which dating technique could be used to tell us how old it is?
   c. What might you conclude about the social rank of the boy's family from the fact that his face is painted with gold?

Historical perspectives and interpretations

9. Use the sources and other information in this lesson, to complete the following.
   a. **Explain** why preserving bodies was so important to ancient Egyptians.
   b. In a brief paragraph, **discuss** the similarities and differences between burial practices and ideas about death in ancient Egypt and the modern world.
10. **Explain** how beliefs about the gods and the afterlife could have contributed to making ordinary Egyptians content with their position in society.
11. **Propose** a reason many ancient Egyptian gods had animal heads.

LESSON
5.6 What's the truth about the pyramids?

LEARNING INTENTION

By the end of this lesson you should be able to explain why, during the Old Kingdom, ancient Egyptians built their most famous legacy, the pyramids, and evaluate different theories as to how they probably did this.

TUNE IN

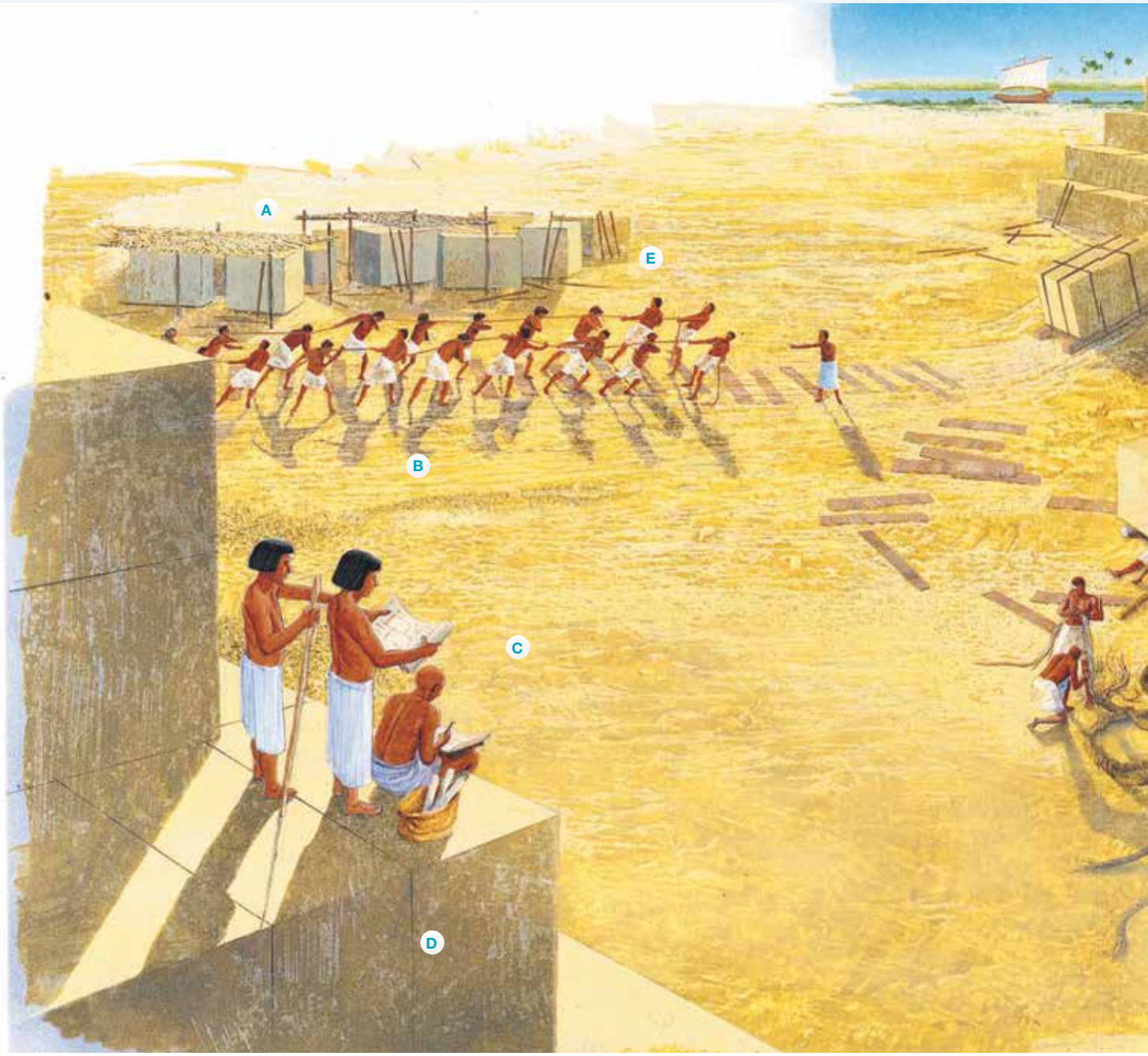
The most famous legacy of ancient Egypt is the Great Pyramid of Khufu, which stands 150 metres high. Approximately 2.3 million blocks of stone were used in the Great Pyramid, and the average weight of each is 2.5 tonnes — that's heavier than an adult rhinoceros!

SOURCE 1 The Great Pyramid of Khufu with the Sphinx in the foreground

1. What questions do you have about the pyramids?
2. In groups, devise an hypothesis as to how the Great Pyramid was built and share it with the class. Challenge each hypothesis with more questions. No Googling!

int-5978

SOURCE 2 The pyramids at Giza in Egypt are the only remaining 'wonder' of the Seven Wonders of the Ancient World.

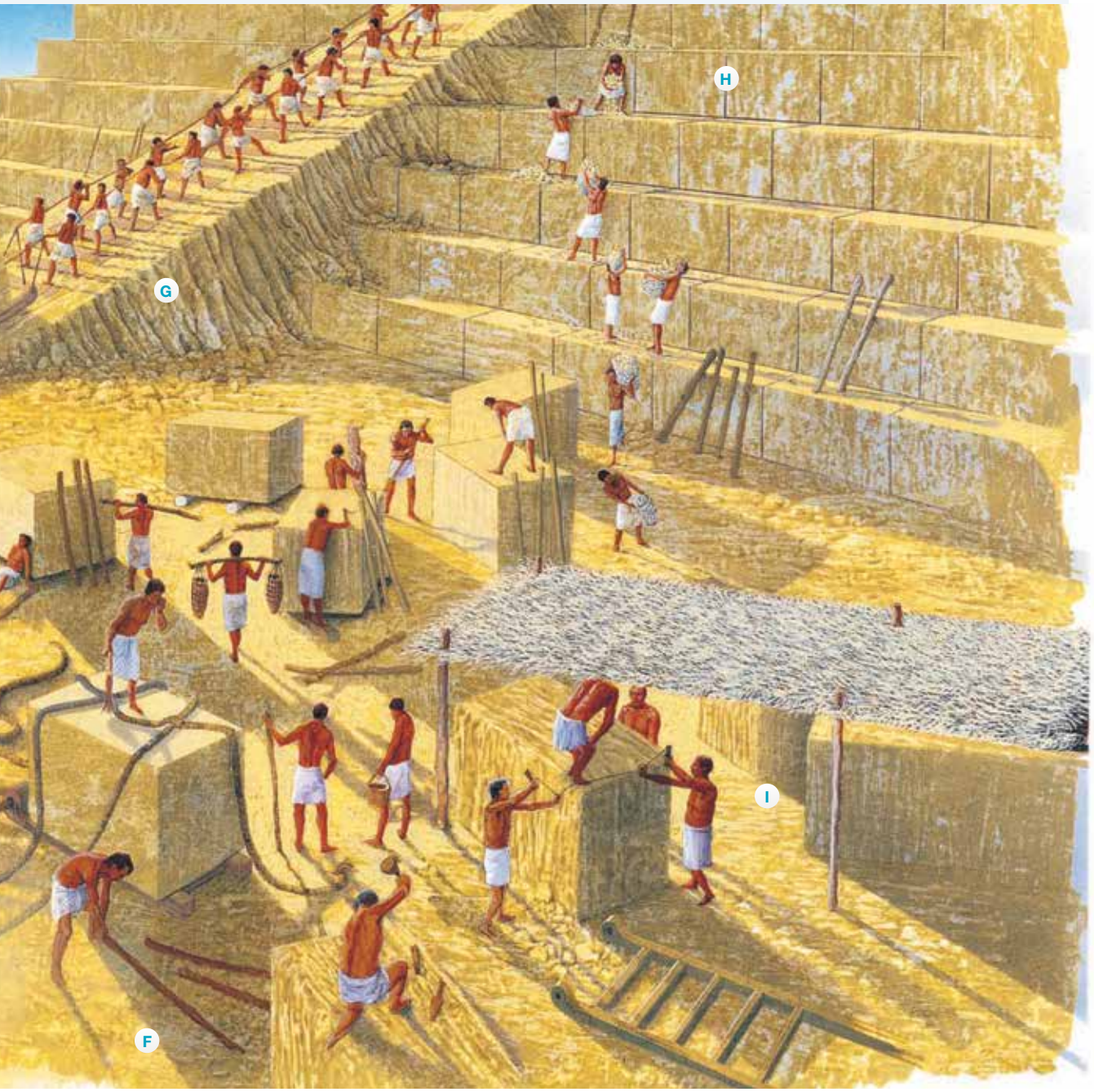


A Between 200 and 300 granite blocks would have been set in place every day.

B It is thought the workmen might have dragged the blocks over soft sand on top of wooden sleds. On harder surfaces, the blocks may have been moved on top of rolling logs.

C Architects and other overseers controlled different aspects of the work, using scribes to document details. Skilled craftsmen included stonemasons and carpenters.

D The sides of the pyramids once had an outer layer of polished white limestone. Most of this was later taken down and used to decorate buildings in Cairo.



E Some of the granite blocks are thought to have been cut from rock faces in Aswan, and the limestone cut from quarries to the east. Both are likely to have reached the site via barges on the Nile River.

F Historians think that around 100 000 men (never slaves) would have worked full time for about 20 years to build the Great Pyramid.

G Huge sand ramps may have been erected to drag blocks up to higher levels.

H The blocks were cut so cleanly that a knife blade can barely be pushed in between them. Blocks may have been cut by driving wooden stakes into the stone and wetting them. As the stakes expanded, they would have split the rock.

I Workers made sure the edges of blocks were square.

5.6.1 Pyramids and hidden tombs

Built about 4500 years ago, the 80 or so pyramids in Egypt are the oldest human-made structures in the world. Of these, the famous three at Giza, near Cairo, are the most impressive. Their construction is an amazing feat of technology. Yet no-one knows for sure how they were built. The ancient Egyptians had only simple tools made of stone, wood and bronze. They had no cranes, computers, rock cutters or heavy earth-moving equipment.

From about 2500 BCE, the mummies and treasures of important people, such as pharaohs, were usually entombed in pyramids. This practice lasted only about 500 years, however, because robbers were a major problem. Thereafter, tombs for such people were dug into mounds and cliffs in the **Valley of the Kings**. But even these were not completely safe. Over time, they were all raided except one — the tomb of the pharaoh Tutankhamun.

The **Great Pyramid** at Giza, built around 2550 BCE, was the tomb of the pharaoh Khufu. The other two were built for his son Khafre and grandson Menkure. The Great Pyramid, the biggest of the three, is close to 150 metres high and contains around 2 300 000 granite blocks, each of which weighs around 2.5 tonnes.

Pyramid mysteries

Some say the technology of the pyramids is so astonishing that they must have been built by an alien intelligence.

Another view is that those who built the pyramids at Giza, and the **Great Sphinx** that guards them, used knowledge and skills passed down from an old but highly advanced civilisation that existed long before the Old Kingdom in Egypt. But archaeologists and historians prefer more scientific explanations.

Valley of the Kings gorge on the Nile in Upper Egypt that contains many royal tombs

Great Pyramid the oldest and largest pyramid in Egypt; one of the Seven Wonders of the Ancient World

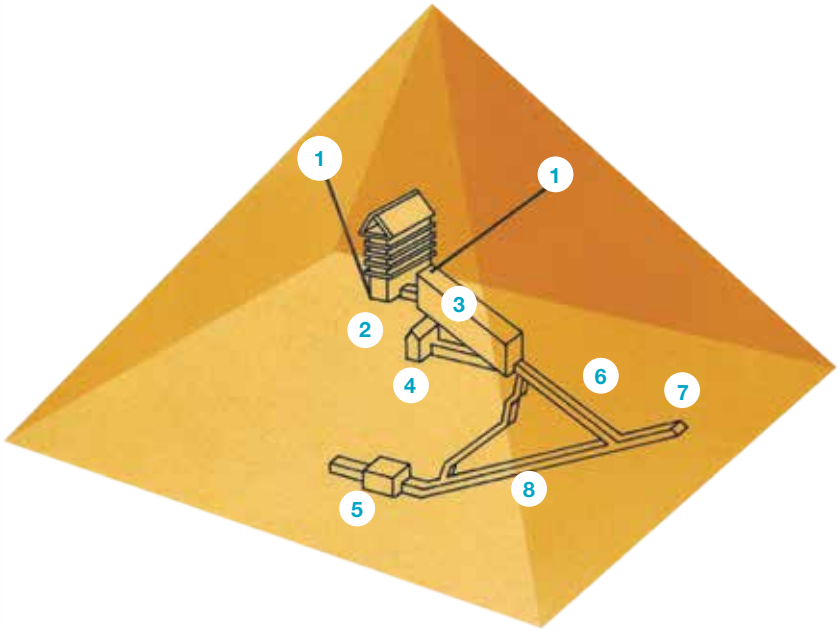
Great Sphinx monument with the body of a lion and the face of a man; located in Giza near the Great Pyramid

Heavenly sails

One treasure the robbers missed in the Great Pyramid was a 43-metre-long boat, built to carry Khufu to the afterlife. It was not found until 1954. It had been broken into 1224 pieces before being packed into a rock cavity near the base of the pyramid. The cavity was so tightly sealed that when archaeologists broke into it they could still smell the cedar oil in the wood — after 4500 years!

int-5979

SOURCE 3 Inside the Great Pyramid



1. Air shafts
2. Pharaoh's burial chamber
3. Grand gallery
4. Queen's chamber
5. False chamber
6. Ascending corridor
7. Entrance
8. Descending corridor

5.6.2 Why did the age of pyramids end?

The end of the Old Kingdom marked the end of the age of pyramid building. Several different dates are given for the collapse of the Old Kingdom, the most common being 2181 BCE. But did it collapse?

Many historians of the 20th century assumed that the collapse of the age of pyramids was due to failure of the regular flooding of the Nile. That flooding was essential for Egypt's prosperity because it provided fresh topsoil for farming. It was also assumed that the long age of peace and stability was replaced by a time of chaos after the death of pharaoh Pepi II.

What made historians believe this? One source of evidence were ancient texts that suggest that during this time Egypt experienced foreign invasions, disease, civil war and famines — even cannibalism. These texts were used to support the Biblical account of Moses, the Jewish slaves and the plague of Egypt.

However, the ancient Egyptian sources on which this view is based were written 800 years after the events were supposed to have occurred. So are they reliable sources? Does other evidence contradict those sources?

Most historians today now believe that these ancient texts might have, in fact, been fiction, even ancient propaganda! They argue that texts such as these were created to uphold the power of later pharaohs who wanted to frighten the people with stories of what would happen without one powerful pharaoh in control. This view is supported by a recent study of skeletons from during this period, which do not show signs of famine or an increase in violent deaths.

SOURCE 4 Relief from Unas' causeway at Saqqara. Are these figures starving Egyptians during a time of terrible famine? Perhaps. Or maybe they are nomadic Bedouins who did not have enough to eat because they lived outside the pharaoh's care and attention.

SOURCE 5 Extract from *The Admonitions of Ipuwer* (dated to late Middle Kingdom era)

Everywhere barley has perished and men are stripped of clothes, spice, and oil. Everyone says: 'There is none.' The storehouse is empty and its keeper is stretched on the ground.

5.6 SKILL ACTIVITY: Using historical sources

Work together to investigate different theories for the building of the ancient Egyptian pyramids. Use the **Mysteries of the pyramids** weblink in the resources tab to help you.

1. **Create** a table like the example below to record your findings. Add the list of theories provided to your table.
2. **Rate** the theories with a five star system according to how believable they are judging from the evidence.
3. **Explain** which theory you think is the most believable and which is the least believable?

Theory	Evidence?	Believability rating
a. Aliens built the pyramids. b. Slaves built the pyramids. c. The knowledge for building the pyramids was passed down by a highly evolved lost ancient civilisation. d. Egyptian workers used specially built canals, ropes and tracks to transport the stone blocks to the pyramid site. e. Ramps were used to lift the blocks into place. f. The ancient Greek historian Herodotus wrote that the pyramid was built by 100 000 workers. g. The stones were dragged on wet sand, which made it much easier to move them. h. The stones were rolled to the construction site. i. The blocks were made from limestone concrete and were poured into moulds at the site.		

Resources

Weblink Mysteries of the pyramids

5.6 Exercise

learnon

5.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4	1, 5, 6, 8	7, 9, 10

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Check your understanding

1. **Describe** the tools and equipment used by ancient Egyptian pyramid builders.
2. **Select** the correct answer. There are **2** / **3** / **4** / **5** famous pyramids at Giza.
3. The Great Pyramid of Giza was built as the tomb of which ruler?
   - A. Khafre
   - B. Menkure
   - C. Sphinx
   - D. Khufu
4. The main purpose of the pyramids was to serve as the homes of royalty. True or false?
5. **Explain** why the pharaohs stopped building pyramids after 500 years and switched to tombs dug into cliffs and mounds in the Valley of the Kings.

Apply your understanding

Communicating

6. **SOURCE 2** shows the steps involved in the building of a pyramid. Select three of these steps and **explain** what tools and equipment would be needed by the workers in order to do their job.
7. Study **SOURCE 3**. Imagine that you are an ancient Egyptian who is planning to rob Khufu's tomb. **Write** a note to your accomplice explaining how to get into the pharaoh's burial chamber and what to look out for.
8. Imagine that you are a worker on the pyramid who had access to two pieces of modern equipment. **Explain** what modern equipment you would use and how that would change your task.
9. Many old Hollywood movies incorrectly gave the impression that the pyramids were built by slaves. **Describe** how the scene in **SOURCE 2** would have been different if they were correct.
10. **Explain** why different interpretations exist of **SOURCES 4** and **5**.

LESSON
5.7 Who were Tutankhamun, Akhenaten and Nefertiti?

LEARNING INTENTION

By the end of this lesson you should be able to explain why the discovery of Tutankhamun's tomb was a key archaeological event, describe the religious changes made by Akhenaten and Nefertiti, and evaluate the significance of these individuals.

TUNE IN

'Can you see anything?' Lord Carnarvon asked.
'Yes, wonderful things!' answered Carter.

These were the words uttered by British archaeologist Howard Carter when he found the tomb of Tutankhamun.

1. What do you imagine lay behind the door in **SOURCE 1**?
2. Lord Carnarvon died a year after this door was opened. Did he die of the mummy's curse?

SOURCE 1 The unbroken seal of Tutankhamun's tomb

5.7.1 An archaeologist's dream

The discovery of the tomb of Tutankhamun was the key archaeological event of the twentieth century — but not because of the man or the size of his tomb. Tutankhamun was still a teenager when he died and the tomb had only four chambers. It was important because its contents were untouched. More than 5000 objects were found, some of them priceless. We can only imagine what might have been found in the large tombs of more famous pharaohs if they had not been robbed.

In 1922, the British archaeologist Howard Carter found the tomb of Tutankhamun. He had looked for it for years in the Valley of the Kings without success. Then he decided to dig up an area around some old workers' huts. To his excitement, a step was uncovered, carved into the rock. More digging revealed the sealed entrance to a passageway that carried the seal of Tutankhamun. Yet more digging to remove the tonnes of rubble in the passageway revealed the stone door to the tomb.

A hole was cut in the door and Carter inserted a lit candle into the darkness behind. He later said, 'At first I could see nothing . . . But presently, as my eyes grew accustomed to the light, details of the room emerged slowly from the mist, strange animals, statues and gold — everywhere the glint of gold'.

SOURCE 2 Head of the 19-year-old pharaoh Tutankhamun

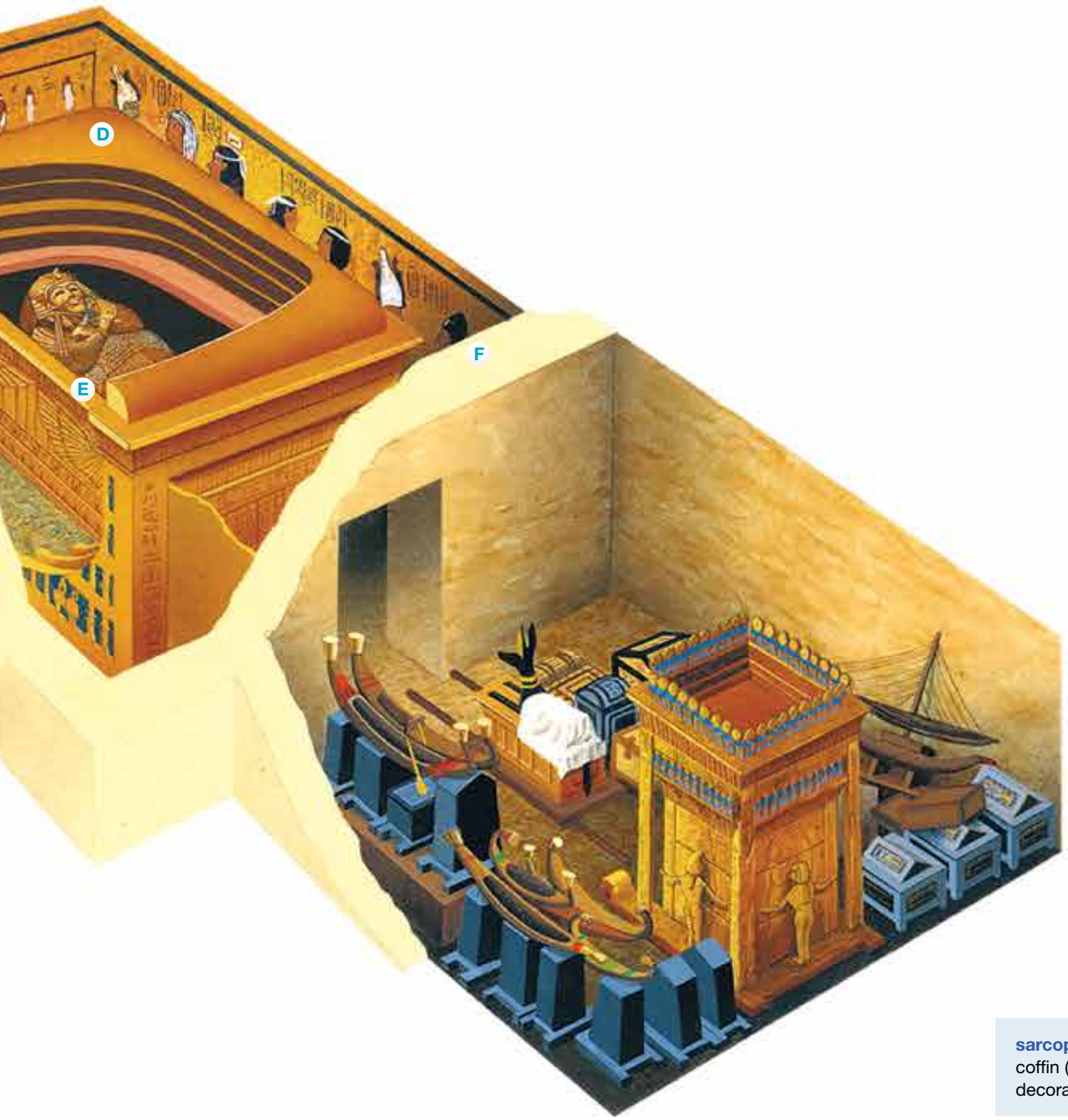
int-5980

SOURCE 3 The discovery of Tutankhamun's tomb was described in the *Illustrated London News* of 9 December 1922 as 'the most sensational Egyptological discovery of the century'.

A The antechamber, the first chamber Carter entered, contained about 700 pieces of furniture, including stools, beds and gold couches with animal heads, chairs, a chariot (in bits) and two black and gold life-size statues either side of the entrance. There were also jars of oil, lamps, vases, musical instruments, board games and clothing.

B This side chamber contained about 600 items, including pieces of wooden furniture, baskets of food, jars of wine and oil.

C About 200 000 tonnes of rubble had to be removed from this passageway to reach Tutankhamun's tomb.



sarcophagus stone or wooden coffin (often inscribed or decorated) in Egypt

D Inside the gold-covered burial chamber, some five metres long and 3.5 metres wide, were three other decorated chambers, each inside the other. The inner one was a stone **sarcophagus**, carved with Tutankhamun's name. Inside this were three elaborately decorated body-shaped coffins. The inner one, made of 1100 kilograms of gold, contained Tutankhamun's mummy.

E The face and shoulders of Tutankhamun's mummy were covered with a mask of solid gold. It was decorated with blue glass and semi-precious stones such as turquoise and lapis lazuli.

F The treasury chamber contained the pharaoh's treasures. In it was the gold-lined shrine holding the canopic jars. Inside these jars were the pharaoh's mummified internal organs. The chamber also contained gold statues, including one of the god Anubis (who guarded the treasures), as well as boats, weapons, a golden throne and chests of jewellery.

SOURCE 4 Translated inscription Tutankhamun had carved into a stone column, marking a return to the worship of many gods

I found the temples fallen into ruin, with their holy places overthrown and their courts overgrown with weeds. I reconstructed their sanctuaries, I endowed the temples and made them gifts of all precious things. I cast statues of the gods in gold and electrum, decorated with lapis lazuli and all fine stones.

5.7.2 A new mystery?

The last significant pharaoh before Tutankhamun was Akhenaten, who became pharaoh in about 1353 BCE, under the name Amenhotep IV. In the fifth year of his reign, he appears to have initiated a religious revolution in Egypt. He erected a new temple to the sun god Aten, changed his name to Akhenaten, meaning 'he who serves Aten' and decreed that in place of the many ancient gods of Egypt the people must worship only Aten. Images of Akhenaten and many traces of the new religion were deliberately destroyed after his death.

Akhenaten's first wife was Nefertiti. She was depicted as a very elegant and beautiful woman in a limestone bust dated c. 1340 BCE (see **SOURCE 5**) and in many images worshipping Aten with her husband.

Tutankhamun was married to the third daughter of Akhenaten and Nefertiti, and was only about nine years old when he became pharaoh in about 1336 BCE. Under Tutankhamun, Egypt made a complete return to the traditional gods. In inscriptions he was referred to as the good ruler who restored 'what was ruined'. He died aged just 19, leaving no heir to the throne. The head of his mummy is shown in **SOURCE 2**. As revealed in **SOURCE 6**, it now appears that Tutankhamun might not have been alone in his tomb.

SOURCE 5 This limestone bust of Nefertiti is held in the Egyptian Museum Berlin.

SOURCE 6 'Egypt's Queen Nefertiti may lie concealed in Tutankhamun's tomb, say archaeologists', ABC News, 5 October 2015

A British archaeologist, Dr Nicholas Reeves, from the University of Arizona, has used high-resolution scans, including radar and thermal imaging, to peer into hidden chambers in King Tutankhamun's underground tomb. Using these scans, he believes that Queen Nefertiti is buried there also.

. . .

His theory is that Nefertiti has lain undisturbed behind what he believes is a partition wall for more than 3000 years. The archaeologist believes the boy king, who died unexpectedly at 19, was buried in a rush in an underground burial chamber that was probably not intended for him.

5.7 SKILL ACTIVITY: Questioning and researching, Historical perspectives and interpretations

One of the key skills we learn in history is how to **identify** patterns over time.

Recognising when changes occur, why they occurred and the impact they had is important.

Also important is **identifying** periods of continuity — when things didn't change much - why that was the case, and to examine when changes might have restored how things were. Sometimes we can see patterns of continuity right up to our present time which link us to the past.

Copy and **complete** the following table together. Use the information from this lesson and the **Nefertiti and Akhenaten** and **Tutankhamun** weblinks in the Resources tab to help you.

Person	What did they do?	Why?	What impact did their action have?	Example of change or continuity?
Nefertiti				
Akhenaten				
Tutankhamun				

Resources

Weblinks Nefertiti and Akhenaten
Tutankhamun

5.7 Exercise

learnon

5.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4, 5	3, 6, 7	8, 9, 10

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Check your understanding

1. Why was Tutankhamun's tomb such a rare and significant discovery?
   - A. Tutankhamun is the most popular pharaoh.
   - B. It was untouched.
   - C. It contained more gold than any other.
   - D. It was the first to be discovered.
2. **State** if the following are true or false.
   - a. Howard Carter was never actually looking for Tutankhamun's tomb.
   - b. Carter found the tomb by digging around old worker's huts.
   - c. Though the tomb was filled with many treasures, gold was not found.
3. **Explain** the meaning of the following concepts and terms: burial chamber, treasury chamber, sarcophagus.
4. Who were Akhenaten and Nefertiti?
5. Under Tutankhamun, Egypt made a complete return to the traditional _____.

Apply your understanding

Using historical sources

6. Using **SOURCE 3**, **identify** and **select** one of the types of items that were found in each of the following: the antechamber, the side chamber, the burial chamber, the treasury chamber. Explain what archaeologists and historians might discover about life in ancient Egypt from each of your four chosen items.
7. Read Tutankhamun's inscription in **SOURCE 4**.
   - a. Who caused Egyptian religion to change before Tutankhamun's reign?
   - b. How would you account for the temples having 'fallen into ruin'?
   - c. Describe the effect of Tutankhamun's reign on Egyptian religion and explain why Tutankhamun might have found it necessary to undertake the works referred to here.

8. Look again at **SOURCE 3** and read **SOURCE 6**.
   a. What was Dr Reeves's hypothesis about Nefertiti and Tutankhamun's tomb?
   b. Where in **SOURCE 3** do you think the partition wall and hidden chambers could possibly be?
   c. What evidence did Reeves offer to support his hypothesis?

Historical perspectives and interpretations

9. Reeves's theory was immediately criticised by other archaeologists. **Explain** what this tells you about contestability in history.
10. Think about all you have learned about the ancient Egyptians in this lesson.
    a. Explore and **discuss** the way the ancient Egyptian people might have felt about Akhenaten's religious changes.
    b. **Explain** why we have no real evidence of what ordinary Egyptians thought about these changes.

LESSON
5.8 What were the effects of war and trade?

LEARNING INTENTION

By the end of this lesson you should be able to describe ancient Egypt's relations with other countries through trade and war, and identify the reasons for Egypt's rise and eventual decline and fall.

TUNE IN

Among the societies with which Egypt had conflicts over its long history were Nubia to its south, Libya to the north, the Hyksos from the north-east, the Hittites, and 'Peoples of the Sea'. However, none were as terrifying as the Assyrians. They had the great advantage of iron weapons, highly disciplined infantry, archers and cavalry, and a reputation for killing, torturing and enslaving people who resisted them.

SOURCE 1 A wall panel depicting Assyrian soldiers attacking a fort

1. Study **SOURCE 1** and identify three Assyrian military tactics that are shown in this relief sculpture.
2. Why would an ancient society want to go to war?
3. What impacts would wars have for the winners and the losers?

5.8.1 From the Old Kingdom to the New Kingdom

Throughout history, all empires have been created by force and all have eventually fallen. In Egypt's long history, during certain periods it suffered from **civil wars** and invasions. There were also times of strong governments that drove invaders out of the land and took control of other countries (see the timeline in lesson 5.1).

Ancient Egypt was at first two separate kingdoms — Upper Egypt and Lower Egypt. Around 3100 BCE, the two kingdoms are thought to have been united under King Narmer, who set up his capital in Memphis (see the map in lesson 5.3). During the next 2700 years, Egypt's history was divided into several distinct periods. Three of the more important of these — at times when Egypt was united and generally powerful — are called the Old Kingdom, the Middle Kingdom and the New Kingdom.

The Old Kingdom: peace and stability

The Old Kingdom (2686–2181 BCE) was the time when the pyramids were built. It was a long period of peace and order, and a time when the skills of building and art were developed. Pyramid building became the most important state activity during this time. The Great Sphinx was also made during this time of almost continuous prosperity and stability.

The Old Kingdom was prosperous and stable due to the regularity of Nile floods and due to irrigation and trade, particularly with Nubia. The people appear to have been grateful to the strong central government for ensuring stability and the fertility of the land. The regularity of the Inundation contributed greatly to stability, as did Egypt's isolation due to barriers to invasion provided by the sea, deserts and the Nile cataracts, which protected Egypt.

civil war war between rival factions within one state or country

mercenary person who fights for a foreign country for money or other rewards

The First Intermediate Period: instability

The collapse of the Old Kingdom was followed by a century of bloodshed as nobles fought each other for control of the country. This made it easier for foreigners to move into the Nile Delta.

During the 6th Dynasty, Pharaoh Pepi I sent military expeditions to Nubia to the south and Canaan to the north. Also, Egypt suffered long droughts and that weakened royal power.

As the nomarchs (regional governors) took advantage of diminishing royal authority, and competed for power, the pharaohs were further weakened and the stability of the Old Kingdom was replaced by the instability of what we call the First Intermediate Period.

Egypt's army was at first made up mostly of peasants called up whenever needed. By New Kingdom times, Egypt had a permanent army with chariots, archers and infantry armed with spears, battle axes, swords and daggers. It appears also to have included conscripted prisoners of war and foreign **mercenaries**.

SOURCE 2 Wooden models of Egyptian soldiers of the Middle Kingdom in four columns

Trade

Egypt's relations with other countries involved trade as well as war. Egyptian trade began around 6000 BCE, long before the first pharaohs, and continued through the period of Roman rule (30 BCE–646 CE). Since the start of the Old Kingdom, Egypt was trading with Nubia, Mesopotamia, Syria, Libya and the Phoenicians in Lebanon. Egypt continued to depend on trade throughout its long history, especially for essential goods and luxuries.

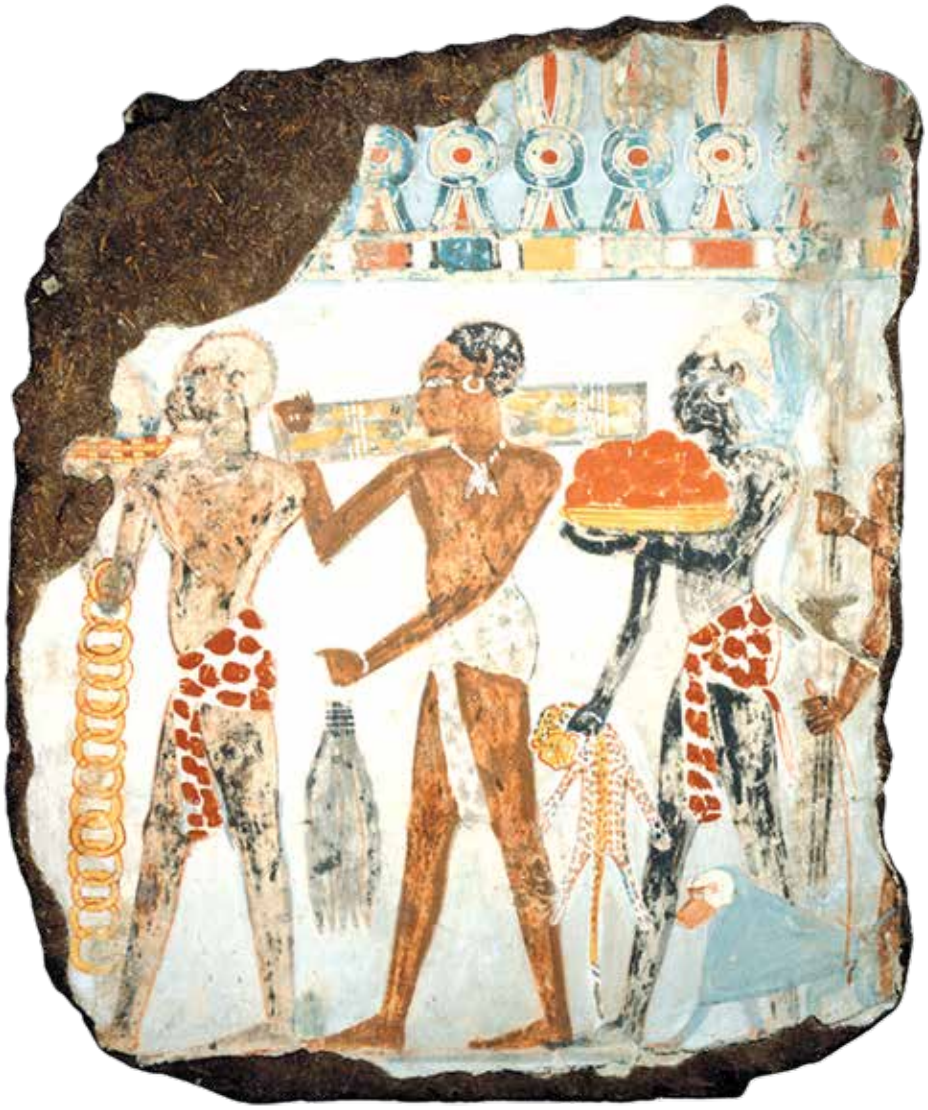
Nubia was very important to Egypt for its gold mines, ivory and wood. Egypt had plenty of grain to exchange for such items. It also traded beer, wine, cheese, oil, linen and tools for Nubian copper, gold, jewels, ebony, ivory, exotic animals and slaves (see **SOURCE 3**). Trade helped to fund the Old Kingdom pyramids. During the New Kingdom, trade helped to fund the building of temples and monuments.

Throughout much of this time, trade was conducted on a barter system, in which agreements had to be reached about values of goods exchanged. Money was only introduced after the Persian invasion in 525 BCE.

Although Egypt depended on trade with Nubia, they were also often in conflict. During the Middle Kingdom, Egypt took part of Nubia and built forts to control the routes to its gold mines. Around the same time, Egypt attacked the Libyans and other desert tribes to its north.

tlvd-10510

SOURCE 3 A scene on a wall of the tomb of Sobekhotep. It shows Africans, probably Nubians, carrying ebony logs, leopard skins, gold rings, giraffe tails and a live baboon.



The Second Intermediate Period and the New Kingdom: expansion

Egypt was again weak in the Second Intermediate Period when the Hyksos invaded from the north-east.

However, this time was followed by the New Kingdom, the time of Egypt's greatest power. At the start of this period, the armies of Pharaoh Ahmose defeated the Hyksos who had occupied Egypt. Ahmose also regained control of northern Nubia.

In the fifteenth century BCE, Egypt defeated a coalition of **Asiatic** princes at the Battle of Megido. The territory occupied by modern Israel, Lebanon and Syria became part of the Egyptian Empire. Later pharaohs fought against the Hittites to keep control of these lands. In these wars Egypt plundered its defeated enemies and gained more wealth from the tribute (treasure, slaves and livestock) that had to be paid by conquered rulers.

Asiatic peoples of Asia, including the Middle East

5.8.2 Decline and fall

Egypt became weaker after the time of Rameses II. Libyans and 'Peoples of the Sea' invaded the Nile Delta. These invaders were defeated many times but gradually Egypt lost its unity and its empire. The priests came to control Upper Egypt, while Lower Egypt was ruled by princes. In the Late Dynastic Period, the country fell under the control of Nubians. In about 663 BCE, the Assyrians took most of Egypt into their empire. Bronze Age Egypt had no iron ore and could not match the Assyrians' iron weapons. Later, Egypt fell under the rule of the Persians, followed by the Greeks and then the Romans.

SOURCE 4 From an inscription in the temple of Pharaoh Rameses III at Thebes describing a victory over the 'Peoples of the Sea', in about 1188 BCE

Year 8 under the majesty of [Rameses III] . . . foreign countries made a conspiracy. No land could stand before their arms . . . they were coming forward toward Egypt . . . I have the river mouths prepared like a strong wall, with warships, galleys and coaster . . . The troops consisted of every picked man of Egypt. They were like lions . . . The chariotry consisted . . . of every good and capable chariot-warrior. Those who reached my frontier . . . were dragged in, enclosed on the beach, killed and made into heaps . . .

5.8 SKILL ACTIVITY: Cause and effect

1. Work with a partner to **identify** the effects of each of the causes listed in the table.

Cause	Effect
a. Regularity of the Nile flooding and a strong, central government	
b. Peace and stability during the Old Kingdom	
c. Drought	
d. Trade with Nubia	
e. Invasion by the Hyksos	
f. Wars of the New Kingdom	
g. Invasion by various groups over time, such as the Libyans and Nubians	
h. Having no iron ore in Egypt	

2. **Draw conclusions** based on your completed table using the following questions as a guide.
   - **a.** What seems to cause war and conflict?
   - **b.** What seems to help create stability and peace?
   - **c.** How does a civilisation become prosperous?
   - **d.** What seems to cause a civilisation to decline?

Resources

Weblinks How powerful is Egypt today?
Winning with cats!

5.8 Exercise

learnon

5.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4, 5	6, 7, 9	8, 10

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Check your understanding

1. **Identify** the three main historical periods used to describe ancient Egyptian history.
   - A. The New Kingdom
   - B. The Ancient Kingdom
   - C. The Old Kingdom
   - D. The First Intermediate Kingdom
   - E. The Upper Kingdom
   - F. The Lower Kingdom
   - G. The Middle Kingdom
2. Why were foreigners able to invade Egypt's Nile Delta during the First Intermediate Period?
   - A. They were allowed access as a trap.
   - B. Egypt had no strong leader.
   - C. Egyptian nobles were fighting amongst themselves.
   - D. The Egyptians were peaceful and unprepared for war.
3. During which times was Egypt strongest and weakest?
4. **List** the lands that Egypt controlled during its strongest period. Locate them on a map.
5. **Identify** the groups that invaded Egypt after the time of the New Kingdom Pharaoh Rameses II.
   - A. Hyksos
   - B. Nubians
   - C. Chinese
   - D. Assyrians
   - E. Romans
   - F. Libyans

Apply your understanding

Using historical sources

6. **Analyse SOURCE 3.**
   - a. **Describe** the details in the source.
   - b. **Outline** what **SOURCE 3** can probably tell us about Egypt's trade with Nubia.
7. **Analyse** the inscription of Rameses III in **SOURCE 4.**
   - a. **Describe** its style.
   - b. **Propose** why it would be written in such a style.

Communicating

8. **Infer** why Egypt's relationship with Nubia went from peaceful trading partners to war.

Historical perspectives and interpretations

9. **Create** a visual timeline of the main periods and events covered in this lesson.
10. In one paragraph, **summarise** the causes and effects of the rise and fall of Egypt in your own words.

LESSON
5.9 Rameses II — Egypt's greatest pharaoh?

LEARNING INTENTION

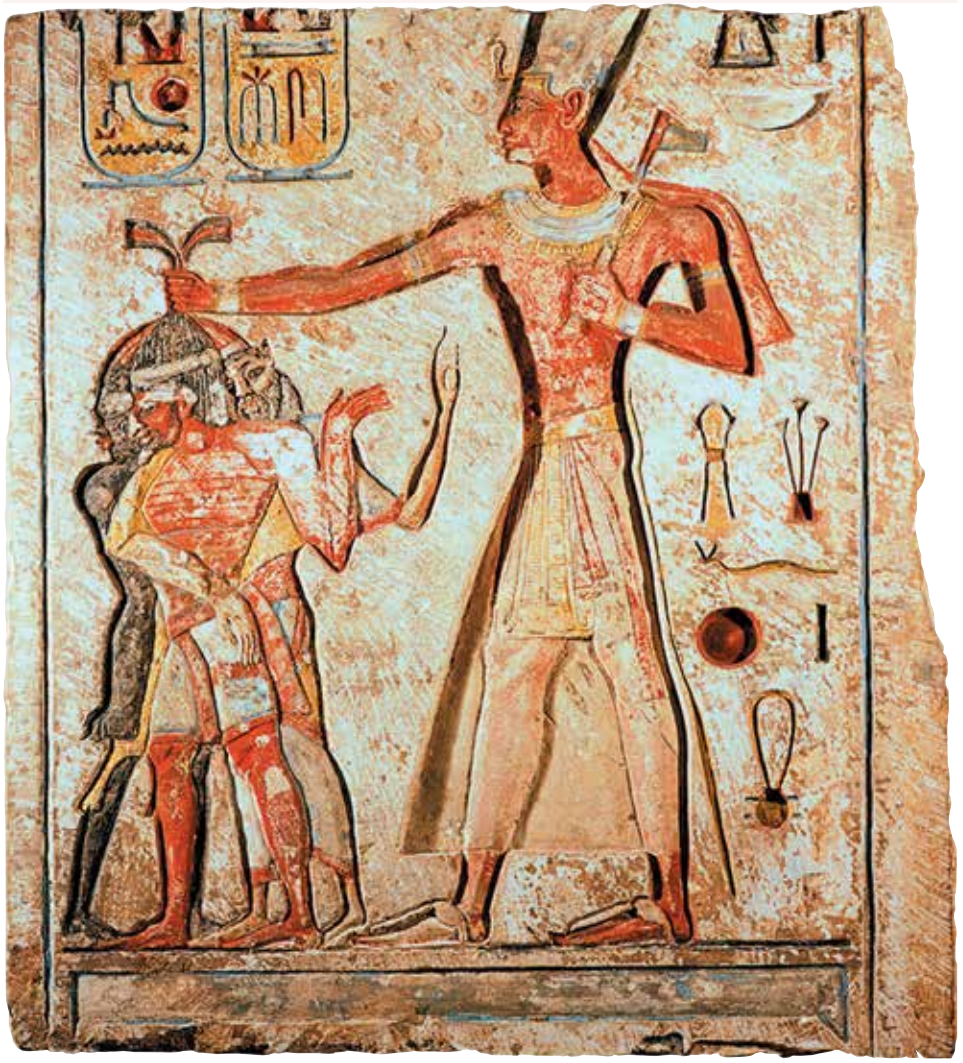
By the end of this lesson you should be able to describe the ruler whom many consider to have been ancient Egypt's greatest pharaoh, and question the reliability of sources that portray him as such a great leader.

TUNE IN

tlvd-10511

Rameses II is often regarded as the greatest of all pharaohs. However, does the evidence support this stance?

SOURCE 1 A painted limestone panel showing the great New Kingdom pharaoh Rameses II striking bound prisoners of war



1. Describe what Rameses II is doing in the painted limestone panel shown in **SOURCE 1**.
2. How would such actions by a political leader be regarded today?
3. How do you think they would have been regarded in ancient Egypt?

5.9.1 Who was Rameses II?

You have already encountered several rulers of ancient Egypt in this topic. They include Narmer, the first pharaoh of both Upper Egypt and Lower Egypt; Khufu, for whom the Great Pyramid was built; and Tutankhamun, who became famous because his tomb was discovered with its contents untouched. However, many historians have regarded Rameses II, who ruled Egypt between c. 1279 and 1212 BCE, as the greatest of all pharaohs.

Rameses II (sometimes spelled *Ramses* and *Ramesses*) was probably born about 1303 BCE. He was a son of King Seti I. Rameses was in his early twenties when he became Egypt's ruler. He held that position for longer than any other pharaoh. Because of his military campaigns and building projects, including temples and cities, he became known as Rameses the Great.

SOURCE 2 The head of the colossal statue of Rameses II at the Temple of Luxor in central Egypt

The warrior king

In about 1278 BCE, Rameses' navy defeated the sea pirates who had been attacking Egyptian trading ships in the Mediterranean Sea. Rameses commanded an army of possibly 100 000 men. He gained fame through many battles in which Egypt fought the Hittite Empire to its north and the Nubians to its south. During these campaigns, Rameses' forces repelled invasions, regained territories Egypt had lost under previous pharaohs and secured Egypt's borders.

vassal state a state whose ruler recognises another, more powerful ruler as overlord

stalemate a situation in a contest or conflict in which neither side can defeat the other

5.9.2 Fighting the Hittites

tlvd-10512

Over 20 years, from about 1277 BCE, Rameses led a series of campaigns against the Hittite Empire. In the first campaign, Rameses defeated several Palestinian princes and captured Amurra, a **vassal state** of the Hittite Empire in Syria.

SOURCE 3 This relief sculpture in Luxor shows Hittite soldiers being crushed under the wheels of Rameses II's chariot at the Battle of Kadesh.

In the following year, Rameses led his armies to attack the Hittite-controlled city of Kadesh. His army consisted of four divisions, with Rameses personally leading the Amun division. However, the waiting Hittite army ambushed another Egyptian division as it was crossing a river, causing the soldiers to flee. According to Egyptian records, in the ensuing battle, Rameses found himself isolated from his forces but, almost single-handed, he defeated an overwhelming Hittite force, killing vast numbers as he escaped (see **SOURCE 4**). Although the Battle of Kadesh was a **stalemate** and the Hittites remained in Syria, Rameses declared the battle a great Egyptian victory.

In later campaigns, spread between the seventh and twenty-first years of his reign, Rameses captured Hittite territory. But neither side was able to win a decisive victory and, in about 1258 BCE, the conflict ended with a peace treaty.

Great ruler or great bragger?

aud-0423

Historians have a vast number of primary sources about Rameses' achievements because, more than any other pharaoh, he was a great builder of monuments that glorified his deeds. Enormous numbers of huge statues were constructed, portraying him as a handsome, smiling and powerful ruler. At his temple at Abu Simbel, each of the four statues of Rameses II carved out of the face of a cliff is almost 20 metres tall. Records of his exploits, including scenes of him crushing the Hittites, were engraved deeply on monuments and temples throughout Egypt. So great was his reputation that nine future pharaohs took his name.

SOURCE 4 From a poem inscribed by order of Rameses II on the walls of five temples to commemorate his victory at Kadesh

In the midst of many peoples, all unknown,

Unnumbered as the sand,

Here I stand,

All alone;

There is no-one at my side;

My warriors and chariots afeared [frightened],

Have deserted me . . .

. . . Two thousand and five hundred pairs of horses were around,

And I flew into the middle of their ring,

By my horse-hoofs they were dashed all in pieces to the ground . . .

tlvd-10513

SOURCE 5 Rameses II in a detail from sculptures and hieroglyphs on his temple at Abu Simbel

DID YOU KNOW?

During the 1960s, an international operation was conducted to save the temple at Abu Simbel and its statues. The entire site was carefully cut into sections and moved to higher ground. This was done to save it from being submerged beneath the rising water behind Egypt's new Aswan High Dam.

5.9 SKILL ACTIVITY: Using historical sources, Historical perspectives and interpretations

One of the important skills we develop as historians is how to determine significance and *who* decides. To decide how significant individual people were, we use criteria. We can develop questions around these criteria such as:

- What role did they play in society? Was it an important role?
- What were their achievements?
- What impact did these achievements have? For example, did they change society or the course of history?
- What influences made them who they were?
- How do we know about these people and how *trustworthy* is this information?
  - How were they perceived by others at the time? Did different people see them differently? Why?
  - How did they represent themselves?
  - Have different historians from different cultures interpreted their significance differently over time? Why?
- How do we perceive these people today through the lens of our own time and place?

Some writers have been unquestioning in accepting Rameses' propaganda as fact. The extract shown in **SOURCE 6** from online website Military History Matters is an example of this. Other writers are more sceptical, as shown in the extract in **SOURCE 7**.

SOURCE 6 From 'Ramesses II — the greatest leader of all time?' on Military History Matters website

Ramesses had walked blindly into a Hittite trap. With little warning, a huge detachment of 2500 Hittite chariots descended on the division of Ra as it marched toward the camp . . . Egyptian survivors of the initial assault fled in disarray as the Hittites poured into the Egyptian camp. Yet it was at this point, as the pharaoh stood alone and defeat seemed certain, that Ramesses proved his worth. He leapt into his war chariot and personally drove back the Hittite advance from the camp. As the Hittites faltered, they were hit by a second setback. Egyptian reinforcements had been sent by sea and fortuitously in time to help Ramesses repel the Hittites.

SOURCE 7 From 'Rameses II' entry in the online *World History Encyclopedia*

The reign of Rameses II has become somewhat controversial in the last century, with some scholars claiming he was more of a showman and a propagandist than an effective king, and others arguing the opposite. The records of his reign, however — both the written and the physical evidence of the temples and monuments — argue for a very stable and prosperous reign.

TASK

Analyse the information about Rameses provided in this lesson and **SOURCES 6** and **7** by filling in the table. You only need to provide a sentence for each.

	By himself	By the Military History Matters website	By the *World History Encyclopedia*
How was Rameses II represented?			
Why was he represented that way?			

	By himself	By the Military History Matters website	By the *World History Encyclopedia*
Was the representation from a reliable or unreliable source?			

5.9 Exercise

learnon

5.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 5, 6	2, 4, 8	7, 9, 10

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Check your understanding

1. **Identify** the enemy group that was not defeated under Rameses II.
   - A. Nubians
   - B. Assyrians
   - C. Hittites
   - D. Mediterranean pirates
2. **Explain** why he came to be known as Rameses the Great.
3. Rameses II's forces fought the Nubians at the Battle of Kadesh. True or false?
4. **Discuss** whether the Battle of Kadesh was really an Egyptian victory. **Justify** your response.
5. In 1258 BCE the conflict with the Hittites ended with a _____ _____.

Apply your understanding

Using historical sources

6. Study **SOURCE 2**. **Describe** the impression of Rameses II that is conveyed by this colossal head and **explain** why he would have wanted to be portrayed this way.
7. Look at **SOURCE 3** and read **SOURCE 4**.
   - a. According to **SOURCE 3**, what happened to Hittite soldiers at the Battle of Kadesh?
   - b. According to **SOURCE 4**, why were Rameses II's soldiers not at his side, how many enemies did he face and how did he defeat them?
   - c. Do **SOURCE 3** and **SOURCE 4** give conflicting or supporting evidence?
   - d. Are these sources reliable or unreliable? Give reasons for your answer.
   - e. How might the soldiers who fought for Rameses II have felt about what was inscribed in **SOURCE 4**?
8. All four sources in this lesson and most other primary sources about Rameses II were produced on his orders. **Propose** any problems this may create for historians.
9. **Place** the main events of Rameses II's life on a timeline.
10. Using **SOURCES 4** and **5**, **describe** how Rameses II wished to be remembered.

LESSON
5.10 What should we thank the Egyptians for?

LEARNING INTENTION

By the end of this lesson you should be able to describe some ancient Egyptian inventions that we still use today.

TUNE IN

Shown in **SOURCE 1** is an Ancient Egyptian invention we still use every day.

SOURCE 1 What is shown here?

1. What do you think **SOURCE 1** might be?
2. How do you think the circle shapes might connect to its function?

5.10.1 Paper

The Egyptians made the first ink and discovered how to make paper from papyrus, which grew along the banks of the Nile.

SOURCE 2 Papyrus from the *Book of the Dead* (c. 1310 BCE)

5.10.2 Make-up

The Egyptians invented cosmetics and hygiene products such as the toothbrush and breath mints. Ancient Egyptians invented eye make-up around 4000 BCE. They mixed together soot and a mineral called galena to make black eyeliner, which was even used as an insect repellent. Green eye shadow was made by powdering a mineral called malachite. Both noble men and women wore make-up.

5.10.3 The calendar

The Egyptians invented a 365-day calendar, separated into 12 months just like ours today. Each month was 30 days, with five extra days added to the end of the year. The calendar was used to help the ancient Egyptians predict when the Nile would flood, which was essential to their agriculture. (A calendar is what is shown in **SOURCE 1**).

5.10.4 Mathematics

While some say that the ancient Egyptians invented mathematics, that is not entirely true. Many other ancient cultures also invented some form of mathematics, including ancient Africans from the Congo, the Sumerians, Chinese, Indians and Mayans. This knowledge was likely shared between some of these cultures when they came into contact and passed down over time. The ancient Egyptians certainly put their mathematical skills to work on their incredible engineering feats — such as the pyramids, which could not have been built without mathematics. As the only one of the seven 'Ancient Wonders of the World' that still remains, the Great Pyramid is probably Egypt's greatest legacy, drawing thousands of tourists to the country each year.

SOURCE 3 Pyramids at Giza. The Great Pyramid of Khufu towers above the others.

SOURCE 4 Princess Nefertiabet eating (2589–2566 BC). You can see Egyptian numbers on the right panel.

5.10 SKILL ACTIVITY: Communicating

When we look back to how people lived thousands of years ago, it might seem like no connection exists between them and us. However, if we look a little more closely, we might also see that, in some ways, we are very similar. Next time you brush your teeth, thank the ancient Egyptians!

TASK

Work in small groups and **choose** one ancient Egyptian invention that we still use today.

1. **Conduct research** and make notes on the development of this invention over the ages.
2. **Create** a visual timeline to show how this invention has changed over time, and display it in your classroom.
3. Could you live without this invention? **Explain** your answer.

5.10 Exercise

learnon

5.10 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6	7, 8

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Check your understanding

1. **List** four ancient Egyptian inventions.
2. The ancient Egyptians made paper out of _____.

3. **State** if the following are true or false.
   a. Only noble women wore make up.
   b. Egyptians were the first to invent mathematics.
   c. The Egyptian calendar is exactly the same as our calendar today.
4. The calendar was used to help the ancient Egyptians predict when the Nile would **dry out** / **flood** / **calm**, which was essential to their **worship** / **washing** / **agriculture**.
5. 'The pyramids could not have been built without mathematics'. **Explain** what you think this means.

Apply your understanding

Questioning and researching

6. **Create** a list of five questions you would like to ask about any of the sources shown in this lesson.

Using historical sources

7. Look at **SOURCE 2**. **Propose** how you think the ancient Egyptians created the colours you can see if they didn't have access to art supplies.

Communicating

8. In your opinion, what is the most significant Egyptian invention or legacy of ancient Egypt? **Explain** your answer in a short paragraph.

LESSON
5.11 INQUIRY: Powerful women — how have they been recorded and treated in history?

LEARNING INTENTION

By the end of this lesson you should be able to use the inquiry process to investigate a question about how women in leadership have been recorded and treated in history.

Background

Throughout history women, and especially women in leadership positions, have been treated differently to their male counterparts.

In this lesson you will compare the pharaoh Hatshepsut with modern Australian leader Juila Gillard. You may also consider other female leaders.

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task you can use this rubric to self-assess.

Inquiry steps

Step 1: Questioning and researching

Look at the primary sources provided. What would you like to investigate further? **Write** an inquiry question using these sources as inspiration.

SOURCE 1 An inscription in the pharaoh Hatshepsut's mortuary

Then his majesty said to them: this daughter of mine . . . I have appointed as my successor upon my throne . . . she shall direct the people . . . it is she indeed who shall lead you. Obey her words.

SOURCE 2 As in this statue, Hatshepsut was usually represented in drawings, paintings and sculpture as a man, with a false beard.

SOURCE 3 Defaced relief of Hatshepsut in the temple of Amun

SOURCE 4 Australia's first female prime minister, Julia Gillard

SOURCE 5 Protest outside Parliament House against Gillard and Labor Party policy, 2011

Step 2: Using historical sources

Read the secondary source provided and highlight the parts that answer your question.

aud-0424

SOURCE 6 Analysis of Hatshepsut by historian Robert Darlington

Hatshepsut becomes a pharaoh

Although women in ancient Egypt generally had more rights than in other ancient societies, the leaders of ancient Egypt were nearly all male. Before Hatshepsut, only three women had ruled the land.

The only circumstance in which a woman could become ruler was if the pharaoh died before the heir to throne was old enough to rule. In that case, the Chief Royal Wife could act as regent. This meant that she would be a temporary ruler on behalf of the heir. If there was no heir, the Chief Royal Wife could rule as pharaoh.

Hatshepsut was the daughter of Thutmose I (who ruled Egypt c. 1506 BCE–1493 BCE). As was common in Egyptian royal families, she married her half-brother, who became Thutmose II and ruled from c. 1493 to 1479 BCE. When her brother died in 1479 BCE, his son Thutmose III was just three years old. This meant that Hatshepsut was able to become regent, ruling on his behalf.

When Thutmose III was about eight years old, Hatshepsut arranged to have herself crowned as pharaoh. She and Thutmose III became co-rulers of Egypt. Hatshepsut made two claims in support of her right to the throne. She claimed that her father, Thutmose I, had appointed her to succeed him as ruler. She also claimed to be the daughter of the god Amun. Hatshepsut and Thutmose II ruled together until 1458 BCE.

Achievements

Hatshepsut is believed to have brought wealth to Egypt, particularly through trade in gold, ebony and incense. She led Egypt's armies — on at least one occasion against Nubia. She had grand structures built that still stand, including her mortuary temple at Deir El Bahri. However, after her death in 1458 BCE, her images were chiselled off some walls, many of her statues were smashed and an attempt was made to remove her from the records of pharaohs.

If your question wasn't answered in SOURCE 6, **research** your question online. Also use the **Hatshepsut** and **Hatshepsut — The pharaoh that wouldn't be forgotten** weblinks in the Resources tab to get you started.

Step 3: Historical perspectives and interpretations

Explain what these sources tell you about the difficulties faced by a female leader in ancient Egypt and a female leader in 21st century Australia. Are things changing?

Step 4: Communicating

What is the answer to your inquiry question? Support your answer with examples from your research. **Present** your findings to your class in a format of your choice.

Complete your self-assessment using the **Inquiry rubric** or access the 5.12 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39371)

Weblinks Hatshepsut
Hatshepsut — The pharaoh that wouldn't be forgotten Ted Ed

LESSON
5.12 Review

Hey students! Now that it's time to revise this topic, go online to:

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5.12.1 Key knowledge summary

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

5.2 How do we know about ancient Egypt?

- Scholars have been able to read ancient Egyptian written primary sources since the code for hieroglyphs was broken in the nineteenth century.

5.3 Why was the Nile so important?

- Civilisation could never have developed in Egypt without the Nile.
- The annual flooding of the Nile provided fertile soil for farming.
- The Nile also provided a transport route, defence and was linked to gods

5.4 What was Egyptian society like?

- Egyptian society was layered like a pyramid.
- Pharaohs had enormous powers but also enormous responsibilities.
- Most ordinary people were peasants but others were engaged in a variety of skilled occupations.
- Women had fewer rights than men but more rights than women in most other ancient societies.

5.5 What did ancient Egyptians believe?

- Ancient Egyptians had many different gods.
- They believed in an afterlife and buried possessions they might need in that afterlife.
- Mummification was a complex process that was carried out with great care wherever possible.
- Burial customs have provided most of our evidence for ancient Egypt.

5.6 What's the truth about the pyramids?

- During the Old Kingdom, pyramids were built to house the mummies of pharaohs.
- The Egyptians built them with tools made of stone, wood and bronze.
- Because the contents of the pyramids were robbed, later pharaohs were entombed in the Valley of the Kings.

5.7 Who were Tutankhamun, Akhenaten and Nefertiti?

- Tutankhamun's tomb is highly significant because, unlike tombs of greater pharaohs, its contents had not been robbed.
- Before Tutankhamun's reign, Akhenaten carried out a religious revolution, decreeing that Egyptians must worship Aten above all other gods.
- Nefertiti was Akhenaten's first wife and a woman of great influence in ancient Egypt.

5.8 What were the effects of war and trade?

- Egypt's relations with other countries involved trade and war.
- During times of strength, Egypt drove out invaders and dominated other lands.
- During times of weakness and division, Egypt suffered invasions.

5.9 Rameses II — Egypt's greatest pharaoh?

- Rameses II has been regarded as Egypt's greatest pharaoh because of his military achievements and the monuments glorifying him.
- His greatness is contestable mainly because the evidence of it was constructed on his orders.

5.10 What should we thank the Egyptians for?

- The ancient Egyptians invented many things we still use today, such as paper, make-up, a 365-day calendar and mathematics.

5.11 INQUIRY: Powerful women — how have they been recorded and treated in history?

- Hatshepsut was one of very few Egyptian women to achieve the rank of pharaoh.
- After her death in 1458 BCE, however, her images were chiselled off some walls, many of her statues were smashed and an attempt was made to remove her from the records of pharaohs.

5.12.2 Key terms

amulet charm believed to protect against evil
artisans skilled craftspeople
Asiatic peoples of Asia, including the Middle East
canopic jars used to store the liver, lungs, intestines and stomach of the person being mummified
cataracts rapids, where the river's surface is broken by rocks
civil war war between rival factions within one state or country
deity god or goddess
delta low, triangular area where a river fans out as it nears the sea
demotic script the simplest of the ancient Egyptian scripts; almost like handwriting
Great Pyramid the oldest and largest pyramid in Egypt; one of the Seven Wonders of the Ancient World
Great Sphinx monument with the body of a lion and the face of a man; located in Giza near the Great Pyramid
hieratic script Egyptian script that was less decorative and complex than hieroglyphs
Inundation the seasonal flooding of the Nile
mercenary person who fights for a foreign country for money or other rewards
mummy body that has been embalmed
natron a mineral salt used to dry out dead bodies
papyrus paper made from crushing reeds
sarcophagus stone or wooden coffin (often inscribed or decorated) in Egypt
shadoof irrigation device used to lift water from the river
stalemate a situation in a contest or conflict in which neither side can defeat the other
Valley of the Kings gorge on the Nile in Upper Egypt that contains many royal tombs
vassal state a state whose ruler recognises another, more powerful ruler as overlord

5.12.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview.

How do we know about ancient Egypt, and what were its defining features, achievements and legacies?

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

eWorkbooks Customisable worksheets for this topic (ewbk-10493)
Reflection (ewbk-10497)
Ancient Egypt crossword 1 (ewbk-10495)
Ancient Egypt crossword 2 (ewbk-10496)
Interactivity Ancient Egypt crossword (int-7693)

5.12 Review exercise

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Multiple choice

1. In Egypt the Inundation was which of the following?
   - **A.** A temple
   - **B.** An annual period of flooding
   - **C.** A bucket used for irrigation
   - **D.** A writing tool
2. The Nile is formed by the joining of which two rivers?
   - **A.** The Murray and Darling
   - **B.** Green Nile and Yellow Nile
   - **C.** Red Nile and Black Nile
   - **D.** White Nile and Blue Nile
3. After the pharaoh, who was the next most powerful official?
   - **A.** The president
   - **B.** The prime minister
   - **C.** The vizier
   - **D.** The lord high executioner
4. Who were included as skilled artisans in ancient Egypt?
   - **A.** Peasants and slaves
   - **B.** Stone masons and paper makers
   - **C.** Scribes
   - **D.** Nobles and priests
5. Which of the following women ruled Egypt as pharaoh from 1479 to 1458 BCE?
   - **A.** Nefertiti
   - **B.** Cleopatra
   - **C.** Hatshepsut
   - **D.** Neber
6. The Great Pyramid was built during which of these periods of ancient Egyptian history?
   - **A.** The Old Kingdom
   - **B.** The First Intermediate Period
   - **C.** The Middle Kingdom
   - **D.** The Second Intermediate Period

7. In ancient Egypt, a woman's social rank depended on the rank of which of these?
   - **A.** Her mother and father
   - **B.** Her brother or sister
   - **C.** Her cousins
   - **D.** Her husband or son
8. Which of the following gods were associated with death, tombs and the afterlife?
   - **A.** Seth and Horus
   - **B.** Osiris and Anubis
   - **C.** Isis and Hathor
   - **D.** Amun-Ra and Thoth
9. When a body was mummified, where were most internal organs stored?
   - **A.** Refrigerators
   - **B.** Cupboards
   - **C.** Cellars
   - **D.** Canopic jars
10. Why was the tomb of Tutankhamun a significant archaeological find?
    - **A.** Tutankhamun was a powerful pharaoh.
    - **B.** The tomb was enormous.
    - **C.** It was the only royal tomb that had not been robbed.
    - **D.** There was a curse on the tomb.

Short answer

Using historical sources

11. Look closely at **SOURCE 1**. During the time of the Roman Empire, this obelisk was taken from Egypt and placed in a public area in Constantinople (now Istanbul).
    - **a.** Referring to the symbols in lesson 5.2, see if you can identify some of the hieroglyphs.
    - **b.** What does the transporting of this enormous obelisk from Egypt to Constantinople suggest about Roman attitudes to Egyptian culture?

Communicating

12. Thinking back to the sources in this topic, briefly **summarise** one type of evidence we have of ancient Egyptian life and **explain** what it tells us.
13. **Describe** the ancient Egyptian approach to death and the afterlife.
14. **Explain** why there are differing opinions on the greatness of Rameses II.
15. In a paragraph, **discuss** the value of the Nile to ancient Egyptians.

SOURCE 1 A section of a huge Egyptian obelisk engraved in neat hieroglyphs

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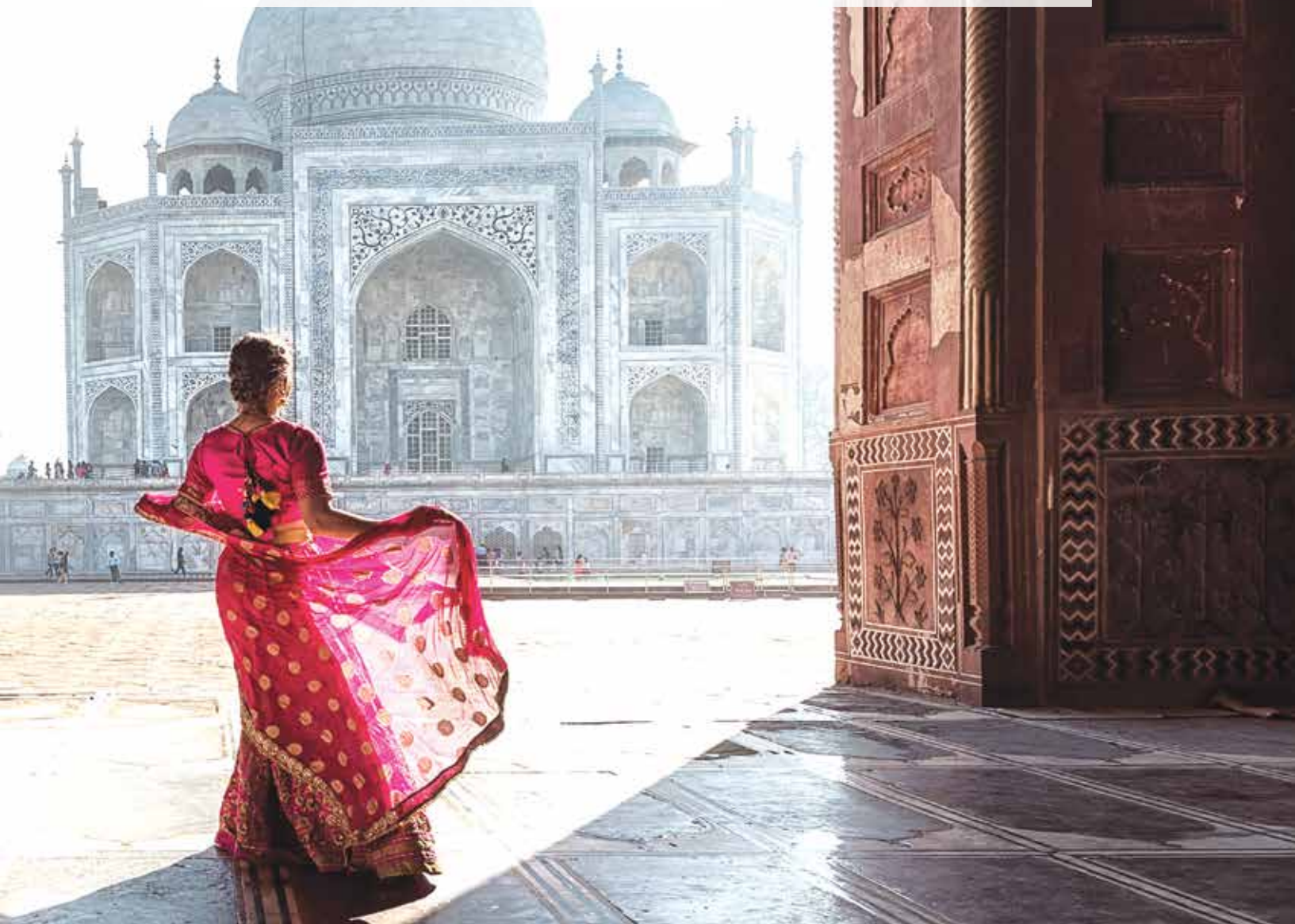
6 Ancient India

LESSON SEQUENCE

online only

6.1 Overview
6.2 How do we know about ancient India?
6.3 What is the geography of India?
6.4 What are the lost cities of the Indus Valley?
6.5 What contacts and conflicts did ancient India experience?
6.6 What was significant about the Mauryan Empire?
6.7 Who was Ashoka the Great?
6.8 What was the social structure of ancient India?
6.9 INQUIRY: What was behind Ashoka the Great's sudden change in leadership style?
6.10 Review



LESSON
6.1 Overview

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How did society change during the Indus Valley Civilisation?

6.1.1 Introduction

With more than 1.3 billion people, India has the world's second largest population. India's economy is growing rapidly and in 2020 was ranked by the International Monetary Fund as the world's sixth largest. Yet, while some Indians have become wealthy, terrible poverty still exists. Approximately 15 per cent of all Indians are undernourished. This may not seem like a significant percentage, but when you consider that 15 per cent of 1.3 billion is 195 million people, you can see how serious the problem of hunger is in India.

India has also become an important trading partner for Australia. Large numbers of Indians have migrated to Australia, and many Indian students study at Australian colleges and universities.

When we speak of ancient India, we refer to the Indian subcontinent. Along with modern India, the subcontinent includes modern-day Pakistan, Bangladesh, Sri Lanka, Nepal and Bhutan. In ancient times, these modern states did not exist. Great civilisations emerged on the Indian subcontinent, and some of their customs have survived to the present day.

SOURCE 1 Men on camels in traditional dress, taken at the Desert Festival in 2013 at Jaisalmer, India

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10518)

Video eLesson Ancient India (eles-1839)

int-4297

SOURCE 2 A timeline of ancient India

BCE

3000

c. 3000 BCE
The Indus Valley Civilisation is established.

2500

c. 2500 BCE
The cities of Harappa and Mohenjo-daro are built.

2000

c. 1600 BCE
The Aryans invade India.

1500

c. 1100 BCE
Iron is first used in India.

c. 750 BCE
Indo-Aryans rule 16 great states in northern India.

1000

c. 527 BCE
Prince Siddhartha Gautama becomes the Buddha.

500

c. 327 BCE
Alexander the Great of Macedon invades India.

304 BCE
The Mauryan Empire is founded.

259 BCE
The Mauryan emperor Ashoka converts to Buddhism.

BCE
CE

220 BCE
The *Mahabharata*, a famous Hindu epic, is composed.

200 CE
Hindus are divided into four main castes under the Manu code.

320 CE
The Gupta Empire is launched.

500

528 CE
The Gupta Empire collapses.

1000

CE

LESSON
6.2 How do we know about ancient India?

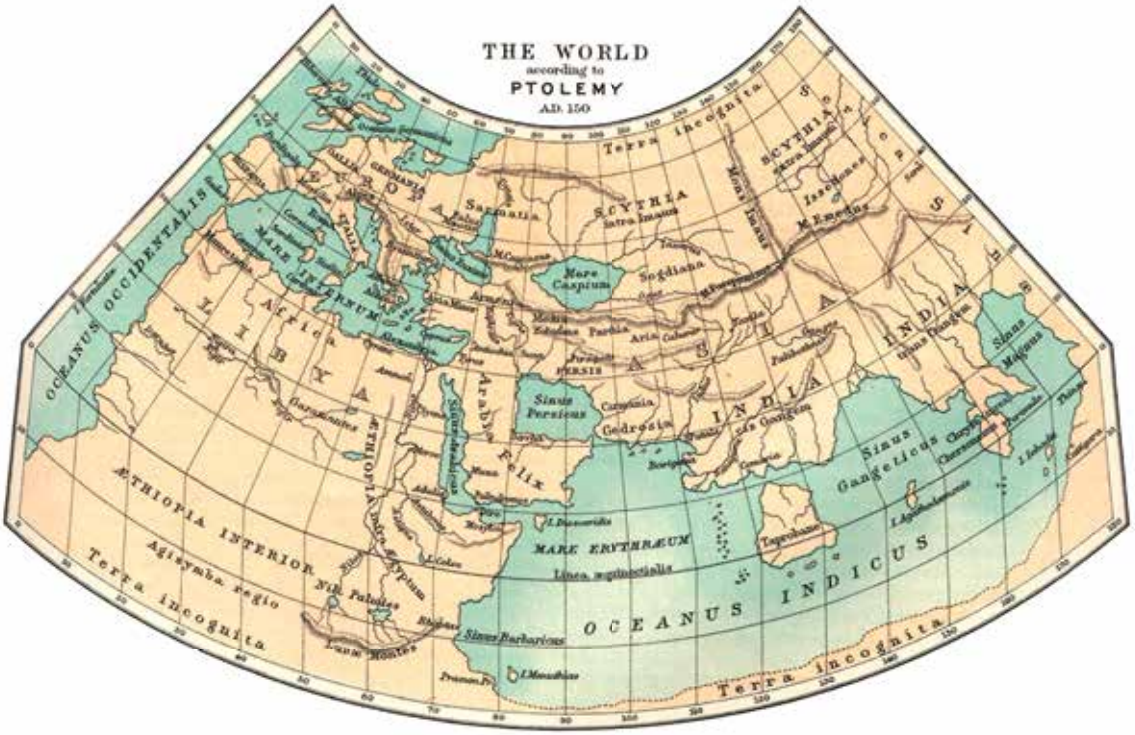
LEARNING INTENTION

By the end of this lesson you should be able to describe the types of historical sources that inform us about ancient India.

TUNE IN

Think about everything you already know about ancient India.

SOURCE 1 A reconstruction of the Greek mathematician Ptolemy's map of the world, which he drew about 150 CE



1. Brainstorm and write a list of all the things you already know, including aspects such as customs, food and traditions. Don't worry if you can't remember all the names, events or people — just write as many points down as you can. You may like to do this activity with a classmate.
2. Discuss your lists as a class. Do you notice any similarities?

6.2.1 How do we know about ancient India?

Ancient India has a rich history spread over more than 3500 years. Over this time, many different civilisations have cast their influence over the subcontinent. The oldest of these, the Indus Valley Civilisation, originated in what is now known as Pakistan. Archaeologists know far more about later ancient Indian civilisations than they do about the Indus Valley. This is largely because the first Indus Valley ruins were only discovered by archaeologists in 1921. Until this time, the remnants of this incredible culture lay hidden for thousands of years.

Finding artefacts, records and information about many ancient civilisations is extremely difficult. The main forms of information about ancient civilisations come from pottery, engraved stone artefacts and the walls of ancient structures. Some civilisations, such as those from Rome, Greece, Egypt and China, have left behind a considerable legacy of large-scale artefacts. The records we have from other civilisations, such as the Indus Valley, have been more difficult to find. We first became aware of the Indus Valley when archaeologists began to unearth two of its cities in 1921. Before this time, no-one knew that these were the ruins of a very ancient civilisation. Most of what we now know about the Indus Valley Civilisation has come from the excavation of three important sites: Harappa, Mohenjo-daro and Lothal. These ancient cities are examined later in this topic.

Evidence from other civilisations

We also have evidence of connections between ancient India and other civilisations. King Darius I of Persia is believed to have sent Greek explorer Scylax of Caryanda on a voyage to the East. On this voyage, Scylax travelled down the Ganges until it emptied into the Indian Ocean. Later, Alexander the Great conquered the Persian Empire in 334 BCE and then set his sights on India. Although his conquests were short-lived, they were significant enough to influence Buddhist art in northern India. Before Greek exploration, the Buddha was never depicted in human form. It is thought that the Greek focus on natural and realistic art influenced Indian artists to create **anthropomorphic** depictions of Buddha (see **SOURCE 3**).

anthropomorphic describing or representing something as having human traits, despite its original lack of these characteristics

SOURCE 2 From *The Histories* by the Greek historian Herodotus, written about 440 BCE

[The Indians of the north-west] go out to fetch gold — for in this region there is a sandy desert . . . the sand has a rich content of gold . . . There is found in this desert a kind of ant of great size — bigger than a fox, but not so big as a dog . . . [These] Indians plan their timetable so as to actually get their hands on the gold during the hottest part of the day, when the heat will have driven the ants underground . . . When the Indians [on their camels] reach the place where the gold is, they fill the bags they have brought with them with sand, and start for home again as fast as they can go; for the ants (if we may believe the Persians' story) smell them and at once give chase; nothing in the world can touch these ants for speed, so not one of the Indians would get home alive if they did not make sure of a good start while the ants were mustering their forces.

SOURCE 3 Humanesque depiction of Buddha from Gandhara

SkillBuilders to support skill development

- 1.12 SkillBuilder: Analysing different perspectives about ancient India

6.2 SKILL ACTIVITY: Using historical sources

1. **Compare** the map in **SOURCE 1** to a modern map of the same area.
2. **Create** and complete a table (similar to the one provided) that lists the similarities and differences you can identify.

	The world according to Ptolemy (AD 150)	Modern map
Similarities		
Differences		

6.2 Exercise

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6.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 6, 7	4, 5, 8	9, 10

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Check your understanding

1. The Indus Valley Civilisation originated in which modern-day country?
   - A. India
   - B. Afghanistan
   - C. Pakistan
   - D. Nepal
2. Archaeologists first discovered the Indus Valley ruins in the year _____.
3. **Identify** where the main forms of information about ancient civilisations come from. Select all that apply.
   - A. Paintings
   - B. Pottery
   - C. Songs and poems
   - D. Engraved stone artefacts
   - E. Walls of ancient structures
4. **State** one reason not a lot of records remain of the Indus Valley Civilisation.
5. **Recall** what influenced the creation of anthropomorphic depictions of Buddha.

Apply your understanding

Using historical sources

6. Engravings from religious buildings provide much of the archaeological evidence we have from ancient India. **Name** three strengths and three weaknesses of this form of evidence
7. Read **SOURCE 2**.
   - a. **Recall** the observations Herodotus makes about India and its culture.
   - b. **Evaluate** the accuracy of these observations.
8. Describe the depiction of the Buddha as shown in **SOURCE 3**. Explain how this depiction differs from those seen in India before contact with the Greeks.
9. a. **Compare SOURCE 1** to a modern map of India. **Identify** and **describe** the key differences.
   b. **Identify** one reason for the differences between Ptolemy's map and a modern map.
10. **Name** three key cities of the Indus Valley Civilisation. **Propose** reasons these cities are no longer as important to India as they once were.

LESSON
6.3 What is the geography of India?

LEARNING INTENTION

By the end of this lesson you should be able to describe India's unique geographic characteristics and explain the impact they had on early Indian civilisations.

TUNE IN

The places where people choose to live are anything but random. When deciding where your family would live, your parents probably considered a number of factors including schools, proximity to family and friends, proximity to public transport and general safety.

The factors that people in ancient times would have thought about were *very* different.

1. Brainstorm the geographic characteristics that would have been favourable in ancient times that would have enabled the development of permanent civilisations.
2. Discuss your own town. Do you think it was built in a good place?

SOURCE 1 What features make a place desirable?

6.3.1 Region and climate

The modern nation of India is the seventh largest country in the world. This in itself is impressive. However, if you add the other modern nations that were once part of greater India — including Pakistan, Bangladesh and the island state of Sri Lanka — the Indian land mass is bigger still. It is so big that the region is often called the Indian subcontinent. A subcontinent is a large land mass attached to a **continent**. In the case of the Indian subcontinent, the land mass is attached to the continent of Asia.

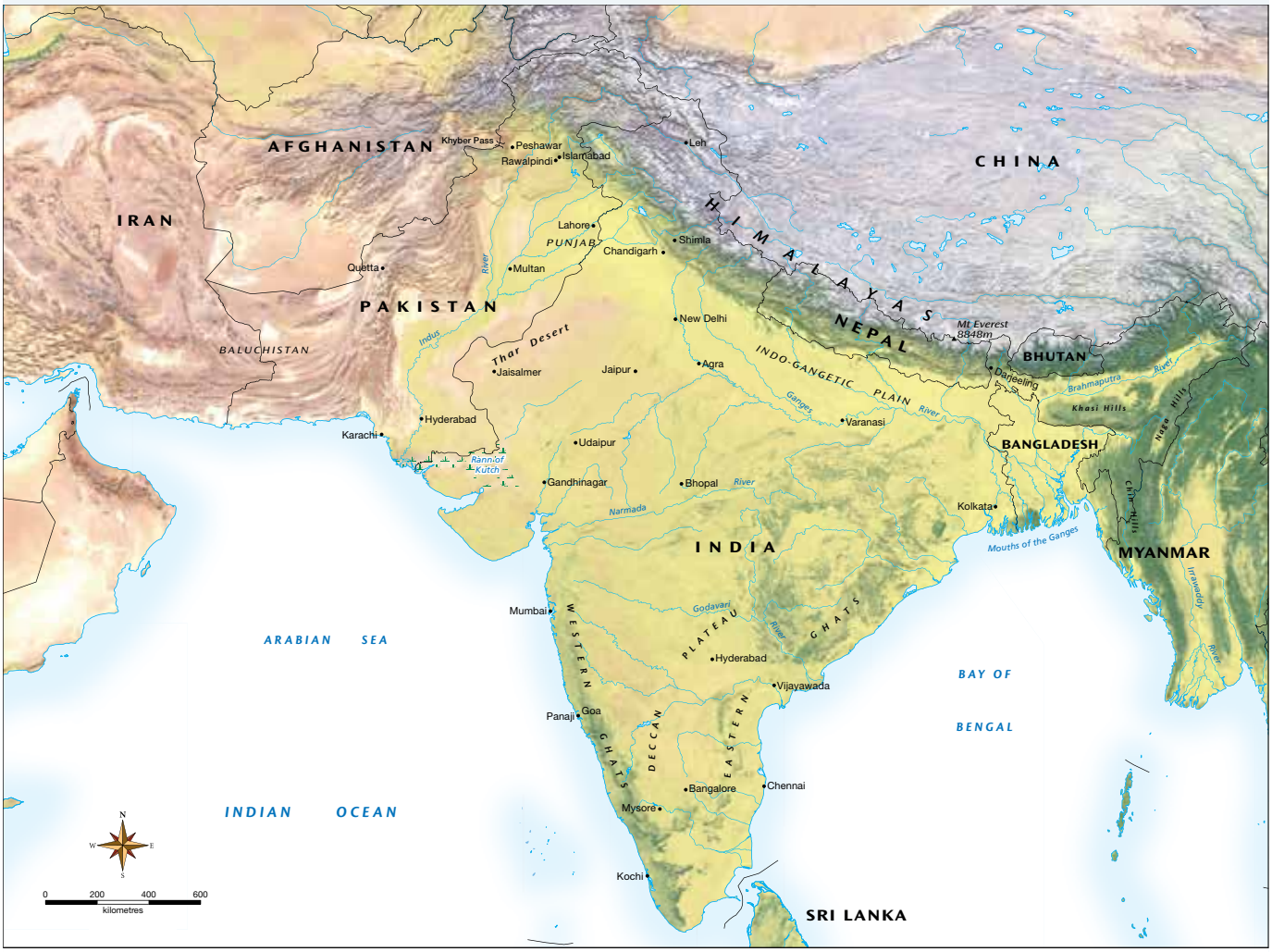
The Indian subcontinent is made up of three geographical regions: the Indian Himalayan Region, the Indo-Gangetic Plain and the Deccan Plateau.

The Indian Himalayan Region is part of the Himalayan mountain range. These mountains are the highest in the world and their snow-capped peaks feed into three of the subcontinent's major rivers — the Ganges, the Brahmaputra and the Indus. As it reaches the Bay of Bengal, the Ganges forms a 350 kilometre wide delta.

The Indo-Gangetic Plain is a flat, well-watered area. It is the most fertile and densely populated region of the subcontinent. Its western section is drier, merging into the Thar Desert.

continent one of seven very large, continuous bodies of land; they are Europe, Asia, Africa, Antarctica, Australia, North America and South America

SOURCE 2 A map of the Indian subcontinent



Source: Spatial Vision

The Deccan Plateau in the south is rocky and barren. Farmers here use the rivers to water their crops. Unlike the rivers of northern India, these southern rivers depend on **monsoon** rains to fill their banks.

Given its vast size and varied terrain, the Indian subcontinent has a wide range of weather patterns. The seasonal monsoons also influence its climate. Each year has six seasons: summer, autumn, winter, spring, summer monsoon and winter monsoon. In the Himalayan north, winters may be freezing and, in some areas, summers are cool. In the central and southern areas of the subcontinent, the tropical climate produces temperatures ranging from warm to hot, with some inland areas reaching as high as 50 °C in summer.

India's geographical features had a strong influence on the location of its ancient civilisations. They developed mainly along river valleys that provided reliable water supplies, fertile soils for growing crops and access to the sea for trading. Such conditions were also seen in some of the world's great early civilisations, including ancient Iraq and Egypt.

monsoon rainy season accompanied by south-westerly summer winds in the Indian subcontinent and South-East Asia

6.3 SKILL ACTIVITY: Communicating

Your task is to inform others about the geography of India in a clear and interesting way.
Using your atlas, **create** a blank outline map of India.
Conduct **research** to label the following:

a. major geographical features (rivers, mountain ranges, plateaus, deserts)
b. main areas of food production
c. major cities
d. two areas of high population density and two areas of low population density.

Use clear, coloured labels to ensure your audience understands what features you are pointing out. You may also like to use icons or images in your map to add interest.

Present your map to the class and **explain** the features you've added.

6.3 Exercise

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6.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 6	2, 4, 5, 7	8, 9, 10

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Check your understanding

1. What is a subcontinent?
   - **A.** A small part of a continent
   - **B.** A continent
   - **C.** A country in a continent
   - **D.** A very large land mass attached to a continent
2. **Name** the nations that make up the Indian subcontinent.
3. **Identify** the three regions of the Indian subcontinent.
   - **A.** Asian Pacific Region
   - **B.** Indian Himalayan Region
   - **C.** Indo-Gangetic Plain
   - **D.** Nepalese Himalayan Region
   - **E.** Deccan Plateau
4. **Name** the three main rivers of the Indian subcontinent.
5. The _____ Region tends to be cool to cold, while the Indo-Gangetic Plain and the _____ are warm to hot.

Apply your understanding

Using historical sources

6. Look closely at **SOURCE 2**. Calculate the distance of the Indian subcontinent from east to west and from north to south.
7. Given the size of the Indian subcontinent and the variety in terrain and climate, do you think it possible that its population could share the same language and culture? **Explain**.

Historical perspectives and interpretations

8. **Describe** the role that rivers played in India's early history.
9. **Explain** what other geographic features, besides rivers, influenced the development of ancient Indian civilisations.
10. **Explain** how the rivers of the Indian subcontinent might have helped to develop a civilisation based on farming.

LESSON
6.4 What are the lost cities of the Indus Valley?

LEARNING INTENTION

By the end of this lesson you should be able to describe the cities of Harappa and Mohenjo-daro and the people who lived there, and explain how the Indus Valley Civilisation ended.

TUNE IN

The mysteries of the Keeladi Civilisation

In 2013, archaeologists made some surprising discoveries near the town of Keezhadi in Southern India. Included in these discoveries were pottery, wells and an incredibly well preserved iron dagger with a wooden handle. The finds at Keezhadi were linked to the Keeladi Civilisation, which is thought to have existed around the same time as the Indus Valley Civilisation. When archaeologists discover artefacts, they often need to make educated assumptions as to the probable use of these artefacts.

The photograph shown in **SOURCE 1** was taken from the Keezhadi excavation site. Brainstorm what you think the purpose was of these square holes. Provide reasons for your assumptions. You will find the answer to this question at the end of the lesson.

SOURCE 1 Square holes at the Keezhadi excavation site

6.4.1 The Indus Valley Civilisation

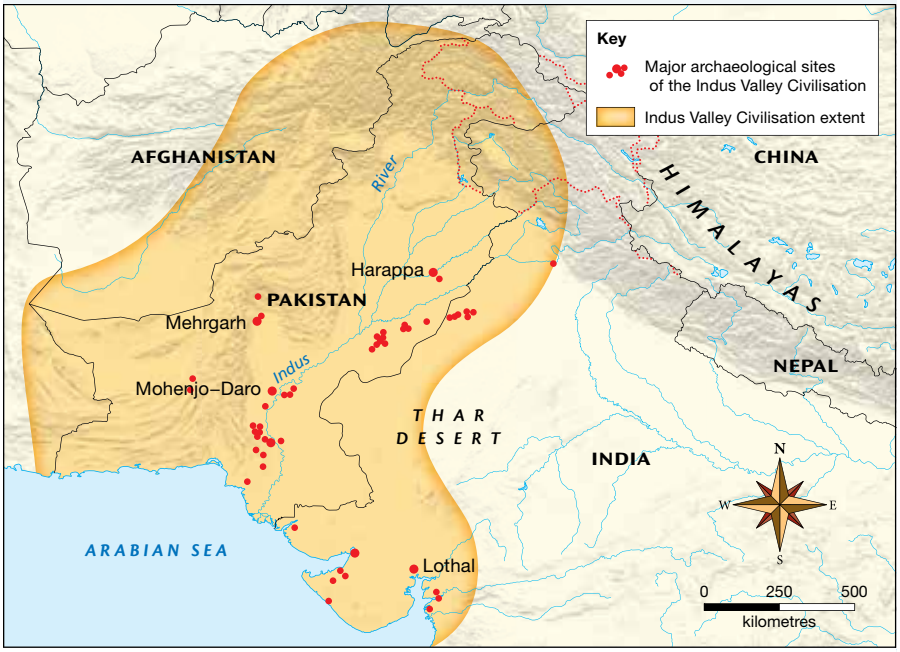
People have lived in the Indian subcontinent since the Old Stone Age. Some rock paintings found there date as far back as 50 000 BCE. The Neolithic Revolution, when people began to settle in farming communities, began about 7000 BCE. The first towns and cities in the subcontinent arose around 3000 BCE. They flourished for around 1400 years before their mysterious decline. For thousands of years all that was known was that people had once lived in the cities, but only the brick ruins remained. What sort of buildings they had been, who built them and what became of them — all of this was unknown.

As in Egypt and Mesopotamia, the first Indian cities were built in a fertile river valley, with good soils and a reliable water supply for growing crops. This was the valley of the Indus River and its tributaries. So this first civilisation, arising at much the same time as those in Egypt and Sumer (in Mesopotamia), has become known as the Indus Valley Civilisation. It is also sometimes called the Harappan Civilisation because Harappa was the first of its cities to be excavated.

SOURCE 2 Mohenjo Daro is an ancient Indus Valley Civilisation city that was abandoned in the 19th century.

int-7763

SOURCE 3 The main archaeological sites of the Indus Valley Civilisation

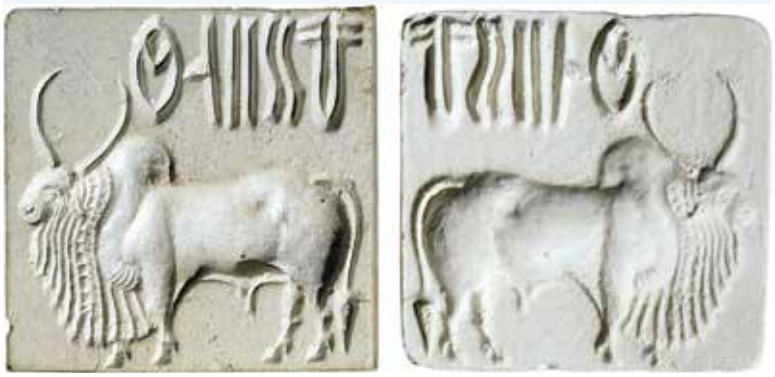


Source: Spatial Vision

The cities of the Indus Valley thrived. Farmers worked the fields surrounding the cities and officials organised the sale and distribution of agricultural produce. They had governments and used writing. Artisans created ornaments and tools, while traders plied their goods in boats up and down the river and its tributaries, and even across the sea to Mesopotamia. Artefacts from Mesopotamia have been found in the Indus Valley. This means trade links probably existed between these civilisations.

SOURCE 4 An Indus Valley stamp-seal, excavated at Mohenjo-daro.

SOURCE 5 An Indus Valley seal and its impression. Such seals have been found at the Mesopotamian city of Ur and other sites in that region. Similarly, seals from Mesopotamian cities have been found at Indus Valley locations such as the port city of Lothal. Animals on the seals include rhinoceros, elephants, unicorns and bulls.



DID YOU KNOW?

Stamp-seals were designed to leave an impression when pressed into wet clay. The imprint would be fixed to bundles of merchandise as merchants' marks.

6.4.2 Living in the lost cities

Our knowledge of the structure and function of cities during the Indus Valley Civilisation comes from several important archaeological sites. These cities have been well preserved and contain the remains of buildings and other pieces of important infrastructure. The largest Indus Valley sites that have been excavated are the cities of Harappa and Mohenjo-daro. Around 400 kilometres apart, both cities were based on a **grid system**, much like many modern cities. Each city was divided into 12 main blocks and had strong outer walls.

Many buildings were made of kiln-fired bricks similar, even in size, to the kinds of bricks used in many modern houses. Historians assume they used kiln-fired bricks because the Indus Valley had a wetter climate in those times. Such bricks were harder to make than mud bricks, dried only by the sun, but they were more durable in a wet environment. Evidence suggests that mud bricks were also used, but only the kiln-fired bricks have survived.

Most of the people of the Indus Valley would have been farmers. Cities could grow only where agriculture could produce a surplus to feed people who were not engaged in farming. So we know the farmers must have produced such a surplus. Excavations have given us some ideas about other kinds of work. Finds include seals, gold jewellery, combs, bronze statues and pottery. Such items would have been made by artisans in the cities and transported and traded by merchants.

SOURCE 6 The Indus Valley Civilisation and Mesopotamia

Source: Spatial Vision

Features of Mohenjo-daro

The grid system is clearly visible in the modern artist's impression of Mohenjo-daro shown in **SOURCE 6**. This city has two levels. The first level is called the Higher Town or the 'citadel'. Although with its surrounding walls it looks like a citadel, or fortress, the Higher Town is actually a mound topped by a huge **granary** and communal baths.

The granary was positioned high above the floodplain and was immense. The inhabitants of Mohenjo-daro depended on this building and its vast stores of grain, such as wheat and barley. The granary needed to be on high ground, beyond the reach of floodwaters. Ox-carts laden with produce would have been stationed in the recesses as workers raised produce to the platforms above.

grid system a street network that creates square and rectangular blocks
granary place for storing grain

The surviving walls of the granary reveal a row of ventilation ducts. These allowed air to circulate inside to prevent the produce from going mouldy. The roof of the granary was probably constructed of timber and has long since rotted away.

A brick-lined, sunken structure in the Higher Town is thought to have been an enormous bath. Traces of bitumen have been found in the bath, suggesting that it was sealed to prevent leakage. While we cannot know the purpose of the bath for certain, we can use contemporary knowledge of Indian customs to make an informed assumption. Ritual bathing is a common aspect of several Indian religions. We can also infer that, as the bath has stairs and ledges, the Great Bath was used for similar purposes.

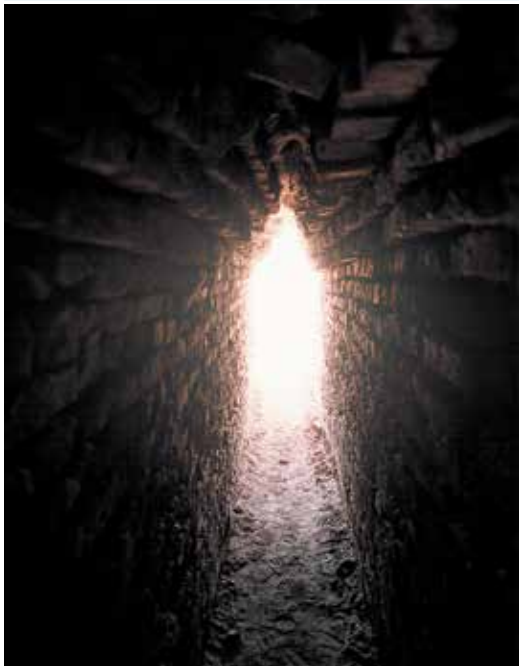
SOURCE 7 A modern artist's impression of Mohenjo-daro. In the centre is the Great Bath and granary in the Higher Town.

The second level of Mohenjo-daro is the Lower Town. Here were the houses of the citizens. Like the buildings of the Higher Town, they are made of kiln-fired bricks. Larger houses often had courtyards. The windows faced inward and were high above ground level, ensuring privacy. A broad street, up to 10 metres wide, runs through the Lower Town, with narrower streets running off it.

SOURCE 8 The Great Bath of Mohenjo-daro

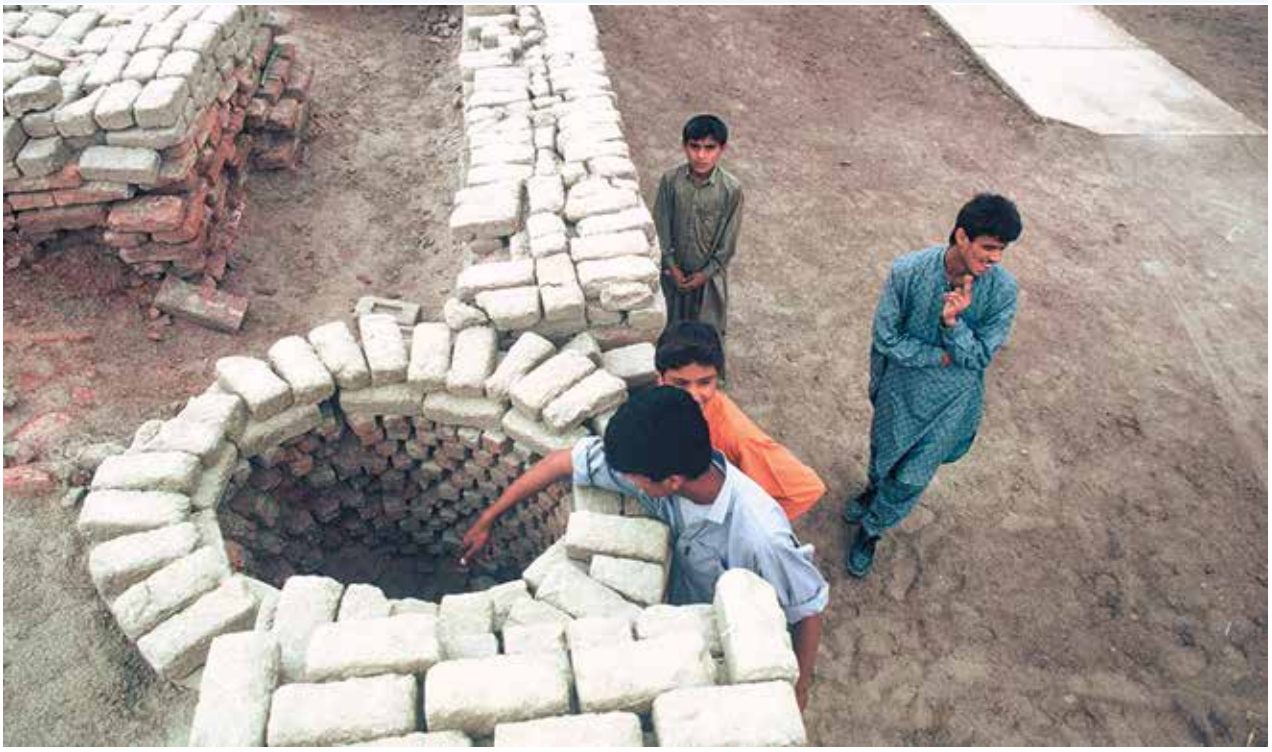
SOURCE 9 Structure believed to be a toilet at Mohenjo-daro

SOURCE 10 Large covered drain at Mohenjo-daro — tall enough for a person to walk through



Many wells were built in Mohenjo-daro. These provided the population with fresh water for drinking and washing. They were constructed of special wedge-shaped bricks. Some bricks had a groove in them to make it easier to send down a bucket on a rope: the groove prevented the rope from slipping sideways and spilling the water. Mud brick often covered the walls of the wells. Most wells were built inside dwellings. However, wells have also been found adjoining the city streets.

SOURCE 11 A well at Mohenjo-daro



For one of the world's first cities, Mohenjo-daro was remarkably **hygienic**. Many of the houses unearthed in the city had baths. Structures resembling toilets have also been unearthed. Many houses had drainage outlets onto the street, where gutters carried away waste water. Sometimes terracotta pipes were used. Chute systems were also used to expel water. Often a notched brick was placed at the end of the chute so solid waste could be trapped, preventing rubbish from accumulating in the street. Drains below the city streets were enclosed channels big enough for a person to walk through. This made it possible for workers to unblock the drainage system if the need arose.

Harappa had similar features to Mohenjo-daro. Their populations were also similar: Harappa's is estimated at 35 000 people and Mohenjo-daro's at 30 000. No evidence exists that a central government ruled the whole valley and used one of the cities as its capital.

hygienic healthy, sanitary

6.4.3 The end of a civilisation

The end of the Indus Valley Civilisation is another mystery. However, historians and archaeologists have at least formed some solid hypotheses about the last days of Harappa and Mohenjo-daro.

SOURCE 12 The Indus River

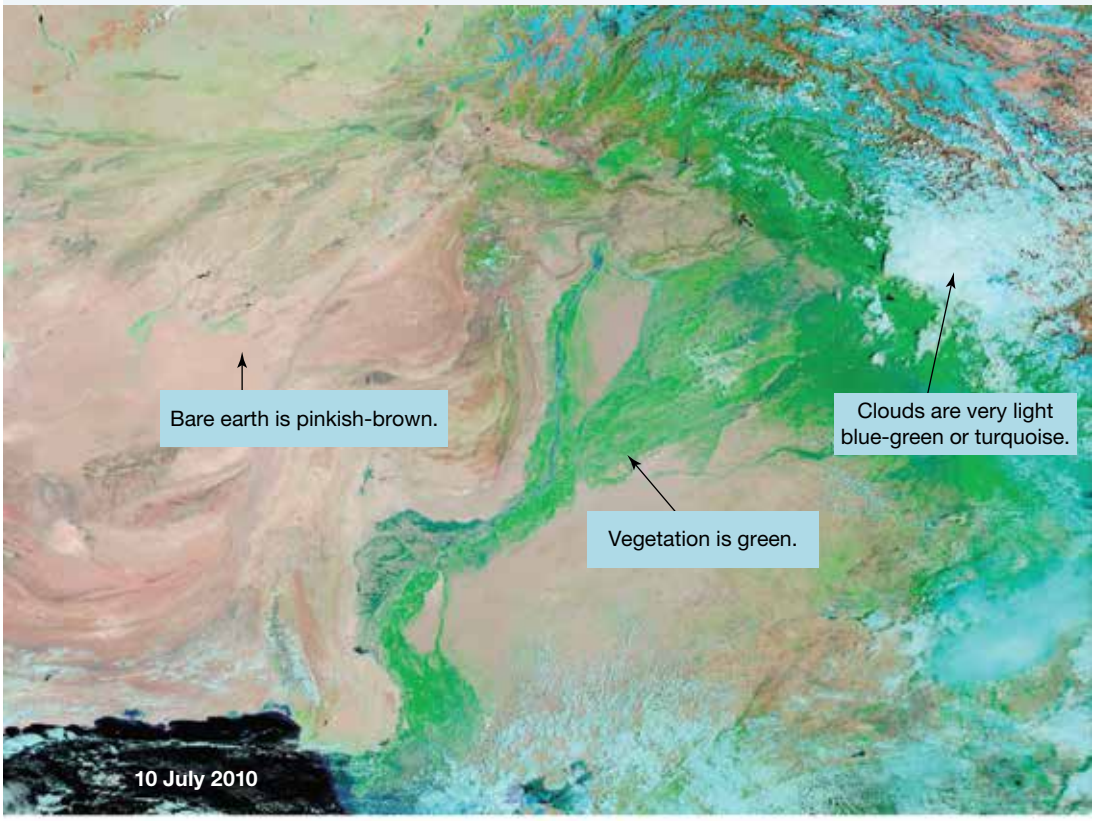
Originally it was thought that the Aryan invasion (see lesson 6.5) led to the fall of the Indus Valley Civilisation. Few scholars now accept this theory. Firstly, the Indus cities had already been abandoned by the time of the Aryan invasion. Secondly, no evidence has been found of warfare in or around the cities. There are none of the weapons, chariots, armour or remains of men and horses that would have been scattered across battlefields. Some skeletons found in Harappa do show signs of violent death and were once thought to be the victims of Aryan invaders. The problem with this theory is that these victims do not occupy strata levels that coincide with the last days of the city itself.

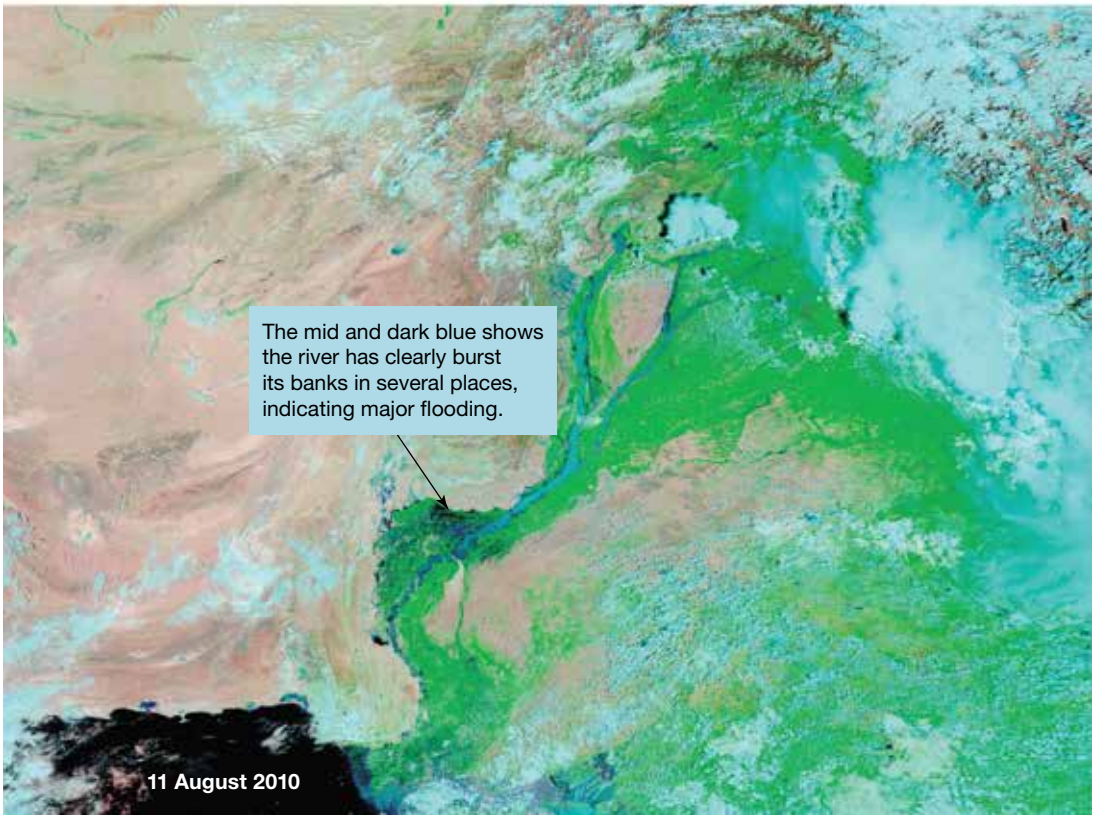
The Indus River flows through an earthquake-prone region and has changed its course many times. Excavations reveal that in the last years of Mohenjo-daro a series of floods occurred and repairs were carried out in their wake. One earthquake blocked the Indus River downstream from Mohenjo-daro, resulting in the creation of a huge lake. This increased the flooding problems for the city. Evidence also suggests that Mohenjo-daro was rebuilt at least seven times as a result of heavy flooding in the Indus River basin. Most recently, the disastrous floods of 2010 (see **SOURCE 13**) threatened the site, although fortunately the floodwaters did not reach it. (These floods affected 20 million people; at one point as much as one-fifth of the modern country of Pakistan was underwater.) Increased urban development, increased numbers of tourist visitors and climate change are all real threats to the survival of Harappa, Mohenjo-daro, Lothal and other key archaeological sites.

A gradual end?

Most historians now believe that the cities were gradually abandoned when it ceased to be practical to live in them, but that their culture lived on. Even today some pottery styles in the Indus Valley are similar to those of the ancient Indus Valley Civilisation. The ox-carts are still in use, and the mud brick platforms around houses would have been familiar to anyone from those ancient communities. So the Indus Valley Civilisation may not have come to an end after all. Perhaps its culture simply blended into, and became a part of, the rich array of cultures that now span the Indian subcontinent.

SOURCE 13 NASA images from space showing the flooding of the Indus River in 2010. The top image shows the Indus River Valley on 10 July, just before the floods. The bottom image shows the valley on 11 August, at the height of the floods. These images combine infra-red and visible light to give us a clearer picture of the difference between water and dry land.





SOURCE 14 From Robert R Raikes, 'The End of the Ancient Cities of the Indus', *American Anthropologist*, 1964

Uplift, almost certainly accompanied by more or less violent earthquake shocks, would not only have caused destruction of cities and settlements but would have disrupted the system of river and coastwise communications on which the commercial life of the culture must have largely depended. Damage to the cities and settlements in the Indus Valley would have been due rather to flooding than to the shocks . . . a point would have been reached when it would no longer have been considered worth the trouble and expense of rebuilding . . .

SOURCE 15 From Chris JD Kostman, 'The **Demise** of **Utopia**', *Journal of the Association of Graduates in Near Eastern Studies*, 1995

A careful review of the literature suggests that although the Harappans did experience great natural disasters and a dramatic [shift] in their urban process, they never declined or fell at all: the Harappan **legacy** continues to this day.

demise death
utopia a perfect social and political system
legacy something handed down from the past

6.4 SKILL ACTIVITY: Using historical sources

Consider **SOURCES 4** and **5** in this lesson.

1. **Describe** the similarities and differences between these two seals.
2. **Research** more information about these types of seals and refer to the Did you know? box in section 6.4.1. **Propose** two reasons for including both animals and writing.
3. **Summarise** the conclusions you have drawn about contacts between the civilisations of Mesopotamia and the Indus Valley based on these sources.

6.4 Exercise

learnon

6.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 9, 10	4, 5, 6, 8	7, 11, 12

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Check your understanding

1. Cities first emerged in the Indus Valley in _____ BCE.
2. What two structures dominate the Higher Town at Mohenjo-daro?
   - **A.** The aqueduct
   - **B.** The granary
   - **C.** The communal baths
   - **D.** The city centre
3. The drains under the city streets were so big because they were sometimes used to evacuate the city during attacks. True or false.
4. **State** two reasons it is unlikely that the Aryans destroyed the Indus Valley Civilisation.
5. **Propose** what may have finally led to the cities being abandoned.

Apply your understanding

Using historical sources

6. Look at **SOURCE 3**.
   - **a.** **Explain** why you think the cities and other settlements (shown by dots) are mostly located along the Indus River and its tributaries.
   - **b.** **Justify** why Lothal would be a suitable place for a port to serve these cities.

7. Look at **SOURCE 7**.
   a. In a short paragraph, **describe** the layout of Mohenjo-daro as seen in this source.
   b. **Explain** why you think the people of Mohenjo-daro would have needed such a huge granary for their produce.
   c. **Evaluate** what such a large single granary tells us about the way society would have been organised at Mohenjo-daro.
   d. From where would they have brought the produce to store in the granary?
8. **Describe** the features of the structures shown in **SOURCES 9, 10** and **11** that could have led archaeologists to conclude that these are toilets, drains and wells.
9. **Compare** the photo of the excavated Great Bath at Mohenjo-daro in **SOURCE 8** with the artist's impression of the same location in **SOURCE 6**. Compile a list of the similarities and differences.
10. **Compare** the satellite images in **SOURCE 13** with the map in **SOURCE 3**.
    a. **Identify** which ancient Indian city was threatened with flooding in August 2010.
    b. **Propose** what modern Indian governments could do to protect this and other important archaeological sites from the dangers of flooding.
11. **Explain** how the cities of Harappa, Mohenjo-daro and Lothal were so well preserved.
12. Compile a table that **summarises** the factors that contributed to the end of the Indus Valley Civilisation.

LESSON
6.5 What contacts and conflicts did ancient India experience?

LEARNING INTENTION

By the end of this lesson you should be able to identify ancient India as an active participant in local and international trade. You should also be able to identify who the Aryans were and the impact they had on ancient India and explain the impacts of the Mauryan Empire on ancient India.

TUNE IN

The image shown in **SOURCE 1** depicts the army of Alexandra the Great in battle with the Hindu King Porus at the Battle of Hydaspes. This image is a secondary source because it is a painting that was created *after* the events it depicts actually occurred.

1. Identify the ways that secondary sources are useful to historians.
2. Some secondary sources may not be entirely accurate. Does this mean that they are not useful? Discuss.

SOURCE 1 Alexander's Macedonian and Greek army encountering an Indian army under the Hindu King Porus at the Battle of Hydaspes

6.5.1 Trade during the Indus Valley Civilisation

From as early as 3000 BCE, members of the Indus Valley Civilisation had begun trading with the outside world. Home to unique and exotic items, such as precious stones, hardwoods and spices, international trade developed quickly in the Indus Valley. Once word of India's riches had spread, the region soon attracted explorers and traders from around the ancient world. However, India's abundant resources also caught the attention of individuals with less peaceful intentions, such as Alexander the Great. Evidence of this contact and conflict has been uncovered in several locations around Europe and Asia. In ancient Mesopotamia, **Indus seals** have been discovered; the city of Lothal was one of the world's earliest ports; and India features prominently in early Roman maps. In this lesson, we will learn about ancient Indian civilisations and their contact and conflict with the outside world.

The lost cities of Harappa and Mohenjo-daro have provided us with incredible insight into the Indus Valley Civilisation. As we have seen previously, the archaeological remains of these sites reveal much about the social, religious and political features of the Indus Valley. Countless examples of Indus Valley Civilisation jewellery, pottery, everyday items and seals have been discovered at Harappa and Mohenjo-daro. These highly sought-after goods would have been traded with other civilisations across Asia and Europe. This raises the question of how this trade actually occurred. The answer can be found in the ancient port city of Lothal (see **SOURCES 2** and **3**).

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SOURCE 2 The location of important cities of the Indus Valley Civilisation

Source: Spatial Vision

Excavated from 1955 to 1960, Lothal is one of the oldest docks in the world. Goods from Harappa and other Indus cities were transported to the port at Lothal. Small compared to modern examples, the port was large enough to house boats capable of international journeys. Exiting the ancient port via the Sabarmati River, these boats then made their way down the Gulf of Khambhat and across the Arabian Sea. The Indus Valley traders may have then met with their Mesopotamian counterparts in what we now call Iran. The strongest evidence of this activity comes in the form of seals. A small block engraved with pictures and writing, seals were used to stamp pottery and other items. The fact that Harappan seals (see **SOURCE 4**) have been found in places previously occupied by the Mesopotamians strongly suggests that trade occurred between these two civilisations. It is also interesting to note that activity at Lothal continued many years after the decline of Harappa and Mohenjo-daro.

Indus seals imprints of stamps found on pottery made during the Indus Valley Civilisation

SOURCE 3 A photograph of the ancient dock at Lothal

SOURCE 4 Harappan pottery stamp-seal (left) and modern impression (right): unicorn and incense burner

6.5.2 The Vedic Civilisation

The next civilisation to develop in India was named after a collection of sacred writings — mostly hymns, prayers and poems. These writings, called the *Vedas*, form the oldest books of the Hindu religion. They were written in **Sanskrit**, the language of this civilisation. The most important of these books, the *Rig-Veda*, was composed around 1000 BCE. The Vedic (sometimes called Aryan) culture came from western Asia. Some groups of Aryans moved westward into Europe. Others entered the Indian subcontinent around 1600 BCE.

Sanskrit ancient Indian language used in classical Hindu literature

The Aryans were warlike **nomads**. With horses and chariots, they stormed across the Indus River Valley and the floodplain of the Ganges River. They had no interest in building cities, such as those of the Indus Valley Civilisation. They were not united as a nation, but rather were made up of numerous tribes, each ruled by a chief or *raja*. Often, they fought among themselves.

With civil conflict common, the Aryans eventually divided their territory into 16 *mahajanapadas* or 'city-states'. Soon after this, a series of Persian leaders, including Cyrus the Great and Darius I, invaded Northern India and the Indus Valley. With its strong and well-organised armies, the Persian occupation of India continued until that empire was defeated by the famed **Macedonian** ruler, Alexander the Great. Believing the Greek theory that the known world ended in India, Alexander invaded northern India and then swept through the subcontinent towards the Middle East. Although Alexander's Indian campaign was swift and ultimately successful, it also included one of his most costly battles: the Battle of Hydaspes.

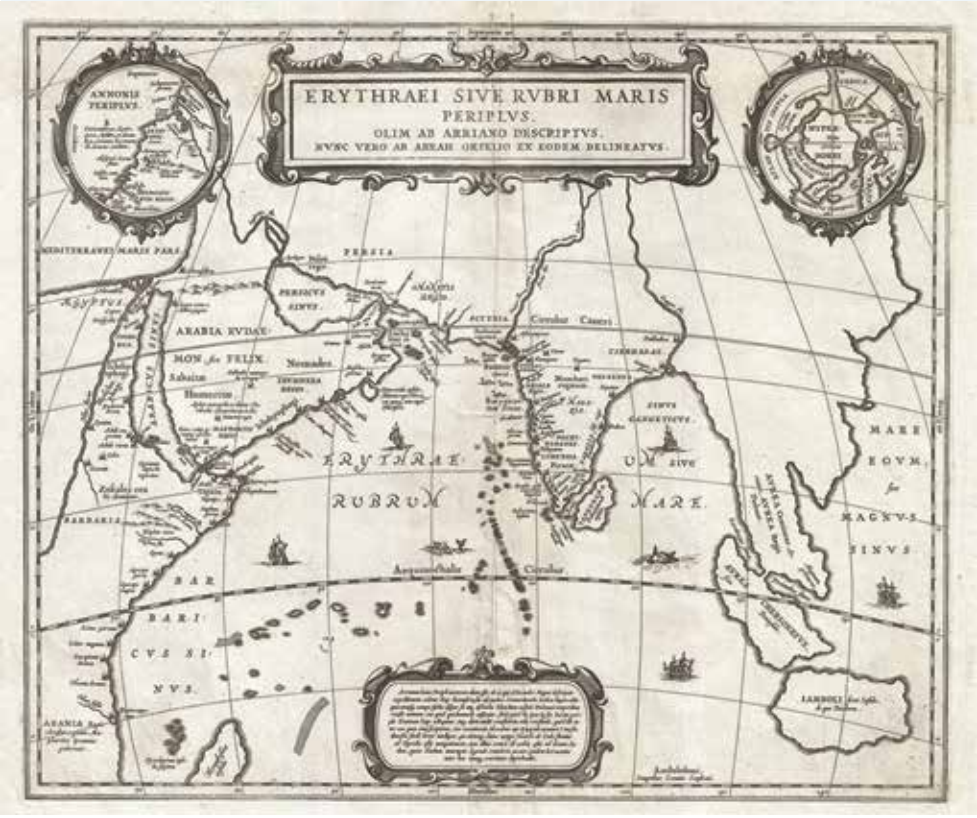
6.5.3 The Mauryan Empire

The Mauryan Empire is believed to have created the first unified Indian state. In 321 BCE, a leader called Chandragupta Maurya set out to create an empire across the subcontinent. It is believed that he was inspired by the exploits of the conqueror Alexander the Great. Alexander had tried to conquer India only a few years before. When he withdrew from western India, Alexander left a **power vacuum** in the region. Chandragupta took advantage of it.

Ashoka and Buddhism

The Mauryan Empire offered India stable government and a regulated economy. It was also during the time of the Mauryans that a system of writing was reintroduced. However, the texts that were popular in Mauryan times were not the traditional Hindu religious writings normally associated with this group. Instead, they were Buddhist. It was the ambitious and highly successful ruler Ashoka who was responsible for this change.

SOURCE 5 Seventeenth century representation of the *Periplus of the Erythraean Sea*



nomads tribal groups who wander from place to place, generally in search of food or pasture

Macedonian native of Macedon, an ancient kingdom north of Greece

power vacuum a situation with a lack of political leadership

Ashoka was the grandson of the founder of the Mauryan Empire, Chandragupta Maurya, and he ruled when the empire was at its peak. With a reputation as a fierce warrior, Ashoka expanded his family's empire until it covered most of the Indian subcontinent, including modern-day Afghanistan and Bangladesh.

However, the years of bloodshed took their toll on Ashoka and, as a result, he began to see the world differently. In 259 BCE, Ashoka converted to Buddhism, which was a relatively unknown religion at the time. He gave up his violent and warlike ways, embracing peace in accord with his new-found beliefs. He even sent Buddhist missionaries to other regions and assisted the spread of Buddhism in Asia. Therefore, the first known writings since the fall of the Indus Valley Civilisation were Buddhist religious texts.

The Mauryan Empire declined after Ashoka, and finally fell apart when its last ruler was assassinated. A turbulent period directly followed the fall of the Mauryan Empire. The ancient Greek and then Roman empires attempted to assert their control over the subcontinent.

First, it was the Indo-Greek rulers who invaded India. In nearly 200 years of rule, over 30 kings struggled to keep control over the region. Despite the tumultuous political events, Greek culture had significant effects on Indian life. In fact, as previously mentioned, it was Greek art that influenced the first representation of Buddha in human form.

The Roman Empire also had a strong connection to ancient India, particularly in the last stages of its rule. Trade between Rome and India was frequent, and strong evidence of this relationship exists today. The Greco-Roman document the *Periplus of the Erythraean Sea* is a record of trade routes and partnerships that existed between Rome, North Africa and the Indian subcontinent (see **SOURCE 5**).

Archaeological evidence also exists at the southern Indian site of Arikamedu. Excavations at this site have revealed many Roman artefacts, including unique Roman pottery, coinage, wine jugs, glass and stone beads, and other pieces of jewellery. Evidence suggests these important relationships continued well into the reign of the Guptas — the so-called Golden Age of India.

SOURCE 6 An Indian silver coin (c. first century BCE) depicting the local ruler wearing a Roman-type helmet with bristles

SOURCE 7 Buddhist bas-relief in the Ajanta Caves, created during the Gupta dynasty

6.5 SKILL ACTIVITY: Communicating

List the major events of ancient India civilisation mentioned in this lesson and place them in chronological order from least to most recent.

1. **Create** a timeline using the events you have listed.
   When creating a timeline, you need to carefully consider the scale of time. **Identify** when the first and last events on your timeline will be. This will help you **determine** the right scale to use on your timeline.
2. **Compare** your timeline to those of other students.

6.5 Exercise

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6.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3	4, 5, 6, 8	7, 9, 10

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Check your understanding

1. Place the following options into the correct spaces to complete the sentence.

   Gulf of Khambhat Arabian Sea Sabarmati River

   When traders were leaving Lothal, they would exit the ancient port via the _____ and make their way down the _____ and across the _____.
2. Seals can be found on artefacts from many different civilisations across the ancient world. The purpose of this practice was to identify where items were being sent. True or false?
3. **Identify** the foreign forces that attempted to control India after the fall of the Mauryan Empire.
   - **A.** Chinese Empire
   - **B.** Ancient Greek Empire
   - **C.** Ottoman Empire
   - **D.** Roman Empire
   - **E.** Mongol Empire
4. **Explain** why Ashoka adopted the Buddhist faith.
5. **State** at least three ways in which the Vedic Civilisation was different from the Indus Valley Civilisation.

Apply your understanding

Using historical sources

6. **Identify** evidence that suggests that trade occurred between the Indus Valley Civilisation and Mesopotamia.
7. Look closely at the location of Lothal on the map in **SOURCE 2**.
   - **a.** Considering that it was a port town, what is strange about its location?
   - **b.** Given the nature of the location of Lothal, **consider** why this may not have been a problem during the time the port was in operation.

Historical perspectives and interpretations

8. **Explain** what **SOURCES 5** and **6** suggest about Indian contact with the Roman Empire.
9. **a.** **Create** a table that **summarises** the accomplishments of the Vedic Civilisation and the Mauryan Empire.
   b. Using the table, **evaluate** the accomplishments of the Vedic Civilisation and the Mauryan Empire. Which of the two do you believe had the most significant impact on the development of Indian culture and beliefs? Provide historical evidence to support your arguments.
10. **Explain** the relationship (cause and effect) between the following events, people and/or beliefs.
    - **a.** The writing of the *Vedas*
    - **b.** The defeat of Alexander the Great
    - **c.** Ashoka's brutal experiences of war
    - **d.** The assassination of the last Mauryan ruler

LESSON
6.6 What was significant about the Mauryan Empire?

LEARNING INTENTION

By the end of this lesson you should be able to describe how Chandragupta Maurya introduced the first system of government to ancient India.

TUNE IN

The Mauryan medallion in **SOURCE 1** shows riders on an elephant under a decorative umbrella. They are likely part of a royal procession.

1. In small groups, carefully examine the medallion.
2. List all of your observations about this source. Note down all of the details that you notice.
3. Discuss what you can infer about the Mauryan Empire based on your observations.

SOURCE 1 Mauryan silver **medallion** from the second century BCE

6.6.1 Chandragupta Maurya and Kautilya

The Mauryan Empire, sometimes called the Mauryan dynasty, ruled the Indian subcontinent from about 323 BCE to 185 BCE. The Mauryan emperors conquered a region reaching from Bangladesh in the east to Afghanistan in the west. This was the first state to stretch over most of the Indian subcontinent.

The dynasty was founded by Chandragupta Maurya. Little is known of his early life. However, we do know that he overthrew the last ruler of the preceding dynasty, the Nanda, with the aid of a former Nanda minister, Kautilya. It appears Kautilya helped Chandragupta raise an army against his former leader.

Kautilya is also credited with compiling a set of rules on running a government, called *The Arthashastra*. Some of these rules appear ruthless and cruel. For example, the punishment for murder was not just death but torture too. If you injured someone in a drunken brawl, you would have your hand cut off. However, *The Arthashastra* also laid the basis for responsible administration. For example, Kautilya advised the ruler to meet every petitioner who entered his court and not leave them to talk only to his officials. This, Kautilya said, would avoid confusion and discontent that might lead to rebellion, and would ensure satisfaction with the ruler's government.

Kautilya's rules laid the basis for a powerful unified government across the subcontinent. The Mauryan Empire was divided into districts run by administrators who reported to the emperor, ensured law and order, provided troops for the army and collected taxes. The central government kept a network of spies to ensure that these district officers followed directions properly. In this way, India became a single state under central rule. The state regulated the economy and introduced a standardised system of weights and measures.

medallion a coin-shaped, usually metallic, decorative disk

DID YOU KNOW?

Elephants have been used in India for both transport and heavy labour for thousands of years up to the present day. However, Mauryan emperors employed elephants in their armed forces as well. Ashoka the Great (see lesson 6.7) is reputed to have had several thousand war elephants. They were used to destroy enemy fortifications and villages, as well as to trample infantry.

The observations of Megasthenes

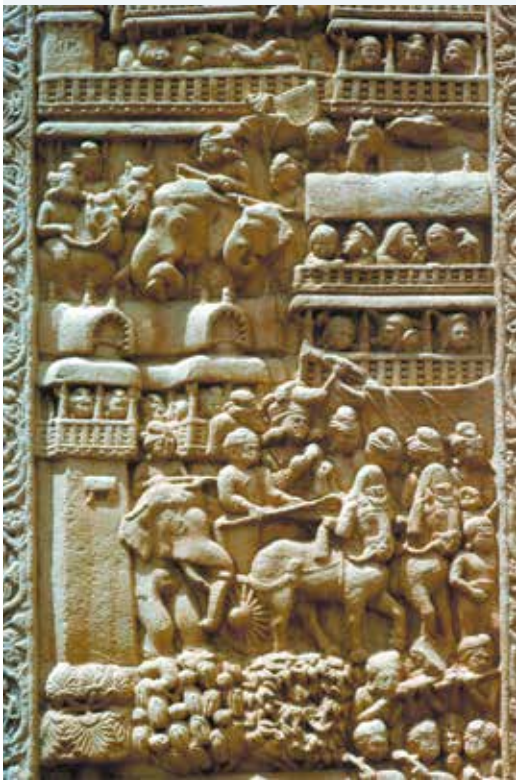
tlvd-10514

The efficiency of the Mauryan Empire under Chandragupta is described in the only known written primary source apart from *The Arthashastra*. This is an account by a Greek ambassador, Megasthenes, from the Seleucid Empire. We know that Megasthenes visited the court of Chandragupta as a representative of the first Seleucid emperor, Seleucus Nikator, one of Alexander the Great's generals. The empire founded by Seleucus ruled over much of the old Persian Empire from 313 to 65 BCE. In **SOURCE 3**, Megasthenes describes the wonders of Chandragupta's capital city, Pataliputra. According to Megasthenes, it was a vast and splendid city ringed with a high wooden wall and 570 towers.

The account Megasthenes wrote about India, called *Indika*, has been lost. What have survived are small infrequent references to it in the works of other Greek writers. Added together, these have helped us to build up a picture of India under Chandragupta Maurya.

Chandragupta extended the Mauryan Empire across the northern half of the subcontinent, expanding westwards into lands held by the Seleucid Empire. In 324 BCE, he pushed Seleucid garrisons out of the Indus Valley. Seleucus Nikator tried to regain this region but was defeated in battle in 305 BCE. After Chandragupta's death, his son Bindusara continued to extend Mauryan power. He conquered 16 kingdoms. But the ruler under whom the empire would grow to its furthest extent was the next emperor, Ashoka.

SOURCE 2 Bas-relief from the Great Stupa of Sanchi, showing what appears to be a festive scene from a Mauryan city



SOURCE 3 From an ancient Greek account of a report by a Greek ambassador, Megasthenes, who had visited the Mauryan capital, Pataliputra, on a mission from the Seleucid Empire

Megasthenes informs us that this city [Pataliputra] stretched in the inhabited quarters to an extreme length on each side of eighty **stadia**, and that its breadth was fifteen stadia, and that a ditch encompassed it all round, which was six hundred feet in breadth and thirty **cubits** in depth, and that the wall was crowned with 570 towers and had four-and-sixty gates. The same writer tells us further this remarkable fact about India, that all the Indians are free, and not one of them is a slave.

stadia the plural form of stadium, which is a measure of about 200 metres

cubit an ancient measure of length, based on an adult's forearm

6.6 SKILL ACTIVITY: Using historical sources

In order to use historical sources as evidence, you need to be able to **analyse** the source. This is often seen as a two-step process. In this activity, you will use **SOURCE 2** in this lesson as an example.

1. First, you simply need to **describe** what you can see in the source. Are there people, animals, tools? What is happening in the scene — does it depict a battle, a festival or just a scene from everyday life?
2. Next, you need to **interpret** any metaphorical meaning that may be contained within the visual source. Perhaps the king is depicted as taller than all other people in the source, denoting his importance and power. This metaphorical meaning can often provide a deeper understanding of the purpose or intent of the source. Be careful, though — sometimes metaphorical meaning does not actually exist and a visual source may simply be a depiction of an actual historical event.
3. Using the information gathered from steps 1 and 2, write an **analysis** of **SOURCE 2**, the bas-relief from the Great Stupa.

6.6 Exercise

learnon

6.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 6	5, 7, 8	4, 9, 10

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Check your understanding

1. The Mauryan emperors conquered a region reaching from _____ in the east to _____ in the west.
2. Only one written primary source is known from the time of the Mauryan Empire. True or false?
3. **Identify** the leader credited with creating the first unified Indian state.
   - A. Kautilya
   - B. Megasthenes
   - C. Ashoka
   - D. Chandragupta Maurya
4. Arrange the following events in chronological order: beginning of the Mauryan dynasty; beginning of the Seleucid Empire; end of the Mauryan dynasty; Chandragupta defeats the Seleucids and drives them out of the region.
5. **State** which empire Chandragupta drove out of the Indus Valley, thus expanding the Mauryan Empire.

Apply your understanding

Using historical sources

6. **Describe** what you believe is happening in **SOURCE 2**. How does this source help us understand what life was like in the Mauryan Empire?
7. **Explain** how **SOURCE 2** supports Megasthenes' description of a Mauryan city in **SOURCE 3**.
8. **Explain** how we know from **SOURCES 1** and **2** that during the Mauryan Empire Indians relied heavily on the elephant. How was the elephant helpful to them?

Communicating

9. **Identify** and **explain** the administrative changes Kautilya undertook.
10. 'It was Kautilya not Chandragupta who was responsible for the success of the early Mauryan Empire.' Do you agree or disagree with this statement? **Justify** your response.

LESSON
6.7 Who was Ashoka the Great?

LEARNING INTENTION

By the end of this lesson you should be able to describe Ashoka and explain the impact his leadership had on Indian culture.

TUNE IN

What makes a great leader?

Ashoka the Great, Alexander the Great, Catherine the Great — throughout history, approximately 105 monarchs have used this imposing title. But what actually makes a great leader?

1. Think about all of the different leaders you have had in your life and write them down in a list. Consider leaders in all aspects of your life including family, school and any extracurricular activities in which you participate.
2. What characteristics do you believe make someone a great leader?
3. What leadership characteristics do you think you have?

SOURCE 1 An artist's impression of Ashoka the Great

6.7.1 The greatest ruler in world history?

Chandragupta's grandson Ashoka was remarkable not only by the standards of ancient India. The famous, respected English writer HG Wells, in his book *A Short History of the World*, claimed that Ashoka was 'the greatest ruler in world history'! Often referred to as 'Ashoka the Great', in this lesson we will see exactly why this ruler was so 'great' and why he was seen as such an important individual.

Like his predecessors Chandragupta and Bindusara, Ashoka was a warrior king. He was already a successful general under his father, putting down several rebellions. After his father's death, Ashoka vied with his brothers for the throne — a struggle that Ashoka eventually won. Legend claims that Ashoka may have even killed his brothers during this conflict.

Over the next eight years, Ashoka conducted wars of conquest that extended the Mauryan Empire to its furthest limits. His final military campaign was in Kalinga, a kingdom on the north-east coast of India. During this bitter campaign, tens of thousands were slaughtered and the cities of Kalinga sacked.

Then something truly amazing and profound happened to Ashoka. It is said that when Ashoka visited the battlefields and ruined homes of the Kalingans, the sight of so much death and suffering sickened him, and he vowed never to wage war again. Although he probably already regarded himself as a Buddhist, he underwent a complete transformation and devoted his life to Buddhist principles. Ashoka vowed to look after his people in the same way that a father looks after his children. To this end, he promised he would extend his empire no further through war. Instead, Ashoka sent missionaries to persuade people to live according to the moral principles of the Buddhist faith.

The edicts of Ashoka

Much of what we know about Ashoka's rule we have learned from **edicts** inscribed on pillars and rocks that were erected throughout the empire. According to the edicts, Ashoka provided medical care for people and animals alike, and planted shade and fruit trees to be enjoyed by all. Sacrifices were banned, as was hunting, a sport that Ashoka himself had loved in his youth. The burning of forests for agriculture was banned, because this could harm animals that sheltered there. Ashoka also promoted a vegetarian diet to reflect his care and regard for the animal world. Many of the harsh punishments decreed by Chandragupta's chief minister, Kautilya, such as torture and the death penalty, were abolished. Parents, teachers, priests, servants and those practising religions other than Buddhism were all to be equally respected.

The edicts of Ashoka can be seen as demonstrations of *dharma* (or *dhamma*) — the moral teachings upon which Buddhism is based. Essentially, dharma recognised the individual's duties and obligations both to other people and animals, and to nature.

Following Ashoka's death in 232 BCE, his son succeeded in bringing Buddhism to Sri Lanka, but such achievements failed to halt the rapid decline of the Mauryan Empire. Nonetheless, the Mauryan Empire had provided India with a model for a unified state and represented a high point in its history.

SOURCE 2 A stamp issued on 15 August 1949, the second anniversary of modern India's independence. It shows lions on top of a pillar erected by Ashoka at Sarnath in northern India.

edict order issued by a sovereign to his or her subjects

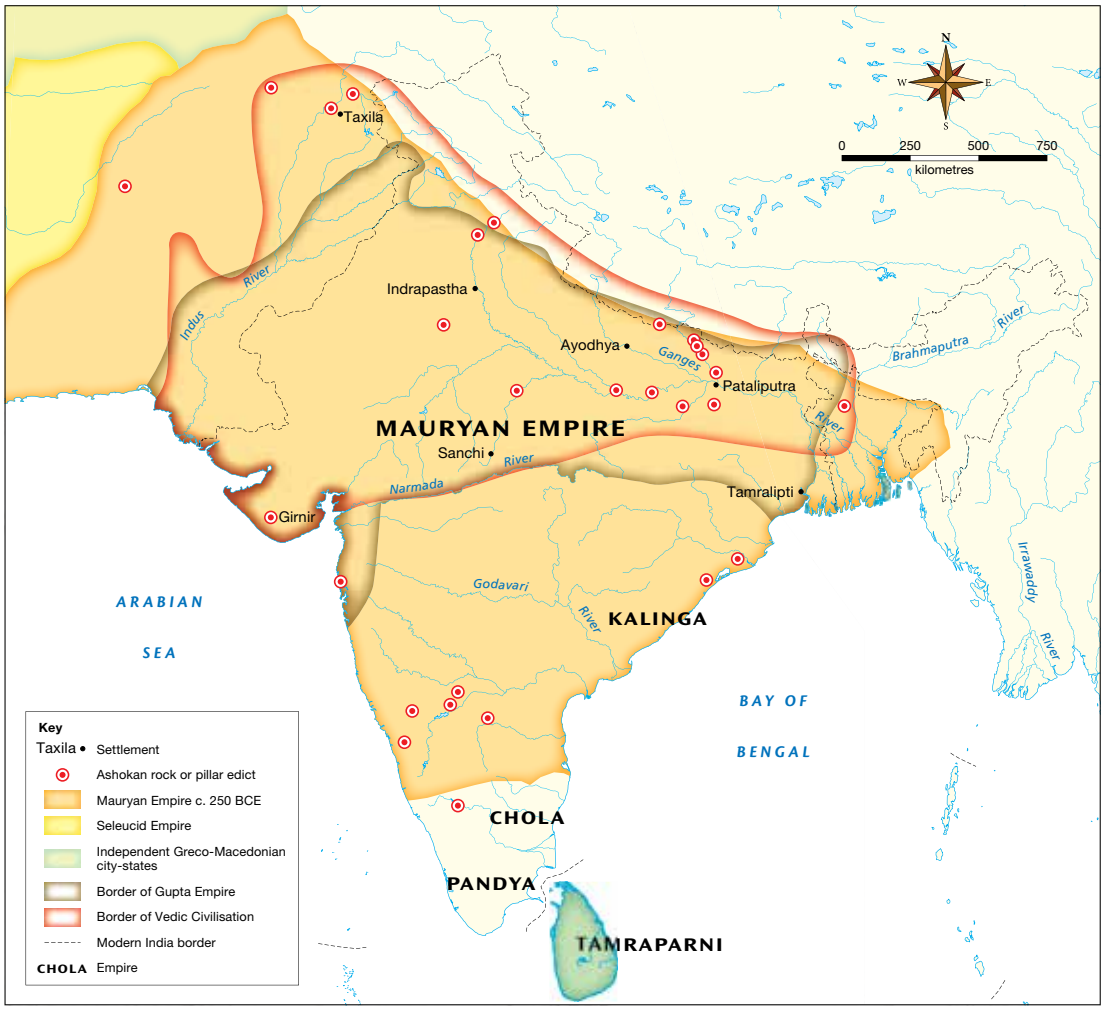
DISCUSS

Now that you have read about Ashoka, what do you think inspired HG Wells to describe him as 'the greatest ruler in world history'?

SOURCE 3 Another of Ashoka's pillars, this one with a single lion on top, at Kolhua. Behind it is a Buddhist stupa.

int-6000

SOURCE 4 The furthest extent of the Mauryan Empire, as achieved by Ashoka. Also shown are the sites where Ashoka erected his rock or pillar edicts.



Source: Spatial Vision

SOURCE 5 From the pillar edicts of Ashoka

Dhamma is good, but what constitutes Dhamma? [It includes] little evil, much good, kindness, generosity, truthfulness and purity. I have given the gift of sight in various ways. To two-footed and four-footed beings, to birds and aquatic animals, I have given various things including the gift of life. And many other good deeds have been done by me. People see only their good deeds saying, 'I have done this good deed.' But they do not see their evil deeds saying, 'I have done this evil deed' or 'This is called evil.' But this [tendency] is difficult to see. One should think like this: 'It is these things that lead to evil, to violence, to cruelty, anger, pride and jealousy. Let me not ruin myself with these things.' And further, one should think: 'This leads to happiness in this world and the next.'

6.7 SKILL ACTIVITY: Communicating

The aim of this activity is to teach you how to analyse information and then use that information to make informed judgements. To practise this skill, we're going to use two different sources — Ashoka's edicts and the political strategies of Kautilya (which were described in lesson 6.6). Ashok's edicts are primary sources whereas Kautilya's strategies are described in a secondary source — this Humanities resource.

Step 1: Read the source and information provided. While it may seem silly to mention this as a first step, proper reading of a source is a step that sometimes gets overlooked. Try not to scan or skim-read, but instead read carefully and **identify** key information.

Step 2: Re-read the source and information. This time, write notes as you go, making sure that your notes are accurate and descriptive.

Step 3: Use your notes to make your informed **judgement**. Answer the following question using both the information you have collected and the opinions you have formed by completing this process.

Discuss how Ashoka's edicts, as shown in **SOURCE 5**, differ from the ideas of Chandragupta's chief minister, Kautilya, described in lesson 6.6. How do you think Ashoka's subjects would have felt about these changes?

6.7 Exercise

learnon

6.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 6	7, 8, 10	4, 5, 9

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Check your understanding

1. Ashoka was Chandragupta's
   - **A.** brother.
   - **B.** son.
   - **C.** grandson.
   - **D.** father.
2. **Identify** the correct definition of dharma.
   - **A.** A Buddhist moral teaching
   - **B.** A religion
   - **C.** A ruler
   - **D.** A family tradition
3. The edicts of Ashoka were recorded on ancient scrolls. True or false?
4. How did Ashoka change after witnessing the appalling suffering brought about by war with Kalinga?
5. **Describe** how the Mauryan Empire grew under Ashoka's rule.

Apply your understanding

Using historical sources

6. **Examine SOURCE 2**. Propose why you think modern India's government, on the second anniversary after independence, issued a stamp with one of Ashoka's pillars on it.
7. **Consider** why you think Ashoka inscribed his edicts on monuments, as seen in **SOURCES 2** and **3.**
8. **Explain** how **SOURCE 4** supports the idea that Ashoka was trying to get his message across to all Indians through his edicts?
9. **Describe** the effects a life of battle had on Ashoka.
10. **Discuss** how Ashoka's reign influenced religious observance in ancient India.

LESSON
6.8 What was the social structure of ancient India?

LEARNING INTENTION

By the end of this lesson you should be able to identify the beliefs and traditions of Indian religions, and explain the structure and cultural implications of the caste system. You should also be able to describe ceremonies and customs that signify important moments in the lives of Indian people, and explain the role of women in ancient Indian society.

TUNE IN

The status and rights of women vary in different cultures and different time periods.

1. Consider the rights that women have in most Western contemporary societies.
2. Discuss what rights and opportunities you think women have now that they didn't have in ancient India.
3. Revisit your discussion at the end of this lesson and evaluate the accuracy of your answer.

SOURCE 1 What has changed for women in India over time?

6.8.1 Hinduism and the natural world

As we learned earlier in this topic, India's unique geographic characteristics enabled the expansion of human civilisations in the area. The plentiful waters of the Ganges, Brahmaputra and Indus rivers became the lifeblood of the Indian people. Enriching the surrounding lands, these rivers allowed people to farm and cities to grow. The importance of the natural world can be seen in the evolution of Indian religions, with environmental themes particularly apparent in Hinduism, Buddhism and Jainism. In the following sections, we will investigate some of India's oldest religions and discover the ways in which they represent, symbolise and seek to protect the natural world.

The oldest of the world's major religions, Hinduism is followed by almost 80 per cent of modern Indians. Hinduism is full of symbols, references and customs that relate to the natural world. In fact, the very name India is derived from the word Hindu, which comes from the Sanskrit word *sindh*, meaning 'river'. Ancient Hindu texts, including the *Vedas* and the *Mahabharata*, frequently mention the divine presence in nature. They describe how Hindu gods such as Krishna often took the form of features in the natural world. As such, animals and the environments in which they lived had to be worshipped and protected. These texts also taught that humans had a duty to live in harmony with the natural world. This duty is often referred to as *dharma*. A word used across many different Indian religions, dharma can be described as a person's responsibility to follow religious and cultural teachings and laws.

SOURCE 2 An excerpt from the Sanskrit verse *Srimad Bhagavata Mahapurna (2.2.41)*

Ether, air, fire, water, earth, planets, all creatures, directions, trees and plants, rivers and seas — they all are organs of God's body. Remembering this, a devotee respects all species.

Hinduism explained

Hinduism is both a pantheistic and polytheistic religion. The first term describes religions that see the entire universe as being divine. Pantheists do not believe in a single god-like being, but rather see god in all aspects of the natural world. This means that Hindus are also polytheists because they worship the natural world through a variety of divine beings.

SOURCE 3 Hindus bathing in the Ganges River during a major religious festival in northern India. They believe that the water of the Ganges purifies the soul and washes away sin.

SOURCE 4 A sadhu, or Hindu holy man, at the Ardh Kumbh Mela, the world's largest religious festival. Millions of Hindus attend this festival, held twice a year at the meeting place of the Ganges and two other rivers.

DID YOU KNOW?

During the Ganesha Festival in August, Hindus place statues of the elephant god, Ganesh, in their homes and in decorated tents to receive his blessing. On the eleventh day, the statues are taken to a river or the sea and immersed in water.

Another key Hindu belief is reincarnation, through which a person's spirit or soul is reborn in another body after death. Hindus believe that after many cycles of death and rebirth, the individual may achieve joy and freedom through eventual unity with a universal spirit, called Brahman.

Hindus also believe that a person's current life will determine what form the next life will take. If you perform religious duties and live a moral life, you may be born to a higher class in the next life. But a sinful life would mean being born into some lower life, perhaps as a poor person, a slave or an animal. Hinduism holds that every living thing contains a part of the universal spirit and is, therefore, sacred. For this reason, vegetarianism is widely practised. Cows are particularly honoured and protected.

SOURCE 5 The Ganesha Festival, held in August

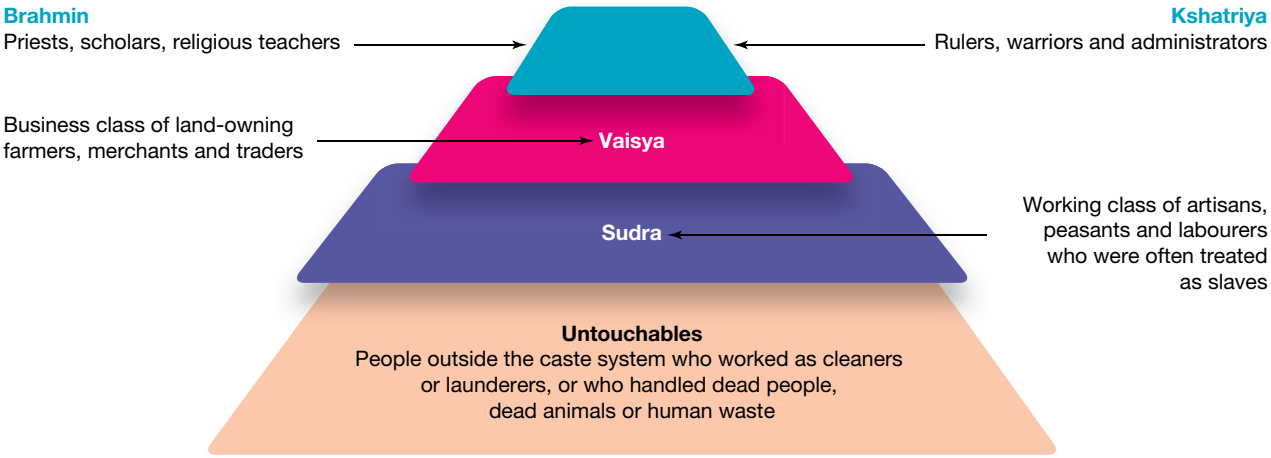
6.8.2 The caste system

As in all ancient societies, civilisation brought increased inequality, with privileged classes oppressing less privileged classes. In India, class differences were reinforced by religious ideas as the Indo-Aryan conquerors set about creating oppressed classes out of the peoples they conquered.

From Vedic times, Hinduism divided society into classes called *castes*. The caste system (see **SOURCE 6**) was a means of social control — of keeping people in the social classes into which they were born. From around 200 CE, four main castes were described under the Manu code. These castes were the Brahmin or priestly class, warriors and landowners, farmers and craftsmen, and Untouchables or outcasts. These main castes developed further into a complex system of hundreds of castes, each with its own rules, occupations and restrictions. A contested verse of the *Purusha Sukta* states that the castes originated from different parts of giant deity, Purusha. It claims that the Brahmin came from its mouth, the kshatriya from its arms, the vaisya from its thighs and sudra from its feet. The dalit or Untouchables were not mentioned in the verse. However, in recent years, historians and commentators have doubted whether the verse was actually written during the Vedic period. In modern times, changes to this social system have been attempted.

int-6001

SOURCE 6 This social pyramid represents the main castes and social classes of ancient India by about the time of the Mauryan Empire. Children were born into a caste, and it was almost impossible to move between castes, especially as Sudra and Untouchable children were denied any formal education. Buddhism rejected the caste system.



DISCUSS

Most people in the modern world regard the caste system as cruel and unjust.

6.8.3 The status of women in ancient India

The status of women changes dramatically throughout the various dynasties of ancient India. During the Vedic (Aryan) period (1500 BCE to 1000 BCE), women were highly respected and treated as equals in all aspects of society. Women had access to education, held positions within government, were able to participate in battle and were also able to choose their own husbands. The several revered female philosophers include Maitreyi. Although conflicting stories exist regarding who Maitreyi actually was, she is regarded as one of the most important women from the ancient Indian period. Maitreyi's teachings centred on the concept of *Atman* (the soul), especially in reference to its immortality. The legacy of Maitreyi is seen in modern India with a college in New Delhi named in her honour.

The status of women gradually deteriorated during the Gupta and Mauryan empires. Although some women in the upper castes still had access to education and some personal freedom, those women in lower castes were

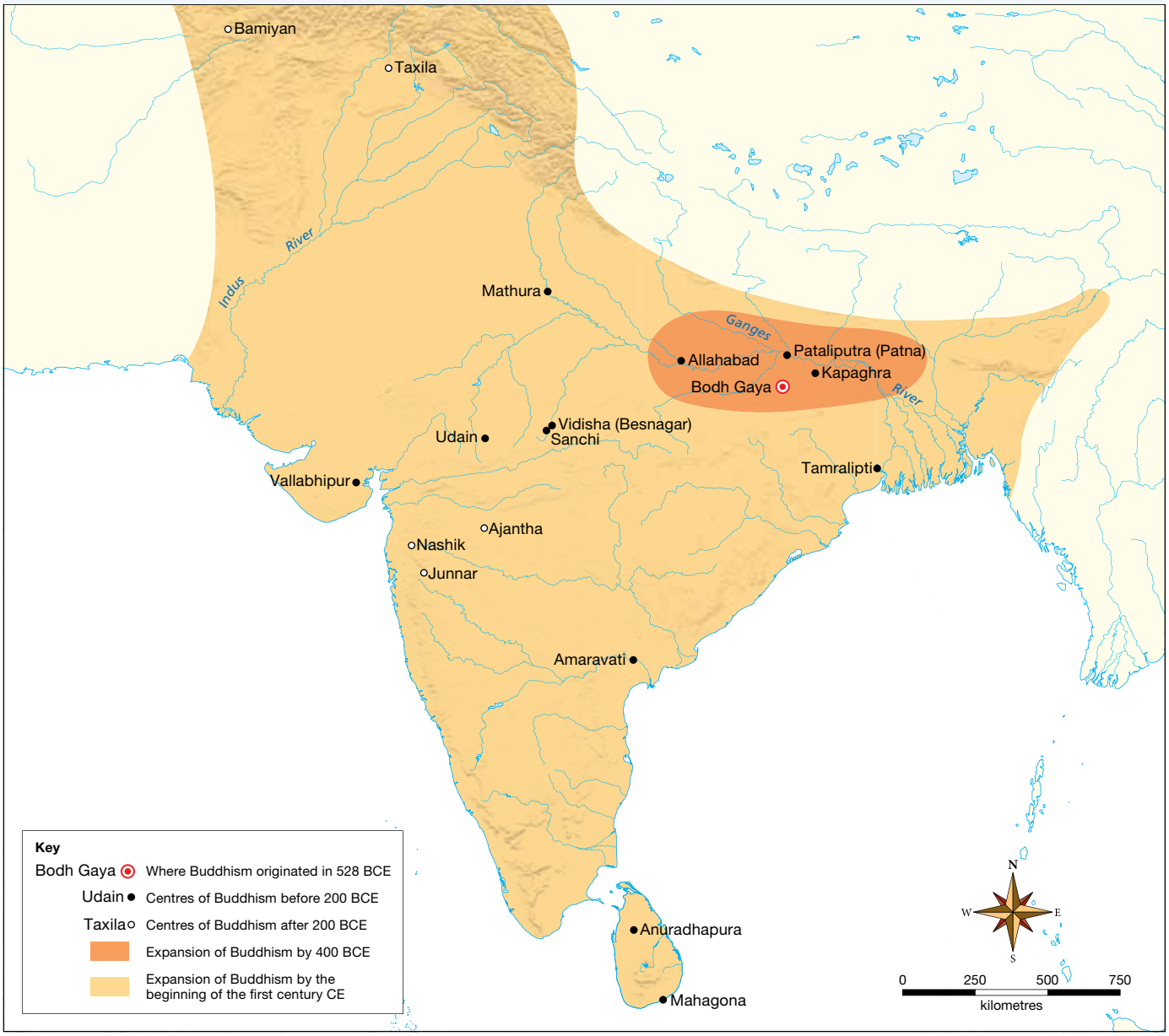
not as fortunate. Discrimination against women become common and they were banned from participating in many religious and cultural practices. Historian Dr Radhika Kapur writes that the status of women became so bad during this period that even the birth of a girl was seen as a misfortune for the family. So while women in early ancient India were seen as equal and enjoyed life without discrimination, the status of women gradually deteriorated throughout subsequent dynasties.

6.8.4 Buddhism and the natural world

A deeply spiritual religion, Buddhism originated in India and then spread throughout Asia and beyond (see **SOURCE 7**). Like Hinduism, Buddhism also sees humankind as part of a sacred natural world. Buddhism advocates contentment. The Buddha taught that humans must understand nature in order to satisfy their needs without harming the natural world. Whenever humans became corrupted by unrestricted greed, both humanity and the natural world suffered. Buddhists see the natural world as being filled with interconnections. Buddhism

int-6002

SOURCE 7 The spread of Buddhism within India up to the first century CE



Source: Spatial Vision

also teaches that humans must achieve a balance between themselves and the environments in which they live. An important element of Buddhism has always been the belief that people can be reincarnated as animals. In Buddhist thought, this provided another reason for a gentle relationship with nature, and sympathy and respect for all living creatures.

SOURCE 8 Statue of the Buddha from the Gandhara region in northern Pakistan, first century CE

Buddhism explained

Buddhism was founded by a Hindu prince named Siddhartha Gautama in the sixth century BCE. After observing the suffering of people in his kingdom, Siddhartha decided to give up his worldly riches and seek deeper truths about life. 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. It is at this time that people began calling him the Buddha, which means 'the Enlightened One'.

The Four Noble Truths are:

- All people, regardless of wealth, suffer pain.
- People suffer pain so long as they remain locked in the cycle of the soul's reincarnation — through birth, death and rebirth.
- Pain is caused by the desire, or craving, for things.
- To overcome desire, a person must follow the Eightfold Path.

The Eightfold Path is concerned with the seeking of wisdom, resisting and freeing the mind from wrongdoing, serving one's neighbours, and 'right concentration' or meditation. The goal is to rid oneself of desire. By following this path, the Buddha taught, one could achieve *nirvana*, a state of spiritual peace and joy, free from worldly desires and attachments, suffering and individual consciousness. The soul ceases to exist as it comes into harmony with the universe.

Buddhism spread throughout ancient India, but by the twelfth century CE it had lost much of its influence. Today, India has about 10 million Buddhists. But Buddhism also spread throughout much of Asia, including China, Japan, Tibet, Korea and South-East Asia. Today, its influence is more marked in these countries than in India.

6.8.5 Jainism and the natural world

Another of ancient India's three religions, Jainism is often mistakenly seen as a branch of Hinduism and Buddhism. Although the three religions do share common values and ideas, Jainism should be viewed as a separate belief system. One of the most important principles in Jainism is *ahimsa*, or non-violence. Jains believe that violence against any living thing is wrong and must be avoided at all costs. They believe that living a non-violent life will bring you closer to holiness. For this reason, Jains commonly practice vegetarianism and adopt lifestyles that reduce their environmental impact. Strict Jains will even sweep the ground in front of them to avoid killing insects. This custom demonstrates just how important the natural world is in Jainism.

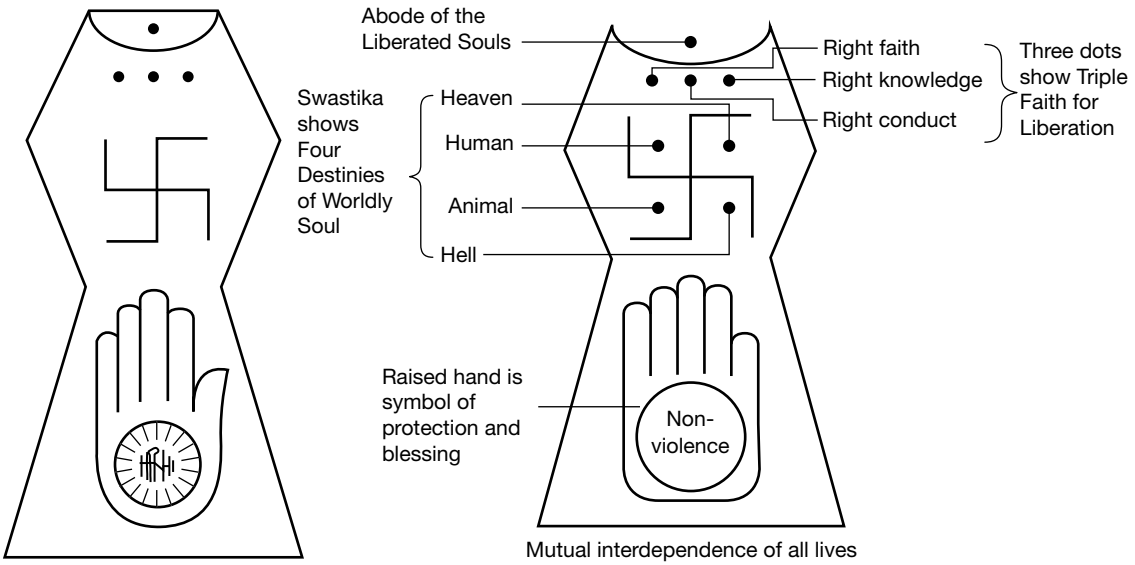
Jainism explained

Ahimsa is not the only important aspect of Jainism. In fact, it is only one of the five major vows that all Jains must take. By fulfilling these vows, Jains believe that all people have the opportunity to become gods.

The Five Vows of Jainism are:

- *ahimsa* — non-violence
- *satya* — truthfulness
- *asteya* — non-stealing
- *brahmacharya* — celibacy/chastity
- *aparigraha* — non-attachment.

SOURCE 9 An explanation of Jainism symbols



By living their lives according to these vows, Jains attempt to seek liberation from the cycle of reincarnation in which they also believe. Once a person attains liberation, their soul becomes immortal and stays in an ever-lasting state of bliss. In modern times, Jainism remains a relatively minor religion in India. It was popularised in the western world by the famous Indian political leader Mahatma Gandhi. Though not a Jain by birth, Gandhi's non-violent methods of protest closely follow the teachings of Jainism.

6.8.6 Rites of passage in ancient India

Life-cycle events are a large part of many religions. In Catholicism, a newborn baby's baptism is a significant religious event, as is a *bar-* or *bat-mitzvah* to a young Jewish boy or girl. In ancient India, life-cycle events were known as *samskara*. A term with different meanings, in this instance samskara refers to the moment in the lives of Hindus, Buddhists and Jains. **SOURCE 10** outlines the most important samskara in Hinduism.

SOURCE 10 The most important samskara in Hinduism

Samskara	Description
Garbhadhana	A ritual that signified the intent to conceive a child
Pumsavana	A ritual to increase the chances of conception
Simanatonayana	'Parting of the hair' ceremony; completed to ensure the safe delivery of a baby
Jatakarman	A ritual to celebrate the birth of a baby
Namakarana	A baby-naming ceremony usually performed on the 10th to 12th day after its birth
Nishkramana	A ritual during which a baby is formally introduced to the world for the first time; the timing usually corresponds to sunrise or sunset
Annaprashana	A ritual during which a baby will eat solid food for the first time
Chudakarana	The ritual of a child's first haircut (usually involves shaving the head, especially for boys)
Karnavedha	An ear-piercing ceremony that in modern times is more common for girls than boys
Vidyarambha	A ritual to celebrate the beginning of a child's education
Upanayana	A rite of passage during which a child receives a sacred thread, usually from a teacher
Praishartha	A ritual that marks the beginning of the study of sacred texts, including the Hindu *Vedas*

(Continued)

Samskara	Description
Keshanta and Ritusuddhi	Rituals that mark a young man's first shave (the former) and a young woman's first menstruation cycle (the latter)
Samavartana	A ritual to celebrate graduation from the education system
Vivaha	The range of rituals in a marriage ceremony
Antyeshti	Funeral rites, often including cremation

Ancient Indians took part in these rituals, and continue to do so today, for many reasons. The most simple of these reasons is that the various samskara allowed people to demonstrate their commitment to what they believe. Take the ritual of *Upanayana*, for example. Conducted between a *guru* (teacher) and a student, this ritual is conducted by only the upper three castes of Indian society. The ceremony marks the beginning of a student's educational journey. Yet, more importantly, it also signifies a young person's acceptance as a full member of their community. During the ceremony, a sacred thread is tied across the student's chest. While it may need to be replaced over the years, this thread is worn for the remainder of the bearer's life — a constant reminder of their connection to their beliefs.

SOURCE 11 A modern example of the Upanayana ritual

6.8.7 Death and funerary customs

The concept of death in ancient Indian belief systems is extremely interesting. With the belief in incarnation strong in many Indian religions, death is seen as a transition from one life into another. For Hindus, the funerary ceremony, or *antyesti*, signifies the separation of the soul from the body. For this reason, adults are usually cremated, with their ashes scattered either in a sacred river such as the Ganges or a place of importance to the deceased. The funeral occurs in the days that follow the death and is usually presided over by the oldest son of the grieving family. An interesting, but rare, custom in Indian funerals is the use of professional mourners. People referred to as *rudaali* are employed by the grieving family to attend the funeral. Rudaali are

SOURCE 12 The Great Stupa at Sanchi and a small personal stupa

only employed by members of the upper castes who, because of their status, are not allowed to publicly show their emotions. Due to this social restriction, the role of the rudaali is to mourn on their behalf.

Cremation was also practised by Buddhists in ancient India. Buddhist monks would chant with the grieving family while the body was set alight. Their prayers were thought to help the soul of the deceased leave the body and transition into its next incarnation. Another Buddhist funerary custom was the construction of *stupas*.

Found at monasteries and religious centres, stupas usually took the form of a hemispherical structure. The shape of the stupa represents the original burial mounds of the Buddha. While the central mound was usually left plain and undecorated, the surrounding walls and arches were covered with elaborate engravings. On early Indian stupas, the Buddha himself was never depicted in human form. Instead, the Buddha was represented through symbols such as the footprints shown in **SOURCE 13**.

The relics of great Buddhist scholars and monks were stored within the structure. Small ceramic, stone or metal stupas were also used to house the ashes of the deceased. It was (and still is) common for these smaller stupas to become the focus of family shrines.

SOURCE 13 Engraved stupa walls at the Great Stupa of Sanchi, showing footprints of the Buddha with a wheel — the Ashoka Chakra — embedded in them

6.8 SKILL ACTIVITY: Using historical sources

Historical sources can provide information about past civilisations and what was important to them.

1. **Examine SOURCE 13.**
2. **Identify** what is located within the Buddha's footprints.
3. **Conduct research** to find out more about this object and answer the following questions:
   - What does the object symbolise?
   - Why has the object been added to this engraving of Buddha's footprints?
   - Is this object displayed in modern India? Provide an example.
4. **Summarise** the significance of this object to the people of India.

6.8 Exercise

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6.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 6, 8	5, 7	4, 9, 10

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Check your understanding

1. Select the correct words to complete the passage.
   Siddhartha Gautama was an Indian **priest** / **prince** / **worker** who founded Buddhism in the **fifth** / **sixth** / **eighth** century BCE. He gave up his worldly riches to seek the deeper truths about life, including the **Two** / **Four** / **Six** Noble Truths. People began to call him Buddha, or the Enlightened One.
2. Reincarnation is the process through which a deceased person's spirit or soul moves to the afterlife. True or false?
3. a. From _____ times, Hinduism divided society into classes called castes.
   b. The caste system was a means of _____ control.
   c. **Identify** the two groups that occupied the top caste of the system.
   d. **Recall** why the lowest ranked group was known as the Untouchables.
4. **Explain** dharma and how it relates to the natural world.
5. **Explain** why people participate in the various rituals explained in this lesson.

Apply your understanding

Using historical sources

6. **Consider** the sources included in this lesson. From what you have learned in this topic, **explain** why you think water plays a key role in these Hindu festivals.
7. **Propose** why someone would have written the *Purusha Sukta* after the Vedic period. What purpose might the author have had?
8. Using **SOURCE 7**, **identify** in which part of India the most centres of Buddhism were located by about 200 BCE.
9. **Describe** what you notice about the representation of the Buddha shown in **SOURCE 8**.
10. The major religions of India are closely linked through shared beliefs and customs. **Evaluate** the accuracy of this statement with examples.

LESSON
6.9 INQUIRY: What was behind Ashoka the Great's sudden change in leadership style?

LEARNING INTENTION

By the end of this lesson you should be able to explain the reasons behind Ashoka the Great's sudden change in leadership style and military approach.

Background

In this inquiry, you will take a closer look at the remarkable personal change made by Ashoka the Great. You may like to revisit lesson 6.7 to refresh your knowledge about the famous warrior-turned-philosopher.

SOURCE 1 An artist's impression of Ashoka the Great

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Step 1: Questioning and researching

Find a range of primary and secondary sources to support the observations you make about Ashoka and his leadership styles. You can use this text as a starting point, but try to find additional sources using your school's library and the internet.

Step 2: Using historical sources

Analyse your research in the context of your guiding questions. In other words, once you have obtained more historical information, try to categorise this information in relation to your questions. A table like the one provided is just one way to organise and analyse your research.

Source	Primary or Secondary	Summary of source	Relevant inquiry question

Step 3: Historical perspectives and interpretations

Evaluate your information by making a judgement on the key research question — which of Ashoka's leadership and military styles were the most effective in building an empire? To assist your evaluation, you may want to revisit the table you just completed.

Step 4: Communicating

What is the answer to your research question? Present your findings in a format of your choosing. Support your answer with examples from your research, analysis and evaluation.

Complete your self-assessment using the **Inquiry rubric** or access the 6.9 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39372)

LESSON
6.10 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

Watch teacher-led videos

Practise questions with immediate feedback

Find all this and MORE in jacPLUS

6.10.1 Key knowledge summary

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

6.2 How do we know about ancient India?

- Indian history stretches back over 3500 years.
- Compared to other ancient civilisation, the Indus Valley Civilisation has fewer historical sources and artefacts remaining today.
- Harappa and Mohenjo-daro are two of the most important archaeology sites in the Indus Valley region.
- Evidence exists of contact between the Indus Valley Civilisation and other ancient cultures.

6.3 What is the geography of India?

- The unique physical factors found within the Indus Valley were crucial to the development of early Indian civilisations.
- The great Himalayan rivers of the Ganges, Brahmaputra and Indus provided the area with a reliable supply of fresh water.
- The rivers also left the surrounding soil rich with sediment eroded from the mountain ranges that lay to India's north.
- The supply of fresh water from the rivers and the rich sediment allowed early Indian farmers to establish permanent settlements in the Indus Valley. From these settlements, the Indus Valley Civilisation arose.

6.4 What are the lost cities of the Indus Valley?

- Archaeological excavations and important sites have revealed much about India's past. In particular, the sites of Harappa, Mohenjo-daro and Lothal have yielded pottery, jewellery, engraved walls and religious structures, ports and even entire street plans.
- Given the importance of early Indian archaeological sites, it is crucial that the relevant authorities strive to conserve and protect them.
- Increased urban development, increased numbers of tourist visitors and climate change are all real threats to the survival of Harappa, Mohenjo-daro, Lothal and other key archaeological sites.

6.5 What contacts and conflicts did ancient India experience?

- Early Indian society was significantly influenced by its frequent battles against invaders from a range of other peoples.
- Trade between Europe and the East became more common, and knowledge of the unique goods and resources India had been blessed with became more widely known.
- Increased knowledge of India's unique resources made the area a target for the powerful armies of Greece, Persia and Macedonia.
- Contact and conflicts with Greece, Persia and Macedonia left cultural and religious impacts on ancient Indian society.

6.6 What was significant about the Mauryan Empire?

- Before the Mauryan Empire, ancient India was ruled by separate tribal families and civil conflict was common and fierce.
- The Mauryan Empire was the first dynastic power in India and brought relative peace to the area through its unified government.
- This period of history witnessed significant developments in law-making and other government regulations.

6.7 Who was Ashoka the Great?

- Through a series of military campaigns, Ashoka expanded the Mauryan Empire to its furthest limits.
- Once a warrior himself, Ashoka saw the brutality of his ways and devoted his life to the principles of Buddhism. Ashoka is credited with popularising Buddhism in ancient India.

6.8 What was the social structure of ancient India?

- Indian society became highly controlled and regulated with the introduction of the caste system, a rigid social hierarchy where moving between castes was virtually impossible. This system is still in place in modern India to some extent.
- Women were initially highly respected in ancient India and experienced a high level of gender equality. However, the status and rights of women deteriorated through later dynasties.
- Introduced by Hindus, the caste system was rejected by followers of Buddhism.
- Indian society was and still is steeped in religion and tradition, and several key belief systems developed in ancient India.
- Each of these belief systems participated in similar, yet varied, daily customs and rituals. In particular, funerary customs were of importance to all Indian religions. With belief in reincarnation and an afterlife common in Indian religions, it was crucial that death be handled in the right way.

6.9 INQUIRY: What was behind Ashoka the Great's sudden change in leadership style?

- Ashoka the Great underwent a complete transformation in his leadership and military style, and devoted his life to Buddhist principles.
- A range of primary and secondary sources can provide further insight into Ashoka and his leadership styles.

6.10.2 Key terms

anthropomorphic describing or representing something as having human traits, despite its original lack of these characteristics
continent one of seven very large, continuous bodies of land; they are Europe, Asia, Africa, Antarctica, Australia, North America and South America
cubit an ancient measure of length, based on an adult's forearm
demise death
edict order issued by a sovereign to his or her subjects
granary place for storing grain
grid system a street network that creates square and rectangular blocks
hygienic healthy, sanitary
Indus seals imprints of stamps found on pottery made during the Indus Valley Civilisation
legacy something handed down from the past
Macedonian native of Macedon, an ancient kingdom north of Greece
medallion a coin-shaped, usually metallic, decorative disk
monsoon rainy season accompanied by south-westerly summer winds in the Indian subcontinent and South-East Asia
nomads tribal groups who wander from place to place, generally in search of food or pasture
power vacuum a situation with a lack of political leadership
Sanskrit ancient Indian language used in classical Hindu literature
stadia the plural form of stadium, which is a measure of about 200 metres
utopia a perfect social and political system

6.10.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How did society change during the Indus Valley 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.

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10518)
Reflection (ewbk-10526)
Ancient India crossword (ewbk-10525)

Interactivity Ancient India crossword (int-7697)

6.11 Review exercise

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Multiple choice

1. When did the first permanent settlements of the Indus Valley Civilisation arise?
   - **A.** About 4000 BCE
   - **B.** About 3000 BCE
   - **C.** About 2000 BCE
   - **D.** About 1000 BCE
2. What natural resource was crucial to the development of the Indus Valley Civilisation?
   - **A.** Gold
   - **B.** Silver
   - **C.** Water
   - **D.** Trees
3. Why don't we know the names of any of the Indus Valley rulers?
   - **A.** Because written language was not used at the time.
   - **B.** Because there were too many different leaders.
   - **C.** Because there were no leaders of the Indus Valley Civilisation.
   - **D.** Because we do not have enough archaeological evidence of these leaders.
4. Which ancient Indian city housed a port that enabled international trade?
   - **A.** Harappa
   - **B.** Mohenjo-daro
   - **C.** Lothal
   - **D.** Sanchi

5. What is the greatest threat to the archaeological sites from ancient India?
   - **A.** Rapid urbanisation
   - **B.** Increased tourist numbers
   - **C.** Increased flooding events
   - **D.** All of the above
6. What was unique about the rule of Ashoka the Great?
   - **A.** He abandoned his reign at the peak of its powers.
   - **B.** He converted India from Hinduism to Buddhism.
   - **C.** He united the warring states of India.
   - **D.** He was assassinated by his own brother.
7. What were the *Vedas*?
   - **A.** A group of religious texts
   - **B.** A group of foreign invaders
   - **C.** A group of Hindu rituals
   - **D.** A group of young Buddhist scholars
8. Which group is at the bottom of the caste system?
   - **A.** Brahmin
   - **B.** Vaishya
   - **C.** Sudra
   - **D.** Dalit (Untouchables)
9. One method Jains take to achieve liberation is which of the following?
   - **A.** The Eightfold Path
   - **B.** Enlightenment
   - **C.** Nirvana
   - **D.** The Five Vows
10. The ancient Indian language used in classical Hindu literature is called:
    - **A.** Suscrit
    - **B.** Sanskrit
    - **C.** Sanswrit
    - **D.** Suskrit

Short answer

Communicating

11. Using the sources shown throughout this topic, **create** a map that shows the establishment and expansion of ancient Indian civilisations. Include the invasions launched by other countries.
12. **Explain** the ways in which religion influenced early Indian civilisations.
13. How did trade with the outside world affect the development of early Indian civilisations?
14. Why is it difficult to make conclusive statements about much of ancient Indian history?
15. Throughout ancient Indian history, civilisations were rigid and resisted outside influences. **Evaluate** this statement, using specific examples to support your view.

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Online Resources

on Resources

This is a summary of the digital resources you will find online for Topic 6 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

6.1 Overview

eWorkbook
- Customisable worksheets for this topic (ewbk-10518)

Video eLesson
- Ancient India (eles-1839)

Interactivity
- A timeline of ancient India (int-4297)

6.4 What are the lost cities of the Indus Valley?

Interactivity
- The main archaeological sites of the Indus Valley Civilisation (int-7763)

6.5 What contacts and conflicts did ancient India experience?

Interactivity
- The location of important cities of the Indus Valley Civilisation (int-7764)

6.6 What was significant about the Mauryan Empire?

Teacher-led video
- Analysing the observations of Megasthenes (tlvd-10514)

6.7 Who was Ashoka the Great?

Interactivity
- The furthest extent of the Mauryan Empire, as achieved by Ashoka (int-6000)

6.8 What was the social structure of ancient India?

Interactivities
- This social pyramid represents the main castes and social classes of ancient India by about the time of the Mauryan Empire (int-6001)
- The spread of Buddhism within India up to the first century CE (int-6002)

6.9 INQUIRY: What was behind Ashoka the Great's sudden change in leadership style?

Digital document
- Inquiry rubric (doc-39372)

6.10 Review

eWorkbooks
- Customisable worksheets for this topic (ewbk-10518)
- Reflection (ewbk-10526)
- Ancient India crossword (ewbk-10525)

Interactivity
- Ancient India crossword (int-7697)

To access these online resources, log on to **www.jacplus.com.au**

7 Ancient China

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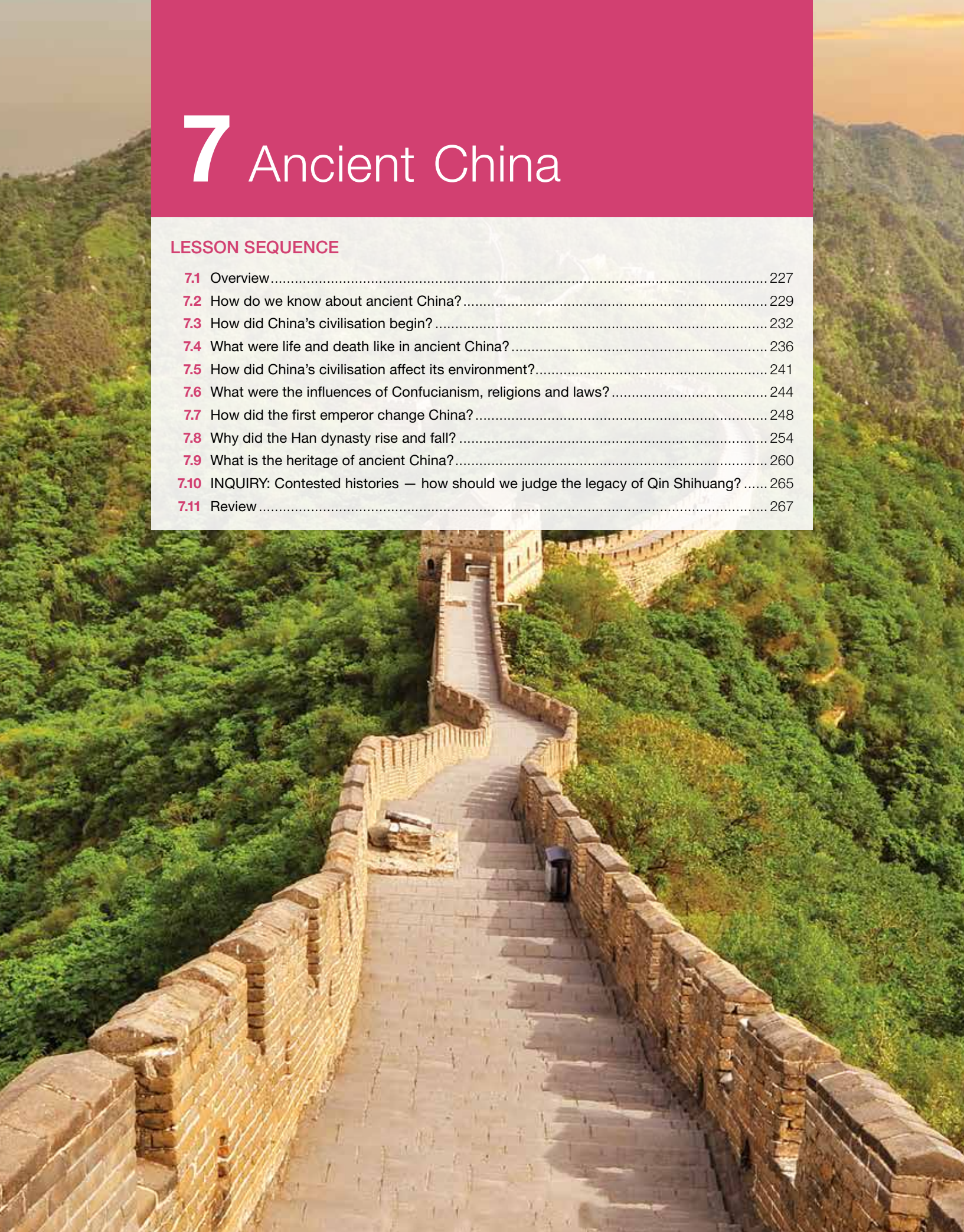

LESSON
7.1 Overview

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Engage with interactivities

Answer questions and check results

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Why and where did ancient China's civilisation emerge, and what were its defining features, achievements and legacies?

7.1.1 Introduction

China is the world's oldest continuous civilisation. For thousands of years, it remained isolated from the western world. During the nineteenth and early twentieth centuries, China suffered invasions, revolutions and civil wars in which many millions of people died. Now, in the twenty-first century, China is emerging as the world's next great superpower.

China has the biggest population and one of the fastest growing economies in the world. In recent years, it has experienced a massive building boom, with skyscrapers pushing ever upwards into the already polluted skies over vast cities such as Shanghai. Its amazing industrial growth has increased the world's awareness of environmental issues, especially global warming. We know that if each person in China were to cause as much pollution as the average Australian, our planet would become uninhabitable.

SOURCE 1 The Great Wall of China

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10528)

Video eLesson Ancient China (eles-1838)

int-4296

SOURCE 2 A timeline of ancient China

c. 1600 BCE
The Shang dynasty begins (lasts until 1046 BCE).

1045 BCE
The Western Zhou dynasty begins (to 770 BCE).

770 BCE
The Eastern Zhou dynasty begins (to 256 BCE).

551–479 BCE
Confucius lives.

475–221 BCE
The Warring States period

206 BCE
The Han dynasty is established.

9–25 CE
The Hsin dynasty (Wang Mang)

65 CE
Buddhism arrives in China from India.

184 CE
Revolt of the Yellow Turbans

BCE
3000
2000
1000
800
700
600
500
400
300
200
100
BCE CE
100
200
300
CE

c. 2100 BCE
The legendary Xia dynasty is established.

c. 1200 BCE
Silk is first made in China.

c. 500 BCE
Iron working begins in China.

221–206 BCE
The Qin dynasty creates the Chinese Empire.

25 CE
The Han dynasty is restored (Eastern Han).

105 CE
The Chinese invent a method of making paper from silk.

220 CE
The Han dynasty falls. The Three Kingdoms period begins.

LESSON
7.2 How do we know about ancient China?

LEARNING INTENTION

By the end of this lesson you should be able to explain how we know about ancient China, and begin to develop the skills of identifying, analysing and using source material.

TUNE IN

In 1928, nearly 100 000 engraved bones and turtle shells from the Shang dynasty were found near the modern city of Anyang. They were covered in early Chinese writing.

SOURCE 1 Shang dynasty inscriptions on bone

Discuss the following with reference to **SOURCE 1**:

1. This bone was found covered in the earliest known Chinese writing. Brainstorm why you think people would have written on bone.
2. What do you think the writing could have been about?

7.2.1 Examining the evidence about ancient China

From huge structures, such as the Great Wall of China, to the writings of ancient Chinese poets and historians, many primary sources provide extensive evidence of ancient China.

We know that at least 6000 years ago people settled in farming villages along China's Huang River (Yellow River). Shang dynasty inscriptions refer to harvests, rainfall, crops, silk and domesticated animals. Through inscriptions on bronze weapons, armour and vessels, and on tortoiseshell and bones, we know that by Shang times the Chinese had developed writing (refer to **SOURCE 1**). Inscriptions show that they believed that China was a place of civilisation surrounded by barbarians. Discoveries of cast-iron implements from Eastern Zhou times show that iron was then being used to make tools and weapons for the expanding armies. Iron gave those armies a great advantage over enemies who still used softer, bronze weapons.

Archaeological finds, including artworks and jade burial suits, tell us about the rich cultures that existed during the Qin (pronounced *chin*) and Han dynasties. The most exciting find of all was the discovery in 1974 by local peasants of a huge buried army of life-size terracotta warriors (see **SOURCE 2**). They stood guard over the tomb of China's first emperor, Qin Shihuang. Archaeologists estimate that the complex surrounding the tomb contains at least 7000 clay warriors, 600 clay horses and many weapons. Two bronze chariots, each made up of more than 3000 pieces, were also found.

SOURCE 2 Some of the thousands of terracotta warriors that were buried around the tomb of China's first emperor

aud-0425

7.2 SKILL ACTIVITY: Using historical sources

SOURCE 3 From Sima Qian's book *Shiji*. Sima Qian was a Chinese historian who lived from about 145 to 86 BCE (during the Han dynasty).

In the ninth moon the First Emperor was buried in Mount Li . . . he employed his soldiery, to the number of 700 000, to bore down . . . and there a foundation of bronze was laid and the sarcophagus placed thereon. Rare objects and costly jewels were collected . . . in vast quantities. **Artificers** were ordered to construct mechanical crossbows, which, if anyone were to enter, would immediately discharge their arrows . . . On the roof were delineated the **constellations** of the sky, on the floor the geographical divisions of the earth . . .

The Second Emperor said, 'It is not fitting that the **concubines** of my late father who are without children should leave him now'; and accordingly he ordered them to accompany the dead monarch to the next world . . . someone suggested that the workmen who had made the machinery and concealed the treasure knew the great value of the latter . . . Therefore, so soon as the ceremony was over . . . the **mausoleum** was closed, so that not one of the workmen escaped.

artificer craftsperson or inventor
constellations groups of stars
concubines women who lived with the emperor in a sexual relationship but were not married to him
mausoleum large tomb structure

Examine **SOURCE 3**.

1. In this extract from *Shiji*, Sima Qian is describing the construction of the tomb of Qin Shihuang, China's first emperor. **Propose** what you think would have been the purpose of the mechanical crossbows.
2. **Identify** what was pictured on the roof. **Discuss** why this might have been done.
3. **Identify** what was done to the concubines and the workmen and **infer** what this tells you about the emperor's power and attitudes to human life.

7.2 Exercise

learnon

7.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4, 5	6, 7	8, 9, 10

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Check your understanding

1. **Identify** when farming began in ancient China.
   - A. Around 6000 years ago
   - B. Around 1000 years ago
   - C. Around 600 000 years ago
   - D. Around 100 000 years ago
2. **Examine SOURCE 1**. **Identify** the clues about ancient China's civilisation that have been provided by inscriptions and implements.
   - A. They had developed writing
   - B. Iron was being used to make weapons and tools
   - C. They kept records of harvests and rainfall
   - D. All of the above
3. **Recall** and select the correct answer to complete the following sentence.
   The Chinese had developed writing by **Xia** / **Shang** / **Han** times.
4. **Discuss** the advantage that armies using iron weapons had over enemies using bronze weapons.
5. **Describe** what was discovered in the complex surrounding the tomb of Emperor Qin Shihuang.

Apply your understanding

Communicating

6. **Explain** how **SOURCE 1** provides evidence of a writing system during the Shang dynasty.

Using historical sources

7. Study **SOURCE 2**.
   - a. **Describe** the terracotta warriors.
   - b. How can you know that they were not mass-produced?
   - c. What do they tell you about the emperor's army, wealth and power?
8. Using **SOURCES 2** and **3** as your evidence, write a one-paragraph **explanation** of the position of the emperor and the burial practices that were carried out after his death.
9. Qin Shihuang is often described as a ruthless, harsh ruler. Refer to **SOURCES 2** and **3** to either support or refute this view.
10. Sima Qian wrote during the Han dynasty, which replaced the first emperor's Qin dynasty. **Discuss** why this should make us cautious about accepting that **SOURCE 3** is accurate.

LESSON
7.3 How did China's civilisation begin?

LEARNING INTENTION

By the end of this lesson you should be able to describe China's physical features and explain how they shaped China's emerging civilisation.

TUNE IN

The city of Shanghai is on the Yangtze River, one of the first places where farming and civilisation developed in China.

SOURCE 1 River traffic in Shanghai

Discuss the following:

1. What advantages do you think the river provides for Shanghai today?
2. What advantages do you think river valleys provided for early civilisations?

7.3.1 China's physical features and the beginning of civilisation

The ancient Chinese saw their country as the centre of the world. Until about 126 BCE, they were unaware of the existence of other civilisations. According to legends in the ancient books of China, there was once a 'golden age' in which the arts of civilisation, morals and good government were established. The legends tell of a dynasty called the Xia (pronounced *shar*). This dynasty possibly ruled a state in China from about the twenty-first century BCE to the seventeenth century BCE, when its last king was overthrown. However, we have no primary evidence of its existence.

SOURCE 2 A map of ancient China

Source: Map drawn by Spatial Vision.

What we do know with certainty is that civilisation could not have developed where it did in China without its river valleys. They provided fertile land for farming. But farming along such river valleys could also be hazardous, because the same floods that provided rich soil for crops could also devastate farms and villages. People looked to gods and rulers to protect them.

From earliest times, Chinese rulers based their authority on the **mandate of heaven**. This meant they had been chosen by the gods to rule. However, a ruler who failed to protect the people from floods, famine, wars or other disasters was considered to have lost the mandate of heaven and could be overthrown.

DID YOU KNOW?

The name 'China' comes from the name of the Chinese state Qin. People in India and Central Asia must have known of Qin's existence by about 300 BCE because by that time the word 'China' had appeared in their languages. Modern Chinese call their country *Zhongguo*. In Eastern Zhou times, *Zhongguo* meant the central states of China.

China's earliest dynasties

The first dynasty for which we have evidence is the Shang dynasty (*c.* 1600–1046 BCE). The Shang rulers were often at war with neighbouring groups. Their dynasty fell when the Zhou (pronounced *jo*) defeated them and set up a new dynasty. Historians divide the Zhou dynasty into two periods: the Western Zhou dynasty (1045–771 BCE) and the Eastern Zhou dynasty (770–256 BCE), under which the capital was moved to the east.

The Warring States period (475–221 BCE)

Royal authority was weak under the Eastern Zhou rulers. Many wars broke out between local lords, who controlled their own states within the Zhou kingdom. The stronger states defeated and took over the weaker states. Finally, seven states — Qin, Han, Zhao, Wei, Ch'u, Yan and Qi — remained to fight for control of northern China.

mandate of heaven Chinese expression meaning that a ruler had been chosen by the gods

SOURCE 3 Zhou dynasty China during the Warring States period, about 300 BCE

Source: Map drawn by Spatial Vision.

7.3 SKILL ACTIVITY: Communicating

Create a timeline, putting the following events in the order in which they took place: the Eastern Zhou dynasty, the Western Zhou dynasty, the legendary Xia dynasty, the Warring States period, the Shang dynasty.

Identify and **describe** any continuous pattern your timeline shows.

7.3 Exercise

learnon

7.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4, 5	6, 7, 8	9, 10

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Check your understanding

1. **Identify** the idea of the mandate of heaven.
   - A. The rulers were gods.
   - B. The rulers were perceived as gods by the people.
   - C. Power and authority was given to a ruler by the gods.
   - D. The gods made laws that could not be broken.
2. The mandate could be withdrawn if a ruler failed to protect the people from floods, famine, war and other disasters. True or false?
3. Why is the Xia dynasty often referred to as the 'legendary' Xia dynasty?
   - A. The Xia dynasty achieved great advancements.
   - B. The people of the Xia dynasty were legendary warriors.
   - C. The ruler of the Xia dynasty was a god.
   - D. No primary evidence has been found to prove its existence.
4. **Explain** why we know more about the Shang and Zhou dynasties than some other dynasties of ancient China.
5. What was the Warring States period?

Apply your understanding

Using historical sources

6. **Examine SOURCE 2.**
   - a. How big was China in Shang and Zhou times compared with modern China?
   - b. Which major rivers can you find in the area that was part of China under the Shang and Zhou dynasties?
7. **Examine SOURCE 3.**
   - a. During the Warring States period, which states occupied land around river valleys?
   - b. What advantages would they have gained from that?
8. Using the sources and information in this lesson, **summarise** a list of ways in which the adoption of farming must have changed Chinese society.
9. Referring to **SOURCE 2**, **propose** how the natural features of China's varied geography would have helped to protect it against invasion.

Communicating

10. **Propose** how China's rivers would have contributed to the development of its civilisation.

LESSON
7.4 What were life and death like in ancient China?

LEARNING INTENTION

By the end of this lesson you should be able to describe ancient China's social structure, explain the connections between class and power, and explain the different experience of the classes in life and death.

TUNE IN

The everyday lives of people varied between different social classes in ancient China.

Examine **SOURCE 1**.

1. Describe what you can see in this image that suggests to you that it is in China.
2. Is this how you would have expected Chinese citizens to appear?
3. Consider the ways that ordinary Chinese people might have looked different in ancient times.

SOURCE 1 Modern Chinese people in the Chinese capital, Beijing

7.4.1 The ruling classes

Chinese society was headed by rulers who were supported by lords, the landowning gentry (whose position was based on inherited status, wealth and education) and **bureaucrats**. These classes had authority over large populations of peasants, landless labourers, artisans and some slaves.

- Ancient Chinese rulers had great power. This is shown by Shang dynasty tombs containing war chariots and the bodies of thousands of followers. These people must have been sacrificed to serve their rulers in the afterlife.
- Below the supreme ruler were the powerful lords. They governed the states, such as Zhao, Qin and Wei, within the kingdom.
- Next came the landowning gentry. The warrior gentry headed the lords' armies. Bureaucrats were also recruited from the gentry, but they had to be scholars to become government officials.

The lords of ancient China were often at war with neighbouring nomadic tribes to China's north and west. They also made war with each other. Warriors fought at first in chariots and later on horseback. The lords and warrior gentry regarded war almost as a sporting contest. When not fighting, they spent much of their time hunting, feasting or attending ceremonies and entertainments at court.

Upper-class women had servants and luxuries. However, as females they were considered inferior to males. When they married, they were treated as the property of their wealthy husbands, who were allowed to have several wives.

bureaucrat government official

SOURCE 2 A late Zhou dynasty bronze musical bell

SOURCE 3 An ox-shaped bronze zun (wine vessel) from the late Zhou dynasty

DID YOU KNOW?

In ancient China, women and men wore ornaments and jewellery as a badge of their social rank. This made it easy to tell at a glance their position in society.

7.4.2 The common people

The struggling peasants

Most of the people in ancient China were powerless peasants whose lives changed little over thousands of years. They reared sheep, pigs, poultry, buffalo and oxen, and grew grains such as wheat, millet and barley. Most peasants were tenants who worked fields owned by the lords or gentry. They had to give their landlords about half of everything they produced, as well as paying taxes to the government. Times could be so hard that they were forced to sell their children into slavery.

Peasants had to cope with natural disasters, such as floods and famine, and with the constant threat of war. Most of the **infantry** in the armies were **conscripted** peasants. In hand-to-hand fighting, their main weapons were at first **halberds** with bronze blades. Later they used swords made from bronze or iron. Many foot soldiers died in battle. Those who were captured could expect to be executed or condemned to slavery.

The lowest classes

Below the peasants came artisans, merchants and slaves. Artisans were skilled craftsmen such as armourers, metalworkers and carpenters. They were a small class because their products were mostly for the ruling classes. Merchants, who conducted businesses and trade, were an even smaller and lower class. Although some merchants were wealthy, they were not considered as playing a useful role and were ranked just above slaves. Ancient China had fewer slaves than many other ancient societies. Many slaves had been taken as prisoners of war. Others suffered slavery as punishment for crimes (sometimes committed by their relatives rather than themselves). Still others were peasants who were sold as slaves to pay debts.

infantry foot soldiers
conscripted forced to become a soldier
halberds daggers mounted on axe handles

7.4.3 Everyday life

How different were the everyday lives of people from different social classes in ancient China and how differently were they treated in death? Life and death were marked by extreme inequality between rulers, lords, gentry and bureaucrats on the one hand, and peasants, artisans and slaves on the other. In addition, within all classes existed extreme inequality between men and women.

The vast majority of the Chinese people were peasant farmers for whom life was a constant struggle to survive. Most spent their entire lives in villages of around a hundred families, toiling on small family farms. They worked long hours every day and most of their work was done by hand. The threat of floods and droughts meant that groups of families often worked together on such tasks as maintaining irrigation canals. In towns and cities, crafts were usually hereditary — a son would learn the craft from his father and take over when his father died. The lives of craftsmen and merchants were also tough but often better than the lives of peasants. At least craftsmen and merchants got to travel for work and trade.

SOURCE 4 A bronze *mao* (spearhead) from the late Shang dynasty

Women's hard lives

Regardless of social class, women were considered inferior to men. Fathers ruled in ancient Chinese families. Women were expected to look after the household and children, and in peasant families they often worked in the fields as well. Their fathers arranged their marriages and, once married, a woman had to live with her husband's family in a dwelling that might house three generations. Married women had to obey their husband's family members but they could gain some respect by producing sons. Baby girls were not valued and were sometimes put out to die or sold to be servants. If a woman failed to give birth to boys, her husband might take other wives. In a society where people venerated their elders, another way for a woman to gain respect was to outlive her husband.

SOURCE 5 A *yue* (battle-axe head) with a dragon design, from the late Shang dynasty

Entertainment

The unending work of men and women in common families left almost no time or money for any kind of entertainment, apart from occasional festivals. In contrast, for the ruling classes, and some wealthy merchants, several forms of entertainment were available. During the Zhou dynasty, acting, music and dance were combined into Chinese opera, in which famous legends were performed. Evidence also exists of a variety of board games from around 500 BCE. From the time of the Qin dynasty, acrobatics became another popular form of entertainment.

SOURCE 6 From Michael Lowe, *Everyday Life in Early Imperial China*

> . . . evidence in the form of reliefs [sculptures] that decorated a tomb illustrates the type of entertainment that rich families could afford to stage, right at the end of the Han period. There was dancing and sword-play, juggling and acrobatic feats, accompanied by skilled players with their drums and bells, their wind and stringed instruments; and we know of other forms of amusements . . . such as cock-fighting, dog or horse racing and bird hunting.

7.4.4 Death and burials

We know little about death among the poor in ancient China, but a lot about the funeral customs of rulers and the ruling classes because they could afford elaborate tombs. Chinese ideas about death preceded the organised religions, so most people did not restrict funeral rituals to any one religion. A rich family might employ Daoist and Buddhist priests and Confucian scholars to play official roles at a funeral (see lesson 7.6).

It was believed that when someone died their soul left their body to dwell in a spirit world. It was also believed that an elaborate funeral would inform the spirit world of the deceased's high rank in society. Another belief was that the living had to help the deceased into the spirit world so that the dead would not become evil spirits that would return to worry them. From about 5000 BCE to the seventeenth century CE, it was the custom of the ruling classes to bury goods, including food and drink, with the dead so that they would have them in the afterlife. Until Han dynasty times, it was also common for rulers to have people buried with them to serve them in the spirit world.

The rich indulged in grand funeral feasts and ceremonies, and evidence exists of them being buried with puppets clothed in fine silk worth more than a peasant might earn in a year. Their tombs were painted with scenes of joyful banquets and dances. The poor had no such finery. Most were probably buried in simple pits. In famines, floods and wars, most of the poor may have received no burial at all.

SOURCE 7 Life-sized terracotta warriors were buried to guard China's first emperor, Qin Shihuang.

SOURCE 8 Jade burial suit of Princess Dou Wan, who lived before 100 BCE. The pieces of jade (2150 of them) are held together with gold wire.

DID YOU KNOW?

Burial suits were often made of jade because it was believed that jade would stop the body from decaying and so ensure immortality.

SkillBuilders to support skill development

- 1.14 SkillBuilder: Analysing different perspectives about ancient China

7.4 SKILL ACTIVITY: Communicating

In groups, **write** and **perform** a role-play of an imaginary discussion between peasants and members of the ruling classes on the following issues:

- how much of their produce tenant farmers had to give to their landlords
- the suffering of peasants who were conscripted as infantry during wars.

Distinguish the feelings that both groups would have had, and why they would have differed greatly.

7.4 Exercise

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7.4 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 3, 4, 5, 6	7, 8	9, 10

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Check your understanding

1. **Select** the correct words to complete the following sentence.
   The **gentry** / **lords** governed states within the kingdom. The **gentry** / **lords** headed the lords' armies and those who were scholars became government officials.
2. Peasants suffered in wars no matter which side won. True or false?
3. **Identify** three ways people could become slaves in ancient China.
   A. By being born as a slave
   B. By being sold into slavery
   C. By being punished for crimes they (or a relative) committed
   D. By being captured as soldiers
4. Why were merchants regarded as belonging to a very low class even though they might be wealthy?
5. **Describe** ways in which women were disadvantaged.
6. **Explain** what beliefs were held about life after death.

Apply your understanding

Using historical sources

7. **Examine SOURCES 2, 3, 4** and **5**. **Describe** how each of these objects was used and which social class would have used it.
8. Read **SOURCE 6** and **explain** what evidence it provides of inequality in ancient China in death and in life.
9. Study **SOURCES 7** and **8**. **Suggest** what evidence each of these sources provides about ancient Chinese society.

Communicating

10. **Explain** why the power and wealth of the ruling classes can be considered as a cause of the poverty and hardships suffered by the common people of ancient China.

LESSON
7.5 How did China's civilisation affect its environment?

LEARNING INTENTION

By the end of this lesson you should be able to identify the environmental issues that China has faced over many centuries and describe the impact this has had on the Chinese people.

TUNE IN

Pandas are native to China. Only a few decades ago these much loved animals were in danger of extinction.

Examine **SOURCE 1**.

1. Why do you think the pandas shown are in a research and breeding centre?
2. Brainstorm what was so wrong in China for so long that such species were threatened.

SOURCE 1 Pandas eating bamboo in a research base and breeding centre in China

7.5.1 China's natural environments

In our time, China faces enormous environmental problems. Since the late twentieth century, China's rapid economic growth has produced thousands of new factories making goods that are exported around the world. This industrial growth has depended on vast numbers of new power stations. Air pollution in many Chinese cities is so bad that when the 2008 Olympic Games were held in Beijing, many factories had to stop production and thousands of cars had to be taken off the roads. These problems are now huge, but even in ancient times China's population had a serious impact on its environment.

China is a vast country with a wide range of climates and landscapes. It has plateaus and mountains in the west, deserts and grasslands in the north, forests in the north-east, hills and low mountains in the south and plains along the coast. China's climate also varies greatly. Beijing has freezing winters, for example, while coastal southern China is subtropical.

SOURCE 2 This section of the Great Wall of China straddles mountains north of Beijing. The wall extends over 5000 kilometres through many different landscapes.

In ancient times, China at first consisted mainly of the area around the fertile valleys of the Huang and Yangtze rivers. It was not until Han dynasty times that the outer areas were brought under Chinese control (refer to lesson 7.3). Then, as now, more than 90 per cent of China's people lived in the country's heartland in the east, where the rivers provided water for agriculture. But these rivers often flooded, causing massive damage and loss of life.

DID YOU KNOW?

Over many centuries, the mud from soil erosion raised the bed of the Huang River so much that the river flowed above the level of the countryside and had to be contained by artificial dykes.

When these dykes broke, floods drowned many people. According to Chinese records, more than a million people died in the river's worst flood in 1117 CE.

7.5.2 A big population

One in every four people in the modern world is Chinese. Researchers have found that even in ancient times China's population was huge, but that it could rise and fall rapidly. They estimate:

- in Qin dynasty times (221–206 BCE), 20 million people were in China
- by 1 CE, there were about 60 million people
- by 220 CE, the population had fallen to about 40 million
- China's population then took almost another thousand years to surpass 60 million.

The rapid population growth during the first Han dynasty (206 BCE–9 CE) was made possible by peace, improved farming methods and irrigation. However, these advances involved clearing forests and cultivating grasslands. Farming along the upper reaches of the Huang River caused massive soil erosion, filling the river with the mud that gave it the name 'Yellow River'. The falling population by 220 CE was probably caused by deaths in rebellions, soil erosion and famines.

Native animal populations fell as humans took more and more of their habitat. In modern times, China's pandas have barely been saved from extinction. In ancient times, elephants and rhinoceroses roamed across much of China. The rhinoceros was driven extinct in China, and elephants now survive in only a few protected areas of the south-west.

7.5 SKILL ACTIVITY: Using historical sources

1. **Describe** the pollution in Shanghai.

SOURCE 3 A constant haze of air pollution hangs over modern China's cities. This is a view of Shanghai.

2. **Discuss** how concerned you think anyone living in Shanghai should be about such pollution.
3. **Conduct** research to find out:
   - how pollution in China became so extreme
   - what China is now doing about it.
4. **Communicate** your findings to the class in any format you choose.

7.5 Exercise

learnon

7.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6	7, 8

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Check your understanding

1. **Identify** how China's rapid modern economic growth has affected the natural environment.
   - A. It has not had any impact.
   - B. It made the climate across the country the same.
   - C. It reduced the population.
   - D. It created high levels of air pollution.
2. **Identify** the different types of natural environment that exist in China.
   - A. Mountains
   - B. Deserts
   - C. Forests
   - D. Grasslands
   - E. Coasts
   - F. All of the above
3. Why have over 90 per cent of China's people lived around the river valleys in the country's east?
   - A. These rivers provided water for farming.
   - B. There was more space.
   - C. It was easier to travel around.
   - D. There was good soil for farming.
4. **Identify** the most likely reasons for China's population growth between 221 BCE and 1 CE, and for its decline by 220 CE.
5. **Describe** the way that rising populations and land clearances for farming affected China's rivers and wildlife.

Apply your understanding

Using historical sources

6. **Describe** the landscape in **SOURCE 2**. Then use your library or the internet to find images of other landscapes along the Great Wall. **Explain** why few of these regions would have been able to support the large levels of population that existed in China's east.

Communicating

7. **Explain** what has remained the same and what has changed in China from ancient to modern times with regard to the following.
   - a. Population levels
   - b. Environmental problems
8. **Explain** how population growth could have been both a cause and an effect of the clearing of forests and cultivation of farmlands in ancient China.

LESSON
7.6 What were the influences of Confucianism, religions and laws?

LEARNING INTENTION

By the end of this lesson you should be able to describe the influence of Confucianism and the beliefs of Daoism and Buddhism on the laws and government of China.

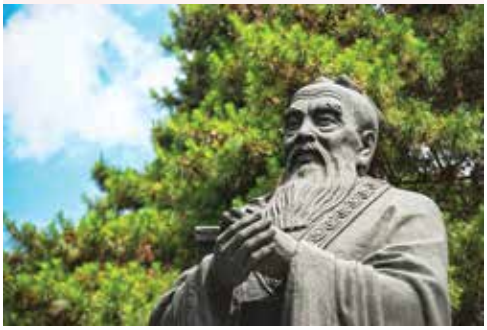
TUNE IN

The following is a Confucian saying:

'The man who asks a question is a fool for a minute; the man who does not ask is a fool for life.'

1. Brainstorm what you think this saying means.
2. Have you or your classmates heard of any other Confucian sayings?
3. Discuss whether the quote provided still applies to modern life.

SOURCE 1 A statue of Confucius made centuries after his death



7.6.1 The ideas and influence of Confucianism

The oldest Chinese religious ideas involved worshipping gods of the sun, rivers and mountains. People worshipped ancestors and believed in good and evil spirits. Ancient China was also influenced by three great and lasting traditions — Confucianism, Daoism and Buddhism. China was tolerant of different beliefs partly because Confucianism, Daoism and Buddhism encouraged tolerance. Confucianism also had a strong and lasting influence on law in ancient China.

Confucius (551–479 BCE)

Amid the ongoing wars of the second half of the Zhou dynasty, **philosophers** taught ideas to solve the problems of their age. Confucius (K'ung Fu-tse) is regarded as the greatest of these thinkers. Born into a minor noble family, his education qualified him to become a high official. Instead, he became a philosopher who taught about life and government. Some of his disciples gained high positions during the Warring States period, but Confucius himself never held anything more than a low post.

The philosophy of Confucius

What we know of Confucius comes from a book called *Lun-yu* (*The Analects*). It is a collection of his sayings recorded by his followers. Confucius was not concerned with religion, but rather with how personal and governmental good conduct could ensure a just and harmonious society. He taught the ideals of family duty and believed that superior people behaved humanely. He taught that government should exist for the people's welfare and that people would follow a good ruler who led by example. He tried without success to convince the rulers of each of the states to restore good government.

philosopher one who studies the fundamental principles and causes of things

By the time he died, Confucius had many followers. The best known of them was Mencius (372–289 BCE), who did succeed in influencing the rulers of his age. Confucius's ideas survived and influenced Chinese thought right up to modern times, as his ideal of the official as a scholar–gentleman replaced the earlier ideal of the warrior noble.

SOURCE 2 From *The Analects*

The princes of today are greedy in their search after material goods. They indulge themselves in pleasure and neglect their duties and carry themselves with a proud air. They take all they can from the people and invade the territory of good rulers against the will of the people, and they go out to get what they want without regard for what is right. That is the way of the modern rulers.

SOURCE 3 From *The Analects*

When the ruler himself does what is right, he will have influence over people without giving commands, and when the ruler does not do what is right, all his commands will be of no avail.

7.6.2 Religions in ancient China

Daoism

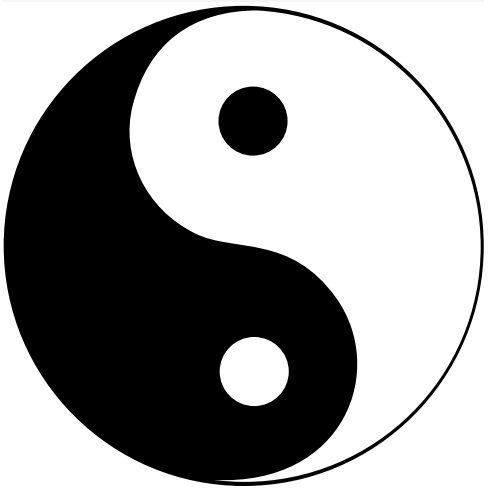
According to legend, **Daoist** ideas were first taught by a man call Laozi, who lived around the same time as Confucius. However, no evidence remains that Laozi existed. The main teaching in ancient Daoist texts is the need to retire from worldly concerns and follow the Dao ('the way').

Daoism holds that nature works in harmony and that people should see themselves as parts of nature in order to find happiness and health. Another Daoist belief was that it was possible to become immortal. Daoists developed the martial art of kung fu and the idea of the yin and yang — complementary opposing forces that together produce harmony and balance.

Daoist a follower of Daoism

SOURCE 4 Kung fu is a Daoist martial art that has been practised for thousands of years.

SOURCE 5 The Daoist symbol for yin and yang



Buddhism

Founded in India in the sixth century BCE, Buddhism expresses the teachings of the Buddha (born Siddhartha Gautama in what is now Nepal, in about 563 BCE), who gave up worldly pleasures and devoted his life to the search for enlightenment. Central ideas of Buddhism are that suffering is caused by desire and that people have many lives. In each of these lives, people should try to live better until they reach nirvana. When a person reaches nirvana they do not need to be reborn, because nirvana is a state of bliss free from the cares of the world. Buddhism came into China via the Silk Road (see lesson 7.8) and became an important influence by the late first century CE.

SOURCE 6 Chinese Buddhism spread to neighbouring countries. This Buddhist statue in Korea reflects Chinese influence.

7.6.3 Laws in ancient China

Confucianism has had an ongoing influence on Chinese traditions, and that influence is especially evident in present-day Chinese beliefs about the need to respect elders and to revere ancestors. While Confucius had no real influence on Chinese government and laws during his lifetime, his ideas later had an important and ongoing influence. Confucius taught that a golden age of good government and good law had existed in early Zhou times. Long after his death, his teachings continued to have many followers. As mentioned, the best known of them was Mencius, who lived during about 372–298 BCE. Mencius taught that the Confucian 'five relationships' — those between father and son, husband and wife, elder brother and younger brother, friend and friend, and ruler and subject — were the basis of any well-ordered society. He succeeded in presenting Confucian ideas in ways that influenced some rulers during the late Warring States period.

Laws of the first Qin emperor

When the Warring States were united under the rule of China's first emperor, Qin Shihuang, in 221 BCE, the laws of the state of Qin were adopted throughout the newly created Chinese Empire. Confucianism had very little influence on these laws and Confucian scholars were suppressed by Qin Shihuang. Instead, the emperor's laws followed the tradition of Legalism, a school of thought that held that people were bad by nature. So the laws that prevailed throughout China under the Qin dynasty were very harsh, with cruel punishments (see **SOURCE 7**).

aud-0426

SOURCE 7 An extract from the laws of the state of Qin before 221 BCE. Such laws operated throughout China under the Qin emperors.

When five men jointly rob something worth one cash or more, they should have their left foot amputated, be tattooed, and be made convict labourers. If fewer than five men were involved but what they robbed was worth more than 660 cash, they should be tattooed, their noses cut off, and made convict labourers…

Suppose the holder of a low rank stole a sheep. Before the case was judged, he falsely accused someone else of stealing a pig…He should be left intact and made a convict labourer.

Anyone who kills a child without authorisation is to be made a convict labourer. This does not apply to killing a deformed or abnormal newborn.

Suppose A ran away from her husband and married B…After they are caught, what should the sentence be? They should be tattooed and made convict labourers…Convict labourers…are to be manacled and fettered.

Laws after the fall of the Qin

The Han dynasty, which replaced the Qin in 206 BCE, employed Confucian scholars as its officials. These men used their positions to revise the laws, implementing Confucian ideas. Those ideas continued to influence Chinese thought and Chinese law under a succession of dynasties until the end of the last Chinese Empire in 1911 CE. China's laws in turn influenced the legal systems of countries where China had influence, especially Vietnam and Korea.

7.6 SKILL ACTIVITY: Historical perspectives and interpretations

What might a Confucian scholar have decided to do if he recognised that the Han emperor was not providing for the people's welfare and was failing to provide a good example?

Consider how his decision might be influenced if this scholar:

a. believed that as a civil servant he had an ethical obligation to obey the emperor
b. believed that the emperor's policies were so unjust that he had lost the mandate of heaven
c. believed that as a follower of Confucius he, the scholar, had to stand up for Confucian principles and speak critically to the emperor regardless of the consequences
d. knew that, like Sima Qian before him (see lesson 7.8), he would probably be castrated and imprisoned for speaking out.

Write a brief paragraph on each of the preceding points and then compare your **evaluation** with a partner.

7.6 Exercise

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7.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4, 5	6, 7, 8	9, 10

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Check your understanding

1. When did the ideas of Confucius begin to influence Chinese thought?
   - A. While he was in power
   - B. Before he was in power
   - C. After his death
   - D. None of the above
2. **Identify** the main ideas of Daoism. Select all correct answers.
   - A. Living simply and in harmony with nature
   - B. Immortality
   - C. Revenge
   - D. Yin and yang
   - E. Unhappiness
3. **Identify** the central ideas of Buddhism. Select all that apply.
   - A. Reincarnation
   - B. Immortality
   - C. Reaching enlightenment
   - D. The strive to eliminate human desire
   - E. Yin and yang
4. **Identify** the school of thought that was the main influence on Chinese law under the Qin dynasty.
5. How was Confucianism incorporated as an influence on Chinese law under the Han dynasty?

Apply your understanding

Using historical sources

6. **Identify** aspects of **SOURCE 1** that suggest that Confucius was highly regarded long after his death.
7. Read **SOURCES 2** and **3**.
   a. Why was Confucius critical of the rulers of his time?
   b. What did Confucius regard as qualities of a good ruler?
8. Read section 7.6.2 and look at **SOURCES 4, 5** and **6**. **Explain** why ancient China was tolerant of different beliefs.
9. Read **SOURCE 7**.
   a. According to the laws of Qin, a robber should have his left foot cut off and be made a convict labourer. How difficult would such a life be with only one foot?
   b. In this source 'left intact' means not mutilated. Using this source as your evidence, **explain** which crimes were punished the most severely under Qin law.
   c. **Explain** what conclusions you can draw about the rights of women and children under Qin law.

Historical perspectives and interpretations

10. **Discuss** why Confucius might be deserving of being regarded as a very significant individual in Chinese history.

LESSON
7.7 How did the first emperor change China?

LEARNING INTENTION

By the end of this lesson you should be able to explain the beginning of the Qin dynasty and describe the massive changes that came to China during this short but eventful period.

TUNE IN

Qin Shihuang was regarded as a ruthless and brutal ruler in accounts of his reign that were written under the Han dynasty, which followed his dynasty.

Examine **SOURCE 1** and discuss the following.

1. What kind of image of a ruler is conveyed by this statue?
2. Propose why you think such a statue would be constructed in modern China.

SOURCE 1 A modern statue of Qin Shihuang, China's first emperor, at the entrance to the site of his tomb in Xian, China

7.7.1 Qin rule

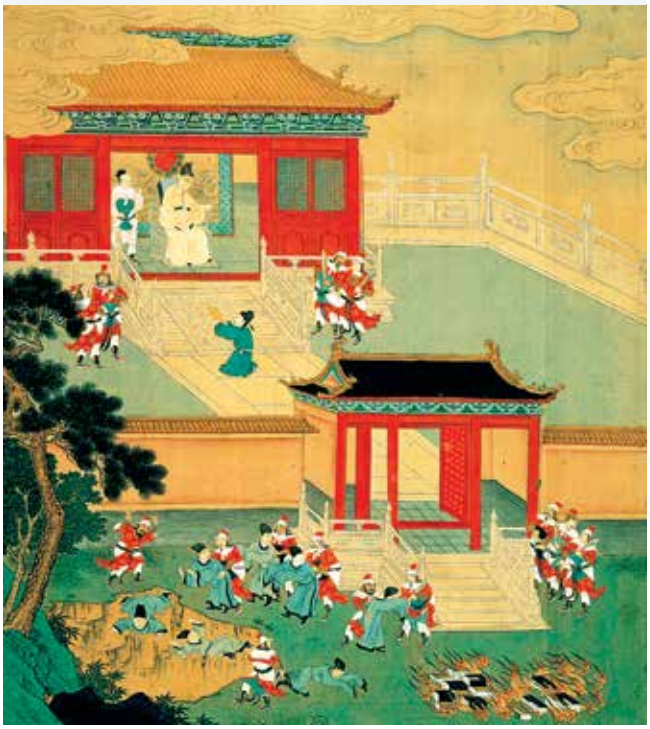
tlvd-10515

Ying Zheng, the ruler of Qin, ended the Warring States period by completing his conquest of the other states of China. He founded the Qin dynasty (221–206 BCE) and gave himself the title Shihuangdi. In modern Chinese, he is called Qin Shihuang (pronounced *chin shir hwang*), which means 'First Emperor of the Qin'.

The Qin dynasty was the shortest in Chinese history, but it was also one of the most important. It was China's first centralised empire and its legacies include the Great Wall.

From 221 BCE, the harsh laws of the Qin state were imposed throughout China. Qin Shihuang sent armies south, conquering much of what is now southern China. To remove threats to his power, the emperor confiscated all weapons held by his people. He banished many nobles of the conquered states and forced others to live in his capital, where they could be watched. In 213 BCE, to stamp out rebellious ideas, he ordered a public burning of books, including those of Confucian scholars (see **SOURCE 2**). Scholars who kept their books were executed by being buried alive.

SOURCE 2 A Chinese painting illustrating Qin Shihuang's burning of the books and the execution of scholars



Previously in China, the nobles had held huge areas of land in return for services to their ruler. Beneath them, millions of peasants toiled for the nobles in return for the right to use the land. This is what we call a feudal system. Qin Shihuang changed this by dividing the country into local government areas administered by officials. He also allowed farming land to be bought and sold freely.

7.7.2 The Great Wall and other achievements of Qin Shihuang

From as early as the seventh century BCE, the Chinese states had built walls to protect themselves from invasion by the northern nomadic **Xiongnu** tribes. During the Warring States period, states had also built walls between themselves and neighbouring states. To unify China, Qin Shihuang ordered the destruction of the walls between former states. To prevent invasion, he ordered his people to link the walls that defended China from the Xiongnu. About half of the present length of the Great Wall was first linked into one continuous barrier under the Qin (see **SOURCES 3** and **4**).

Qin reforms

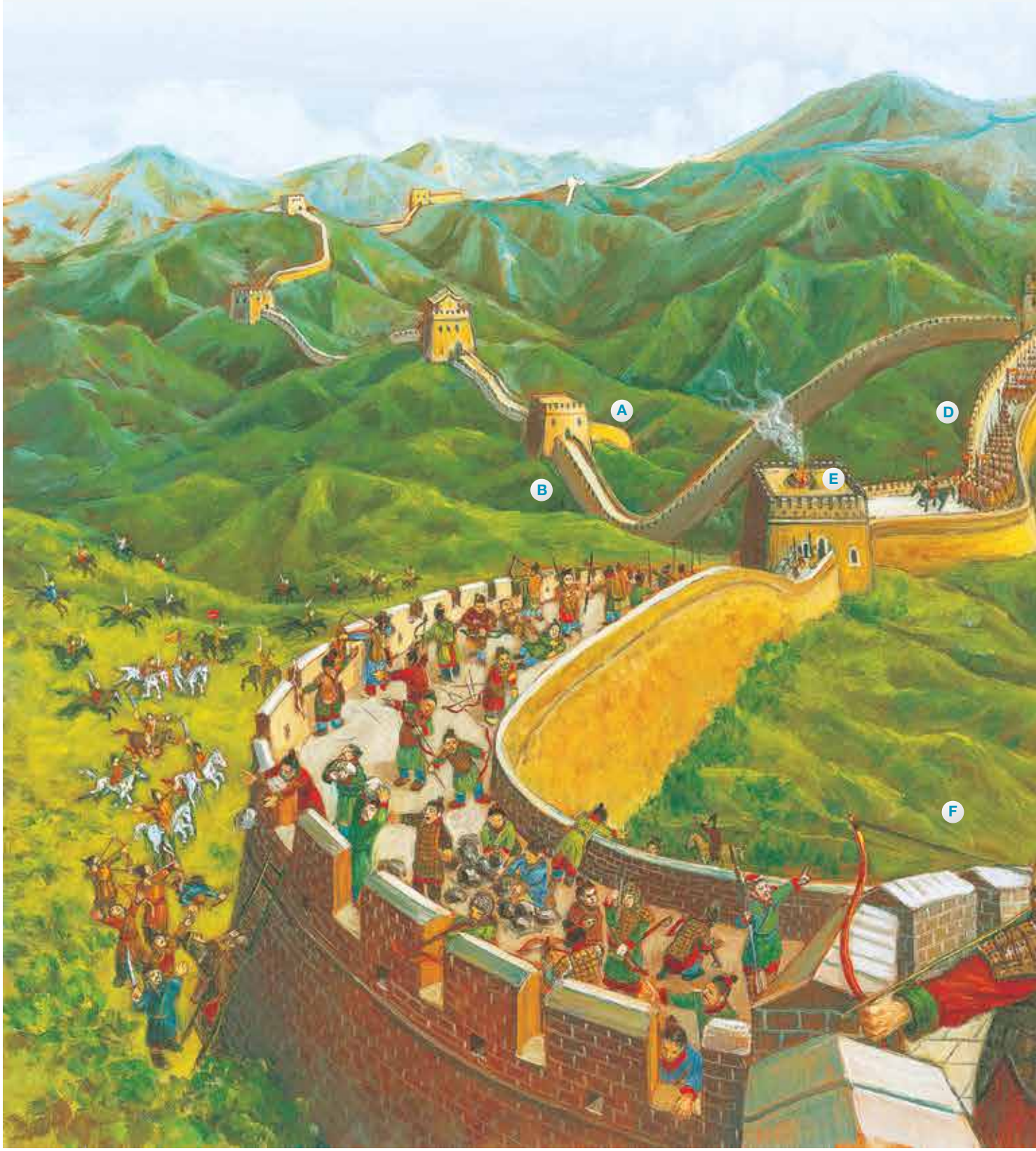
To strengthen central rule and make China more efficient, Qin Shihuang introduced many reforms.

- Separate states were replaced with central rule and one set of laws.
- The calendar and people's dress were standardised throughout the empire.
- A single form of writing, a single system of weights and measures, and a single currency (money) were to be used throughout the empire. This made trade and taxation more efficient.
- His new capital was Xianyang. Highways were built from it to unite the country, and new trading cities were founded.
- He ordered that all carts were to have the same axle width. This made it possible for carts to move more easily along the dirt roads because the wheels of all carts could travel in the same wheel ruts.

Xiongnu the ancient Chinese name for the nomadic Turkic tribes of Central Asia

int-5995

SOURCE 3 The Great Wall of China is the world's biggest single construction project. It is more than 5000 kilometres long and has 20 000 watchtowers and 10 000 beacon towers. The present wall is much longer and stronger than that completed under the Qin. It took many more centuries to complete, and over time its construction may have cost a million lives.



A The height and width of the Great Wall vary along its length. On average, the wall is 7 metres high and 5 metres wide.

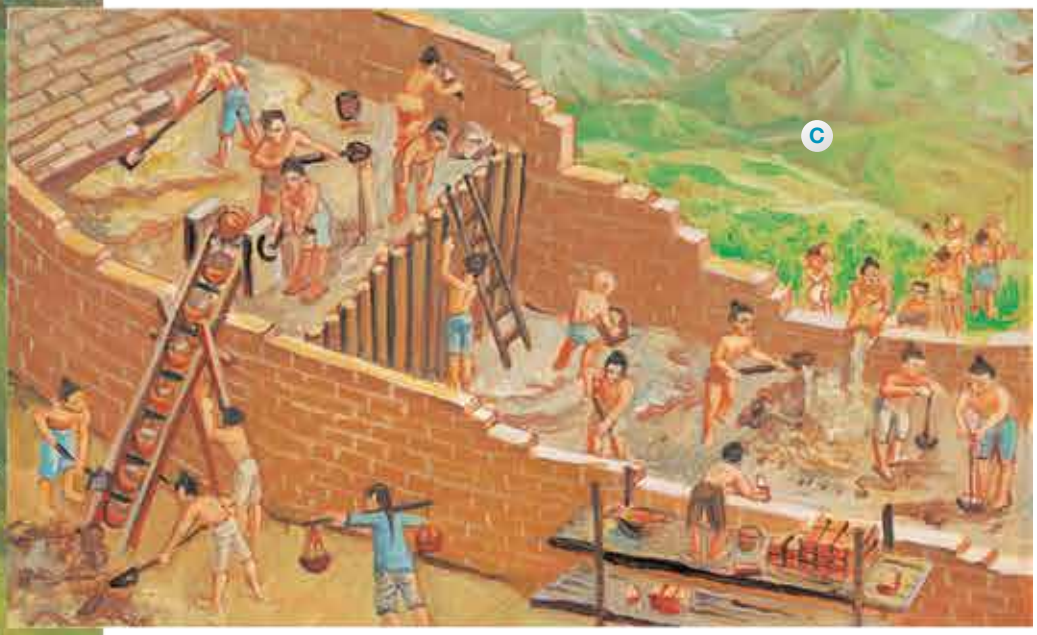
B Qin Shihuang began linking existing short walls built by earlier rulers into one continuous wall to protect his empire from attacks from the north.

C Throughout successive dynasties, the wall was extended and repaired. Most of the present wall was built between the fourteenth and sixteenth centuries.

D The wall was topped by a road wide enough in parts to accommodate marching soldiers, horsemen and chariots.

E Soldiers on the watchtowers would signal an attack by lighting a fire.

F Watchtowers were protected by battlements. Soldiers would fire arrows down on the enemy as they tried to scale the wall.



7.7.3 The fall of the Qin

Qin Shihuang wanted to live forever. He sent hundreds of men and women to sea on rafts in search of the secret of everlasting life, but none ever returned. He surrounded himself with fortune-tellers and others who promised him immortality. Despite these efforts, he died at the age of 49 in 210 BCE, while on a journey. His chief minister, Li Si (pronounced *lee shir*), and others pretended for a while that the emperor was still alive. This gave them time to forge a decree that would place their choice of successor on the throne. It was summer, however, and the body of the emperor soon began to smell, so Li Si ordered a cart filled with rotting fish to follow the imperial carriage to disguise the smell. Only later did they announce the emperor's death, which was possibly due to poisoning by mercury, commonly used in 'immortality' drugs at that time.

His successor, the Second Emperor, lasted only a few years. Higher taxes and forced labour had made the lives of the peasants unbearable. Hundreds of thousands of peasants had been conscripted to build palaces, roads and the emperor's tomb, and to link the Great Wall and serve in the army. A peasant rebellion from 209 to 206 BCE destroyed the Qin dynasty. Liu Bang, a leader of the rebellion, became the new emperor and founded the Han Dynasty. Qin Shihuang thought he had founded a dynasty that would last for thousands of emperors. He failed to achieve this goal. He had, however, turned a group of rival states into an empire and created a central system of government that lasted until the twentieth century.

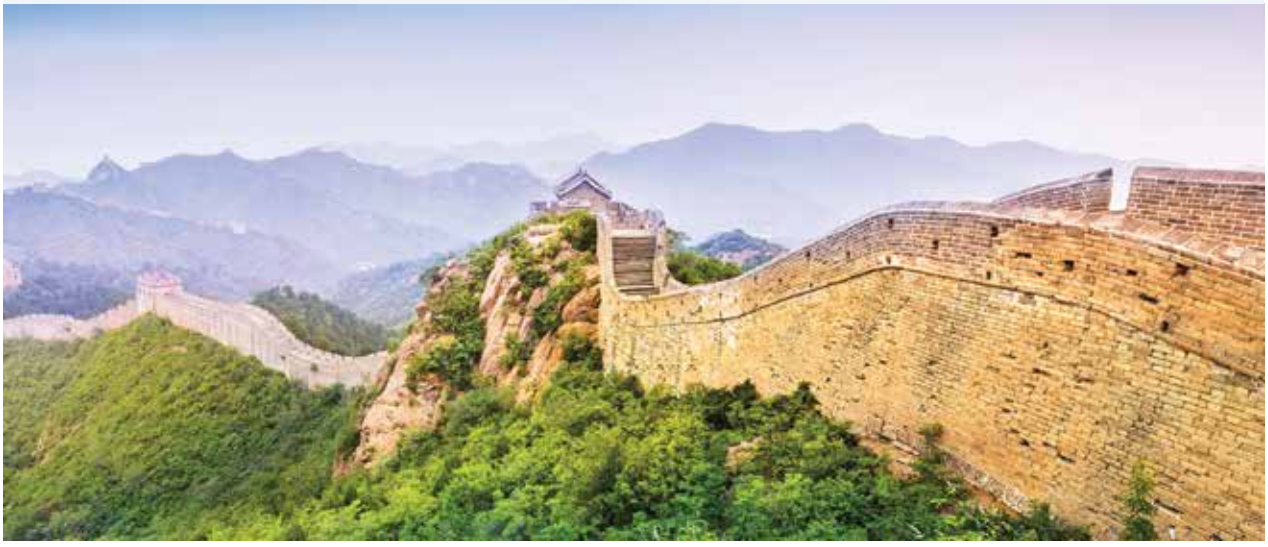
SOURCE 4 An extract from Thomas Bartlett, *Qin Dynasty: China's Ancient Revolution*

The overall image of the Qin state and its imperial phase [the period of the Qin dynasty], as transmitted through history by surviving records, is a grimly harsh one ... These charges [against the Qin rulers] reflect early Han writers' self-interested writing of Qin history ... Overall, the Qin reflects in concentrated form the inhumane aspects of the Warring States period ... But, from the perspective of nation building, some modern Chinese ... emphasise his achievements, typically saying that 'he sacrificed one generation to benefit 10000 future generations'.

DID YOU KNOW?

In ancient China, dragons were sometimes depicted with their mouths open, roaring as if to frighten away evil spirits. The dragon is a symbol of wisdom, strength and goodness. It was under Qin Shihuang that the dragon was first used as a symbol for Chinese emperors.

SOURCE 5 A section of the Great Wall of China



7.7 SKILL ACTIVITY: Communicating

Scenario

Modern political leaders sometimes employ public relations and advertising teams to distract attention from their failures and from things that lessen their popularity. The people in these teams are referred to as 'spin doctors'. They put a positive 'spin' on things that can be presented as achievements that benefit the people.

Imagine that your group has been hired by Qin Shihuang to write a propaganda advertisement telling of the benefits of his achievements, rather than the high cost of them for the Chinese people in deaths and suffering.

Criteria

- Your message should be no longer than a modern television advertisement or a single, full-page ad in a newspaper. You may also like to use social media as your medium.
- It should aim to be persuasive.
- It should be selective, using only those facts that make the emperor look good.

1. **Identify** three achievements that you think Qin Shihuang would want advertised.
2. **Develop** each of these into a brief, persuasive and positive message.
3. **Create** a simple advertisement that includes all of these messages. You may want to include images or even acting (in the case of a commercial).
4. **Communicate** your propaganda message to your peers.

7.7 Exercise

learnon

7.7 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 3, 4	5, 6, 7, 8	9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. Ying Zheng gave himself the title _____, which means 'First Emperor of the Qin'.
2. Qin Shihuang reduced the influence of Confucian scholars by ordering that they be imprisoned. True or false?
3. **Explain** why Qin Shihuang weakened the power of the nobles.
4. **Propose** how the emperor's attempts to live forever might have contributed to his early death.
5. **Explain** how standard calendars, laws, money, weights and measures, axle widths and system of writing would have made trade, taxation and government more efficient.

Apply your understanding

Using historical sources

6. **Describe** what is being done in **SOURCE 2** and why.
7. **SOURCE 3** is a secondary source and **SOURCE 5** is a photograph of a primary source. **Compare** them to judge the accuracy of **SOURCE 3**.

Communicating

8. **Describe** features of the Great Wall that would have made it an effective barrier to invasion.

Using historical sources

9. Look at the landscape in **SOURCE 5** and read the **SOURCE 3** caption. **Determine** why you think so many people could have died building the Great Wall.
10. Read **SOURCE 4** and other information in this lesson and answer the following.
    A. **Describe** how Chinese society changed under the first emperor.
    B. **Predict** how groups such as the nobles, peasants and Confucian scholars would have regarded these changes.

LESSON
7.8 Why did the Han dynasty rise and fall?

LEARNING INTENTION

By the end of this lesson you should be able to describe the expansion that came with the rise of the reforming Han dynasty, and outline the developing trade contacts with the world and reasons for the eventual fall of the Han.

TUNE IN

Cavalry became a major part of the Han army because of the mobility it gave Chinese armies fighting mounted nomads.

1. Discuss why you think the figures shown in **SOURCE 1** would have been created.
2. Does anything similar get created for the modern military? Brainstorm examples with a partner and compare with the class.
3. What thoughts do you initially have about the Han Dynasty when you see these figures?

SOURCE 1 Terracotta figures representing Han dynasty cavalry

7.8.1 Reforms, expansion and trade

The fall of the Qin dynasty was followed by four years of bloody civil war before Liu Bang defeated his rivals and became the first ruler of the Han dynasty. This dynasty lasted, except for a brief interruption, for four centuries and made important achievements in education, science and trade. The Han dynasty had such influence on later dynasties that modern Chinese people call themselves 'Han' people.

Han reforms

Liu Bang did not want to share the same fate as the Qin dynasty so he took steps to restore prosperity. The size of the army was reduced. He also reduced taxes on the peasants and encouraged farming to ensure plentiful supplies of food. As a result, China's population reached 60 million by the end of the first century BCE. However, landlords continued to exploit the peasants.

A system of state education was founded. It included a Great Academy, in which boys studied the classic books of Confucianism. No girls were enrolled. The boys were expected to memorise what they studied and were not allowed to criticise or challenge ideas. Through examinations, they were selected for positions as bureaucrats in the civil service.

castrated having had the testicles cut off

DID YOU KNOW?

The Han dynasty is usually regarded as more tolerant than the Qin dynasty. However, when the great historian Sima Qian dared to speak in defence of an officer who was unfairly blamed for a Chinese defeat by the Xiongnu, Emperor Wudi had Sima Qian **castrated** and thrown into prison.

China expands

int-5997

China expanded under the Han dynasty. In 138 BCE, Emperor Wudi (140–87 BCE) sent Zhang Qian and 99 others on a mission to establish relations with people in the remote west. After twice being captured and enslaved by the Xiongnu and twice escaping, Zhang returned in 125 BCE with stories of civilisations that China had never heard of before. Zhang Qian was sent on two further missions to find a trade route to Central Asia and India. In the following years, Chinese rule was extended into the north of Korea in 109 BCE, and from Korea the influence of Chinese culture spread to Japan. Much of what is now south-eastern China and western China was brought under Han control by about 102 BCE.

SOURCE 2 The Silk Road — the world's longest trade route in continuous use

Source: Map drawn by Spatial Vision.

The Silk Road

By the early first century BCE, further Chinese missions led to the founding of the famous Silk Road. From this time onward, camel trains loaded with valuable silk were able to make the hazardous journey from China through the deserts and mountains of Central Asia to India, Persia and the Roman Empire. Traders from other lands used the Silk Road to bring products including jade, silver and Roman glassware to China.

7.8.2 Growing discontent, rebellion and the fall of the Han

The rich get richer and the poor get poorer

To control newly conquered territories, the Han rulers **deported** many local people and settled their lands with Chinese. The ruling classes and merchants benefited from this growth of the empire, but the ordinary people of China paid a terrible price. The Han rulers paid for wars of conquest through increased taxes on the peasants. Many peasants had to sell their land to pay taxes. Others were so desperate that they were forced to sell their children or themselves into slavery.

Wang Mang

The peasants became more desperate while powerful landlords became richer. Even among the privileged were people who saw this as unjust. Wang Mang was an official who had support from many Confucian scholars. In 9 CE he seized control of China from the infant Han emperor and set up the Hsin dynasty. In his first year as ruler, Wang Mang proclaimed many reforms:

- All land was to become the property of the emperor so that the estates of big landlords could be given to the peasants.
- The slave trade was to be banned.
- Government loans were to be given to peasants at low interest rates. This would have helped peasants who had to borrow from moneylenders at high interest to pay taxes but lost everything when their debts became too big to repay.

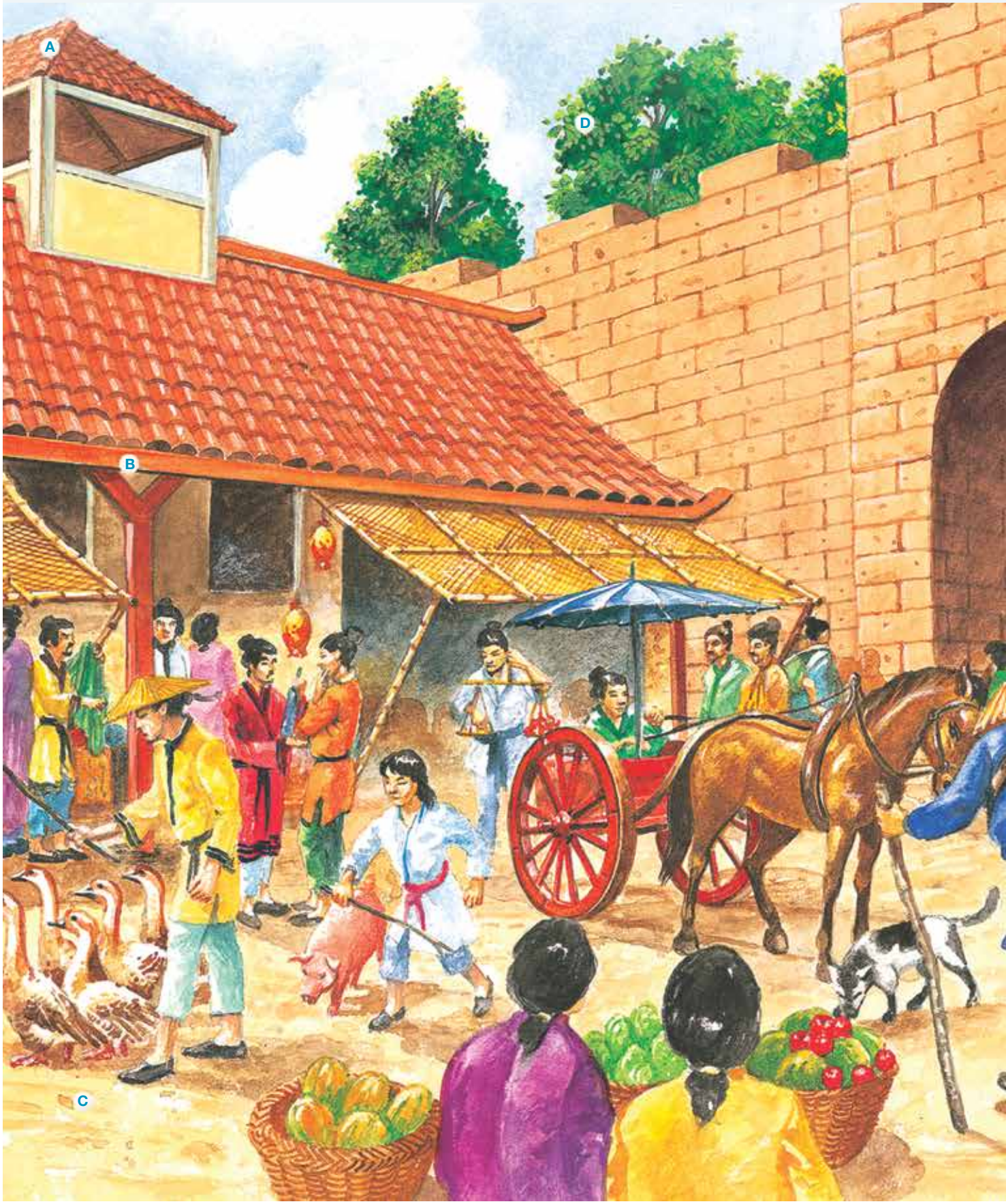
The fall of the Hsin dynasty

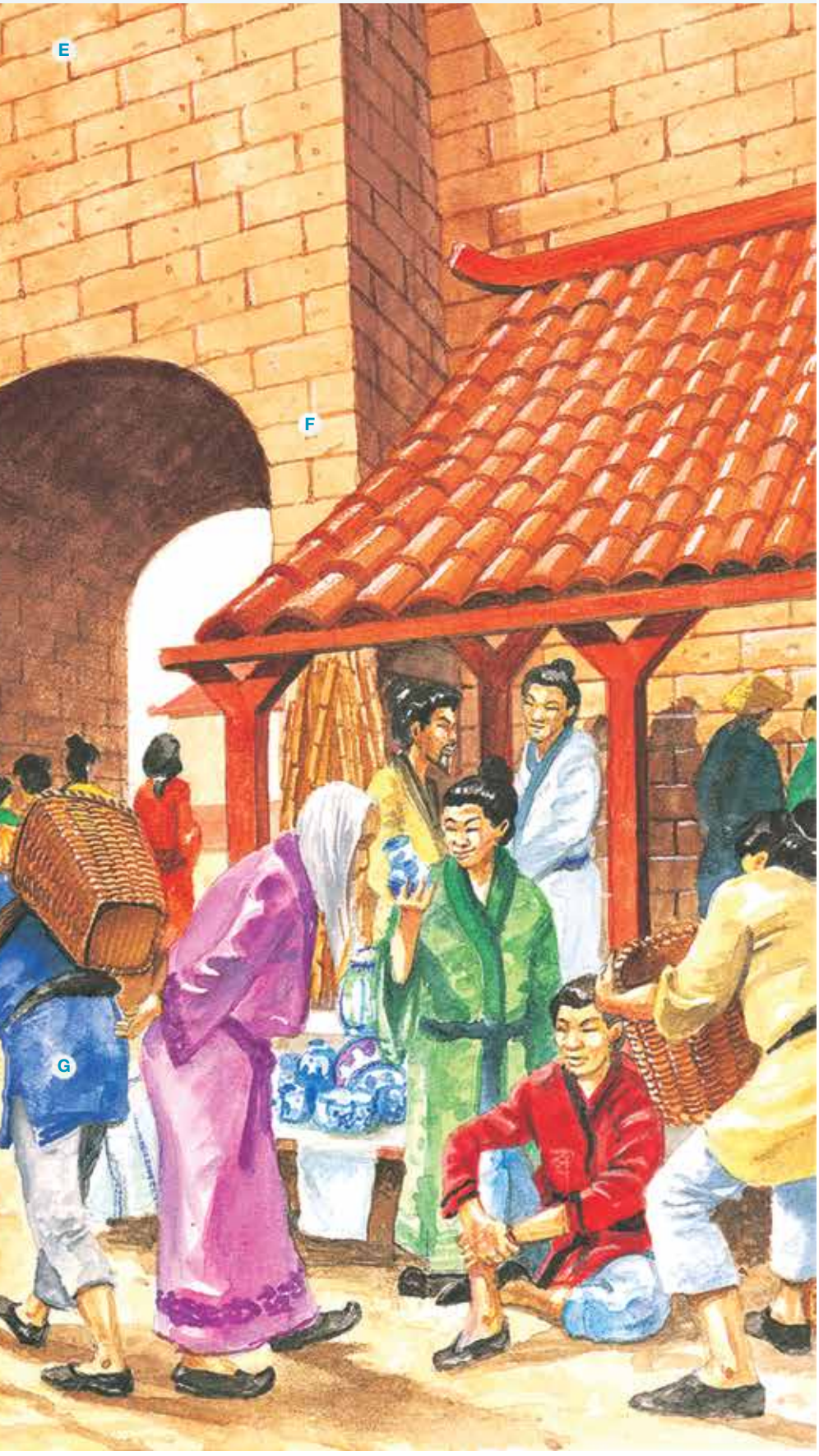
The privileged classes forced Wang Mang to abandon these reforms, and so peasant revolts began in 14 CE. Four years later, led by a secret society called the Red

deported forced to leave the country

int-5996

SOURCE 3 Chinese life under the Han





A As in Xianyang, large and lively marketplaces were usually just inside the city gates. This allowed access by travelling merchants. Merchants were looked down on by society even if they were rich. They were not seen as contributing in the way farmers did. Goods from all over China and the known world were sold and traded in the market.

B In the noisy markets, people bought and sold food and animals. There were musicians, acrobats, jugglers, letter writers, dentists and craftworkers.

C Owls, panthers, deer, dogs, pigs, ant eggs, snails and turtles were all available, mostly bought by the rich.

D Ancient Chinese cities were circled by two walls. City walls were built to protect the people. If you visit China today, you will still be able to see the remains of these walls in many cities. The inner wall was called *cheng* and the outer wall was called *guo*. Often moats, called *chi*, surrounded these walls. The inner city was called *geng*, and together they were known as *cheng chi*.

E Rich and poor people lived in extended family groups. Their belief in Confucian values strengthened family ties. Ancestor worship and respect for elders were important values.

F Murals, jade jewellery and carvings, glazed pottery, silk goods and objects made from cast iron such as ploughs were bought and sold.

G According to Confucian principles, women were subordinate to men, and life was difficult for females living in a male-dominated society. A daughter was given no education and worked under the direction of her mother. Her father decided whom she would marry. Once married, a girl would live with her husband's family and obey her mother-in-law. A female had no status until she gave birth to a male child.

Eyebrows, the rebels attacked towns, killing officials and landlords. When powerful members of the old ruling family joined the fight against Wang Mang, his armies were defeated. Wang Mang was killed and beheaded in 23 CE. This was the end of the Hsin dynasty. The armies of the old ruling family crushed the Red Eyebrows and in 25 CE a new Han emperor took the throne.

The Eastern Han dynasty

The second period of Han rule is called the Eastern Han dynasty because the capital was moved to the east. So many people had died in the rebellion that there was now enough land for the peasants. Large areas of state land were given to them and taxes were reduced. But the big landowners benefited most from these reforms. They paid the lower taxes but continued to take at least half the harvest of their tenant farmers. Increasingly, the great landowning families were becoming more powerful than the Han government.

The Yellow Turbans and the fall of the Eastern Han

By the middle of the second century CE, more local peasant uprisings had broken out. These were crushed, but in 184 CE a secret society called the Yellow Turbans led a countrywide revolt. As the central government collapsed, **warlords** became the absolute rulers of their own local areas. Their armies massacred many peasants during the years that it took to smash the revolt. When they finally defeated the Yellow Turbans, the warlords fought each other for the throne of China. By 220 CE, the Han dynasty was finished and China began centuries of civil war, division and suffering.

warlords generals from powerful landowning families

7.8 SKILL ACTIVITY: Historical perspectives and interpretations, Communicating

Peasants had overthrown the Qin dynasty, and one of their leaders had founded the Han dynasty and become the new emperor.

SOURCE 4 From a Chinese scholar of the early second century BCE, in the *Han-shu Han History*

These days a family of five peasants will have at least two persons who are liable for labour-services and conscription. What with their ploughing in the spring and hoeing in the summer, harvesting in the autumn and storing in the winter, with felling firewood, repairing government offices and rendering labour-service . . . in none of the four seasons will they have a day of rest. And, in spite of all this painful toil, they will still have to endure such natural disasters as flood and drought and also the cruelty of an impatient government which imposes taxes . . . those who own something sell it off at half its price; and those who own nothing borrow at doubled rates of interest. It is for this reason that some dispose of their lands and houses, and sell their children and grandchildren to redeem their debts.

SOURCE 5 From the statement of a Han dynasty official in 81 BCE

Those who live in . . . spreading mansions . . . know nothing of the discomforts of one-room huts and narrow hovels, of roofs that leak and floors that sweat.

Those with a hundred teams of horses . . . and wealth heaped in their storehouses . . . do not know the anxiety of facing days that have a beginning but no end.

Your task is to present an argument, based on evidence from **SOURCES 4** and **5**, showing that very little changed for China's peasants under the Han dynasty (and under the Hsin dynasty, which was prevented by big landowners from implementing changes).

Begin by outlining:

a. the social problems described in **SOURCES 4** and **5**
b. the perspectives of these writers
c. the specific evidence these sources provide for the peasants' motives for rebellion against Han rule.

Conclude by **summarising** up your argument.

7.8 Exercise

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7.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 6	5, 7, 9	4, 8, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

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Check your understanding

1. **Recall** how Liu Bang became the founder of the Han dynasty.
   - **A.** He inherited the position.
   - **B.** He was elected.
   - **C.** He defeated his rivals.
   - **D.** He killed Qin Shihuang.
2. How did the Han try to win support for their rule?
   - **A.** By reducing the size of the army
   - **B.** By encouraging family life and farming
   - **C.** By reducing taxes and making the laws easier to understand
   - **D.** All of the above
3. The Chinese education system promoted critical and independent thinking. True or false?
4. **Explain** how Wang Mang tried to help the peasants.
5. **Describe** how the ruling classes regained control.

Apply your understanding

Communciating

6. **Identify** the events that brought about the end of the Eastern Han dynasty.

Using historical sources

7. Look at **SOURCE 2** and **analyse** it using these questions:
   - **a.** Why were the cities enclosed by walls?
   - **b.** What role did marketplaces play in expanding trade?
   - **c.** What can you discover from this source about activities, clothing and hairstyles in a Han-era town?
8. Look at **SOURCE 3** and **explain** what China would have gained from contacts established through the Silk Road.
9. Study **SOURCE 1** and **suggest** why the Han adopted cavalry as a major part of their army.
10. Using the information and sources in this lesson, **explain** what caused rebellions such as that of the Red Eyebrows and Yellow Turbans.

LESSON
7.9 What is the heritage of ancient China?

LEARNING INTENTION

By the end of this lesson you should be able to describe the contributions ancient China made to the wider world, including the many inventions and scientific developments that occurred in China long before they emerged in the western world.

TUNE IN

As we have seen, China's civilisation has been long-lived. But how aware are you of how much we owe to ancient China? China, for example, was the first civilisation to invent a compass.

1. How do you think the compass shown in **SOURCE 1** would have worked?
2. Refer to the list in 7.9.1 and select three inventions. Brainstorm how they may have been invented. What need were they meeting? What do you think the earliest versions were like compared to our modern equivalents?

SOURCE 1 A replica of an ancient Chinese compass

7.9.1 Some great Chinese inventions

Ancient China left many legacies. One of the most significant was the system of rule by emperors, which persisted until 1911. Even in modern times, Chinese leaders have continued to exercise powers that are not very different from those of the emperors. China's heritage also includes traces of the ancient past, such as the Great Wall and the amazing discoveries from Qin and Han tombs. Perhaps the most remarkable part of China's heritage is the scale of discoveries and inventions that originated in ancient China, in many cases long before similar developments occurred in the western world.

Many things we take for granted today were invented by the people of ancient China. Some of the more important ones include the following:

- abacus
- acupuncture
- bomb
- cannon
- compass
- cast iron
- chopsticks.
- decimal system
- fan
- gunpowder
- helicopter rotor and propeller
- horse collar
- ink
- iron ploughshare
- kite
- kung fu/wushu
- matches
- origami
- paper
- printing
- paper money
- printed book
- parachute
- rocket
- seismograph
- silk
- spinning wheel
- umbrella
- wheelbarrow

SOURCE 2 A fragment of red Chinese silk featuring dragons, a symbol of wisdom, strength and goodness

Compass

The Chinese invented the magnetic compass. Compasses were first used to ensure houses were built facing a direction that was in harmony with nature.

Paper and printing

The inventions of paper and printing in ancient China were to have an enormous impact on people's lives. The earliest paper was made by mixing rags, rope, bark and even fishing nets in a watery solution and crushing the material down to a wet pulp (see **SOURCE 3**). The disintegrating fibres were used to create sheets of paper, which were used for many things including umbrellas, clothing, toilet paper, curtains, money and wallpaper. Paper revolutionised communication. Traditionally, silk had been used for writing, but it was expensive. Paper was cheaper, so more people could afford to use it for writing.

Following the invention of block printing (see **SOURCE 4**) in 750 CE, every Chinese scholar and public servant bought copies of the most important books for their shelves. With paper, records could be kept and instructions sent more easily and more often. Today, we still rely heavily on paper for communication.

SOURCE 3 Paper-making in ancient China

SOURCE 4 Printing in ancient China

7.9.2 Also made in China

Today, we are used to buying all sorts of goods that are made in China. But, long ago, China also led the world in inventions such as gunpowder and in developments in medicine and earthquake detection — and even in a favourite hobby of many people's childhoods, flying kites.

Gunpowder

From very early times, the Chinese searched for a drug that would give the emperor eternal life. By accident they discovered gunpowder. At first, gunpowder was used in fireworks for entertainment and in religious ceremonies. Later, it was used in making simple bombs. Lengths of heavy bamboo were loaded with gunpowder and a fuse set in the side. When cast iron was developed, pipes were loaded to create the first cannons. The Chinese then developed cannons that fired arrows with individual rockets attached — the first multi-stage rocket. Flame-throwers, mines and hand grenades were also used by Chinese armies.

SOURCE 5 Gunpowder was first used in fireworks.

Medicine

Acupuncture appears to have been used in China since the third century BCE. Needles were understood to block or stimulate the flow of yin and yang to certain areas of the body. The ancient Chinese were also the first to understand blood circulation and, by 200 CE, were using an **anaesthetic** based on hemp. Possibly the first human **dissection** was carried out on the body of a criminal in 16 CE by a doctor and a skilled butcher. Human dissection was soon banned, though, because it conflicted with the Confucian belief in the purity of the body.

SOURCE 6 Zhang Heng's seismograph

Seismographs

Zhang Heng invented the world's first seismograph — an instrument for detecting earthquakes — in 132 BCE. An earth tremor caused a ball to be released from a dragon's mouth and fall into a toad's mouth farthest away from the earthquake epicentre. This showed the emperor the direction of the disaster.

Kites

Kites were first made out of bamboo and silk and, later, paper. They were used mostly during festivals, but were also used in battle to frighten enemies (by creating unusual sounds through the strings) and to send signals to the troops. Kites were even used for fishing and for scaring birds away from crops.

7.9.3 Conserving China's cultural heritage

The United Nations Educational, Social and Cultural Organization (UNESCO) is the world body responsible for identifying natural and cultural sites in all countries that are of such great value that they must be conserved. These sites include the remains and heritage of ancient civilisations. UNESCO maintains a list of these World Heritage Sites, which you can view on its website. You will likely not be surprised to find that China has more UNESCO-listed sites than almost any other country, and that the Mausoleum of Qin Shihuang (see **SOURCE 7**) and the Great Wall of China (see **SOURCE 8**) are among the listed sites.

acupuncture a medical practice in which long, sharp needles are inserted under the skin as a means of diagnosing, relieving or curing illness

anaesthetic drug to deaden pain

dissection systematic cutting up of a body for medical study

tlvd-10516

SOURCE 7 Terracotta soldiers and horses at the Mausoleum of Qin Shihuang

SOURCE 8 The Great Wall of China is over 21 000 kilometres in length and, on average, more than 10 million people visit it each year.

7.9 SKILL ACTIVITY: Questioning and researching

Look at **SOURCES 4, 5** and **6** and choose one of these ancient Chinese inventions.

1. **Compose** five questions that you could ask about this source to learn more about its significance.
2. **Conduct** research on the internet to answer your questions.
3. **Compare** your questions to those of other students.

7.9 Exercise

learnon

7.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4, 5	6, 7	8, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. For what purpose were compasses first used in China?
   - A. To navigate complex trade routes
   - B. To aid in the farming process
   - C. So houses were built facing a direction that was in harmony with nature
   - D. So that people could find their way through cities
2. **Identify** which material was originally used for writing in China.
   - A. Paper
   - B. Silk
   - C. Bark
   - D. Rock
3. How did the Chinese discover gunpowder?
   - A. During the search for a drug for the plague
   - B. During the search for a drug for immortality
   - C. During the development of weapons for war
   - D. During the development of materials for mining
4. **Recall** the medical advances in which China led the world.
5. **Describe** the role of UNESCO.

Apply your understanding

Using historical sources

6. Look at **SOURCES 3** and **4** and **explain** what you can tell about early Chinese methods of papermaking and printing.
7. Study **SOURCE 7**. **Identify** what evidence you can see of measures that have been taken to conserve the objects that were found around the tomb of China's first emperor.

Communicating

8. **Compare** the various ancient Chinese inventions described in this lesson and choose one that you think had the biggest impact on people of the time and on future generations. **Create** a brief written advertisement for it.

LESSON
7.10 INQUIRY: Contested histories — how should we judge the legacy of Qin Shihuang?

LEARNING INTENTION

By the end of this lesson you should be able to evaluate the role and achievements of a significant individual and recognise different perspectives as you investigate interpretations in secondary sources.

Background

Despite using the same evidence, historians have differed widely in their conclusions about the Qin dynasty and its legacies. Reading the following sources will enable you to compare and consider some different judgements that have been made. You can also use the internet and/or your library to find other relevant secondary sources.

Note: you will notice Qin Shihuang referred to as Qin Shi Huang, Qin Shi-Huang or Shi Huangdi in these sources. These variations are all correct.

A selection of secondary sources

SOURCE 1 From Felicity Jiang, 'The Qin Dynasy — First Imperial Dynasty in China', *China Highlights* website

The Qin Dynasty lasted for only 15 years . . . But during their short reign, they destroyed more than half the population and much of the culture, literature and scholarship of the Zhou era. It is thought that the population dropped from about 40 million at the beginning of their reign to about 18 million by the end of their reign.

In carrying out their plans, they caused enormous misery and destruction, but they built a lot of infrastructure such as roads, canals and the Great Wall that benefited later empires . . . By standardizing even the writing and ideas and customs and religion, they laid the foundation for later empires.

SOURCE 2 From Joshua J Mark, 'Qin Dynasty' entry, *World History Encyclopedia* website

Although the Qin Dynasty is often referred to positively as the first political entity to unite China . . . the reigns of Shi Huangdi and his inept son and grandson were a dark time for the people of China, who were impoverished, brutalised, and kidnapped from their homes to serve the ego of the emperor. It is a chilling detail that the Qin dynasty is the shortest, only 15 years, in the history of China owing to its brutality and blatant rejection of the central value of the Mandate of Heaven that a ruler care for the people above any personal considerations.

SOURCE 3 From Claudius Cornelius Muller, 'Qin Shi-Huang emperor of China' entry, *Encyclopaedia Britannica* website

Most of the information about Qin Shi Huang's life derives from the successor Han dynasty, which prized Confucian scholarship and thus had an interest in disparaging the Qin period . . . With few exceptions, the traditional historiography of imperial China has regarded him as a villain . . . Modern historians, however, generally stress the endurance of the bureaucratic and administrative structure institutionalised by Qin Shi Huang, which . . . remained the basis of all subsequent dynasties in China.

SOURCE 4 From 'Qin Shi Huang' entry, *New World Encyclopedia* website

Because of this systematic Confucian bias on the part of the Han scholars, some of the stories recorded about Qin Shi Huang are doubtful…Some of the stories are plainly fictitious… This makes it difficult to know the truth about other stories…

Only in modern times were historians able to penetrate beyond the limitations of traditional Chinese historiography …there emerged a new appreciation of the man who had unified China … In the new era [since 1972] Qin Shi Huang has been seen as a farsighted ruler who destroyed the forces of division and established the first unified, centralised state in Chinese history by rejecting the past.

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Step 1: Questioning and researching

For each of the provided sources, **discuss** the following:

Is the writer's dominant judgement about Qin Shihuang and the Qin dynasty favourable or unfavourable?

Write your inquiry question. Your question could be based on anything — for example, one of the following issues:

a. How significant were the changes made under Qin Shihuang to people living at the time?
b. How many people were affected?
c. To what extent were people's lives changed?
d. What is Qin Shihuang's legacy, and should he be remembered as an especially cruel ruler or as a far-sighted ruler who brought significant change to his country?

Research your inquiry question.

Step 2: Using historical sources

Analyse the sources that you find. Inevitably some will represent differing perspectives and some of those will be biased, so try to separate fact from opinion. Try to identify cause and effect — for example, the reasons for the changes made by Qin Shihuang and the consequences of them.

Step 3: Historical perspectives and interpretations

Evaluate the significance of the changes and how many people were affected by them.

Step 4: Communicating

What is your answer to your inquiry question? **Present** your findings in a format of your choosing. Support your answer with examples from your research, analysis and evaluation.

Complete your self-assessment using the **Inquiry rubric** or access the 7.10 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39373)

LESSON
7.11 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

Watch teacher-led videos

Practise questions with immediate feedback

Find all this and MORE in jacPLUS

7.11.1 Key knowledge summary

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

7.2 How do we know about ancient China?

- Shang dynasty inscriptions are our earliest written evidence of ancient China.
- Archaeological finds provide evidence of rich cultures during Qin and Han times.
- The most exciting find was the discovery of the terracotta warriors guarding the tomb of Qin Shihuang.

7.3 How did China's civilisation begin?

- No primary source evidence has been found for the legendary Xia dynasty.
- Early Chinese rulers based their authority on the mandate of heaven.
- Early Chinese civilisation was based on farming in river valleys in eastern China.

7.4 What were life and death like in ancient China?

- Rulers were supported by powerful lords and landowning gentry, who included warriors and bureaucrats.
- Peasants formed the largest group and they suffered through natural disasters and wars.
- Merchants and slaves were at the bottom of Chinese society.
- Life for all classes of the common people was harsh, especially for women.
- We know much more about death and the funeral customs of the ruling classes than of the common people.
- The ruling classes' custom was to bury goods with the dead to provide for them in the afterlife.
- Until Han times, people were also buried with rulers to serve them in the afterlife.

7.5 How did China's civilisation affect its environment?

- China is a vast country with a wide variety of climates and landscapes.
- Of the large population, 90 per cent lived in the east, where agriculture was based along river valleys.
- Intensive clearing of land for farming caused massive soil erosion and other environmental damage.

7.6 What were the influences of Confucianism, religions and laws?

- Confucianism is not a religion. It is concerned with how good conduct can create social harmony.
- Confucianism had no influence in its founder's lifetime but much influence in later periods.
- Daoism and Buddhism became major religious influences in ancient China.
- The laws of China's first emperor were based on the harsh laws of the state of Qin.
- Confucianism regained influence under the Han and later dynasties.

7.7 How did the first emperor change China?

- Qin Shihuang took control of China in 221 BCE after completing his conquest of the other Chinese states, and turned the system of defensive walls into the Great Wall of China.
- He stamped out potential threats to his power through several measures, including confiscating weapons, controlling the nobles and burning books.
- By 206 BCE, the Qin dynasty had been destroyed in a peasant rebellion.

7.8 Why did the Han dynasty rise and fall?

- The Han dynasty carried out reforms to avoid the fate of the Qin, and China expanded under the Han.
- Chinese missions led to the founding of the Silk Road, which opened trade between China and India, Persia and the Roman Empire.
- Inequality grew under the Han and rebellions led to its fall in 220 CE.

7.9 What is the heritage of ancient China?

- China's legacies include an amazing number of inventions, including printing and gunpowder.
- China's cultural heritage includes many UNESCO-listed sites, among which are the Great Wall and the Mausoleum of the First Emperor.

7.10 INQUIRY: Contested histories — how should we judge the legacy of Qin Shihuang?

- Traditionally, Chinese historians have regarded Qin Shihuang as a particularly cruel and ruthless ruler.
- Han dynasty historians had an interest in portraying the first emperor as a villain.
- In modern times, Chinese historians have tended to value Qin Shihuang as a far-sighted ruler who created China's first unified state.

7.11.2 Key terms

acupuncture a medical practice in which long, sharp needles are inserted under the skin as a means of diagnosing, relieving or curing illness
anaesthetic drug to deaden pain
artificer craftsperson or inventor
bureaucrat government official
castrated having had the testicles cut off
concubines women who lived with the emperor in a sexual relationship but were not married to him
conscripted forced to become a soldier
constellations groups of stars
Daoist a follower of Daoism
deported forced to leave the country
dissection systematic cutting up of a body for medical study
halberds daggers mounted on axe handles
infantry foot soldiers
mandate of heaven Chinese expression meaning that a ruler had been chosen by the gods
mausoleum large tomb structure
philosopher one who studies the fundamental principles and causes of things
warlords generals from powerful landowning families
Xiongnu the ancient Chinese name for the nomadic Turkic tribes of Central Asia

7.11.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Why and where did ancient China's civilisation emerge, and what were its defining features, achievements and legacies?

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 Customisable worksheets for this topic (ewbk-10528)
Reflection (ewbk-10538)
Ancient China crossword (ewbk-10535)
Ancient China find-a-word (ewbk-10536)

Interactivity Ancient China crossword (int-7696)

7.11 Review exercise

Students, these questions are even better in jacPLUS

Receive immediate feedback and access sample responses

Access additional questions

Track your results and progress

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Multiple choice

1. Shang dynasty inscriptions provide early evidence of ancient Chinese what?
   - A. Ironwork
   - B. Gunpowder
   - C. Farming
   - D. Manufacturing
2. The 'mandate of heaven' meant which of the following for Chinese emperors?
   - A. They were believed to be gods.
   - B. They were supposedly chosen by the gods to rule.
   - C. They lived like gods.
   - D. They said there were no gods.
3. During the Warring States period, wars occurred between which of the following?
   - A. Local lords who controlled their own states within the Zhou kingdom
   - B. Local lords who controlled their own states outside the Zhou kingdom
   - C. Nomads who wanted to invade China
   - D. Nobles and peasants
4. Merchants occupied which of these positions in Chinese society?
   - A. At the top, along with nobles
   - B. Between nobles and peasants
   - C. Almost at the bottom
   - D. Between peasants and artisans
5. Environmental problems in ancient China were caused mainly by which of the following?
   - A. Polluting the air
   - B. Burning coal
   - C. Polluting the ocean
   - D. Clearing forests for farming
6. What were the main ideas of Confucius concerned with?
   - A. Worshipping gods
   - B. Conduct that ensured a harmonious society
   - C. Obedience to kings
   - D. Rebelling against authority

7. The martial art of kung fu was developed by which of these groups?
   - **A.** Daoists
   - **B.** Buddhists
   - **C.** Followers of Confucius
   - **D.** Qin Shihuang's army
8. Qin Shihuang changed the feudal system by which of these means?
   - **A.** Burning books
   - **B.** Executing scholars
   - **C.** Confiscating weapons
   - **D.** Allowing farming land to be bought and sold
9. Around how many people might have died constructing the Great Wall of China?
   - **A.** Five hundred
   - **B.** One million
   - **C.** Two thousand
   - **D.** Five million
10. Under Qin Shihuang's orders, scholars who refused to burn their books were what?
   - **A.** Beheaded
   - **B.** Fined
   - **C.** Imprisoned
   - **D.** Buried alive

Short answer

Communicating

11. What or who were the Yellow Turbans and Red Eyebrows?
12. The Silk Road was the land route for trade between China and which places?

Using historical sources

13. Imagine that you have been hired by the Chinese tourism authorities who erected the stone marker in **SOURCE 1**.

    Your job is to **create** a guide to this site for Australian and other English-speaking tourists visiting the site. You will need to use what you have learned in this topic as well as information you can gather using the internet, including the UNESCO World Heritage List. Your guide should include:
    - **a.** the history of this section of the wall from the time when the various walls were joined under Qin Shihuang up to the time when this section was rebuilt during the early Ming dynasty
    - **b.** an explanation of what was involved in building the wall
    - **c.** information about what the wall would have meant to Chinese people in Qin times and later.

SOURCE 1 The stone marking the modern entrance to the Mutianyu section of the Great Wall of China, about 70 kilometres north of Beijing

14. **Analyse SOURCE 2** using the following questions.
    a. **Describe** the details of the painting.
    b. **Identify** ways in which the appearance of the students and the room differ from a modern examination room.
    c. **Describe** the kinds of questions that examiners would be likely to ask.
    d. **Describe** the types of answers that students would be expected to give.
    e. To fully **analyse** this source, you would need information that is not provided here. **List** examples of such types of information.

SOURCE 2 This painting depicts a Chinese emperor assessing the performance of students in exams for the civil service.

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Access quarantined tests and assessments

Track your students' results

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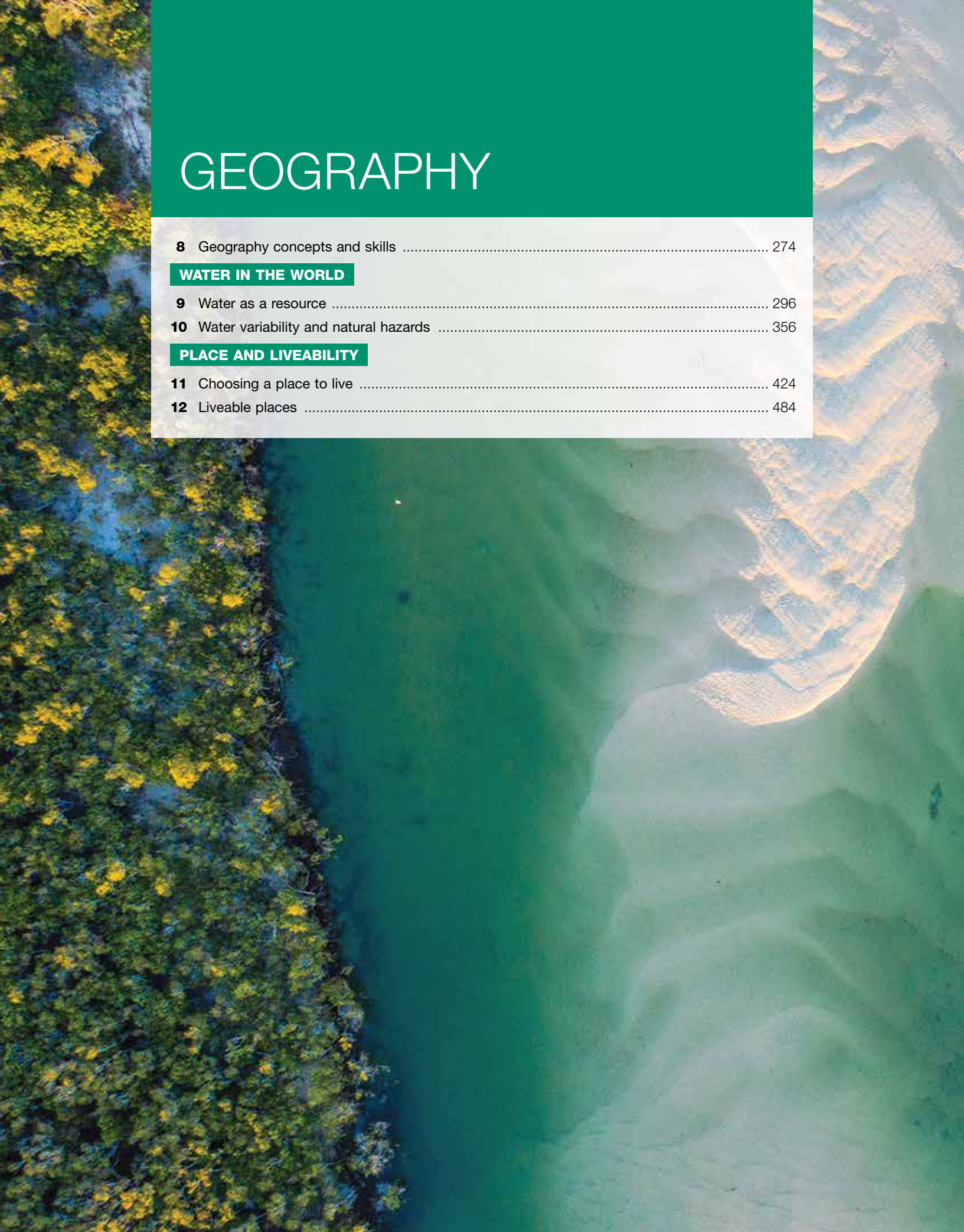

GEOGRAPHY

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WATER IN THE WORLD

9 Water as a resource 296

10 Water variability and natural hazards 356

PLACE AND LIVEABILITY

11 Choosing a place to live 424

12 Liveable places 484

8 Geography concepts and skills

LESSON SEQUENCE

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8.5 SkillBuilder: How to read a map ..... online only
8.6 SkillBuilder: Reading a weather map ..... online only
8.7 SkillBuilder: Creating a simple column or bar graph ..... online only
8.8 SkillBuilder: Using topographic maps ..... online only
8.9 SkillBuilder: Using alphanumeric grid references ..... online only
8.10 SkillBuilder: Drawing a climate graph ..... online only
8.11 SkillBuilder: Creating and analysing overlay maps ..... online only
8.12 SkillBuilder: Annotating a photograph ..... online only
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LESSON
8.1 Overview

Hey students! Bring these pages to life online

Watch videos

Engage with interactivities

Answer questions and check results

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8.1.1 What is Geography?

The world around us is made up of a large range of interesting places, people, cultures and environments. Geography is a way of exploring, analysing and understanding this world of ours — especially its people and places. Studying Geography at school allows you to build up your knowledge and understanding of our planet, at different scales: the local area, our nation, our region and our world. In essence, geographers investigate the characteristics of places and the relationships between people and places.

FIGURE 1 Geography helps you explore and understand the amazing world we live in.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10539)

Video eLesson Geography concept and skills (eles-6009)

LESSON
8.2 Concepts in Geography

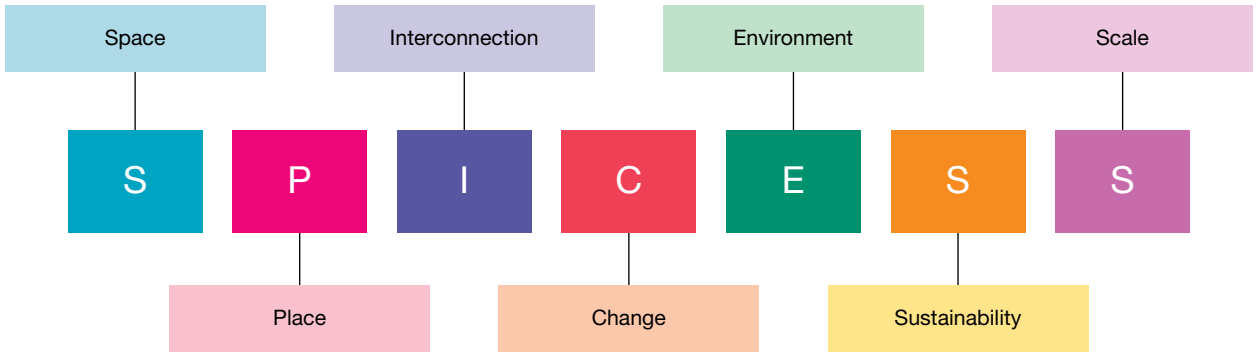
LEARNING INTENTION

By the end of this lesson you should be able to identify, explain and apply the seven geography concepts using the acronym SPICESS.

8.2.1 Geography concepts: SPICESS

Geographical concepts help you to make sense of your world. You can use these concepts to both investigate and understand the world you live in. You can also use them to try to imagine a different world. The concepts help you to think geographically. The seven major concepts are ***space***, ***place***, ***interconnection***, ***change***, ***environment***, ***sustainability*** and ***scale***. You will use the seven concepts to investigate two aspects: water as a resource, and place and liveability.

FIGURE 1 A way to remember these seven concepts is to think of the term SPICESS.



8.2.2 What is space?

The concept of space is about where things are located and distributed on the surface of the Earth, and how the space is organised and managed by people.

When referring to space in Geography, we can have absolute or relative location. Absolute location is the unique location of a site or geographical feature. For example, the absolute location of Broken Hill is at 31.95° South latitude and 141.45° East longitude. Relative location is the location of a place or feature in relation to other places. It can be described by direction and distance from other places and features.

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Space**

8.2.3 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.

Places may be natural (such as an undisturbed wetland) or highly modified (such as a large urban conurbation).

Places provide us with the services and facilities we need in our everyday life. The physical and human characteristics of places, their location and their environmental quality can influence the quality of life and wellbeing of people living there.

You often have mental images and perceptions of places — your city, suburb, town or neighbourhood — and these may be very different from someone else's perceptions of the same places.

FIGURE 2 Mental map of Jayden's local place (a) by Jayden and (b) by Annette, Jayden's mother

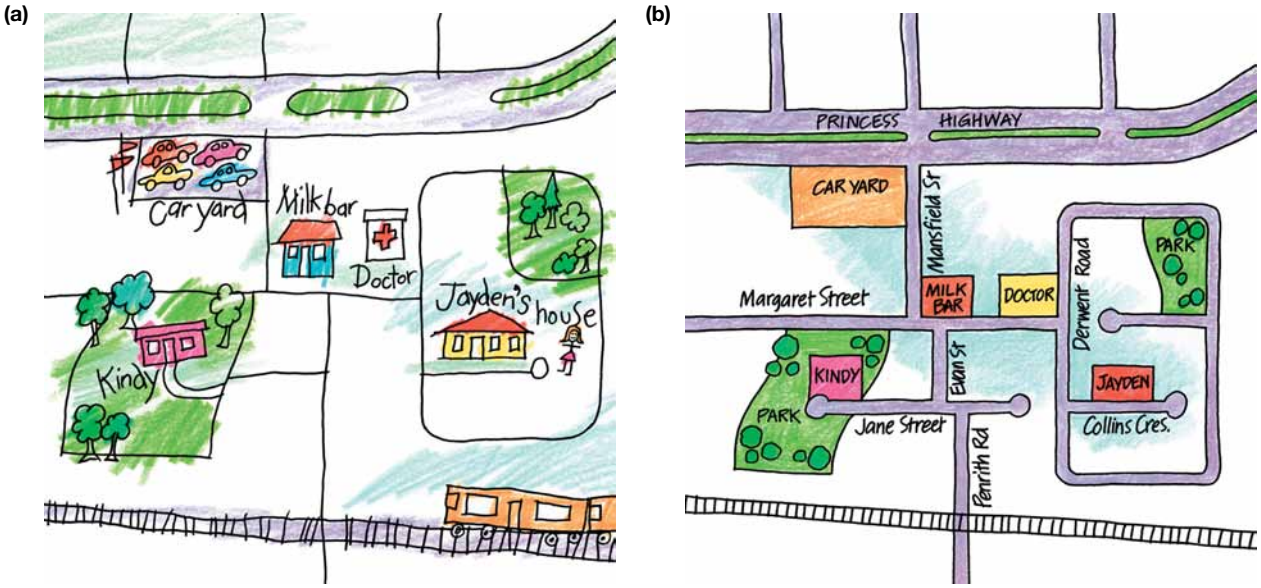
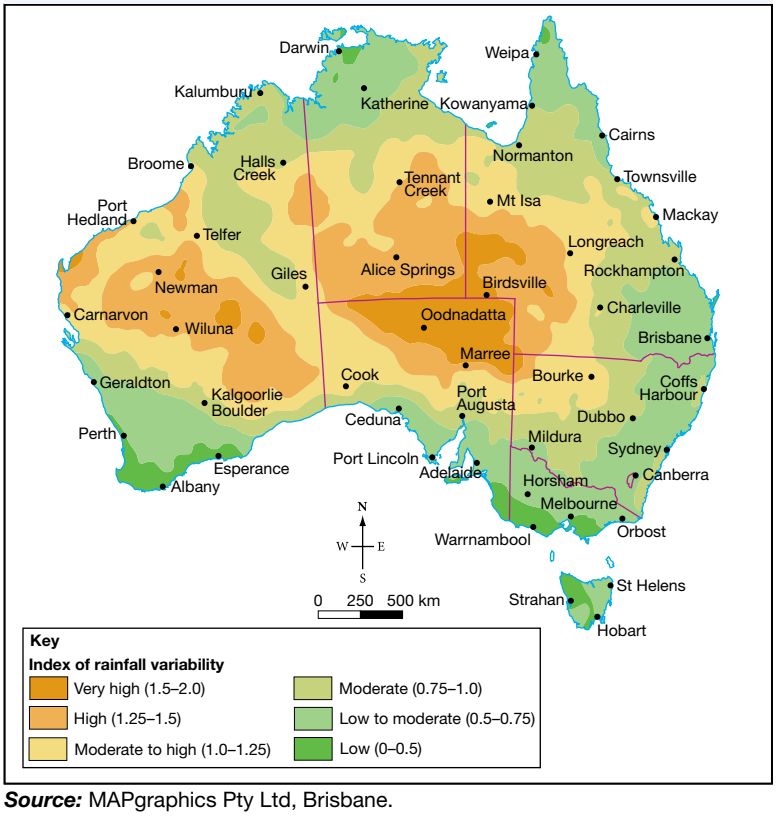
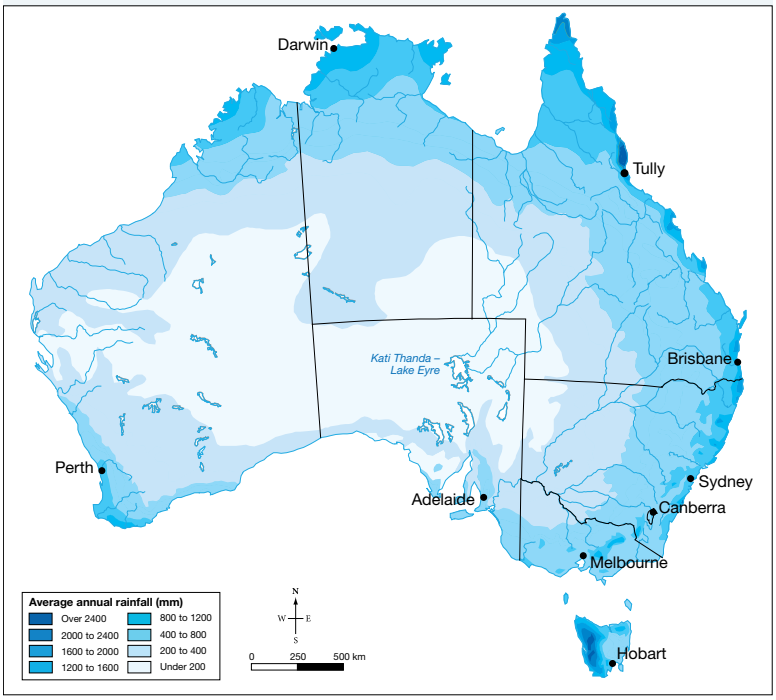


FIGURE 3 Australian annual rainfall variability



Source: MAPgraphics Pty Ltd, Brisbane.

FIGURE 4 The amount of rain that falls in Australia varies from place to place, as this rainfall map shows.



Source: Bureau of Meteorology, 2003

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Place**

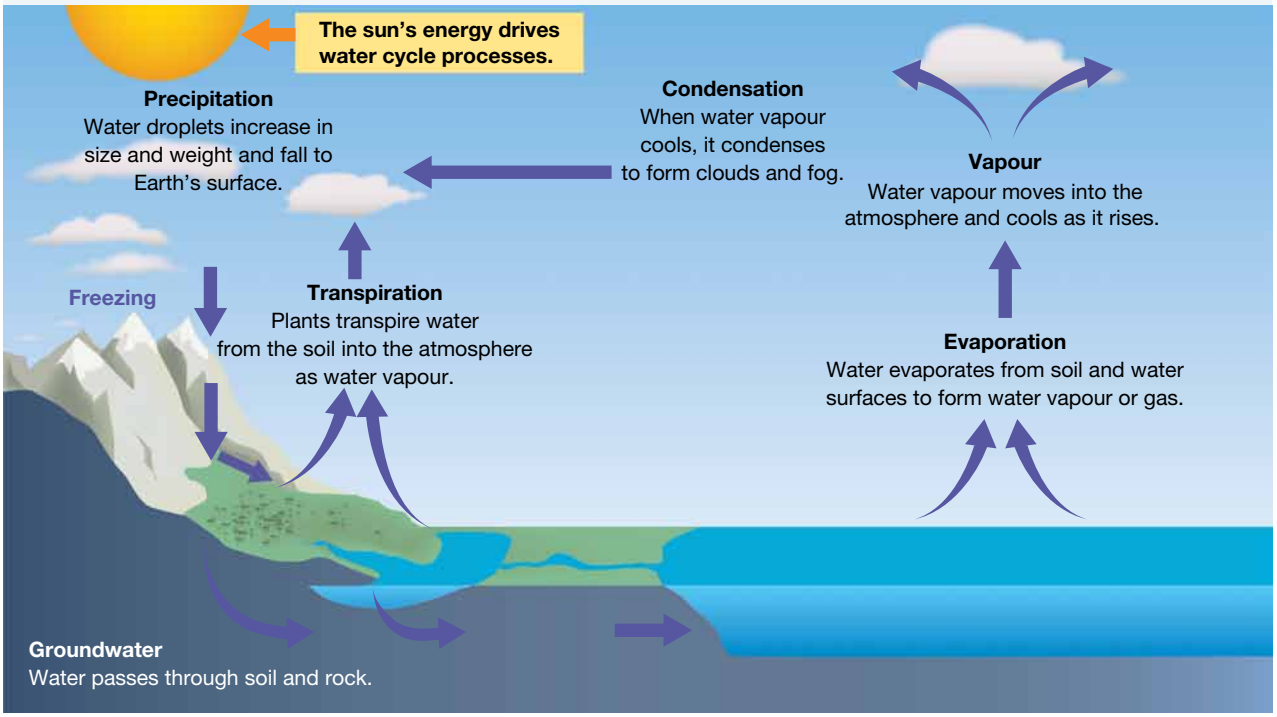
8.2.4 What is interconnection?

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 5 Mount Tom Price township and mine in Western Australia, with fly in, fly out (FIFO) worker huts in the left foreground

FIGURE 6 The water cycle shows many interconnections.



Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.
- Developing Australian Curriculum concepts > **Interconnection**

8.2.5 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.

The concept of change involves both time and space — change can take place over a period of time, or over an area. The time period for change can be very short (for example, the impact of a flash flood) or over thousands or millions of years (for example, the development of fossil fuel resources).

FIGURE 7 Port Douglas, 60 km north of Cairns, was a busy port in the 1870s, with a population of over 10 000. The mining that had attracted people to this hot, wet area, however, did not last. By the 1960s, the population was only 100. In the 1980s, road and air access to the town improved and tourist numbers to the area grew. The permanent population is now about 3500. During the peak holiday season (May to November), this number increases by four times.

Environmental change can occur over short or long periods of time. The use of technology can result in rapid change — think of the explosions at a mining site that reveal mineral seams.

The degree of change occurring can be used to predict, or plan for, actual or preferred futures.

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.
- Developing Australian Curriculum concepts > **Change**

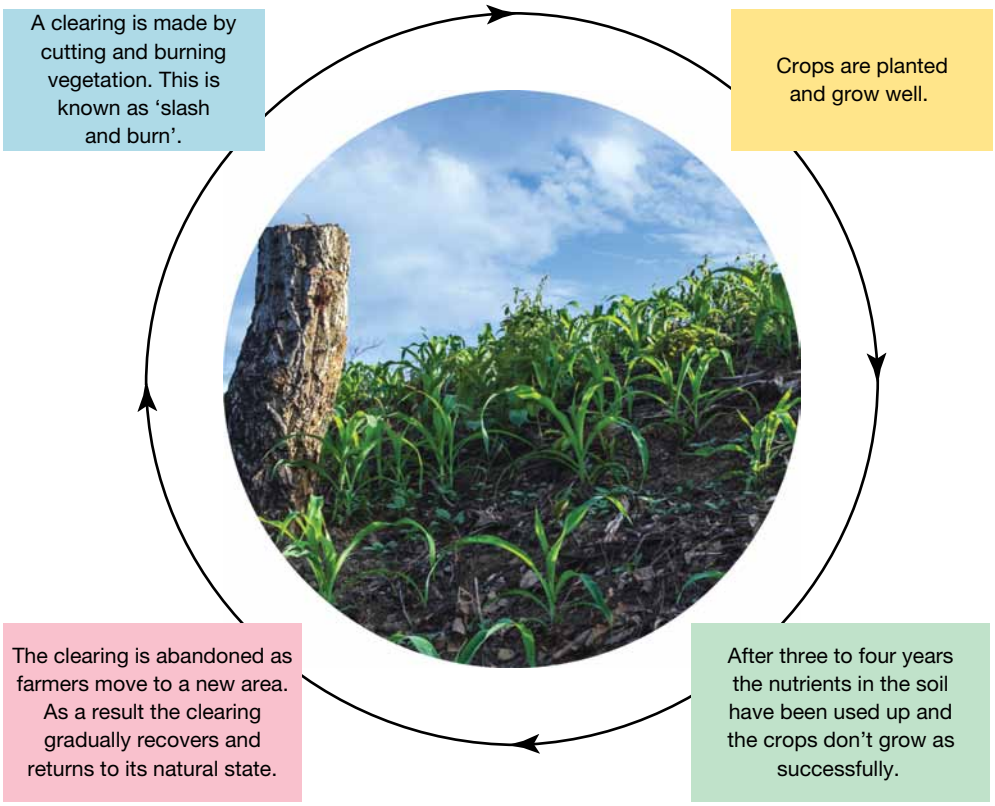
8.2.6 What is environment?

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.

FIGURE 8 Pacific Islanders use traditional methods to fish sustainably.

FIGURE 9 The process of shifting cultivation



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- Developing Australian Curriculum concepts > **Environment**

8.2.7 What is sustainability?

Sustainability is about maintaining the capacity of the environment to support our lives and those of other living creatures.

Sustainability considers 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.

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Sustainability**

8.2.8 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 applied from personal and local levels to regional, national or global levels. Looking at things at a range of scales allows a deeper understanding of geographical issues.

Different factors can be involved in explaining phenomena at different scales. Local events can have global outcomes; for example, removing areas of forest at a local scale can have an impact on climate at a global scale. A policy at a national scale, such as forest protection, can have an impact at a local scale, such as the protection of an endangered species.

FIGURE 10 Railway route and main settlements between Sydney and Perth

Source: Spatial Vision.

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Scale**

LESSON
8.3 Skills used in Geography

LEARNING INTENTION

By the end of this lesson you should be able to write a class definition of Geography, explain what geographers do, and identify different types of maps and their purpose.

8.3.1 Geography is . . . about our wonderful world

Have you ever visited a place other than the one you live in? If so, you probably noticed that some of the features and characteristics are similar and some are different. Geographers aim to understand these characteristics as well as the relationship between people and the different environments around us.

As a geographer, you answer questions ranging from the local to the global, in the past, present and future. Along the way, you will develop skills and inquiry methods to answer these questions for yourself.

8.3.2 Geography is . . . something you do

One of the best parts of studying Geography is the opportunity to visit places outside the classroom. Going on a field trip allows you to collect data and information for yourself and to work collaboratively with other members of your class.

FIGURE 1 Using maps to work out locations and to plot data

Geographers use what is called an 'inquiry' approach. This means that you will investigate geographical questions by collecting, analysing, and interpreting information and data in order to develop your own understanding and draw your own conclusions.

This helps you develop proposals for what should happen and what action should be taken in the future.

Studying Geography develops a wide range of skills that you can apply in your everyday life, in your future life and possibly in your career!

FIGURE 2 Conducting a survey in the field

FIGURE 3 Collecting your own data and information

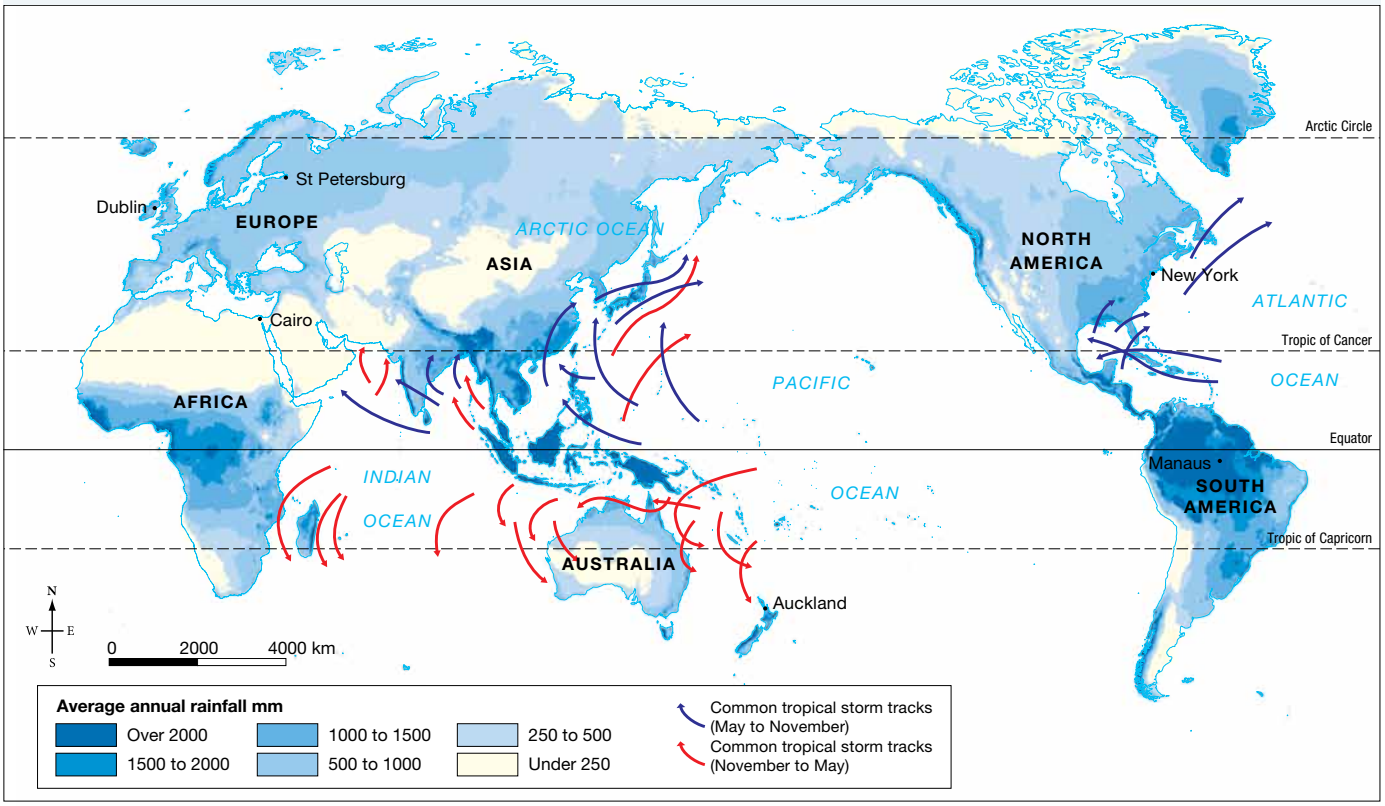
8.3.3 Geography is … a way of thinking

Geography is a way of thinking and a way of looking at the world. One of the key tools geographers use is a map. If you look really carefully at them, maps (such as the ones shown in **FIGURES 4** and **5**) contain a lot of information. As a student, you will often use a variety of different types of maps produced by someone else (for example, from this textbook, atlases and online). However, as a geographer, you will produce your own maps and spatial information, by hand or digitally. Using and interpreting maps are important skills you will develop. It is also important to identify major patterns and trends in maps in order to unlock information they contain.

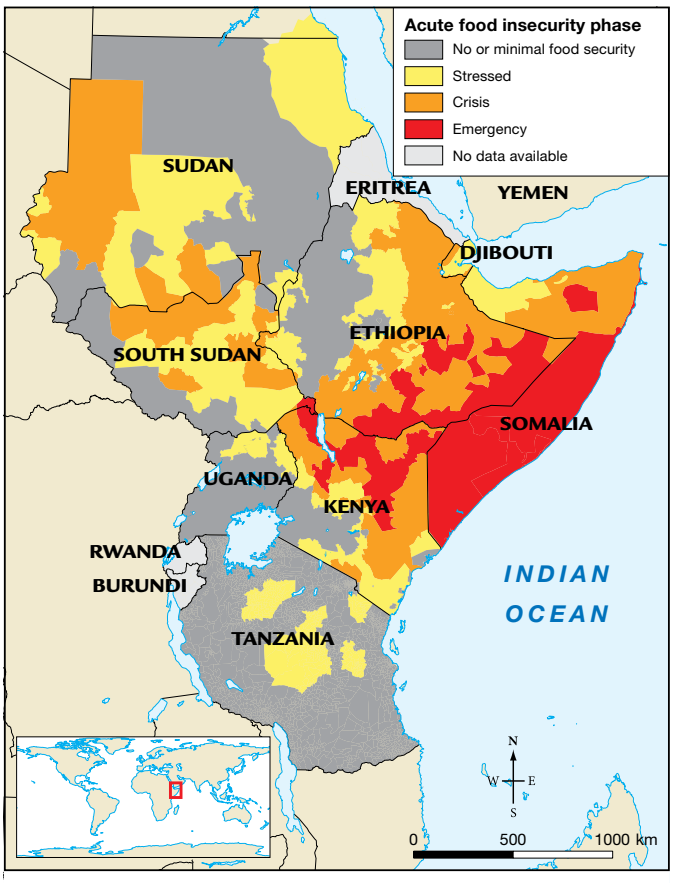
As a geographer, you will use a set of seven geographical concepts to help you not only think geographically but also investigate and understand the world (refer to lesson 8.2).

As a geographer, you should also ask yourself, 'What can I do and contribute as an informed and responsible citizen to make this world a better place?'

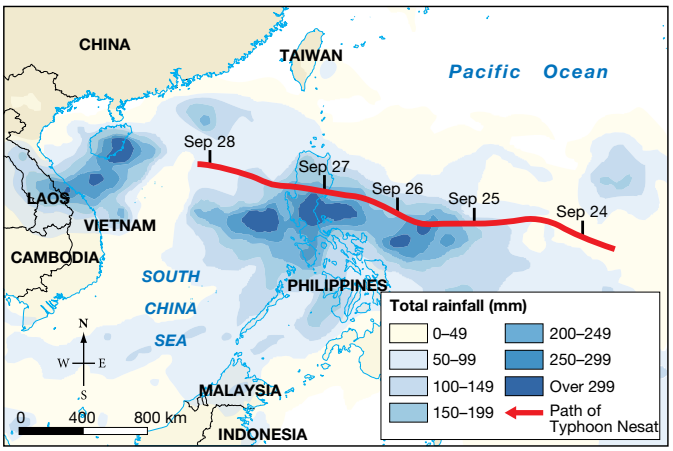
FIGURE 4 Maps: a key tool for the geographer



Source: WorldClim.

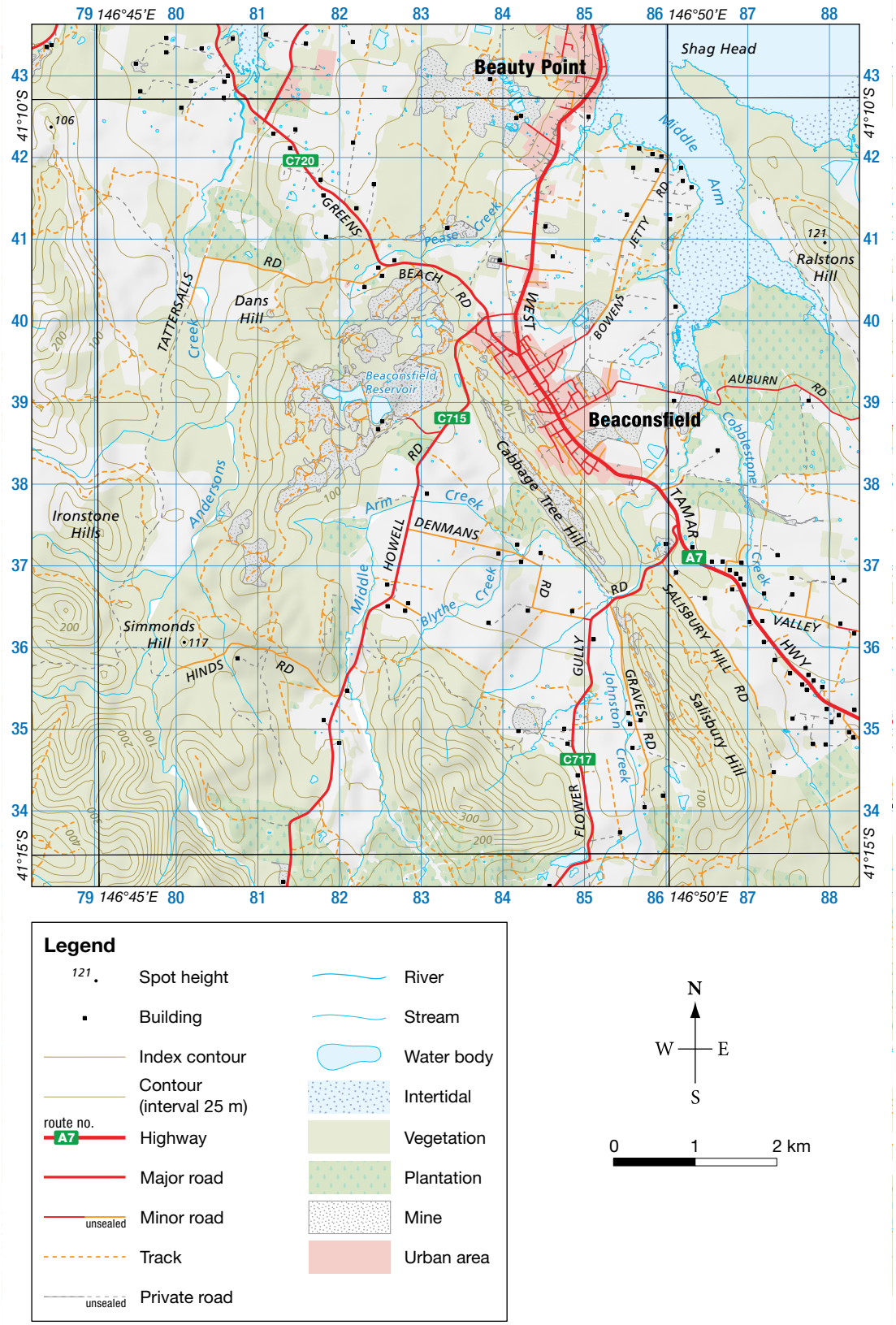


Source: USAID. FEWS NET 2011.



Source: NASA Earth Observatory.

FIGURE 5 Topographic map extract, Tamar Valley, Tasmania, 2021



Legend

- Spot height
- Building
- Index contour
- Contour (interval 25 m)
- route no. A7 — Highway
- Major road
- unsealed — Minor road
- Track
- unsealed — Private road
- River
- Stream
- Water body
- Intertidal
- Vegetation
- Plantation
- Mine
- Urban area

N
W E
S

0 1 2 km

Source: Address Points, Coastline, Contours, Hydrographic Areas, Hydrographic Lines, Spot Heights, Tasmania 25m DEM, TASVEG 3.0, Transport Nodes, Transport Segments from www.theLIST.tas.gov.au
© State of Tasmania.

8.3.4 Skills used in studying Geography

You will learn, practise and master a range of essential practical skills as you study Geography. The SkillBuilder lessons found throughout this title will tell you about the skill, show you the skill and let you apply the skill to the topics covered.

Investigating using geographical methods

Investigating using geographical methods involves applying geographical concepts to develop questions, and using primary research or fieldwork to gain a greater understanding of a concept or issue. This year your fieldwork should involve gathering information from both primary sources (for example, information you observe and record) and a range of secondary sources (for example, information obtained from maps, atlases and textbooks), and then evaluating them for relevance, reliability and bias. In Geography, we look at information from a range of perspectives, and use ethical protocols to assess reliability and worth.

The SkillBuilders related to this skill that you'll use at Year 7 level are:

- Interpreting diagrams

Interpreting and analysing geographical data and information

In Geography this year, you will interpret data by using both quantitative methods (measurable information) and qualitative methods (observations and descriptions) to find similarities, patterns and differences in sources studied. You will also be expected to predict trends and discuss relationships by identifying the key aspects of data presented to you in a variety of forms (for example, a range of different types of maps, tables, graphs and charts). In Year 7 Geography, this may include looking at the link between mountain ranges and rainfall patterns, or links between wealth and liveability.

The SkillBuilders related to this skill that you'll use at Year 7 level are:

- How to read a map
- Interpreting topographic maps
- Using alphanumeric grid references
- Cardinal points — wind roses
- Understanding satellite images
- Constructing a pie graph
- Reading a weather map
- Creating a simple bar or column graph
- Drawing a line graph
- Interpreting topological maps

Concluding and decision-making

In Geography, you will learn to justify conclusions and propose strategies by analysing data, information and perspectives from a variety of sources. By considering environmental, economic and social factors you will make assessments about what makes a liveable community or city. The significance of water in the world will be analysed and you will be expected to make conclusions about how best to manage this precious resource.

The SkillBuilders related to this skill that you'll use at Year 7 level are:

- Drawing a climate graph
- Creating and analysing overlay maps

Communicating

Communicating your ideas and justifying your conclusions are key skills you will develop in Geography. Using geographical concepts and knowledge and a range of digital and non-digital formats, you will seek to express your thoughts and ideas on a wide range of concepts and issues. When communicating in Geography you need to ensure that you consider your audience, acknowledge your sources and choose appropriate methods of communication to ensure your message is clear and well-conceived. In Year 7 you will be expected to explore new ways of presenting information, take risks and develop new presentation skills.

The SkillBuilders related to this skill that you'll use at Year 7 level are:

- Annotating a photograph
- Creating a concept diagram

LESSON
8.4 SkillBuilder: Constructing a pie graph

online only

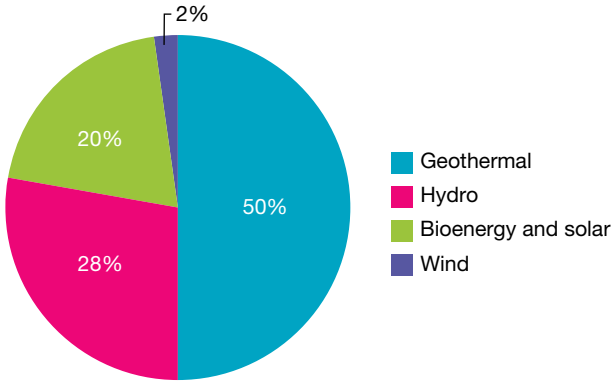
What is a pie graph?

A pie graph, or pie chart, is a graph in which slices or segments represent the size of different parts that make up the whole. The circle of 360 degrees represents the total, or 100 per cent of whatever is being examined. The size of the segments is easily seen. Presenting the parts in order, from largest to smallest, makes it easier to interpret.

Go online 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).

Percentage of electricity generated from renewables in New Zealand



on Resources

Video eLesson Constructing a pie graph (eles-1632)
Interactivity Constructing a pie graph (int-3128)

LESSON
8.5 SkillBuilder: How to read a map

online only

What are maps and why are they useful?

Maps represent parts of the world as if you were looking down from above. The mapmaker, or cartographer, simplifies the plan view from a vertical aerial photograph or satellite image. Cartographers use colours and symbols on the map to show how features such as roads, rivers and towns are organised spatially. Maps are useful to show features so that we have a deeper understanding of places. When travelling, maps are essential to navigate unfamiliar places.

BOLTSS

- B **Border** — a box around the map to clearly show its extent
- O **Orientation** — a compass direction
- L **Legend** — a key to what the symbols and colours on the map stand for
- T **Title** — a clear indication of what the map is about or its theme
- S **Scale** — indicates distances on the map compared with the actual area being shown
- S **Source** — where possible, the information used to make the map should be sourced

Go online 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).

on Resources

Video eLesson How to read a map (eles-1634)
Interactivity How to read a map (int-3130)

LESSON
8.6 SkillBuilder: Reading a weather map

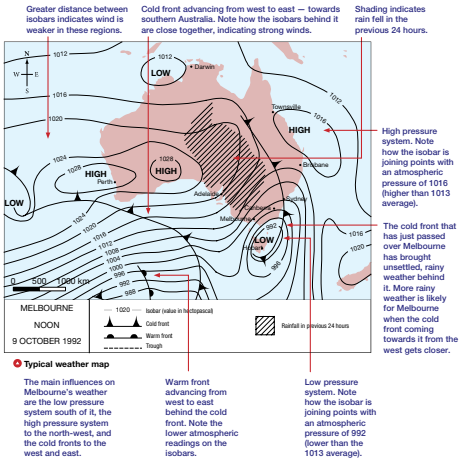
online only

What are weather maps?

Weather maps, or synoptic charts, show weather conditions over a larger area at any given time. They appear every day in newspapers and on television news. Being able to read a weather map is a useful skill because weather affects our everyday life.

Go online 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).



Resources

- **Video eLesson** Reading a weather map (eles-1637)
- **Interactivity** How to read a weather map (int-3133)

LESSON
8.7 SkillBuilder: Creating a simple column or bar graph

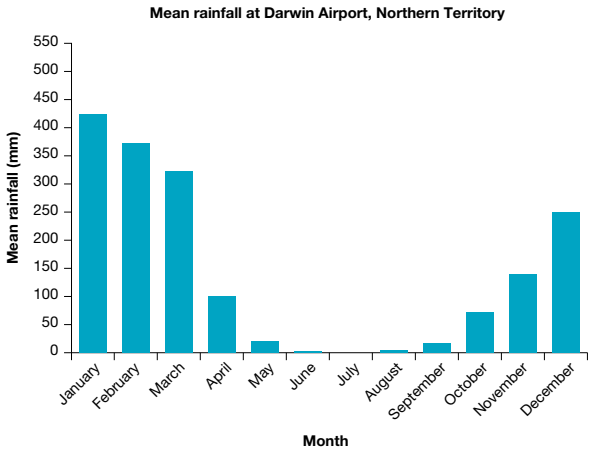
online only

What are column or bar graphs?

Column graphs show information or data in vertical columns. In a bar graph, the data is shown in bars that are drawn horizontally. Column and bar graphs can be drawn by hand, or constructed using a computer spreadsheet.

Go online 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).



Resources

- **Video eLesson** Constructing a simple column or bar graph (eles-1639)
- **Interactivity** Creating a simple column or bar graph (int-3135)

LESSON
8.8 SkillBuilder: Using topographic maps

online only

What are topographic maps?

Topographic maps are more than just colour maps showing the height and shape of the land. They also show features of the natural environment, such as forests and lakes, and features of human environments, such as roads and settlements (places where a community of people live).

Go online 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).

on Resources

Digital document	Topographic map extract — Mt Gambier (doc-17951)
Video eLesson	Using topographic maps (eles-1641)
Interactivity	Using topographic maps (int-3137)
Google Earth	Mount Gambier

LESSON
8.9 SkillBuilder: Using alphanumeric grid references

online only

What are alphanumeric grid references?

Alphanumeric grid references are a combination of letters and numbers that help us locate specific positions on a map. They are linked to the lines that form a grid over certain kinds of maps. The letters and numbers are placed alongside the gridlines, just outside the map. The grid, letters and numbers allow you to pinpoint a place or feature by stating its alphanumeric grid reference.

Source: Russell Tate / Getty Images Australia

Go online 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).

on Resources

Video eLesson	Using alphanumeric grid references (eles-1642)
Interactivity	Using alphanumeric grid references (int-3138)

LESSON
8.10 SkillBuilder: Drawing a climate graph

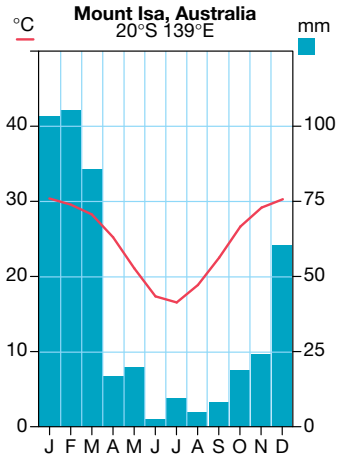
onlineonly

What are climate graphs?

Climate graphs, or climographs, are graphs that show climate data for a particular place over a 12-month period. They combine a column graph and a line graph. The line graph shows average monthly temperature, and the column graph shows average monthly precipitation (rainfall).

Go online 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).



on Resources

- **Video eLesson** Drawing a climate graph (eles-1644)
- **Interactivity** Drawing a climate graph (int-3140)

LESSON
8.11 SkillBuilder: Creating and analysing overlay maps

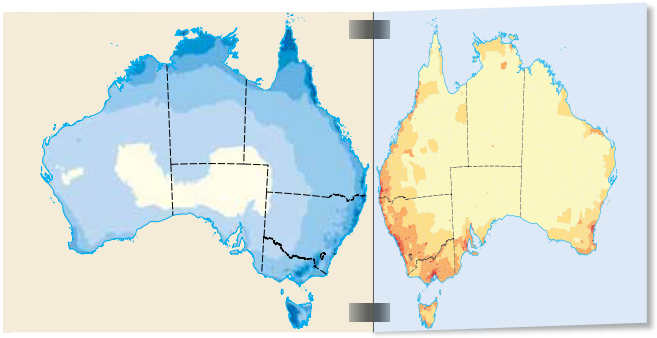
onlineonly

What are overlay maps?

An overlay map usually consists of two or more maps of the same area. A base map is overlaid with a transparent overlay, showing different information. Overlay maps allow users to see the relationships between the information on two or more maps.

Go online 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).



on Resources

- **Video eLesson** Creating and analysing overlay maps (eles-1645)
- **Interactivity** Creating and analysing overlay maps (int-3141)

LESSON
8.12 SkillBuilder: Annotating a photograph

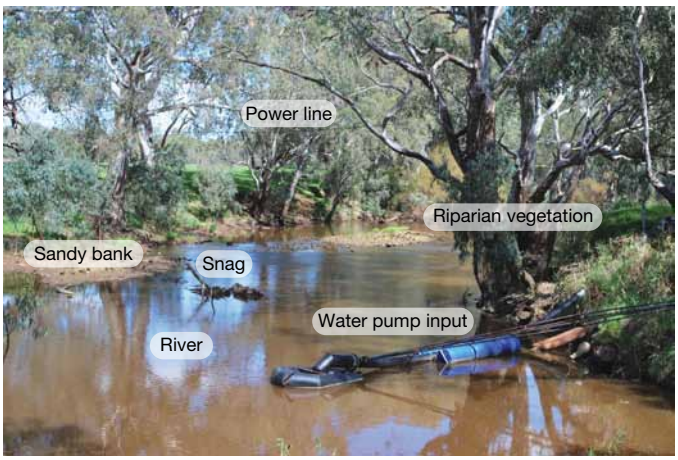
online only

What are annotated photographs?

Photographs are used to show aspects of a place. Annotations are added to photographs to draw the reader's attention to what can be seen and deduced.

Go online 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).



on Resources

Video eLesson Annotating a photograph (eles-1633)
Interactivity Annotating a photograph (int-3129)

LESSON
8.13 SkillBuilder: Drawing a line graph

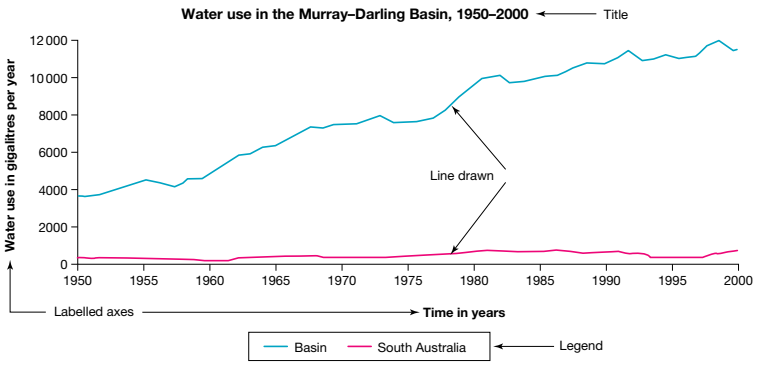
online only

What is a line graph?

A line graph displays information as a series of points on a graph that are joined to form a line. A line graph can be drawn by hand or by using a spreadsheet program such as Excel.

Go online 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).



Source: © Department of Environment, Water and Natural Resources, South Australia Government

on Resources

Video eLesson Drawing a line graph (eles-1635)
Interactivity Drawing a line graph (int-3131)

LESSON
8.14 SkillBuilder: Interpreting diagrams

online only

What are diagrams?

A diagram is a graphic representation of something. In Geography, it is often a simple way of showing the arrangement of elements in a landscape and the relationships between those elements. Diagrams also have annotations: labels that explain aspects of the illustration.

Go online 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).

on Resources

Video eLesson Interpreting diagrams (eles-1636)

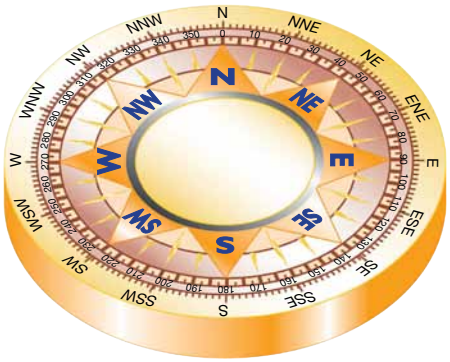
Interactivity Interpreting diagrams (int-3132)

LESSON
8.15 SkillBuilder: Cardinal points — wind roses

online only

What are wind roses?

A wind rose is a diagram that shows the main wind features of a place; in particular, wind direction, speed and frequency. Wind directions can be divided into 8 or 16 compass directions.



Go online 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).

on Resources

Video eLesson Cardinal points: wind rose (eles-1638)

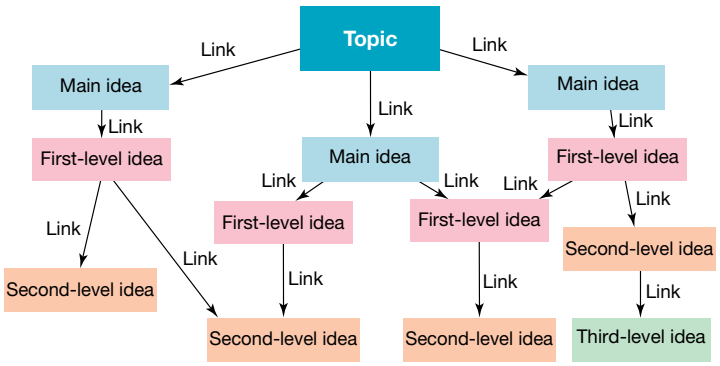
Interactivity Cardinal points: wind rose (int-3134)

LESSON
8.16 SkillBuilder: Creating a concept diagram

online only

What is a concept diagram?

A concept diagram, sometimes mistakenly called a concept map, is a graphical tool that shows links between ideas or concepts. Concept diagrams organise links into different levels. Concept diagrams enable you to organise your ideas and communicate them to others.



Go online 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).

on Resources

Video eLesson Creating a concept diagram (eles-1640)
Interactivity Creating a concept diagram (int-3136)

LESSON
8.17 SkillBuilder: Interpreting topological maps

online only

What are topological maps?

Topological maps are very simple maps, with only the most vital information included. These maps generally use pictures to identify places, are not drawn to scale and give no sense of distance. However, everything is correct in its interconnection to other points.

Go online 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).

on Resources

Video eLesson Interpreting topological maps (eles-1736)
Interactivity Interpreting topological maps (int-3354)

LESSON
8.18 SkillBuilder: Understanding satellite images

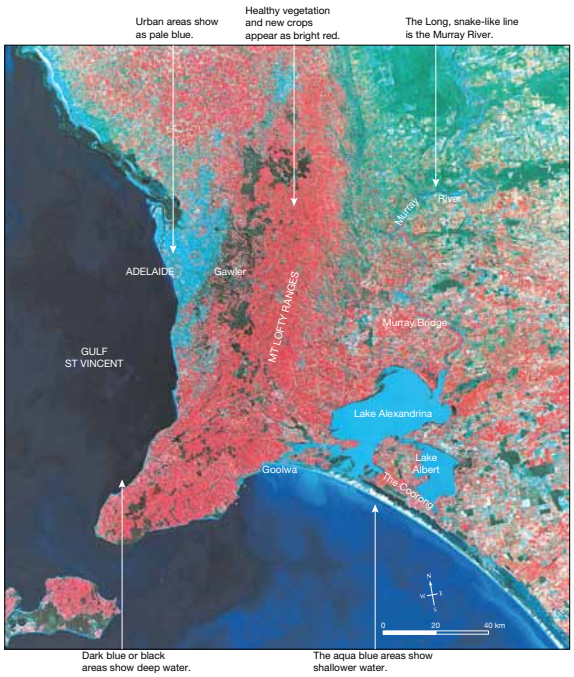
onlineonly

What are satellite images?

Satellite images show parts of our planet from space. They are taken from satellites and transmitted to stations on Earth. Satellites can collect a variety of data, including standard photographic imagery, colour infrared and radar data. They can show Earth in close-up or from far away.

Go online 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).



Resources

Video eLesson Understanding satellite images (eles-1643)

Interactivity Understanding satellite images (int-3139)

LESSON
8.19 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

Watch teacher-led videos

Practise questions with immediate feedback

Find all this and MORE in jacPLUS

8.19.1 Key knowledge summary

8.2 Concepts in Geography

- The acronym SPICESS helps you remember the seven geographical concepts:
  - space
  - place
  - interconnection
  - change
  - environment
  - sustainability
  - scale.

8.3 Skills in Geography

- Geography is a way of exploring, analysing and understanding this world of ours, its people and places.
- Geographers use what is called an 'inquiry' approach. This means that you will investigate questions by collecting, analysing, and interpreting information and data in order to develop your own understanding and draw your own conclusions.
- Geography is a way of thinking and a way of looking at the world. One of the key tools geographers use is a map.
- Maps contain a lot of information about people and places. As a geographer, you will produce your own maps and spatial information, by hand or digitally.
- You will learn, practise and master a range of essential practical skills, including:
  - investigating using geographical methods
  - interpreting and analysing geographical data and information
  - concluding and decision-making
  - communicating.

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10539)
Reflection (ewbk-10540)

Interactivity Geography concepts and skills crossword (int-7698)

Hey teachers! Create custom assignments for this topic

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Find all this and MORE in jacPLUS

LESSON
8.4 SkillBuilder: Constructing a pie graph

LEARNING INTENTION

By the end of this SkillBuilder you should be able to construct a pie graph.

8.4.1 Tell me

What is a pie graph?

A pie graph, or pie chart, is a graph in which slices or segments represent the size of different parts that make up the whole. The circle of 360 degrees represents the total, or 100 per cent of whatever is being examined. The size of the segments is easily seen. Presenting the parts in order, from largest to smallest, makes it easier to interpret.

A pie graph can be drawn by hand or by using a spreadsheet program.

How are pie graphs useful?

Pie graphs give us an overall impression of data. They are useful for comparing proportions of categories. However, if more than eight segments are needed, the graph becomes difficult to read and it is better to use a bar graph. Unlike line graphs, pie graphs are not useful for showing a trend over time.

A good pie graph:

- has a clear and accurate title that explains the purpose of the graph
- has segments that are either labelled directly or indicated by means of a colour key
- includes percentages or raw figures
- has segments drawn clockwise from largest to smallest, starting at 12 o'clock with the largest and finishing at 12 o'clock with the smallest, unless there is a segment for 'other', which is always last
- includes the source of the data.

8.4.2 Show me

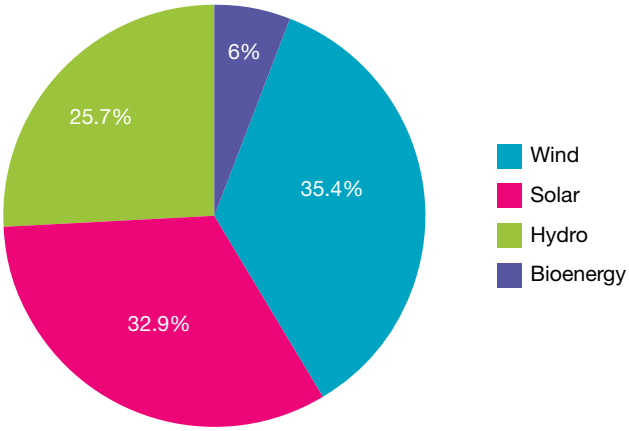
How to complete a pie graph

You will need:

- paper
- a pencil
- a protractor
- a ruler
- coloured pencils
- a data set — in this case, energy generated from renewables in New Zealand (see **TABLE 1**).

Model

FIGURE 1 Percentage of electricity generated from renewables in Australia by energy source (2019)



Source: Based on Clean Energy Australia Report 2020. Clean Energy Council (2020). Retrieved from https://assets.cleanenergycouncil.org.au/documents/resources/reports/clean-energy-australia/clean-energy-australia-report-2020.pdf [Online Resource]

Note: 24% of total energy consumption in Australia is from renewable sources.

TABLE 1 Percentage of electricity generated from renewables in New Zealand by energy source (2010)

Renewable energy	Percentage (%)
Hydro	28
Bioenergy and solar	20
Wind	2
Geothermal	50

Note: In 2019, 84% of all electricity generated in New Zealand came from renewable resources.

Source: New Zealand Energy Data File 2012

Procedure

Step 1

Order the statistics from largest to smallest. If there is an 'other' category, put it last.

Step 2

If you have not been given percentages, you will need to calculate them. Add all of the categories together to give you your total figure. Divide each individual category by the total figure and then multiply by 100. This will give you a percentage.

Step 3

Convert the percentage to degrees of a circle by multiplying by 3.6. (100 per cent of the circle = 360 degrees, so 1 per cent of the circle = 3.6 degrees.)

TABLE 2 Converting percentages to degrees in circle

Renewable energy	Percentage (%)	Degrees in circle (percentage × 3.6)
Hydro	28	100.8
Bioenergy and solar	20	72
Wind	2	7.2
Geothermal	50	180

Step 4

Draw a straight line from the centre of the circle to 12 o'clock.

Step 5

Use the protractor to mark the first and largest segment, working clockwise. To do this, place the 0 degrees line on the protractor along the line you have just drawn. Now mark in the second largest group. Use the protractor to mark each of the other segments in descending size, marking the 'other' category last (if needed).

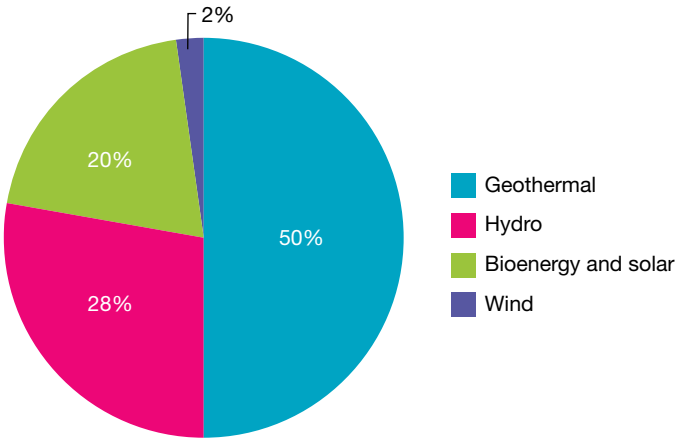
Step 6

Label and colour each segment, making sure you include the percentage label.

Step 7

Provide a clear title and source.

FIGURE 2 Percentage of electricity generated from renewables in New Zealand by energy source (2010)



Source: New Zealand Energy Data File 2012

Resources

Video eLesson Constructing a pie graph (eles-1632)
Interactivity Constructing a pie graph (int-3128)

8.4.3 Let me do it

Complete the following activities to practise this skill.

8.4 ACTIVITIES

1. Use the data in **TABLE 3** to **create** a pie graph. Use the checklist provided to make sure you cover all aspects of the task.

TABLE 3 Source of electricity worldwide, 2017

Source of electricity	Percentage (%)
Coal	38
Oil	3
Natural gas	23
Nuclear	10
Hydro	16
Other	9

Source: Based on IEA data from the IEA (2017). World gross electricity production, by source, 2017. https://www.iea.org/data-and-statistics/charts/world-gross-electricity-production-by-source-2017. All rights reserved.

2. Once you have created your pie graph, apply the skills you have developed in this SkillBuilder to answer the following questions.
   a. What is the most common source when producing electricity?
   b. Are renewables or non-renewables the main source of electricity?
   c. Name a renewable that is part of the 'other' category.

d. In Iceland, 70 per cent of all electricity is produced from hydro power and 30 per cent is produced from geothermal power. Is this similar to or different from the world trend?
e. Research the sources of energy production for another country. Compare your results to Australia and Iceland.

Checklist

I have:

- provided a clear title and source
- plotted the data accurately and labelled each segment
- included the percentages
- shown largest to smallest clockwise from 12 o'clock, with 'other' last.

LESSON
8.5 SkillBuilder: How to read a map

LEARNING INTENTION

By the end of this SkillBuilder you should be able to read a map.

8.5.1 Tell me

What are maps and why are they useful?

Maps represent parts of the world as if you were looking down from above. The mapmaker, or cartographer, simplifies the plan view from a vertical aerial photograph or satellite image. Cartographers use colours and symbols on the map to show how features such as roads, rivers and towns are organised spatially. Six features should be included on all maps. To help us remember these, we use the acronym BOLTSS (see **FIGURE 1**). Maps are useful to show features so that we have a deeper understanding of places. When travelling, maps are essential to navigate unfamiliar places.

FIGURE 1 Essential map features

BOLTSS

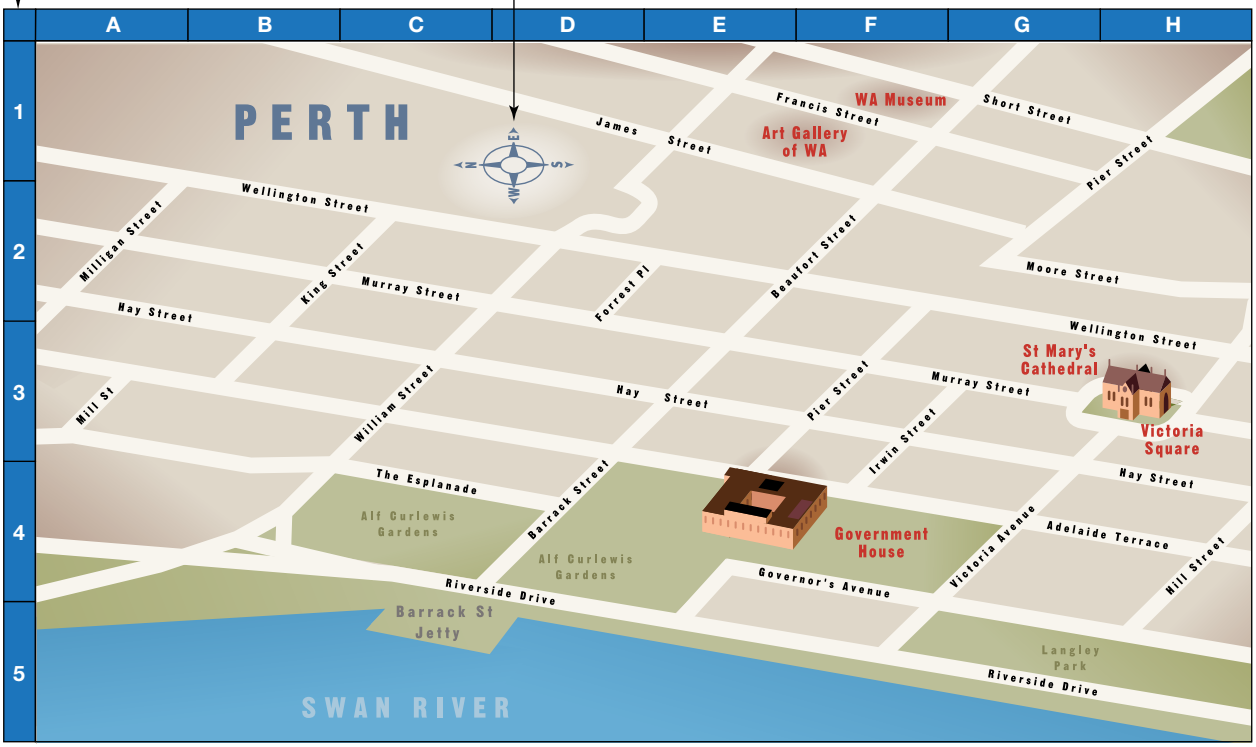
- B — **Border** — a box around the map to clearly show its extent
- O — **Orientation** — a compass direction
- L — **Legend** — a key to what the symbols and colours on the map stand for
- T — **Title** — a clear indication of what the map is about or its theme
- S — **Scale** — indicates distances on the map compared with the actual area being shown
- S — **Source** — where possible, the information used to make the map should be sourced

Understanding map legends

When you look at a map, you no doubt immediately notice the various colours and symbols used on the map. The legend, or key, lists and explains these. The legend is usually found next to or in a corner of the map, or it may be located in a special reference section.

Cartographers overcome the difficult task of showing all features of an area on a map by using symbols and colour to show point symbols (for example, a church), line symbols (a road) and area symbols (a forest). Many maps use the same symbols to help the reader instantly recognise features; for example, blue lines to represent rivers. These conventional symbols are usually drawn to look like the objects they represent. The many symbols used in atlases and other maps are small. It is important that you keep symbols small when making your own maps.

FIGURE 2 A section of the Perth CBD



Source: Russell Tate / Getty Images Australia

Source

Maps often show features that can be seen from an aeroplane but they also show features that are not visible from the air.

As mentioned, a good map has BOLTSS:

- Border — to show the boundaries of the map
- Orientation — to show direction on the map
- Legend — to explain the symbols and colours used
- Title — to describe what the map is
- Scale — to indicate distances on the map
- Source — to explain the source of the information for the map

Importantly, the map must also be accurate and neat.

8.5.2 Show me

How to read a map

You will need:

- a map of the region being considered (see **FIGURE 3**).

Procedure

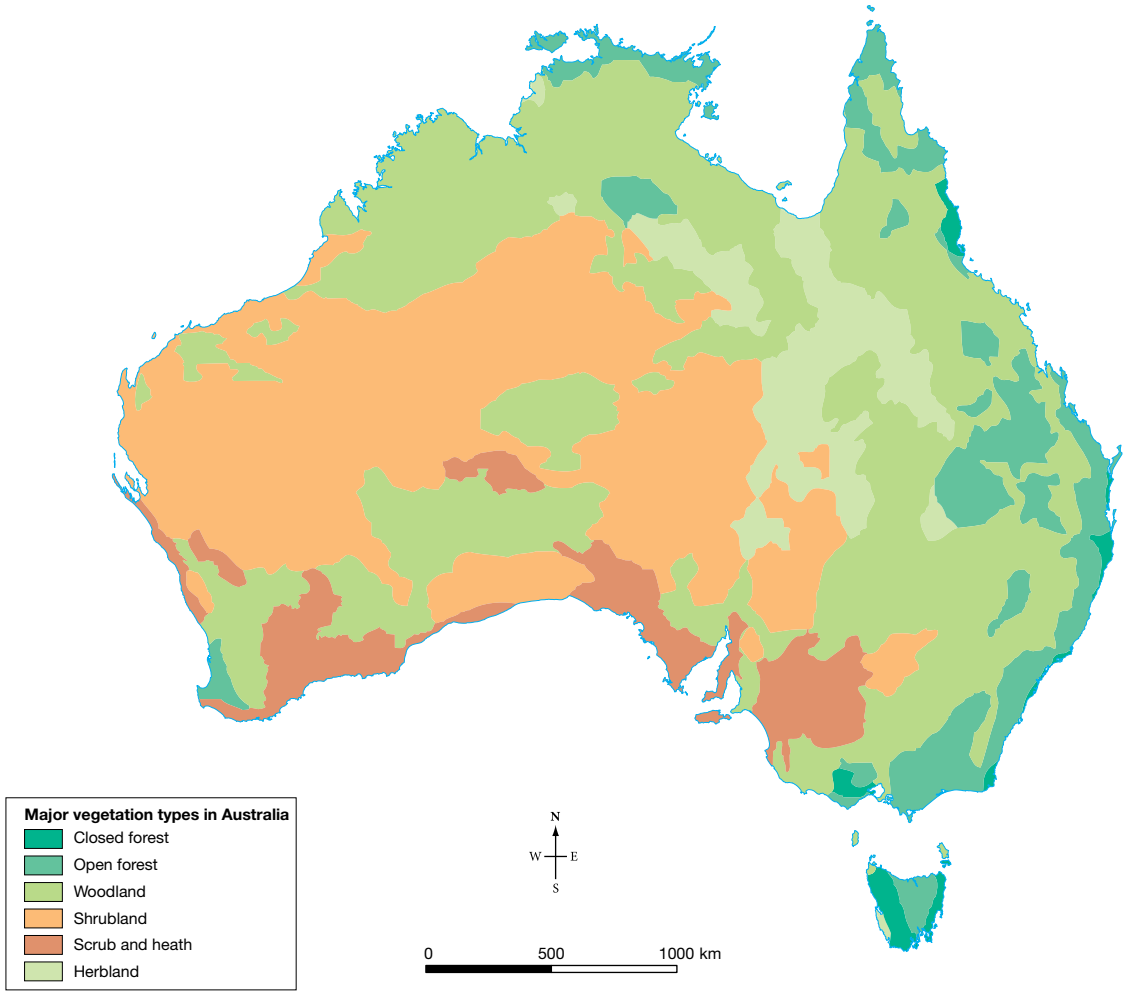
Step 1

Identify and carefully read the title of the map because it will provide you with an understanding of the information you can expect to see on the map. Sometimes the title tells you the date of the information that has been mapped. The map shown in **FIGURE 3** has a title that tells us it is a map of Australia showing major vegetation types. The colours in the key help us to understand the distribution of vegetation.

Step 2

Next, examine the key. We notice that closed forest is found in about half the area of Tasmania, small linear coastal tracts along parts of the east coast of mainland Australia and in the Otway region of Victoria. We could make a similar detailed description of open forest. Looking at the pattern of forests overall, we conclude that only a small area of Australia is forested — less than 10 per cent.

FIGURE 3 Major vegetation types in Australia



Source: Map taken from http://www.anbg.gov.au/aust-veg/veg-map.html. Reproduced with permission from Sydney University Press

Resources

Video eLesson How to read a map (eles-1634)
Interactivity How to read a map (int-3130)

8.5.3 Let me do it

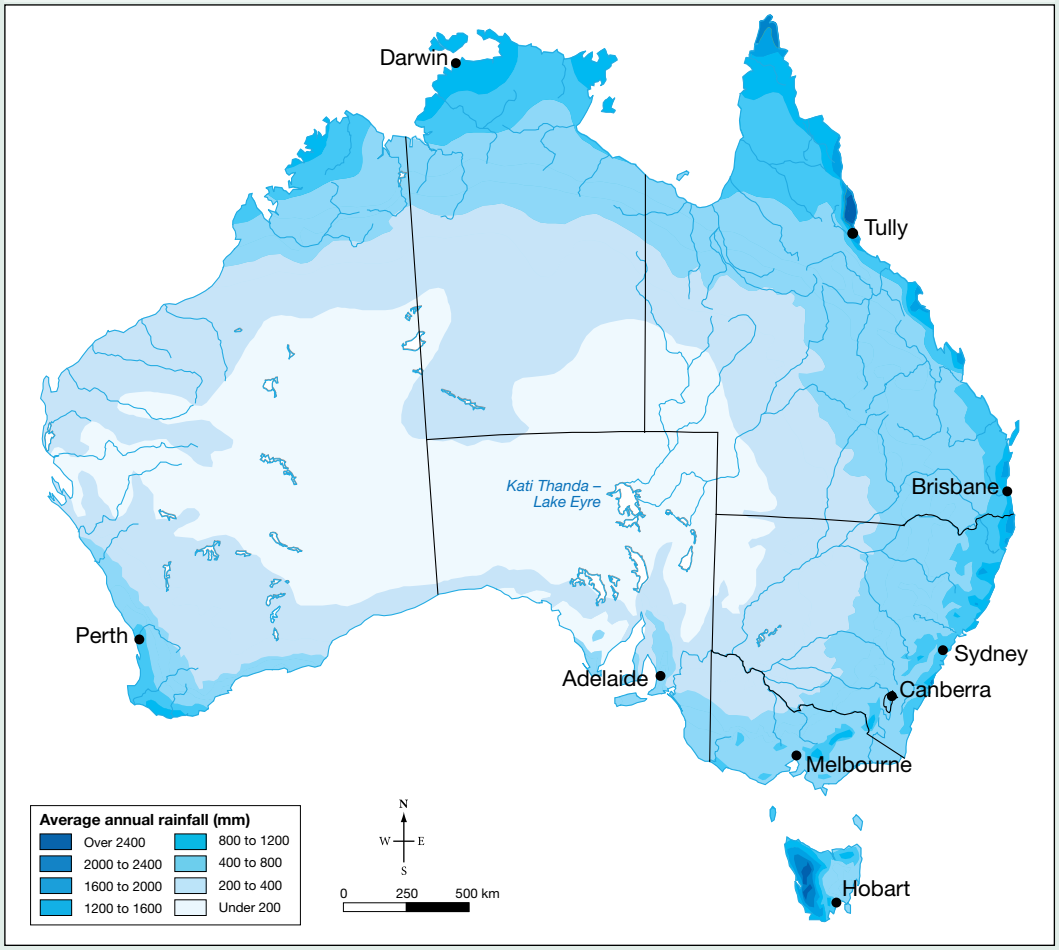
Complete the following activity to practise this skill.

8.5 ACTIVITY

Apply your skills to answer the following questions. Use the checklist provided to make sure you have covered all aspects of the task.

1. Refer to **FIGURE 4**. **Describe** the map of Australia's average annual rainfall.
   a. What is the average annual rainfall of Cairns?
   b. What is the average annual rainfall of Australia's state capital cities?
   c. **Describe** the area of Australia that receives less than 200 mm of annual rainfall.
   d. **Describe** the distribution of the wettest areas in Australia.

FIGURE 4 Average annual rainfall



Source: Bureau of Meteorology, 2003

LESSON
8.6 SkillBuilder: Reading a weather map

LEARNING INTENTION

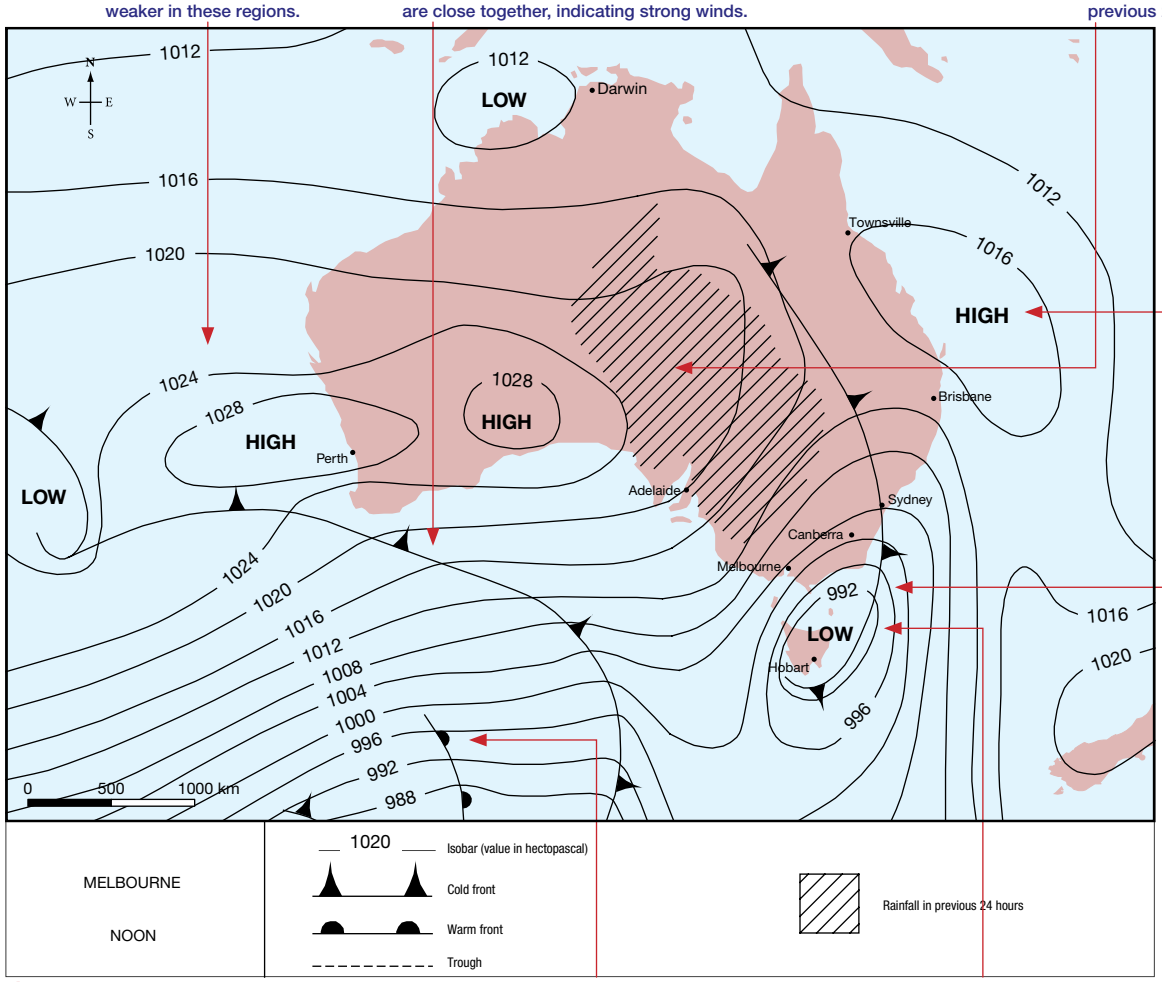
By the end of this SkillBuilder you should be able to read a weather map.

8.6.1 Tell me

What are weather maps?

Weather maps or synoptic charts appear every day in newspapers and during the television news. They may look complex but, just as you learned to read letters and words, you can learn to read the symbols on weather maps. Weather maps use lines and symbols to show areas of low and high pressure, and weather events such as warm and cold fronts. The lines are called isobars. They join places with the same atmospheric pressure.

FIGURE 1 A typical weather map



Typical weather map

The main influences on Melbourne's weather are the low pressure system south of it, the high pressure system to the north-west, and the cold fronts to the west and east.

Source: MAPgraphics Pty Ltd, Brisbane

Atmospheric pressure is the weight of the air. This varies from place to place, depending on the air temperature. Meteorologists use sensitive instruments called barometers to measure atmospheric pressure.

How are weather maps useful?

Understanding weather is useful because it affects everyone's lives. Being able to read weather maps allows you to better understand what weather is expected (forecast) in the days ahead. Farmers use weather information to plan their work; tourists rely on forecasts to make decisions about travel plans; and emergency services use weather forecasts to broadcast warnings so that people can prepare for adverse conditions.

Today, meteorologists have more accurate ways of predicting weather than those used in the past. They use satellite images, radar-tracking weather balloons, automatic weather stations, ships and aircraft to help them predict the weather.

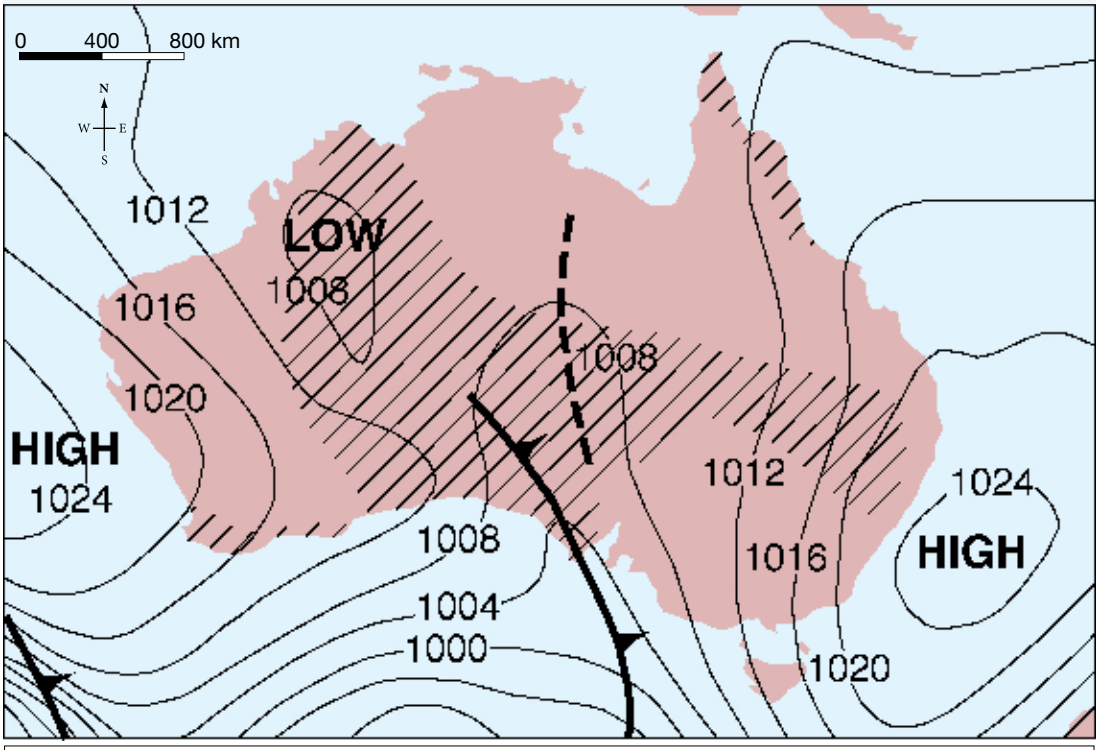
8.6.2 Show me

How to interpret a weather map

You will need:

- a weather map
- a key to interpret the weather map symbols.

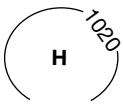
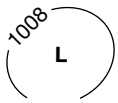
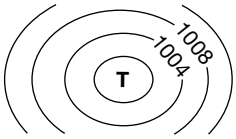
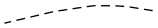
FIGURE 2 Weather map for 10 November



Source: MAPgraphics Pty Ltd, Brisbane

The average weight of air is 1013 hectopascals (hPa). Measurements higher than this (for example, 1020 hPa) indicate areas of high atmospheric pressure, where air is sinking. Measurements lower than this (for example, 985 hPa) indicate areas of low atmospheric pressure, where air is rising. You can use this code to read the weather map in **FIGURE 2**.

TABLE 1 Symbols on weather maps for the southern hemisphere

Symbol	Name	What does it mean?	Comment
	Isobars	Join places with the same air pressure	The closer together these lines, the stronger the wind.
	High pressure area	Sinking air	Generally fine weather. Winds rotate around these areas anticlockwise.
	Low pressure area	Rising air	Generally cooler weather, rain. Winds rotate around these areas clockwise.
	Tropical cyclone	Rapidly rising air	Strong winds, torrential rain
	Cold front	The 'line' along which an approaching mass of cold air meets warmer air	Fall in temperature, rain. Front moves in direction of arrowheads.
	Warm front	The 'line' along which an approaching mass of warm air meets colder air	Temperature rise, sometimes light rain. Uncommon in Australia
	Rain	Rain in the last 24 hours	Usually associated with low pressure areas and fronts
	Trough	A dip in isobars	An area associated with unsettled weather and precipitation

Procedure

Step 1

Pressure systems

Examine high-pressure systems (pressure above 1013 hPa) and low-pressure systems (pressure below 1013 hPa). Pressure systems generally move from west to east as they cross Australia and move around the world. In **FIGURE 2**, a high-pressure system is approaching south-west Western Australia, and this system is likely to bring fine weather to the region. The low-pressure system east of Broome brings cooler weather and rain.

Step 2

Air masses and fronts

Examine any air masses and fronts. **FIGURE 2** shows a cold front where cold air meets warmer air. This is likely to cause a fall in temperature and rain in South Australia.

Step 3

Precipitation

Examine precipitation patterns. Precipitation includes snow, hail and dew but the most common form of precipitation is rainfall. In **FIGURE 2**, we can see that more than half of Australia has received rain in the last 24 hours. This chart does not indicate how much rain has fallen.

Step 4

Wind

Wind is not depicted on this weather map. However, the closer together the isobars are, the stronger the winds will be. No significant areas of high wind are shown for Australia on 10 November.

Step 5

Troughs

The weather map in **FIGURE 2** shows a trough in central Australia. The trough line runs north from central South Australia towards the Gulf of Carpentaria. Troughs are usually associated with unsettled weather and precipitation.

on Resources

Video eLesson Reading a weather map (eles-1637)

Interactivity How to read a weather map (int-3133)

8.6.3 Let me do it

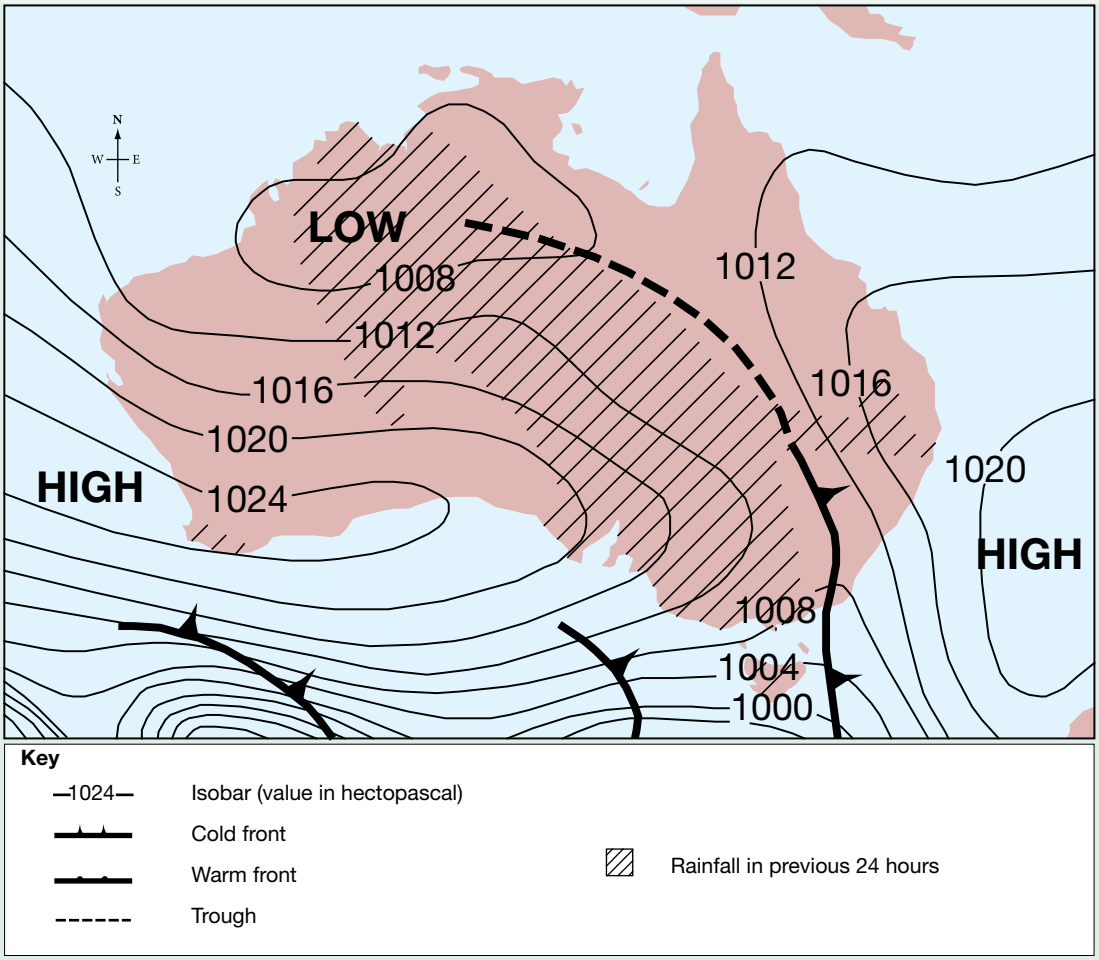
Complete the following activity to practise this skill.

8.6 ACTIVITY

The map in **FIGURE 3**, produced on 11 November, predicts the weather for 12 November. **FIGURE 4** shows what the weather was actually like that day. Based on the skills you have learned in this SkillBuilder, interpret the maps and answer the following questions. Use the checklist provided to make sure you cover all aspects of the task.

1. List what is different in **FIGURE 3** from the map showing actual weather for two days earlier (10 November), shown in **FIGURE 2**.
2. **Compare** the actual weather conditions in **FIGURE 4** with those predicted 24 hours earlier in **FIGURE 3**.
   a. How accurate was the predicted weather map?
   b. How was it different?
3. Using **FIGURE 4**, **describe** Melbourne's weather on 12 November.

FIGURE 3 Weather map showing predicted weather for 12 November



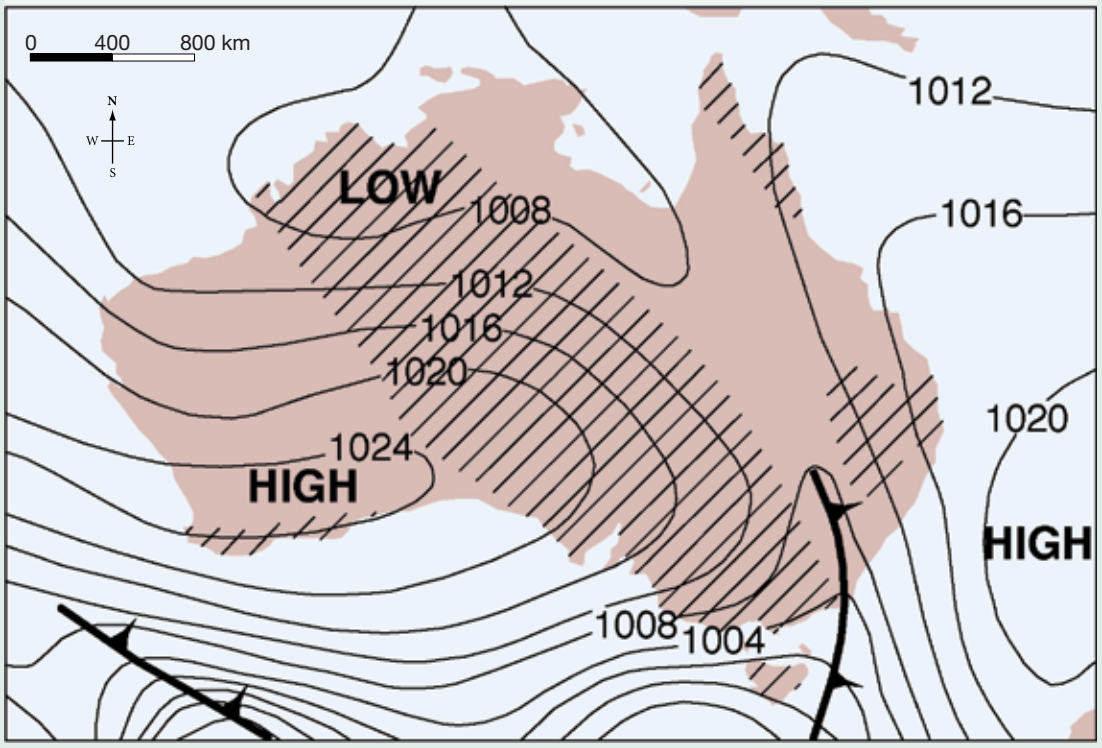
Source: MAPgraphics Pty Ltd, Brisbane

Checklist

I have:

- **interpreted** pressure systems, air masses and fronts, precipitation, wind and troughs
- written a detailed description.

FIGURE 4 Map showing actual weather for 12 November



Key

—1024— Isobar (value in hectopascal)

Cold front

Warm front

Trough

Rainfall in previous 24 hours

Source: MAPgraphics Pty Ltd, Brisbane

LESSON
8.7 SkillBuilder: Creating a simple column or bar graph

LEARNING INTENTION

By the end of this SkillBuilder you should be able to create a simple column or bar graph.

8.7.1 Tell me

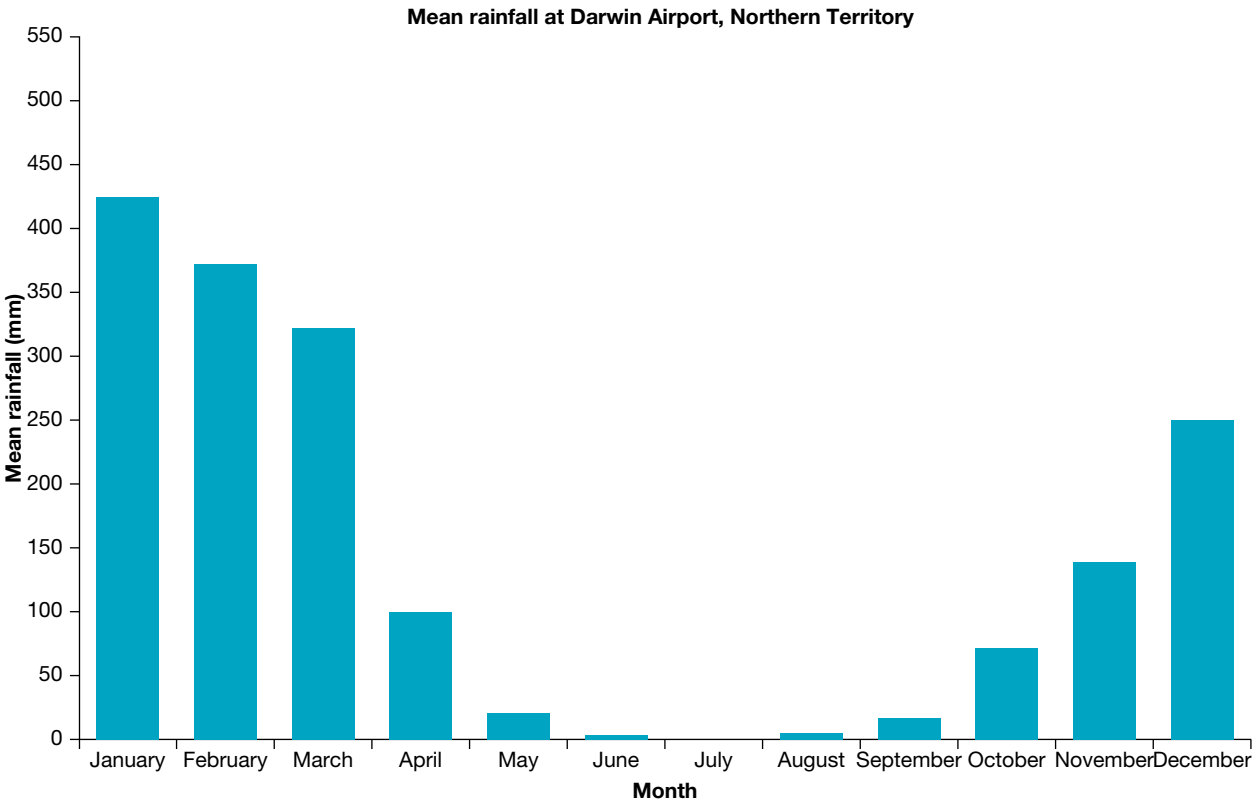
What are column or bar graphs?

Column graphs show information or data in vertical columns. In a bar graph, the data is shown in bars that are drawn horizontally. Column and bar graphs can be drawn by hand, or constructed using a computer spreadsheet.

How are column graphs useful?

Column graphs are useful for comparing quantities. They can help us understand and visualise data, see patterns and gain information. For example, we can use them to help understand rainfall patterns in different months (see **FIGURE 1**).

FIGURE 1 Rainfall at Darwin Airport



Source: © Bureau of Meteorology

A good column graph has:

- ruled axes
- labelled axes
- a space between each column
- a title
- the source of information.

8.7.2 Show me

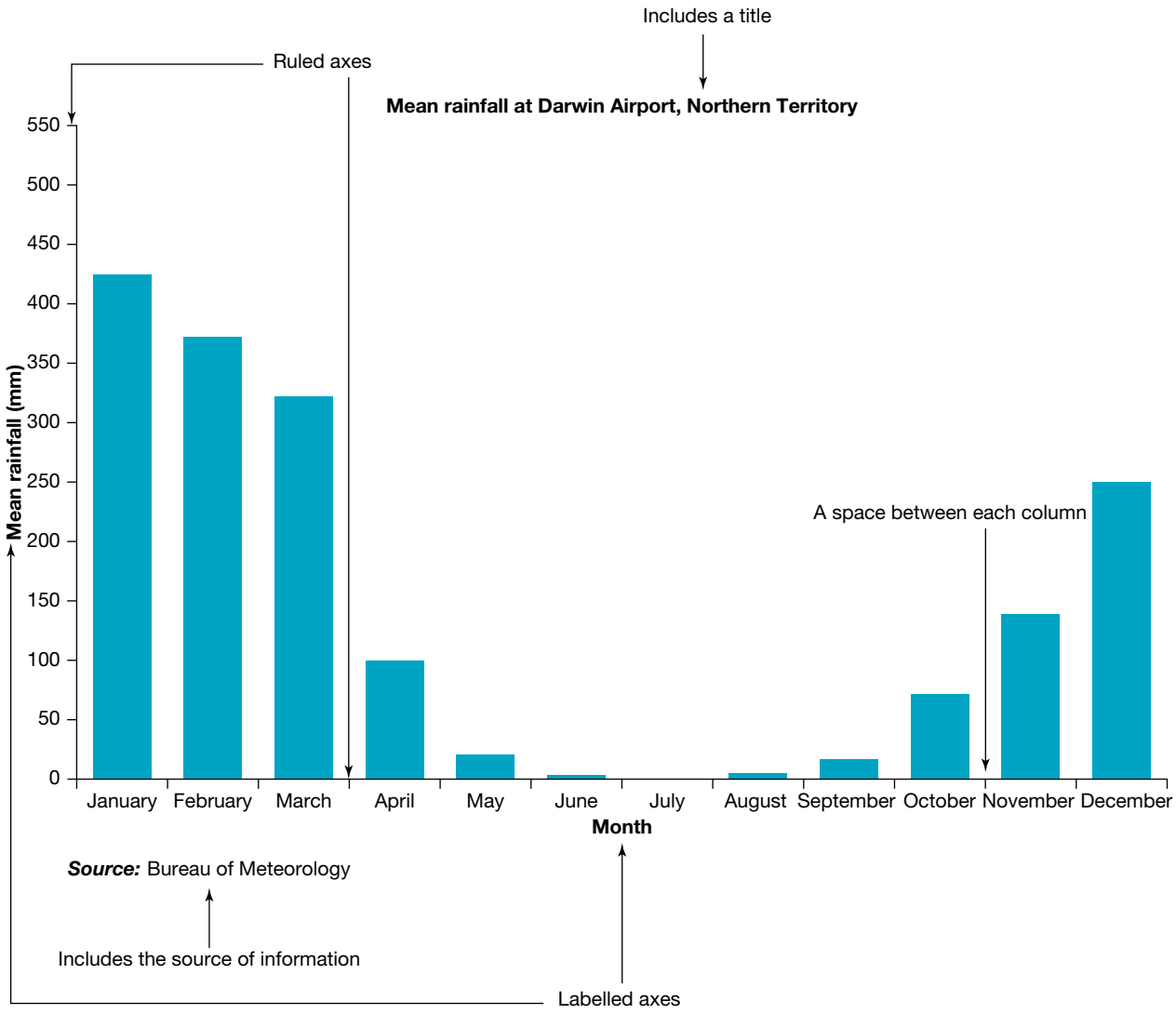
How to complete a column graph

You will need:

- a table of data (see **TABLE 1**)
- graph paper
- a pencil
- a ruler.

Model

FIGURE 2 A labelled column graph



Procedure

Step 1

Examine the data. Decide on the scale to use for your vertical axis. For this example, the vertical axis should start at zero and increase at intervals to suit the data. Because the highest rainfall for any month for Cardwell is 465.9 mm, intervals of 50 would be suitable. For this exercise, you could use 1 cm to represent 50 mm of rainfall. Draw your vertical axis according to the scale you have devised.

TABLE 1 Mean monthly rainfall (mm) for the years 1871 to 2016, Cardwell, Queensland

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
438.5	465.9	400	208.6	94.7	47	32.4	29.2	38.5	54.4	115.2	193.5

Source: © Bureau of Meteorology

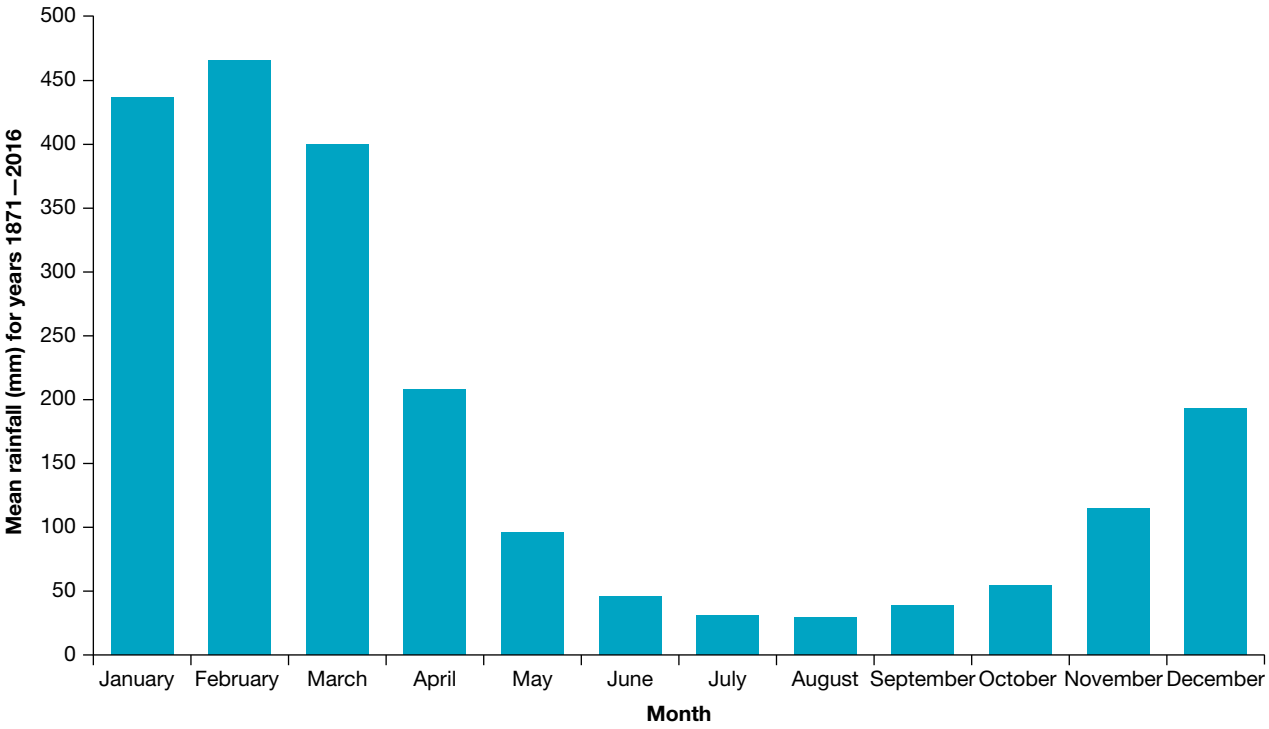
Step 2

Decide on the width and spacing of the columns and draw your horizontal axis to fit. Make sure that each column is the same width.

Step 3

For each column, mark the meeting point of the two pieces of information with a dot, and then use your ruler to neatly complete the column. Shade it in using colour.

FIGURE 3 Mean monthly rainfall for the years 1871 to 2016, Cardwell, Queensland



Source: © Bureau of Meteorology

Step 4

Label the vertical and horizontal axes and give the graph a title. Include a key if necessary.

Step 5

Provide the source beneath your graph, to enable the reader to locate the source data if they wish.

on Resources

Video eLesson Constructing a simple column or bar graph (eles-1639)
Interactivity Creating a simple column or bar graph (int-3135)

8.7.3 Let me do it

Complete the following activities to practise this skill.

8.7 ACTIVITIES

1. Using the data in **TABLE 2**, **construct** your own graph of average monthly rainfall for Innisfail, Queensland.

TABLE 2 Mean rainfall (mm) for the years 1881 to 2016, Innisfail, Queensland

Jan	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sep	Oct	Nov.	Dec.
507.3	590.1	662.2	456.3	302.2	189	137.6	116.9	86.1	87.7	157.9	262.6

Source: Bureau of Meteorology

2. Once you have **constructed** your graph, **apply** the skills you have learned in this SkillBuilder to answer the following questions.
   a. Which month has the most rainfall?
   b. Which month is the driest?
   c. Imagine you are a filmmaker, planning to film on location in Innisfail for three months. Because rain would cause problems for your filming schedule, which months would be best for your requirements?

Checklist

I have:
- ruled axes
- labelled axes
- a space between each column
- included a title
- included the source of information.

LESSON
8.8 SkillBuilder: Using topographic maps

LEARNING INTENTION

By the end of this SkillBuilder you should be able to use a topographic map.

8.8.1 Tell me

What are topographic maps?

Topographic maps are more than just contour maps showing the height and shape of the land. They also show features of the natural environment, such as forests and lakes, and features of human environments, such as roads and settlements (places where a community of people live).

FIGURE 1 This is an aerial photograph of Mount Gambier, South Australia, an area with many extinct volcanoes. Lakes have formed in the craters of several volcanoes, and the most famous of these is Blue Lake. We can see many features in the photo, but a topographic map can give us more information, especially about the shape of the landscape — its topography.

Why are topographic maps useful?

All topographic maps use similar symbols to show the main features in the landscape. These conventional symbols make it easy for map readers to quickly identify the features shown in the legend, or key. Topographic maps are useful for a range of purposes, from bushwalkers wanting to gain an understanding of the landscape in which they plan to walk, to town planners and engineers needing to construct infrastructure such as roads and bridges.

8.8.2 Show me

How topographic maps help us to locate places on a map

You will need:

- a topographic map (see **FIGURE 3**).

Many observations can accurately be made from a topographic map. **FIGURE 3** is a topographic map extract of Mount Gambier. Blue Lake is a distinctive feature on this map, and it is surrounded by a steep slope. The built-up area, or township, is situated north of Blue Lake. A railway line passes through the town and the station is close to the civic centre and post office. The main town extends approximately four kilometres east–west and four kilometres north–south. The local golf club can be found in the north-east of town. These observations are made by using the legend, north arrow and scale.

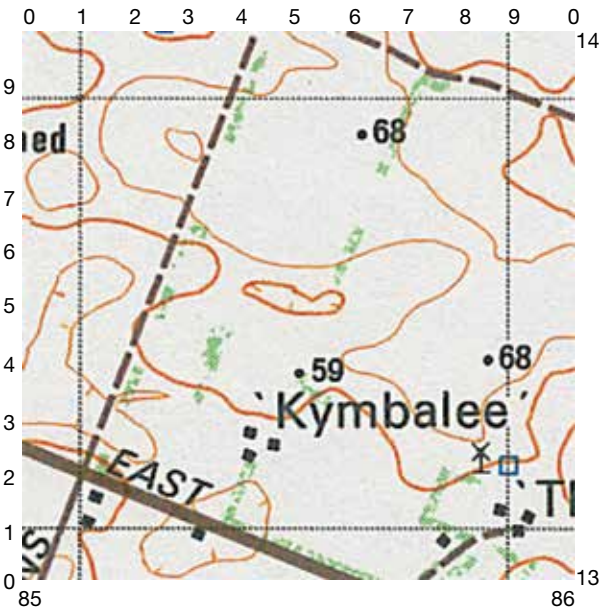
Area and grid references

A one-kilometre-square grid is overprinted on a topographic map. These grid lines are numbered with two-digit numbers in the map's margins. Lines that run up and down the map (north–south) are called eastings. The numbers increase as you move to the east. Lines that run horizontally across the map (east–west) are called northings. The numbers increase as you move north. In a grid reference, the eastings are given first, and then the northings.

Four-figure grid references tell you the grid square in which to find a feature. The letters AR are placed in front of a four-figure reference to show the area reference. For example, AR8513 contains the town of Kymbalee (see **FIGURE 2**).

Six-figure grid references pinpoint an exact point in the grid square. The third and sixth figures represent one-tenth of the distance between the two grid numbers. These divisions are not written on the map, so they must be estimated. The letters GR are used in front of a six-figure grid reference. No spaces are used between the digits in four- or six-figure references; for example, Kymbalee's grid reference is GR854132.

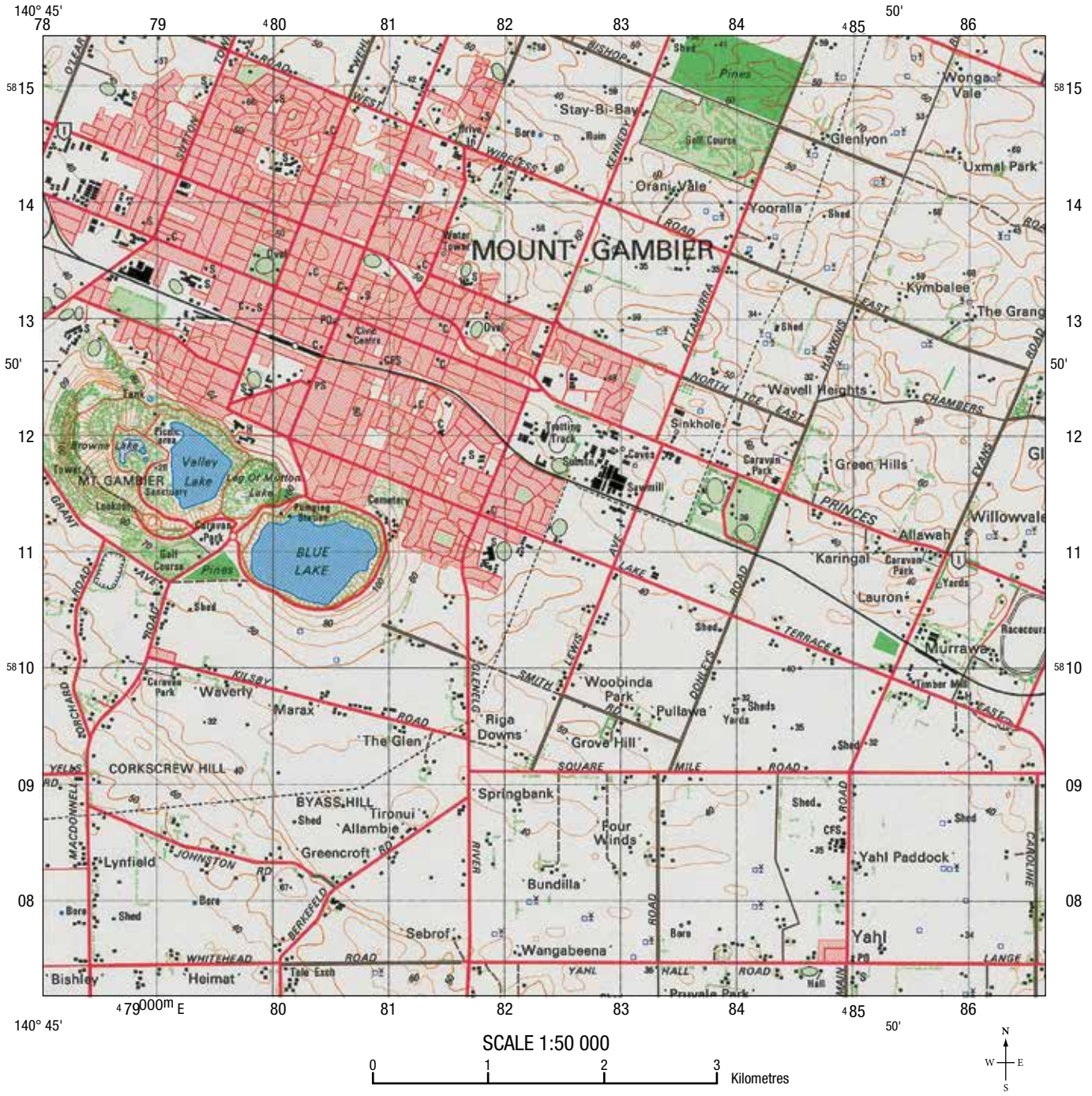
FIGURE 2 Working out a six-figure grid reference



Resources

- **Digital document** Topographic map extract — Mt Gambier (doc-17951)
- **Video eLesson** Using topographic maps (eles-1641)
- **Interactivity** Using topographic maps (int-3137)
- **Google Earth** Mount Gambier

FIGURE 3 This topographic map extract of Mount Gambier can be used to determine the location, direction and distance of physical and human features in the area shown on the map.



Built-up area; Parks, recreation areas.

Road, sealed surface, two or more lanes; National route marker.

Road, sealed surface, one lane.

Road, unsealed surface, two or more lanes; Bridge.

Road, unsealed surface, one lane; Gate; Cattle grid.

Vehicular track.

Railway, multiple track; Station; Siding.

Railway, single tract, Cutting; Embankment.

Building; Post office; Police station; School.

Hospital; Church; Mine; Windmill.

Fence; Guerry.

Power transmission line; Levee or bank.

Survey beacon; spot elevation.

Lake perennial; Watercourse.

Lake, intermittent; Land subject to inundation.

Dam or waterhole on watercourse; Tank or small dam.

Contours; Depression contours.

Cliff; Escarpment or low cliff.

Pine plantation; Orchard or low cliff.

Windmark.

Trees and scrub, scattered

Trees and scrub, medium, dense.

Source: Government of South Australia, Department of Environment, Water and Natural Resources.

8.8.3 Let me do it

Complete the following activity to practise this skill.

8.8. ACTIVITIES

Answer these questions using the **FIGURE 1** aerial photograph and **FIGURE 3** topographic map extract of Mount Gambier. Use the checklist provided to make sure you have covered all aspects of the task.

1. **Examine FIGURE 1**. From which direction was this photograph of the crater lakes taken?
2. **Examine FIGURE 3**. Look at the contour lines to the south of Blue Lake. Is the land flat or steep? How can you tell?
3. Sketch the special symbols used in the legend showing that the crater lakes:
   a. form a depression
   b. have steep sides.
4. Give the main features found at the following area references.
   a. AR8010
   b. AR8013
5. Give area references for the following features.
   a. Valley Lake
   b. The trotting track
6. Find the following features.
   a. GR858087
   b. GR816077
   c. GR807128
   d. GR812123
7. From the topographic map extract of Mount Gambier, give six-figure grid references for features that show the following.
   a. Mount Gambier has a large timber industry.
   b. Mount Gambier is a popular tourist resort.
   c. Mount Gambier has many sporting facilities.
   d. Mount Gambier is the centre of a farming region.
8. Approximately how wide is Blue Lake at its widest point?

Checklist

I have:

- identified north, south, east and west using the north point
- used the key to identify features
- used grid references to describe the location of a specific feature
- used the scale to calculate distances
- interpreted topography by considering how close together the contour lines are.

LESSON
8.9 SkillBuilder: Using alphanumeric grid references

LEARNING INTENTION

By the end of this SkillBuilder you should be able to use an alphanumeric grid reference.

8.9.1 Tell me

What are alphanumeric grid references?

Alphanumeric grid references are a combination of letters and numbers that help us locate specific positions on a map. They are linked to the lines that form a grid over certain kinds of maps. The letters and numbers are placed alongside the gridlines, just outside the map. The grid, letters and numbers allow you to pinpoint a place

or feature by stating its alphanumeric grid reference. For example, in **FIGURE 1**, the Queen Victoria Market is located at grid reference B1; Federation Square is located at F4 and the Rialto Tower is located at B4.

Why are alphanumeric grid references useful?

If it weren't for grid references, finding places in detailed books of maps such as street directories and atlases would be very time consuming. Grid references allow the user to quickly locate the information they want among the hundreds of other features shown on a map. They also allow people to communicate with one another about location when they are using the same map.

FIGURE 1 A section of the Melbourne CBD

Source: Russell Tate / Getty Images Australia

8.9.2 Show me

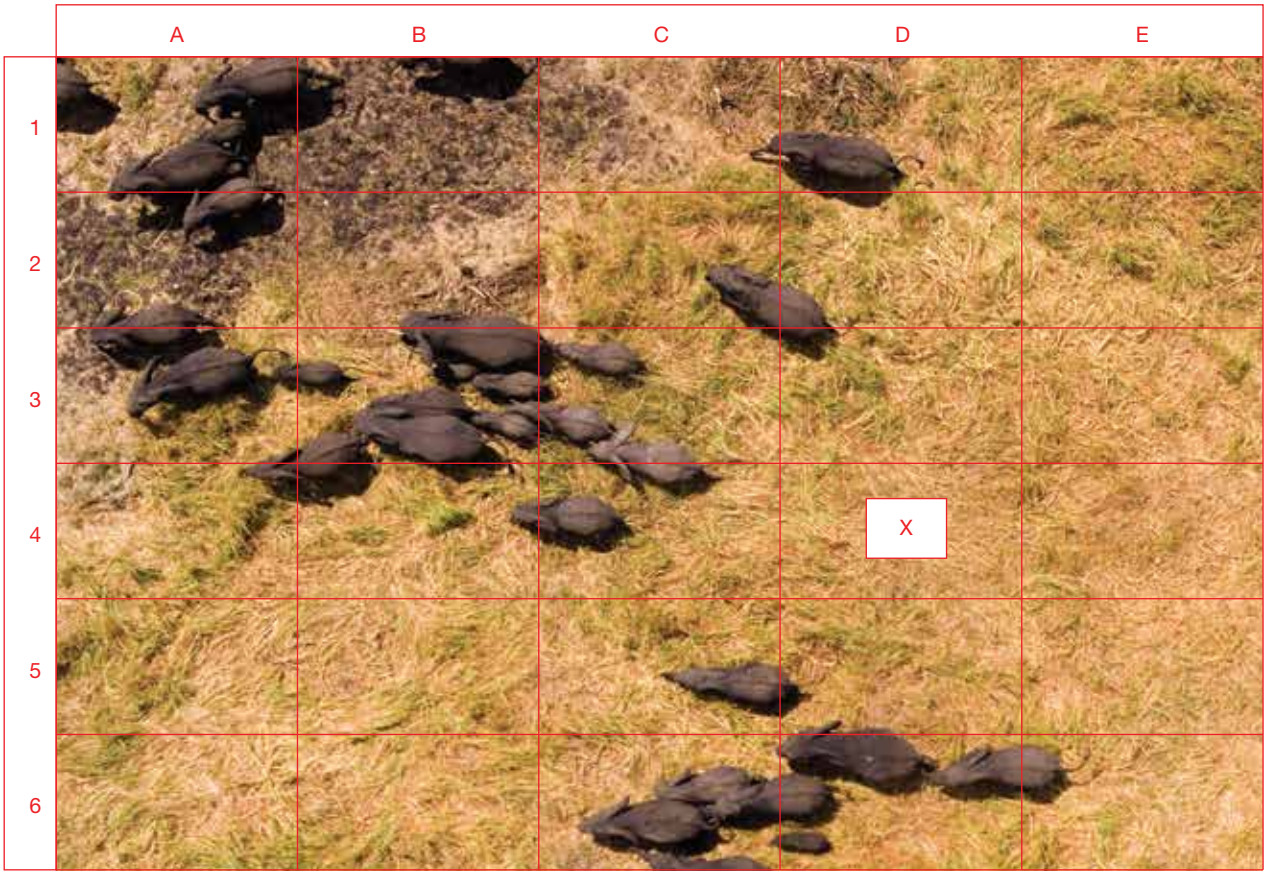
How to use alphanumeric grid references

You will need:

- a map that has alphanumeric grid references (see **FIGURE 3**)
- a pen and notebook.

Model

FIGURE 2 Aerial photo of elephants in Botswana



Procedure

Step 1

We will demonstrate this skill using the photo in **FIGURE 2**. In this aerial photograph of elephants in Botswana, we want to locate the veterinarian, Jessica, who is at point X.

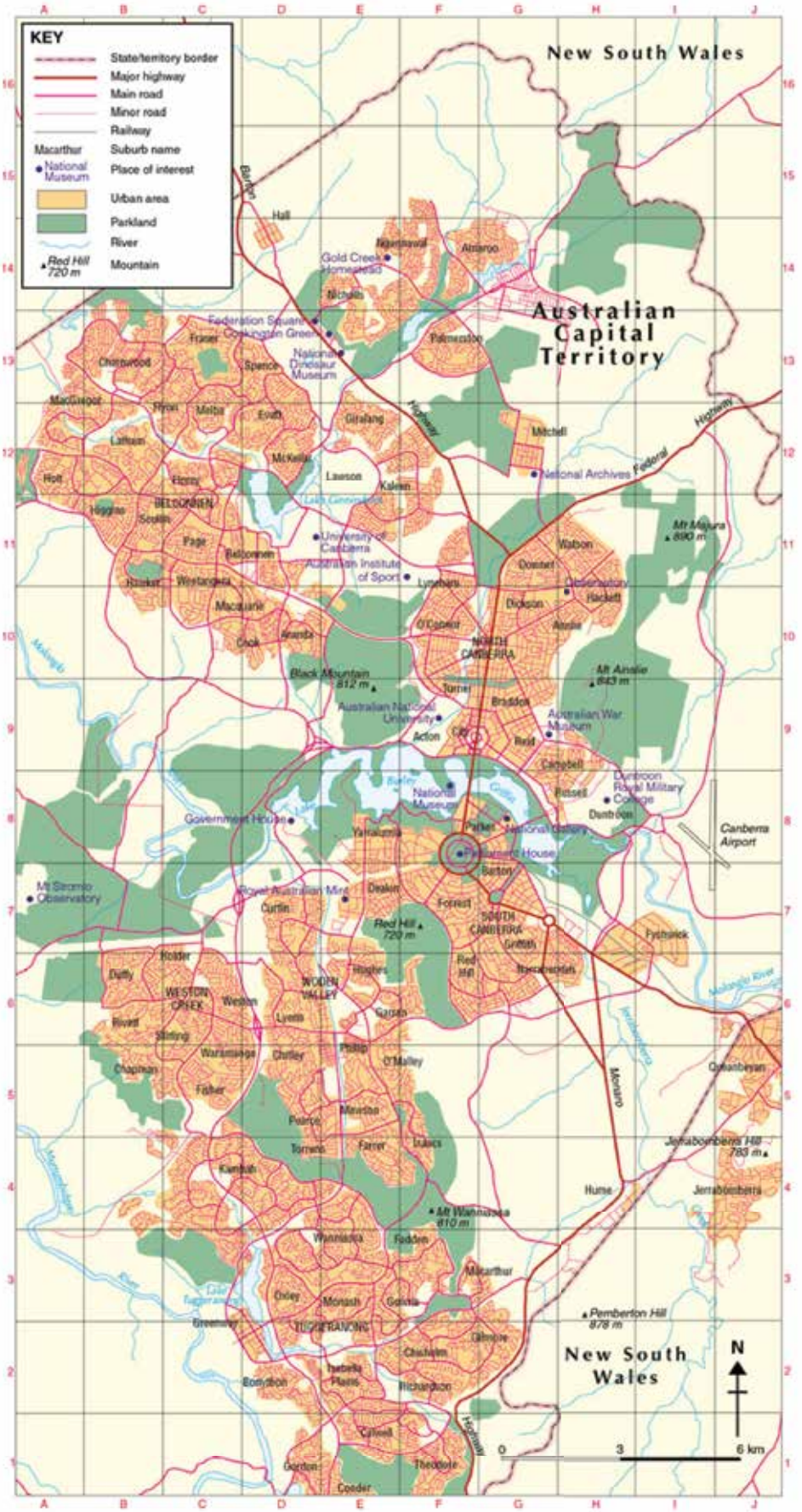
Step 2

Place your finger in the grid square that contains the X. By running your finger up the column of squares, you can see that Jessica is in column D. Write this down in your notebook.

Step 3

Now run you finger across the row of squares and you can see that she is in row 4. Write this down to the right of the letter D in your notebook. This gives us the grid reference for Jessica's location: D4. Now write the name of the feature (in this case, Veterinarian: Jessica) beside the grid reference.

FIGURE 3 Canberra and its suburbs



Source: MAPgraphics Pty Ltd, Brisbane.

Resources

Video eLesson Using alphanumeric grid references (eles-1642)
Interactivity Using alphanumeric grid references (int-3138)

8.9.3 Let me do it

Complete the following activities to practise this skill.

8.9 ACTIVITIES

1. Using **FIGURE 3**, give grid references for the following features.
   a. Canberra airport
   b. Queanbeyan
   c. Mt Ainslie
2. The Prime Minister is hosting a group of leaders from the Asia–Pacific region. As part of their trip, the leaders will be visiting some of the local attractions in and around Canberra. Use the Canberra map in **FIGURE 3** and the following grid references to report on the places of interest that the group visited.
   a. Before lunch, the group went to E7, E13 and F11.
   b. They had lunch at F9.
   c. After lunch, they visited G9 and H8 before making their way to A7.
   d. That night they had dinner at D8.

Checklist

I have:

- run up or down the column of squares first and then run across the row of squares to identify the grid references
- written the letter of the alphabet before the numeral for each reference
- double-checked my answers.

LESSON
8.10 Skillbuilder: Drawing a climate graph

LEARNING INTENTION

By the end of this SkillBuilder you should be able to draw a climate graph.

8.10.1 Tell me

What are climate graphs?

Climate graphs, or climographs, are graphs that show climate data for a particular place. They combine a column graph that shows average monthly precipitation (rainfall), and a line graph that shows average monthly temperature. The left axis represents temperature and the right axis represents rainfall, so you must take care to read from the correct scale when interpreting a climate graph. Temperature can be shown in one line, as mean monthly temperature; or it can be shown in two lines, representing mean maximum and mean minimum monthly temperatures.

Mount Isa is located around 1800 kilometres north-west of Brisbane, in the arid Gulf Country region of Queensland. It is one of the largest centres in outback Australia, being home to some 22 000 people. Most of these people are involved in the mining of the vast deposits of copper, silver and zinc found in the region. In the climate graphs for Mount Isa in **FIGURES 1** and **2**, you can see how one or two temperature lines can be used to give us an understanding of the climate.

FIGURE 1 Climate graph for Mount Isa, Queensland

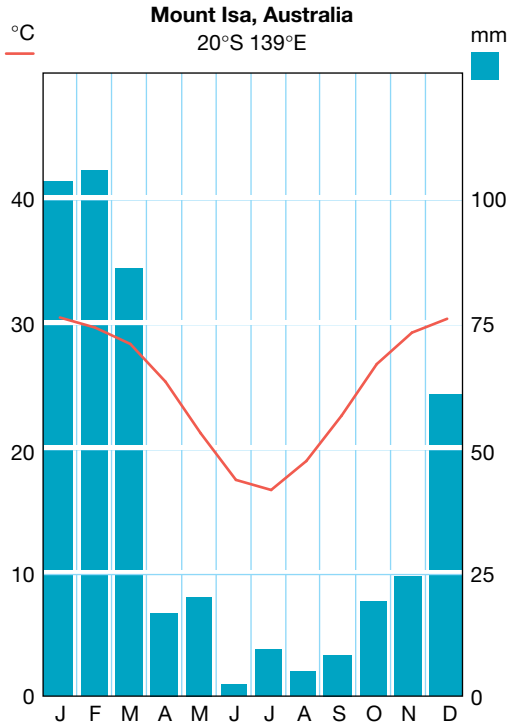
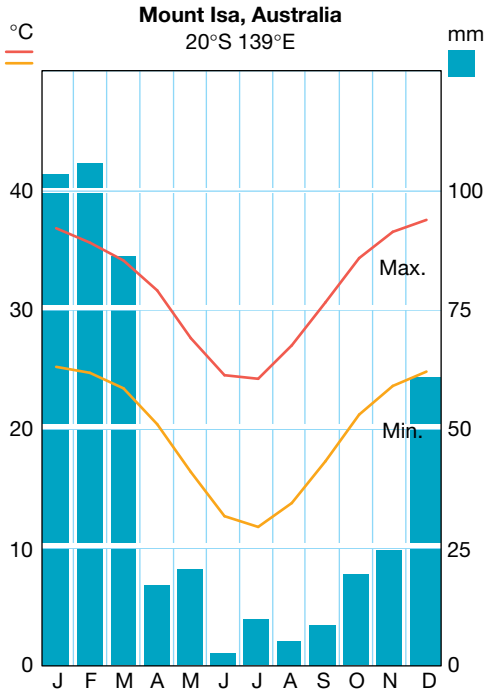


FIGURE 2 Climate graph for Mount Isa, showing average maximum and minimum temperatures



Why are climate graphs useful?

Climate graphs are used to show the climate of a place over a 12-month period. Because the red line on the graph shows temperature and the blue columns show rainfall, you can quickly understand the graph. It is much easier to compare the climate of two places by looking at their climate graphs than by looking at tables of statistics, so drawing and using these graphs is an important geographical skill. It also makes it very easy to compare climate patterns for different areas when the graphs are drawn using the same conventions.

A good climate graph:

- is drawn in pencil first, and then coloured
- has ruled axes
- has labelled axes
- makes use of small dots before a line is drawn
- has a smooth curve for the temperature line in red
- has rainfall columns shaded in blue
- includes a title
- includes a source.

8.10.2 Show me

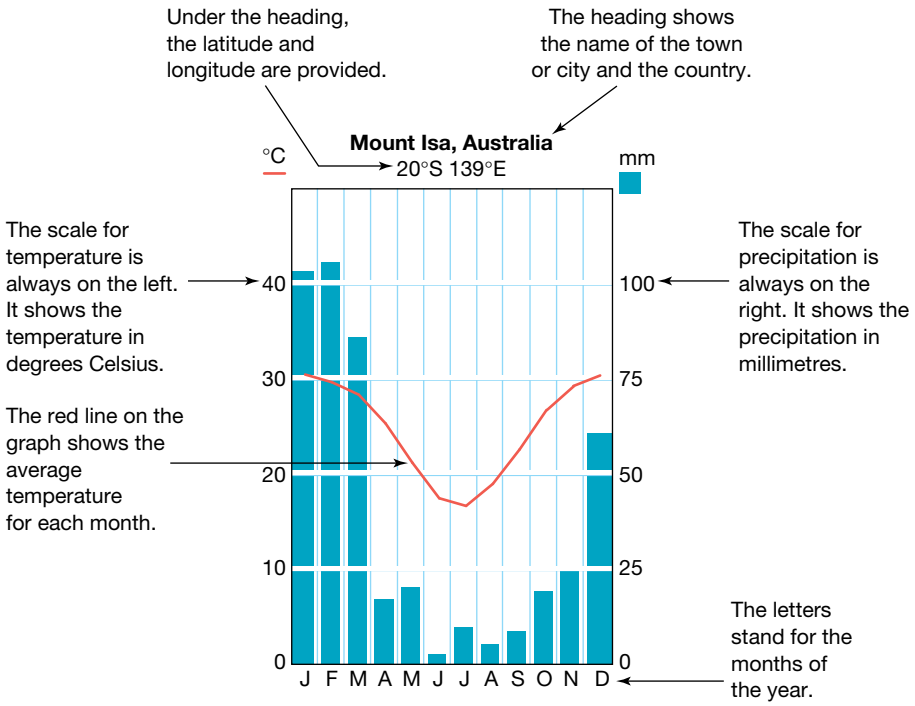
How to complete a climate graph

You will need:

- data to plot on your graph (see **TABLE 1**)
- graph paper
- a grey lead pencil
- a ruler
- a red pen and a blue pencil.

Model

FIGURE 3 Features of a climate graph



Procedure

Step 1

Look at the data in **TABLE 1**. Two sets of data are given: average monthly precipitation and average monthly temperature.

TABLE 1 New Delhi, 28°N 77°E, average monthly precipitation and average monthly temperature

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
°C	14.1	16.9	22.4	28.6	32.8	33.8	31.0	29.8	29.2	26.0	20.3	15.4
mm	22.7	20.1	14.5	10.1	15.0	67.9	200.4	200.3	122.5	18.5	3.0	10.0

Source: www.worldclimate.com

Step 2

Consider the range of the data before you decide what scales will work for the vertical axes. For the right axis, find the wettest month. The precipitation scale begins at 0 and must extend far enough to include the wettest month. For the left axis, find the highest and lowest temperatures. A scale of 0 °C to 40 °C will suit most climate graphs. Try to use temperature and precipitation scales that prevent the line and column graphs from overlapping; however, this may not be possible if the place has a very high rainfall.

Step 3

Use a ruler and pencil to draw the axes on graph paper. Divide the horizontal axis into 12 equal sections to represent the months of the year. Label each month with its initial. Label the temperatures on the left vertical axis and precipitation on the right vertical axis.

Step 4

Construct a column graph showing the average monthly rainfall. Make sure you use the right vertical scale to plot your data. Rule a line across each column and colour the column blue.

Step 5

Construct a line graph showing the average monthly temperature. Plot the temperature by placing a dot in the centre of each month. Make sure that you use the left vertical scale. Use a red pen to join the dots with a smooth curve; don't use a ruler.

Step 6

Add a title, giving the name of the place, the country and the latitude and longitude. You can also indicate the elevation if you wish.

Step 7

Add the source details of the data used.

FIGURE 4 Set of axes for New Delhi climate graph

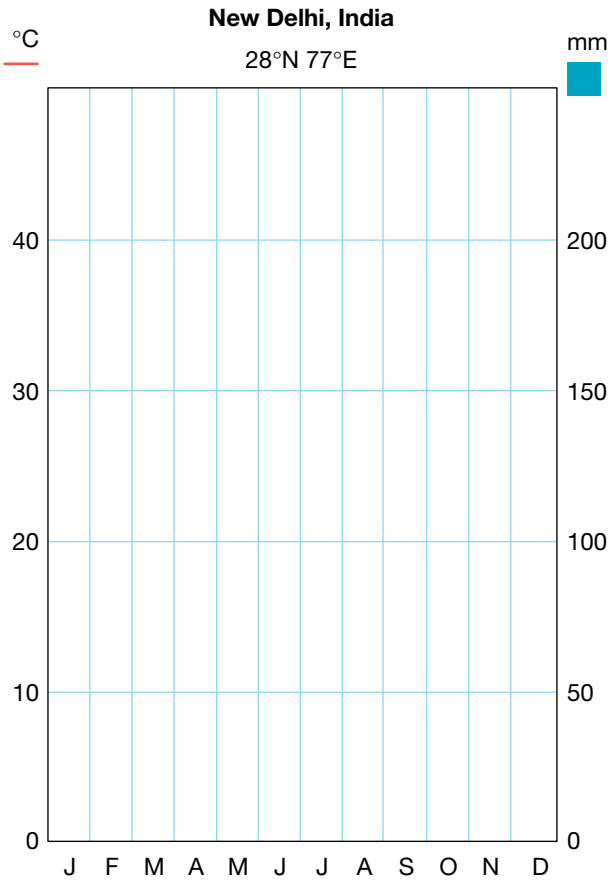
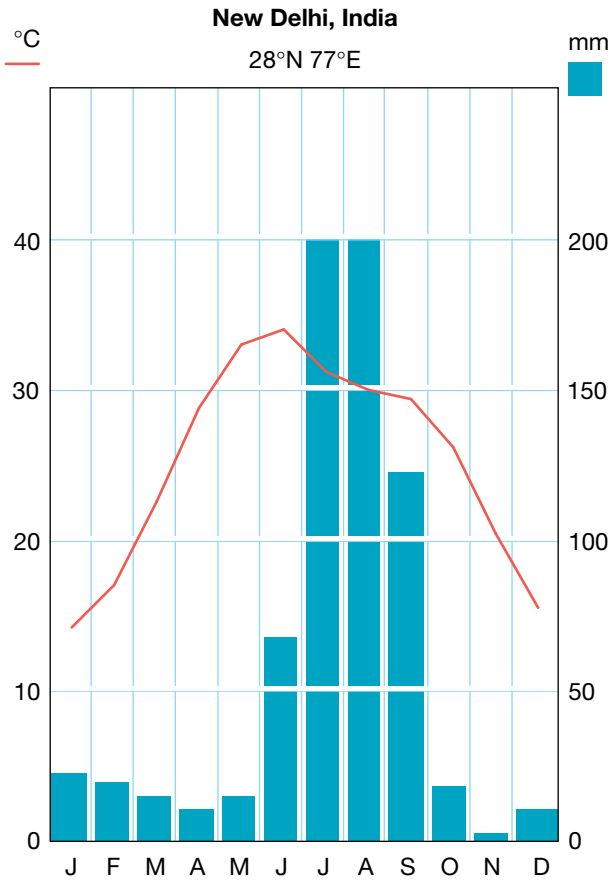


FIGURE 5 New Delhi climate graph



Resources

Video eLesson Drawing a climate graph (eles-1644)
Interactivity Drawing a climate graph (int-3140)

8.10.3 Let me do it

Complete the following activities to practise this skill.

8.10 ACTIVITIES

1. Mount Buller is a mountain in the Australian Alps. It is three hours' drive from Melbourne, and is the closest major mountain to Melbourne for skiing in winter. Use the data in **TABLE 2** to **construct** a climate graph for Mount Buller. Use the checklist provided to make sure you have covered all aspects of the task.

TABLE 2 Mount Buller, Victoria, 37.15°S, 146.44°E, elevation 1707 m, average monthly precipitation and average monthly temperature

	Jan.	Feb.	Mar	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
°C	17.2	16.5	14.4	10.0	6.2	3.0	1.4	2.0	4.9	8.2	11.8	14.3
mm	59.0	68.0	44.8	76.1	110.0	154.2	161.0	145.6	143.0	110.6	126.8	84.3

Source: Australian Bureau of Meteorology

2. **Apply** the skills you have developed in this SkillBuilder to answer the following questions.
   a. Which month is warmest in Mount Buller?
   b. Which month is coolest in Mount Buller?
   c. Which month has the greatest precipitation in Mount Buller?
   d. Which month has the least precipitation in Mount Buller?
   e. **Describe** the climate of Mount Buller.

Checklist

I have:
- ruled the axes and labelled them
- drawn first in lead pencil and then used colour
- used small dots for the lines and then created a smooth curve with red pen
- shaded the columns in blue
- included a title and source.

LESSON
8.11 SkillBuilder: Creating and analysing overlay maps

LEARNING INTENTION

By the end of this SkillBuilder you should be able to create and analyse an overlay map.

8.11.1 Tell me

What are overlay maps?

An overlay map usually consists of two or more maps of the same area. These maps are drawn at the same size or scale but show different information. The base map often shows information that does not change very much. Another transparent overlay, showing different information, is laid over the base map.

Why are overlay maps useful?

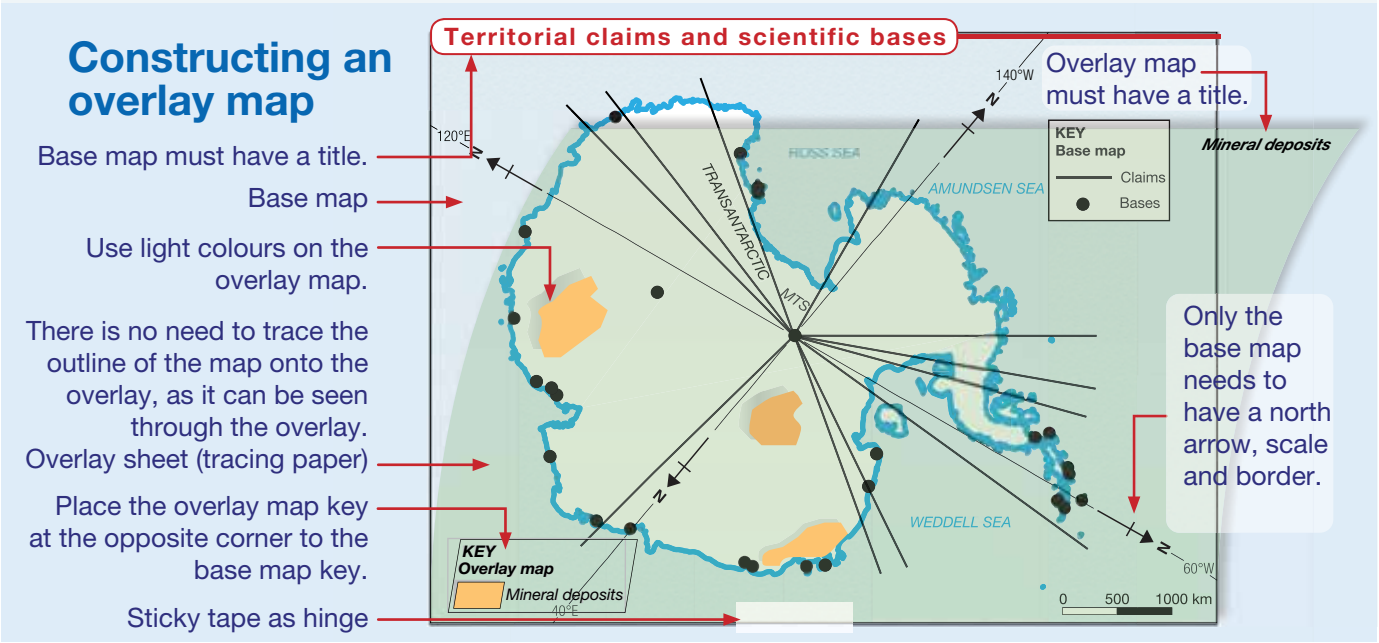
An overlay map is useful for comparing two different features on a map. It is really two maps in one — a base map drawn on paper and an overlay drawn on tracing paper to depict additional information.

Overlay maps allow map users to see the relationships between the information on two or more maps. They are useful when looking for patterns of spatial association — that is, features found in a similar distribution pattern.

Model

In the overlay map in **FIGURE 1**, the base map depicts the continent of Antarctica, territorial claims and scientific bases. The overlay illustrates mineral deposits.

FIGURE 1 Constructing an overlay map of mineral deposits in Antarctica



A good overlay map:

- is drawn in pencil first, with colour added later
- includes BOLTSS on the base map
- uses light colours on the overlay so the base map information remains visible
- includes a key for the element depicted on the overlay
- is hinged to the base map using sticky tape
- includes a title for the overlay.

8.11.2 Show me

How to complete an overlay map

You will need:

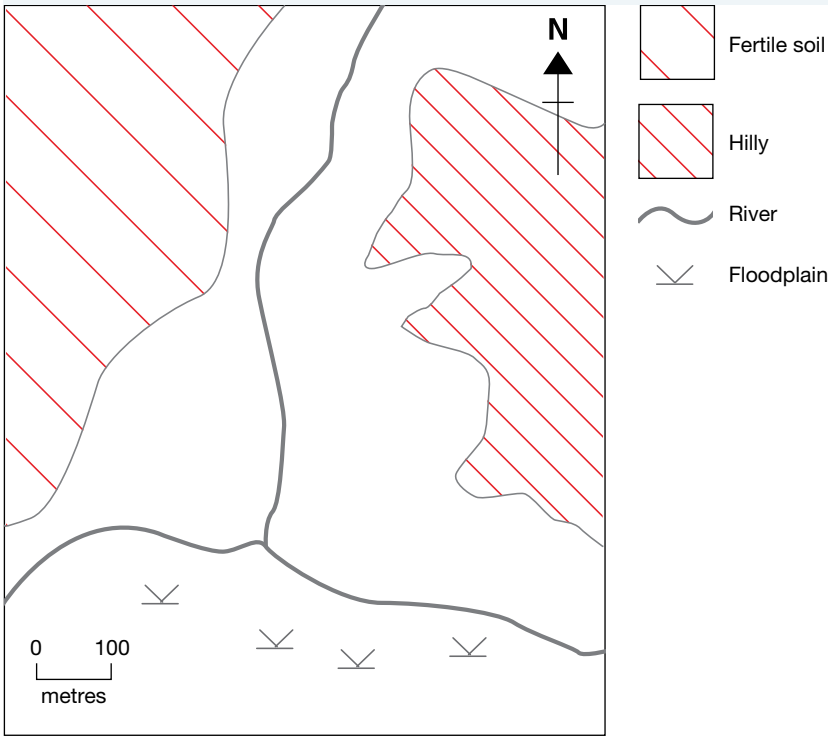
- two or more maps of the same area, drawn at the same scale, and showing different information
- tracing paper or clear transparency sheet
- cardboard (optional)
- clear adhesive tape
- a black lead pencil
- coloured pencils.

Procedure

Step 1

Create a base map of an area showing the distribution of features you want to display (see **FIGURE 2**). Base maps are drawn on clean white paper. To make a base map, find a map of the area that you want to show, and trace the features that are relevant to your purposes. Make sure you include BOLTSS.

FIGURE 2 The fictional Price Shire

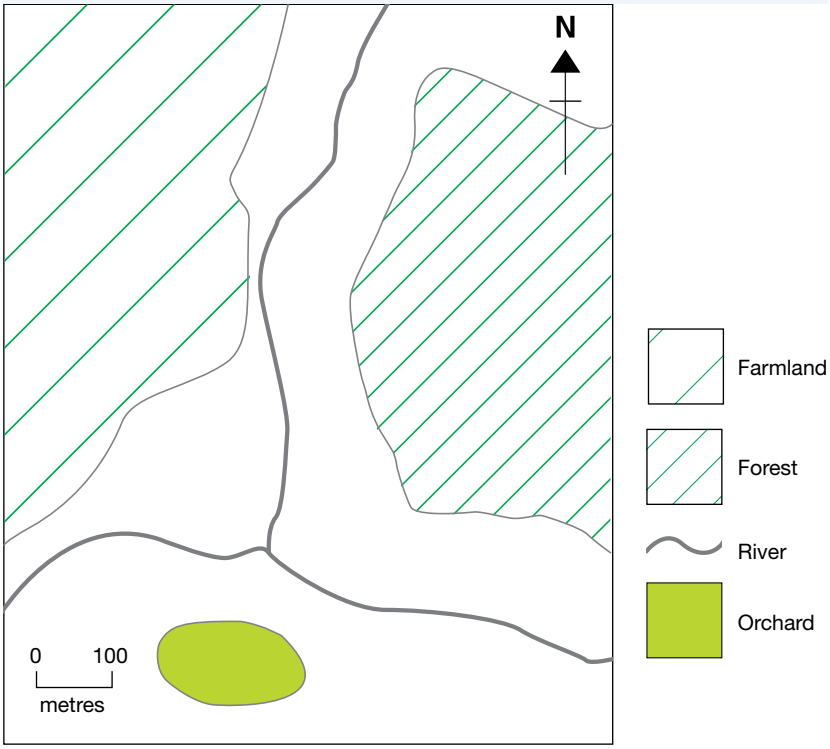


Source: Price Shire Council

Step 2

Create an overlay of a second feature on the tracing paper (see **FIGURE 3**). (Make sure the second map is of exactly the same area and is drawn to the same scale and size as the base map.)

FIGURE 3 Land use in Price Shire



Source: Price Shire Council

Step 3

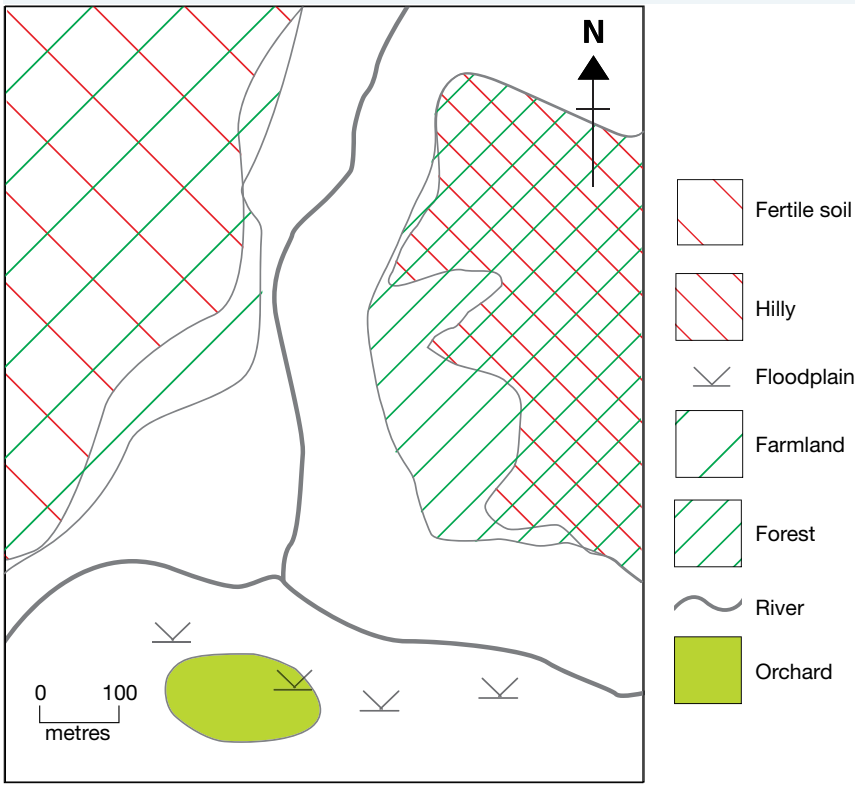
Join the base map and the overlay together using adhesive tape (see **FIGURES 4** and **5**). Before doing so, check that key features such as coastlines and major roads line up on both maps. You may wish to attach your base map to some cardboard to make it more durable. You can create more than one overlay, each depicting a different feature. If you do this, you can hinge each overlay from a different side of the base map.

FIGURE 4 Place the overlay onto the base map.

on Resources

Video eLesson Creating and analysing overlay maps (eles-1645)
Interactivity Creating and analysing overlay maps (int-3141)

FIGURE 5 This overlay map reveals that farmland tends to be found in areas with fertile soils, and that forest tends to be found in hilly areas.



Source: Price Shire Council

8.11.3 Let me do it

Complete the following activities to practise this skill.

8.11 ACTIVITIES

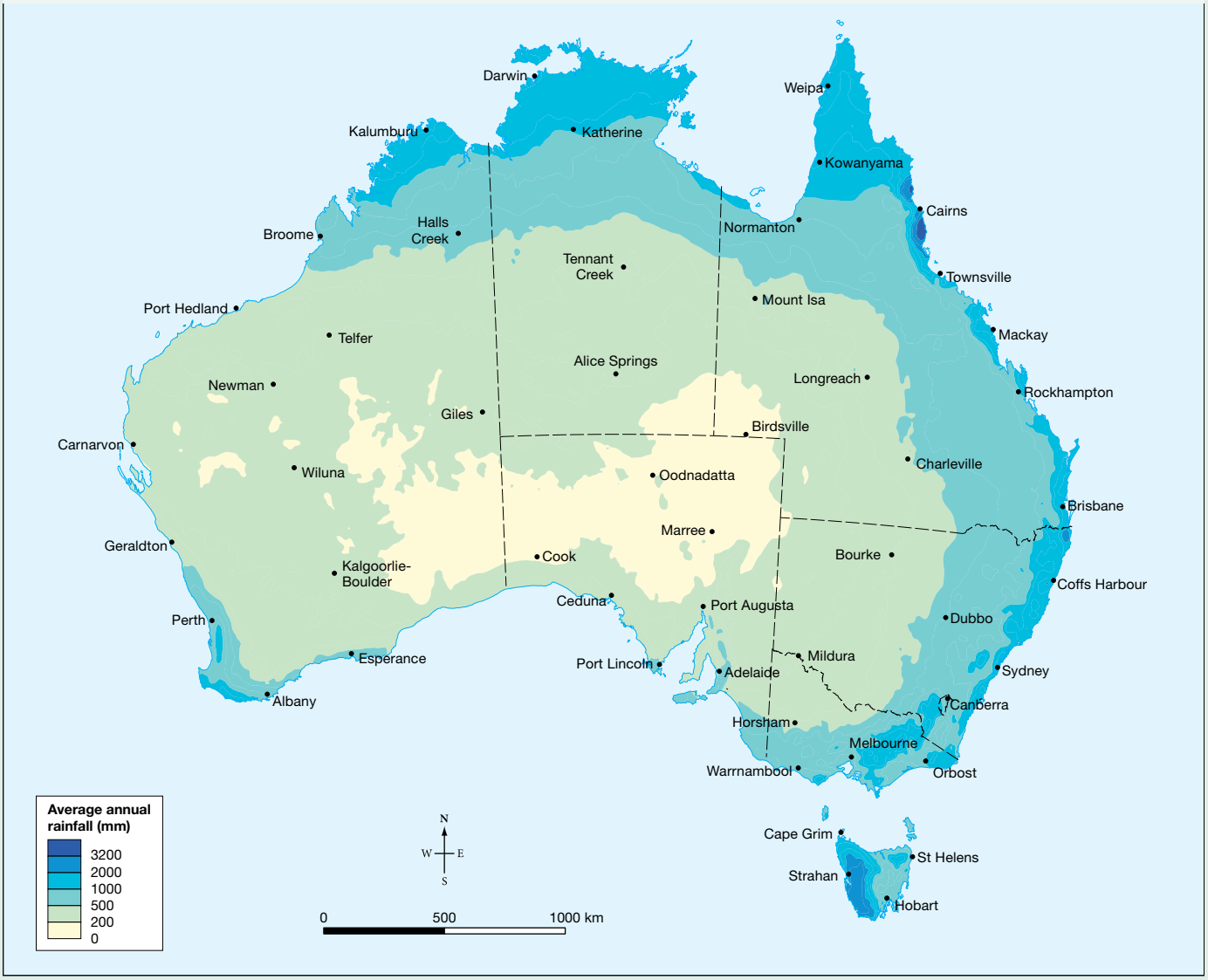
1. **Create** an overlay map to show the relationship between Australia's rainfall and population distribution. Use **FIGURE 6** to **create** a base map of rainfall patterns, and then use **FIGURE 7** to add the population overlay. Use the checklist provided to make sure you have covered all aspects of the task.
2. Once you have **created** your overlay map, using the skills you have developed in this SkillBuilder, answer the following questions.
   a. Look carefully at your base and overlay maps and hunt for patterns between them. Find examples where rainfall and population:
      i. mostly coincide with each other
      ii. sometimes coincide with each other
      iii. do not coincide at all with each other.
   b. **Describe** these areas, either by percentage or by amount of overlap.
   c. How strong is the **spatial** association (relationship) between the following?
      i. High rainfall and high population density
      ii. Low rainfall and a low population density

Checklist

I have:

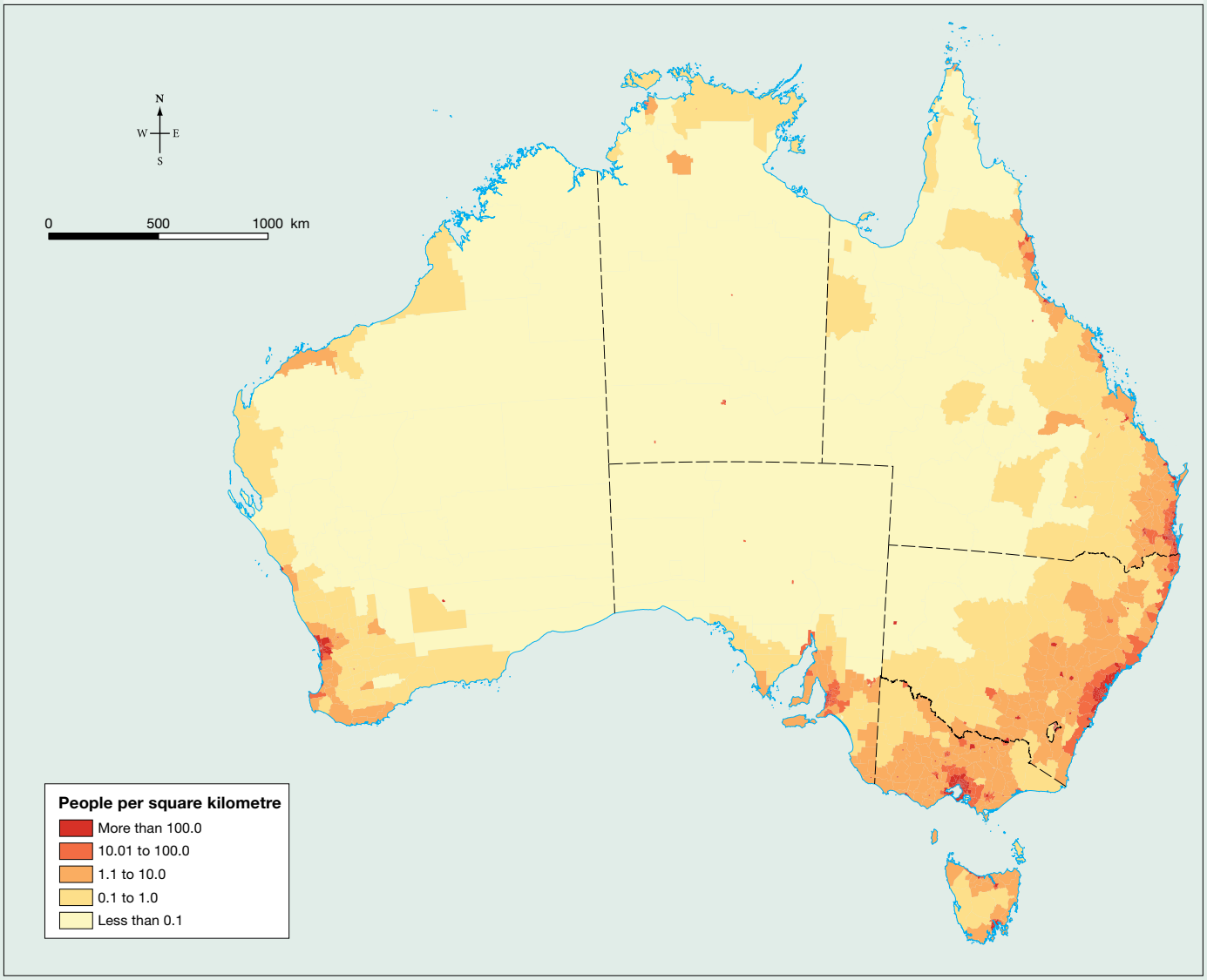
- drawn in pencil first and then added colour
- included BOLTSS on the base map
- used light colours on the overlay
- included a key on the overlay
- hinged the overlay to the base map using sticky tape
- included a title for the overlay.

FIGURE 6 Base map, Australian rainfall



Source: Bureau of Meteorology

FIGURE 7 Overlay map, Australian population density



Source: Australian Bureau of Statistics

LESSON
8.12 SkillBuilder: Annotating a photograph

LEARNING INTENTION

By the end of this SkillBuilder you should be able to annotate a photograph.

8.12.1 Tell me

Using annotated photographs in Geography

Photographs are used to show aspects of a place, but they don't always give us all the information. Often people will notice different elements in the same photograph, depending on their particular interest and knowledge. Annotations are added to photographs to draw the reader's attention to what can be seen and deduced. Look at **FIGURE 1** as an example. Because it is clearly shown in the photograph, we know the Campaspe River had water at the time the photograph was taken. However, we don't know what the water quality was like.

Moreover, photographs today are digital and can easily be resized and cropped, so it may be difficult to gain an accurate overview of the particular situation or environment depicted. It's also important to understand that the angle a photograph is taken from, and the time it is taken, can affect how easy it is to see some aspects in the photograph. You should consider the angle the photograph was taken from, and what might be outside the border of the photograph.

Why use annotated photographs?

Annotated photographs are useful in geographical inquiries as geographers are interested in analysing places, and photographs provide a snapshot at a point in time. The annotations are vital to fully understanding the photograph. When photographs are used to show spatial change over time, the same views are photographed at different times, and the annotations are used to highlight the changes.

A good annotated photograph includes:

- a clear title that includes the location of the photograph
- labels of the main features
- annotated processes if known
- date and time of when the photograph was taken
- the source of information — the photographer's name.

8.12.2 Show me

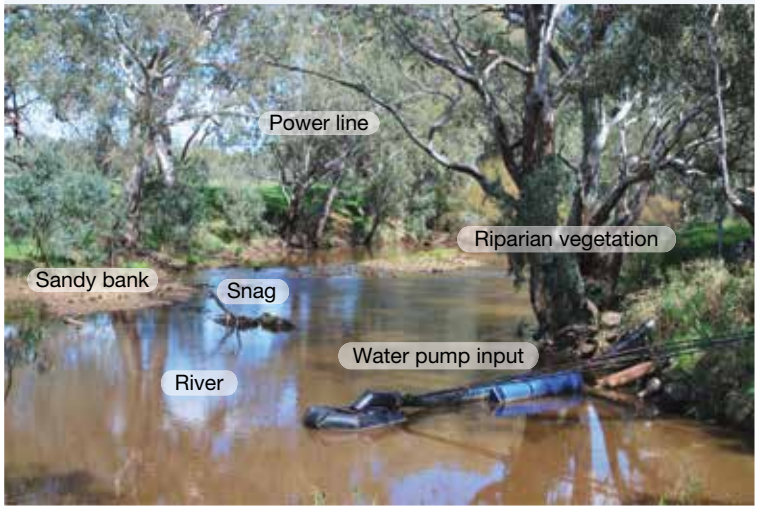
How to annotate a photograph

You will need

- a photograph
- a black fine-line felt-tipped pen
- a ruler.

Model

FIGURE 1 Campaspe River near Axedale, Victoria



Source: Taken by Mattinbgn, 17 March 2012. © Creative Commons

Procedure

Step 1

Examine the photograph in **FIGURE 2** carefully, looking for the key information it is showing you. You will notice that this particular image includes evidence that it was taken during a low flow period, because the water line is below the line of trees that mark a higher water level. Previous high flow or perhaps flood events of the river are shown by the large logs deposited in the currently dry bed of the river.

FIGURE 2 Annotating a photograph

Source: Taken by Paul Humphries, 5 February 2012. © Paul Humphries

Step 2

Check the date the photograph was taken. This photograph is tagged 5 February 2012. The photographer is Paul Humphries and the location is Campaspe River at Strathallen; therefore, a clear title might be *Campaspe River at Strathallen during summer low flow period*. It is important to provide the source underneath, because this provides the reader with information as to who took the photograph and the time of year at which it was taken. In this case, it is '*Source:* Taken by Paul Humphries, 5 February 2012'.

Step 3

Add labels to the image, focusing on the key aspects you wish the viewer to notice. These might include *River in low flow*, *Debris deposited in high flow* and *Gum trees*. Adding labels is often much easier if you took the photograph and made field notes while you were on site. For example, you could have determined if the river was flowing and in which direction. If, for the purpose of retaining clarity within the image, labels need to be placed outside the photograph, fine lines should be drawn from each annotation to the relevant feature.

on Resources

Video eLesson Annotating a photograph (eles-1633)
Interactivity Annotating a photograph (int-3129)

8.12.3 Let me do it

Complete the following activities to practise this skill.

8.12 ACTIVITIES

1. **Annotate** the following photograph. **Label** any physical processes that you can see. For example, the river is flowing towards the foreground of this photograph. **Label** the human activities that are shown. Use the checklist provided to make sure you cover all aspects of the task.

FIGURE 3 Yarra River, Melbourne, Australia

Source: Taken by Russell Moseley at 5 pm, 10 September 2012. © Russell Moseley
http://www.free-things-to-do-melbourne.com

2. Once you have labelled your photograph, **apply** your skills to answer the following questions:
   a. Name two activities that you can see.
   b. What are the tall poles for?
   c. Where are boats stored? How do you know?
   d. What is the landing platform made of?
   e. Give evidence to support the idea that rivers such as this are an important resource for people.

Checklist

I have:
- a clear title that includes the location of the photograph
- labelled the main features
- included annotated processes, if known
- included the date and time of when the photograph was taken
- provided the source of the information.

LESSON
8.13 SkillBuilder: Drawing a line graph

LEARNING INTENTION

By the end of this SkillBuilder you should be able to draw a line graph.

8.13.1 Tell me

What is a line graph?

A line graph displays information as a series of points on a graph that are joined to form a line. A line graph can be drawn by hand or by using a spreadsheet program such as Excel.

How are line graphs useful?

Line graphs are very useful to show change over time. They can show a single set of data, or they can show multiple sets based on a common theme, such as water use in the Murray–Darling Basin compared to water use in South Australia (see **FIGURE 1**). This enables us to compare similarities and differences between two sets of data at a glance.

A good line graph has:
- been drawn in pencil
- an appropriate scale to show the data clearly
- labelled axes
- used small dots joined by a line to make a smooth curve
- a legend, if necessary
- a clear and accurate title that explains the purpose of the graph
- the source of the data.

8.13.2 Show me

How to complete a line graph

You will need:

- data (see **TABLE 1**)
- graph paper
- a pencil
- a ruler.

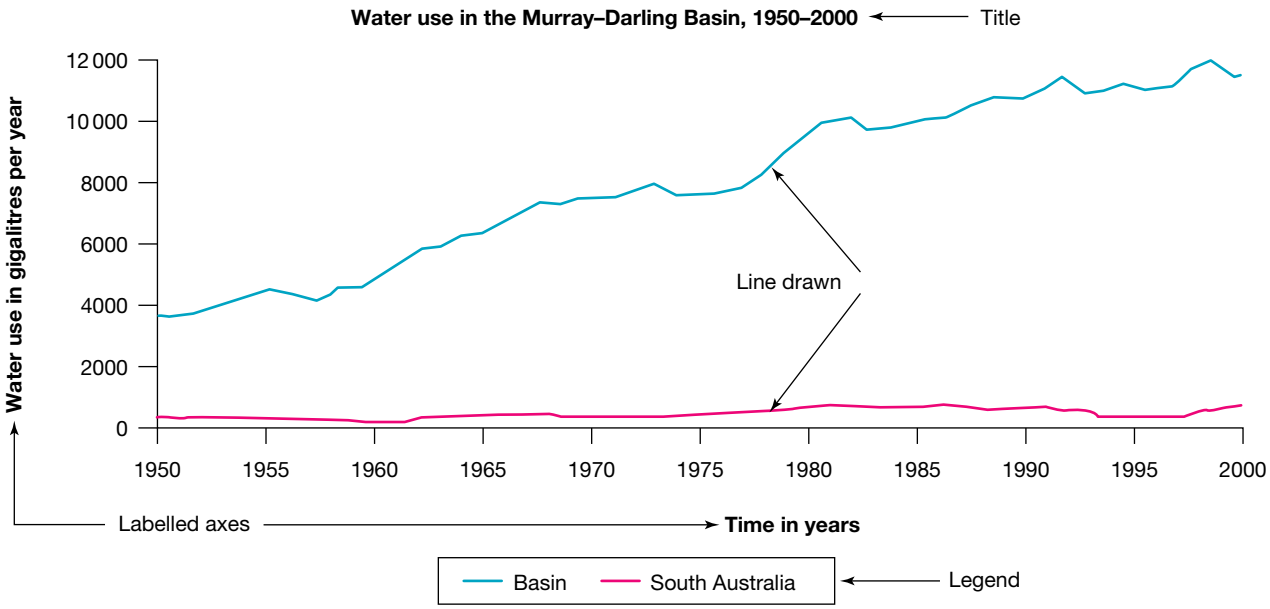
TABLE 1 Use of rainwater tanks by household, 2001–2010

Year	Use of rainwater tanks by household (%)
2001	16
2004	17
2007	19
2010	26

Source: © Australian Bureau of Statistics

Model

FIGURE 1 Water use in the Murray–Darling Basin and in South Australia



Source: © Department of Environment, Water and Natural Resources, South Australia Government

Procedure

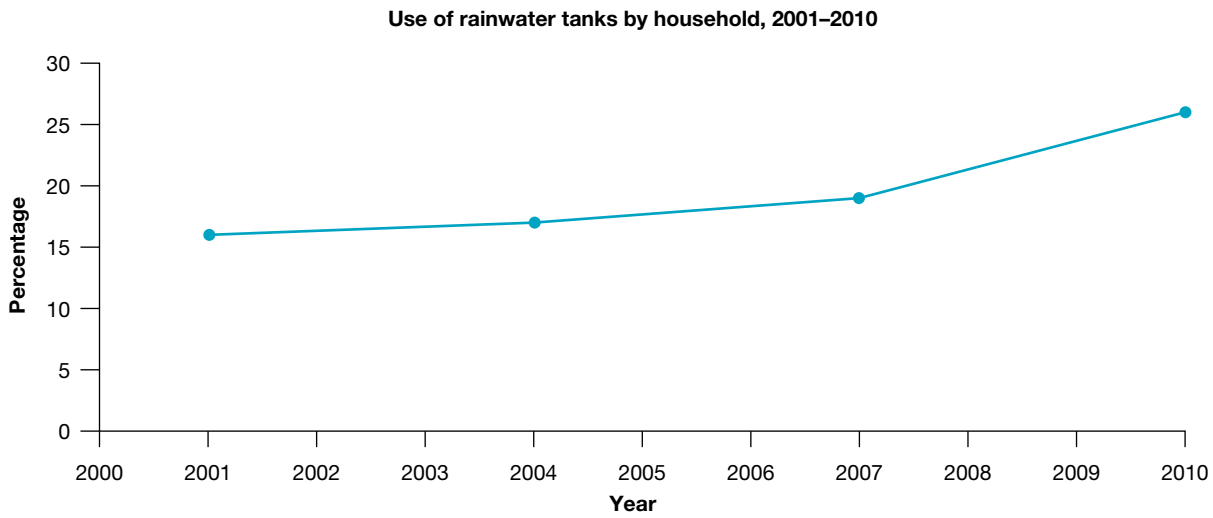
Step 1

Select the data you wish to compare or interpret (see **TABLE 1**).

Draw a horizontal and vertical axis using a ruler.

Evenly space and then label the years along the horizontal axis. Look carefully at your range of data and work out appropriate increments for the vertical axis, and then evenly space and label this information on the axis. Start at zero where the axes join. For the **TABLE 1** data, an increment of 5 percentage points would be appropriate.

FIGURE 2 Use of rainwater tanks by household, 2001–2010



Source: © Australian Bureau of Statistics

Step 2

Label the *x* and *y* axes. In this case, the *x*-axis would be labelled 'Year', and the *y*-axis would be labelled 'Percentage'.

Plot the statistics. Draw a dot at the point where the year on the horizontal axis meets the relevant position on the vertical axis. Once you have plotted all the statistics, join the dots. This can be done freehand or using a ruler.

Step 3

Add a title and a source to the graph.

on Resources

Video eLesson Drawing a line graph (eles-1635)
Interactivity Drawing a line graph (int-3131)

8.13.3 Let me do it

Complete the following activities to practise this skill.

8.13 ACTIVITIES

1. Use the data in **TABLE 2** to **create** a line graph. Use the checklist provided to make sure you cover all aspects of the task.

TABLE 2 Daily residential water consumption for South Australia

Year	Daily residential water consumption (litres)
2001	539
2002	502
2003	532
2004	460
2005	465
2006	440
2007	413
2008	410
2009	395

Source: SA Water, Annual Reports

2. Based on what you have learned in this SkillBuilder and referring to your graph, **apply** your skills to answer the following questions.
   a. In which year was water consumption lowest?
   b. **Describe** the pattern shown by the graph.
   c. What reasons might explain the changes from 2001 to 2009?
   d. When water restrictions were lifted in 2011, predict what happened to water consumption.
   e. If the government made every household adopt water saving measures in 2022, what might happen to water consumption?
   f. Find statistics for water consumption for your area and compare these to another area.
   g. **Explain** how useful the graph was in helping you understand the changes that occurred to water consumption in South Australia compared to reading a table of figures.

Checklist

I have:
- labelled the axes
- provided a clear title and source
- plotted the data accurately
- joined the points with a smooth line.

LESSON
8.14 SkillBuilder: Interpreting diagrams

LEARNING INTENTION

By the end of this SkillBuilder you should be able to interpret diagrams.

8.14.1 Tell me

What are diagrams?

A diagram is a graphic representation of something. In Geography, it is often a simple way of showing the arrangement of elements in a landscape and the relationships between those elements. A common diagram that you are probably familiar with is the water cycle (see **FIGURE 1**). Diagrams also have annotations: labels that explain aspects of the illustration. Interpreting diagrams involves examining the visual and text elements provided to gain an understanding of all the information presented.

What causes rainfall? Where does the water come from and where does it go? The answers lie in the water cycle. Water evaporates from oceans, lakes and vegetation, and condenses into clouds. The rain, sleet, hail or snow that falls from clouds flows back into rivers, lakes and oceans and underground, where the water cycle process continues.

How are diagrams useful?

Diagrams are useful for representing ideas visually. They are often used to increase understanding of written information. They can be used to:

- illustrate a process
- simplify a concept
- show flows and movements
- illustrate relationships spatially.

The diagram in **FIGURE 2** shows how properties can be designed to manage floods in new development areas and existing development areas.

A good diagram:

- is large so it can be easily interpreted
- has understandable annotations or labels
- is clear and simple
- includes a precise title or caption
- states the source – where it came from or who created it.

8.14.2 Show me

How to interpret a diagram

You will need:

- a diagram (see **FIGURE 3**)
- any information that is related to the diagram.

Model

The amount and intensity of rainfall is the most important factor in causing a flood, but many other factors can contribute to flooding. When it rains in a catchment, the amount of rainwater that flows into the rivers depends on land uses. Some water can soak into soil unless the soil is already saturated from previous rainfall. Urban areas have many hard surfaces such as roads, so water is less able to soak into the soil and more water

flows into drains and creeks. Heavy vegetation can slow the movement of water to rivers. Dams can be used to control the amount of water released downstream. The shape of the land is also an important factor, because more water usually runs off steep slopes.

Procedure

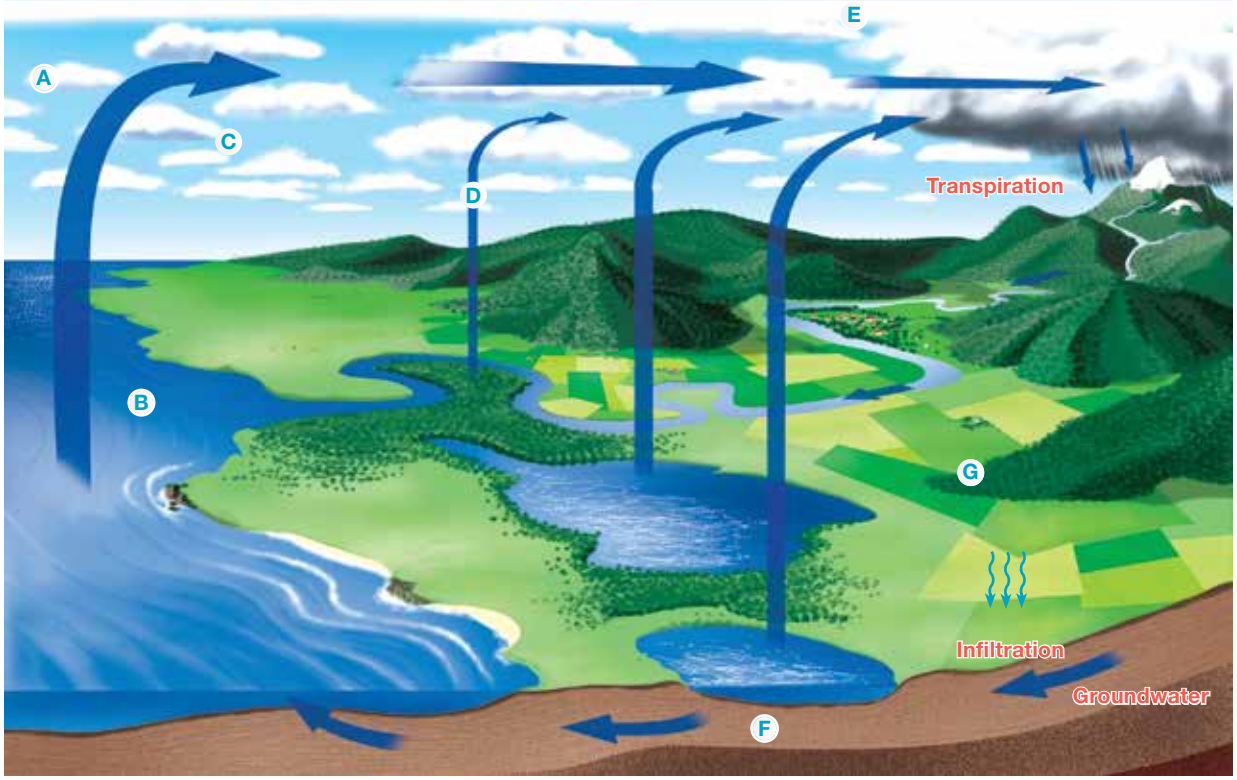
Step 1

Identify and carefully read the title of the diagram, because it helps you to understand the diagram's purpose. The diagram in **FIGURE 3** is illustrating factors that can affect flooding, and it is designed to be read with the explanatory text.

Step 2

Examine the diagram to identify all the elements being illustrated and the annotations. Look at each part of the diagram. You will notice that various factors are identified, including rainfall, run-off, vegetation, size of waterways, soil type, slope and land use.

FIGURE 1 The water cycle



- **A** The sun's heat provides the energy for the water cycle process.
- **B** The sun evaporates water from oceans, damp soil, leaves and people's skin, turning it into water vapour.
- **C** The warm air that absorbs evaporated moisture expands and rises into the atmosphere.
- **D** As warm, moist air rises, it cools. Water vapour that cannot be held in the air condenses into tiny water droplets or ice crystals. As more of these form, clouds appear. This process is known as condensation.
- **E** When the droplets or crystals in the cloud become too heavy to overcome the pull of gravity, they fall to Earth as precipitation.
- **F** Run-off from land returns to the sea via rivers and underground channels.
- **G** Infiltration occurs when water seeps into the soil.

FIGURE 2 Managing flood risks

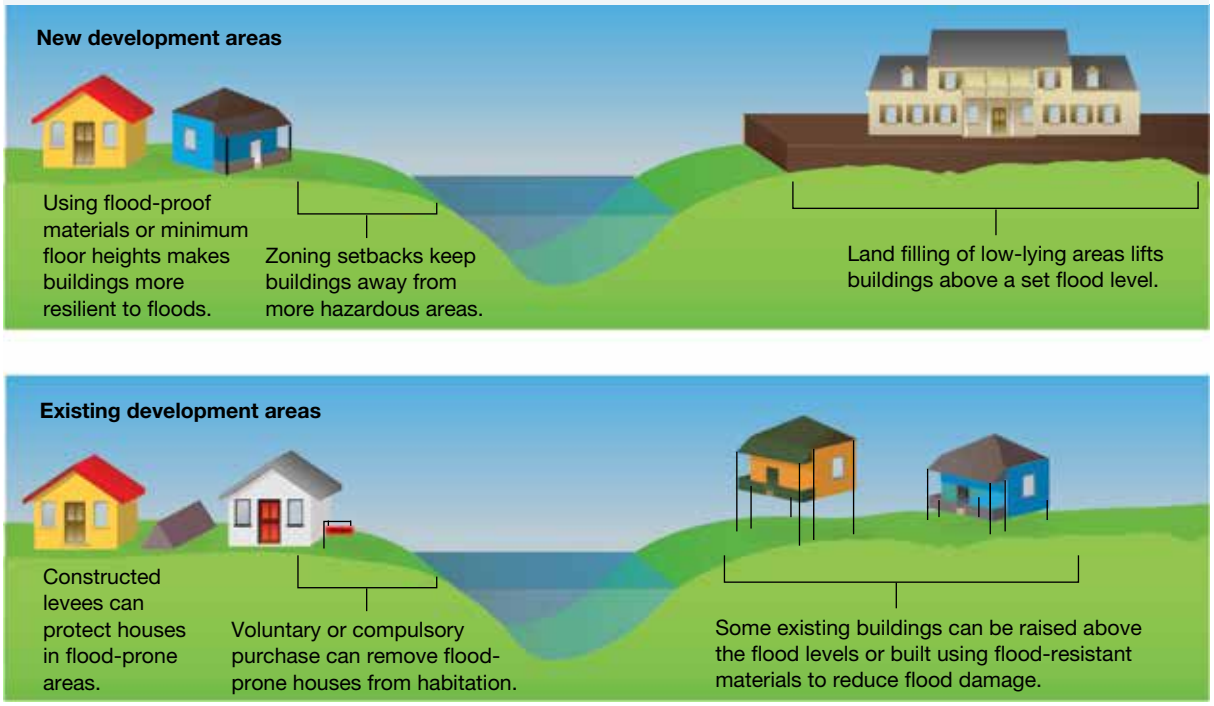
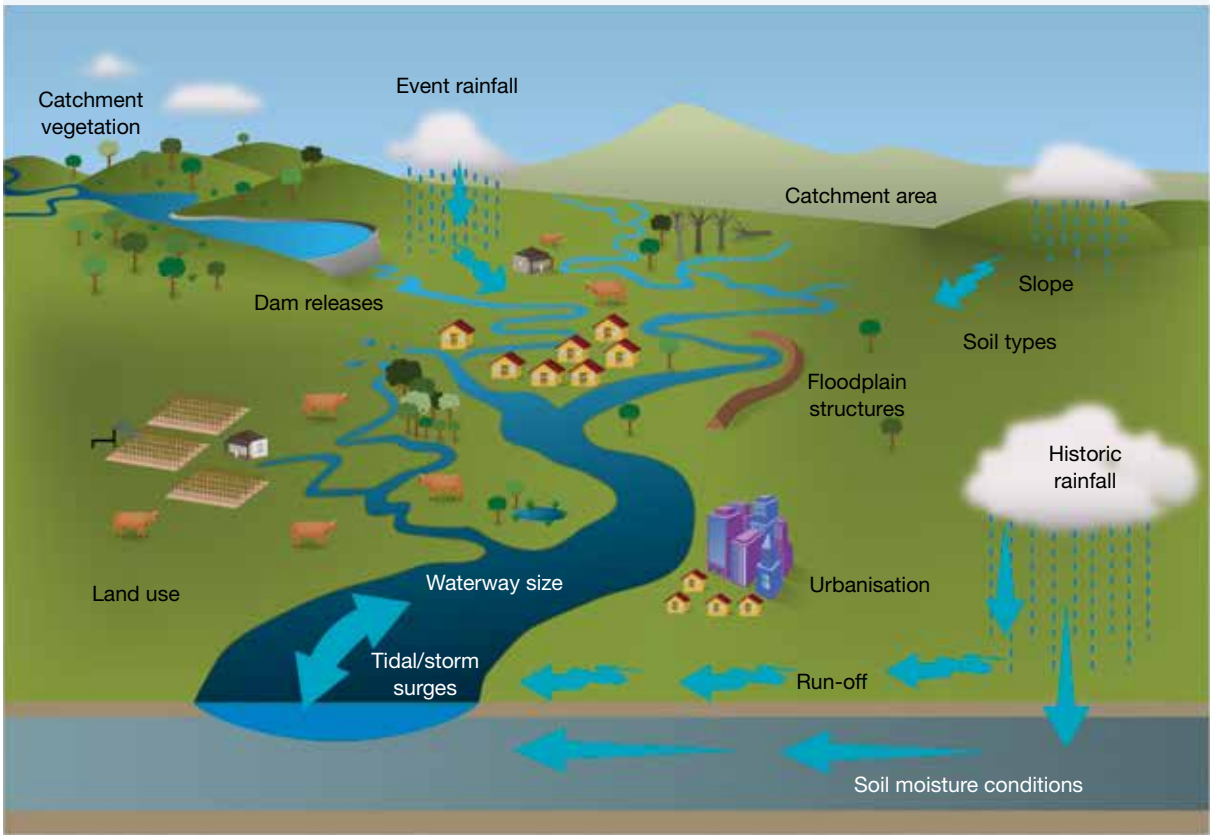


FIGURE 3 Factors that can affect flooding



Source: www.chiefscientist.qld.gov.au/publications/understanding-floods/what-is-a-flood.

Step 3

Now consider the diagram as a whole. Studying the diagram helps you conclude that many factors affect flooding. It is more complicated than simply how much rain falls and how quickly.

Resources

Video eLesson Interpreting diagrams (eles-1636)
Interactivity Interpreting diagrams (int-3132)

8.14.3 Let me do it

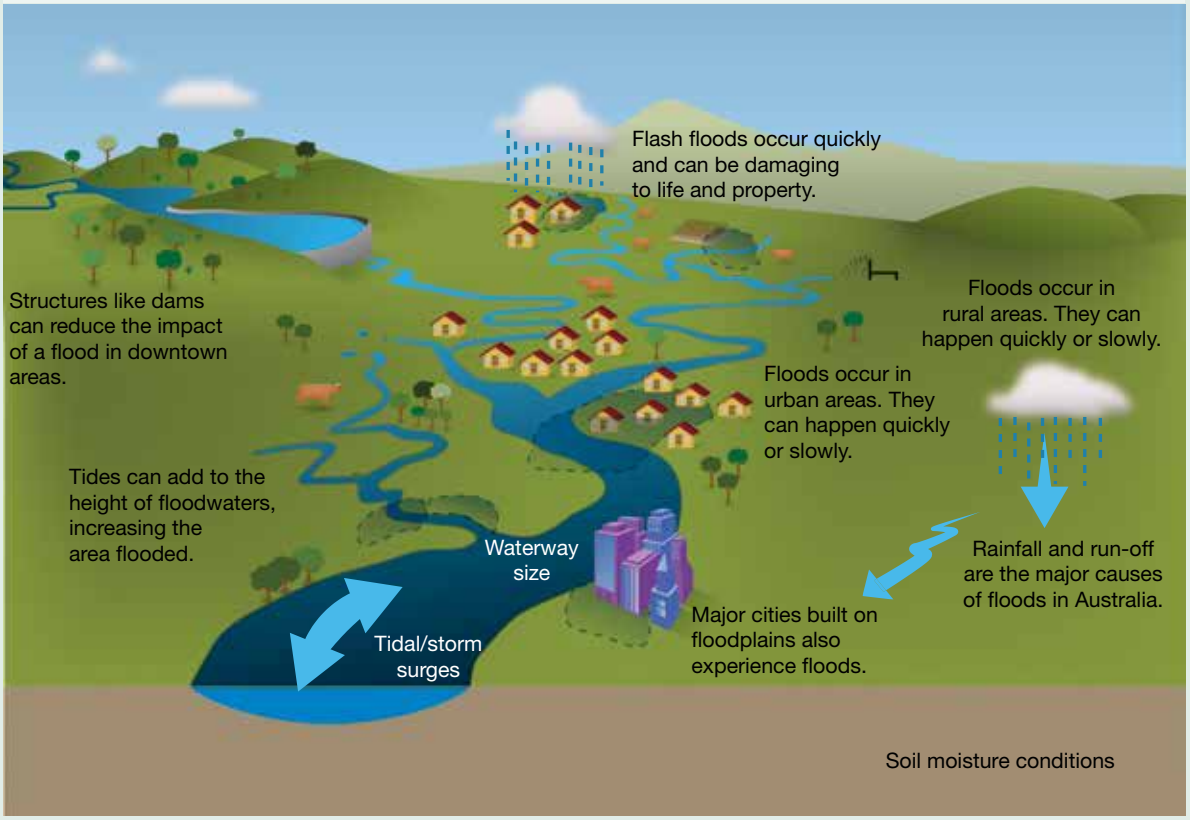
Complete the following activities to practise this skill.

8.14 ACTIVITIES

Rainfall is the main cause of flooding in Australia. Floods can happen quickly (flash flooding) or slowly, and they are difficult to predict. Cities and farms are often built on floodplains (land that is subject to occasional flooding) because they provide access to water and good quality soil. In coastal areas, tides can add to flooding.

1. **Apply** your skills to interpret **FIGURE 4** and answer the following questions.
   a. How might a dam affect flood events?
   b. What is run-off?
   c. What effect can high tides have during flooding in coastal areas?
   d. Why are cities sometimes built on floodplains?
   e. What are some effects of floods?

FIGURE 4 Characteristics of floods



Checklist

I have:

- understood the title
- **examined** all parts of the diagram — the illustrations, annotations and any accompanying text
- **considered** the diagram as a whole.

LESSON
8.15 SkillBuilder: Cardinal points — wind roses

LEARNING INTENTION

By the end of this SkillBuilder you should be able to interpret wind roses.

8.15.1 Tell me

What is a wind rose?

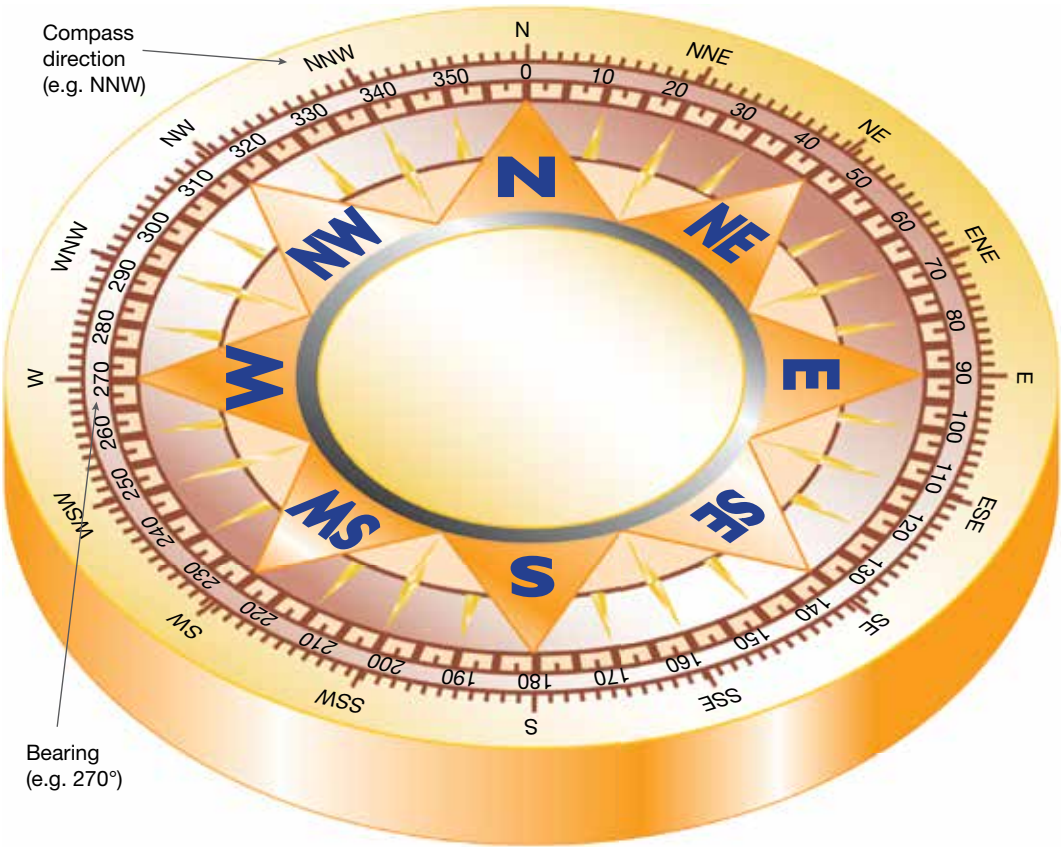
A wind rose is a diagram that shows the direction, speed and frequency of wind. We name wind direction according to the direction from which the wind is blowing. For example, a wind described as 'a southerly' is coming from the south. Wind direction can be described using 8 or 16 compass directions.

To understand a wind rose, you must know your cardinal points. Let's quickly revisit these.

What are cardinal points?

A compass has four main (or cardinal) points: north, east, south and west. These four cardinal points are used to describe direction. For example, if you are facing north, south is behind you, east is to your right and west is to your left. To give more accurate directions, the four cardinal points can be divided into inter-cardinal points: north-east, south-east, south-west and north-west. For even finer definition, we can further divide the inter-cardinal points (see **FIGURE 1**). For example, between north and north-west, is north-north-west (NNW); between north-west and west is west-north-west (WNW), and so on. Cardinal and inter-cardinal points are used in wind roses.

FIGURE 1 A compass



Why are wind roses useful?

Wind roses are useful because they allow us to quickly see patterns in relation to wind direction, speed and frequency.

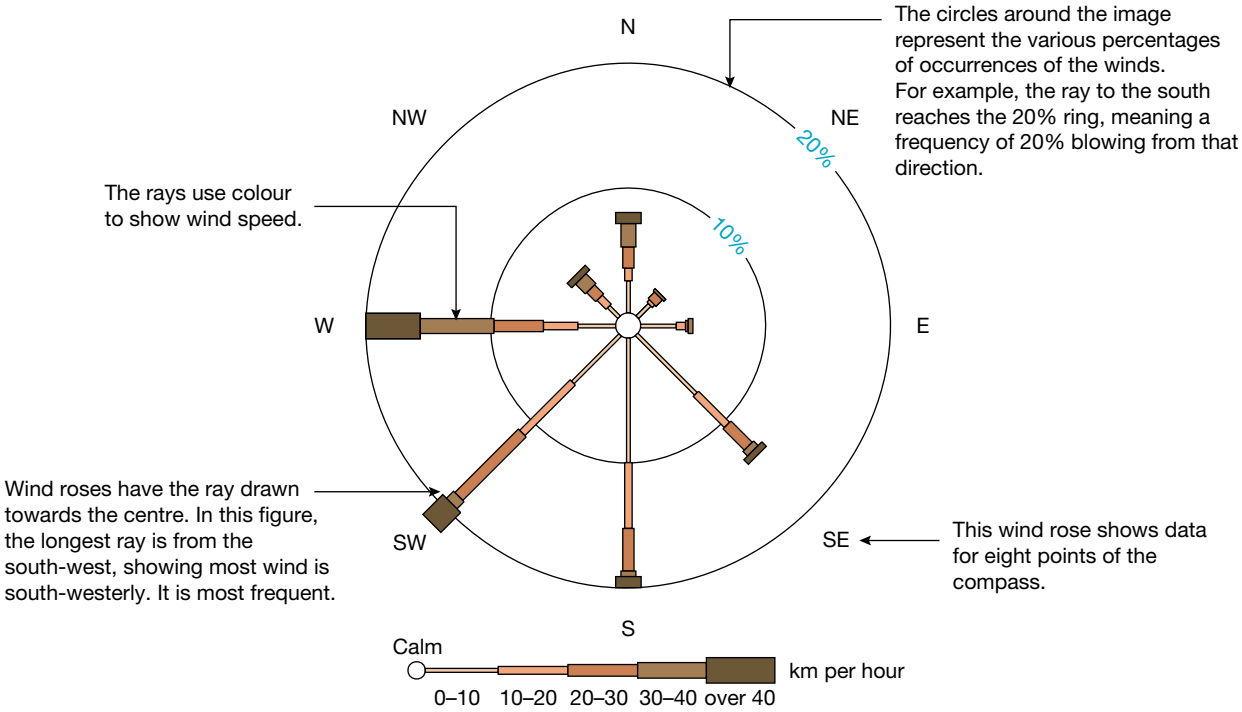
Interpreting a wind rose

To interpret a wind rose, remember the following points:

- Wind roses have the rays drawn towards the centre. In **FIGURE 2** the longest ray is from the south-west, which shows that most of the wind is south-westerly. It is most *frequent*.
- The circles around the image represent the various percentages of occurrences of the winds. For example, if the ray to the south just reaches the 20 per cent ring, it means a frequency of 20 per cent blowing from that direction.
- The rays use symbols and colour to show wind *speed*.

The **FIGURE 2** wind rose shows data for eight points of the compass.

FIGURE 2 A wind rose



8.15.2 Show me

How to read a wind rose

You will need:

- a wind rose (see **FIGURE 3**)
- a ruler.

Procedure

To describe wind patterns using a wind rose you need to examine the direction, length and width of the rays. We will use **FIGURE 3** to explore this process.

Step 1

Determine the direction of wind with the greatest frequency by finding the longest ray. In **FIGURE 3**, the longest ray is from the south, so we can say that the predominant average wind direction in Melbourne at 3 pm is a southerly.

Step 2

Determine the direction of wind with the highest speed by finding the widest ray. In **FIGURE 3**, we can see that the highest average speeds were reached by winds coming from the north (northerlies).

Step 3

Work out the general pattern and main features of wind direction and strength. The **FIGURE 3** wind rose shows us that in Melbourne at 3 pm, the predominant average winds are southerlies, occurring more than 30 per cent of the time. The next most frequent wind at 3 pm is a northerly, which blows more than 20 per cent of the time. Winds blow from the west only around 10 per cent of the time, and easterlies are very infrequent.

Resources

Video eLesson Cardinal points: wind rose (eles-1638)
Interactivity Cardinal points: wind rose (int-3134)

8.15.3 Let me do it

Complete the following activities to practise this skill.

8.15 ACTIVITIES

Interpret the wind roses in **FIGURES 3** and **4** to answer the following questions. Use the checklist provided to make sure you cover all aspects of the task.

1. In which direction are the highest frequency winds for Melbourne, 9 am?
2. In which direction are the highest speed winds for Melbourne, 9 am?
3. In which direction are the lowest frequency winds for Melbourne, 9 am?
4. In which direction are the lowest frequency winds for Melbourne, 3 pm?
5. **Compare** and **contrast** the wind direction patterns for Melbourne at 9 am and at 3 pm.

Checklist

I have:

- found the longest ray to determine the direction of wind with the highest frequency
- found the widest ray to determine the direction of wind with the highest speed
- worked out the general pattern and main features of wind direction and strength.

FIGURE 3 Wind rose for Melbourne, annual average at 3 pm

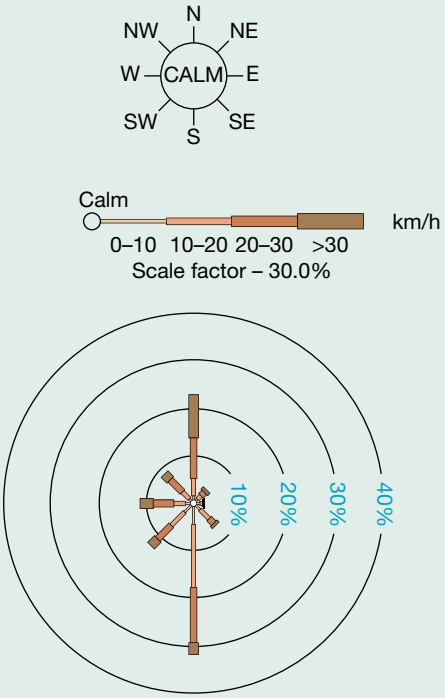
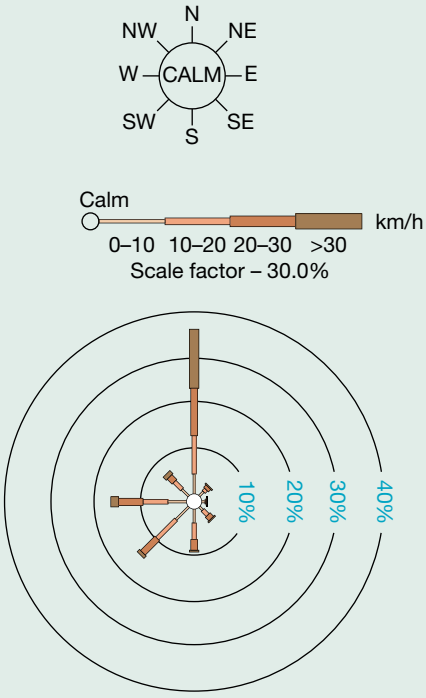


FIGURE 4 Wind rose for Melbourne, annual average at 9 am



LESSON
8.16 SkillBuilder: Creating a concept diagram

LEARNING INTENTION

By the end of this SkillBuilder you should be able to create a concept diagram.

8.16.1 Tell me

What is a concept diagram?

A concept diagram, sometimes mistakenly called a concept map, is a graphical tool that shows links between ideas, or concepts. Concept diagrams organise links into different levels.

Why are concept diagrams useful?

Concept diagrams enable you to organise your ideas and communicate them to others. They also help you to clarify and represent your knowledge of a topic or issue. They highlight the ways your thoughts and ideas relate to each other. They are useful for when you are reflecting on a topic or issue, especially towards the end of studying a topic, because they help you see connections between ideas and information. They can also be useful when brainstorming, and can help you in the further research of a topic.

A good concept diagram should:

- include a clear title
- be presented neatly and clearly
- explain what each colour represents
- be easy for another person to understand.

8.16.2 Show me

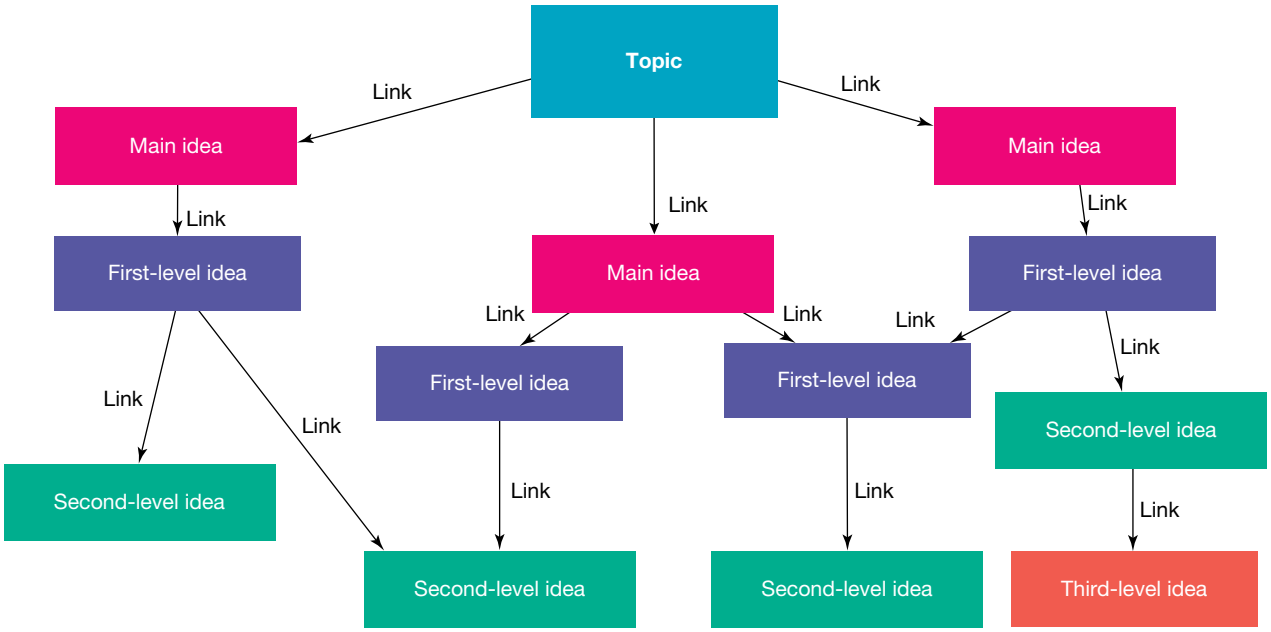
How to create a concept diagram

You will need:

- a blank sheet of paper
- a ruler
- colour pencils
- an eraser
- a black lead pencil.

Model

FIGURE 1 Example of a concept diagram

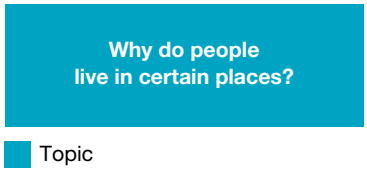


Procedure

Step 1

First, start with a topic. Place this in the middle of a blank sheet of paper. Rule a box or draw a circle around it.

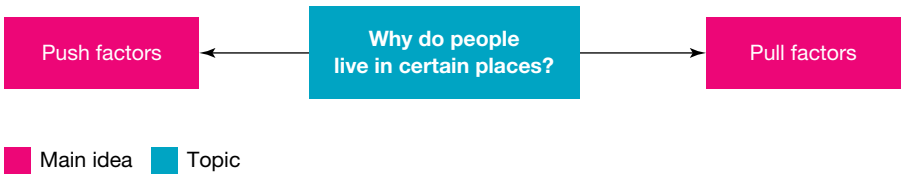
FIGURE 2 Start with the topic.



Step 2

Use your ruler to draw lines out from this box or circle and add key words about the topic or issue. This level is called the main ideas level.

FIGURE 3 Add your main ideas.



Step 3

Add other lines to each of the main ideas and add words that relate to each of them. This level is called first-level ideas.

Step 4

Add new lines and words, so that the diagram develops into something that resembles a spider web. This level is called second-level ideas. If you like, you can add extra information on some of the connecting lines. You may also choose to add colours to represent different levels or connections. Add a clear title.

FIGURE 4 Add your first-level ideas.

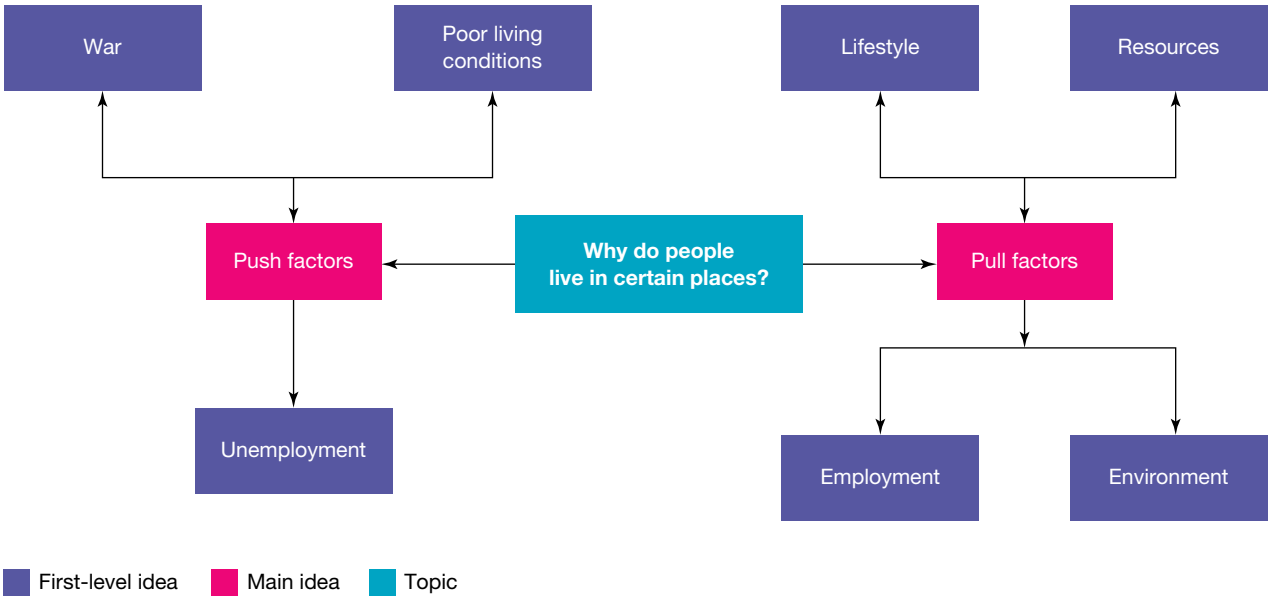
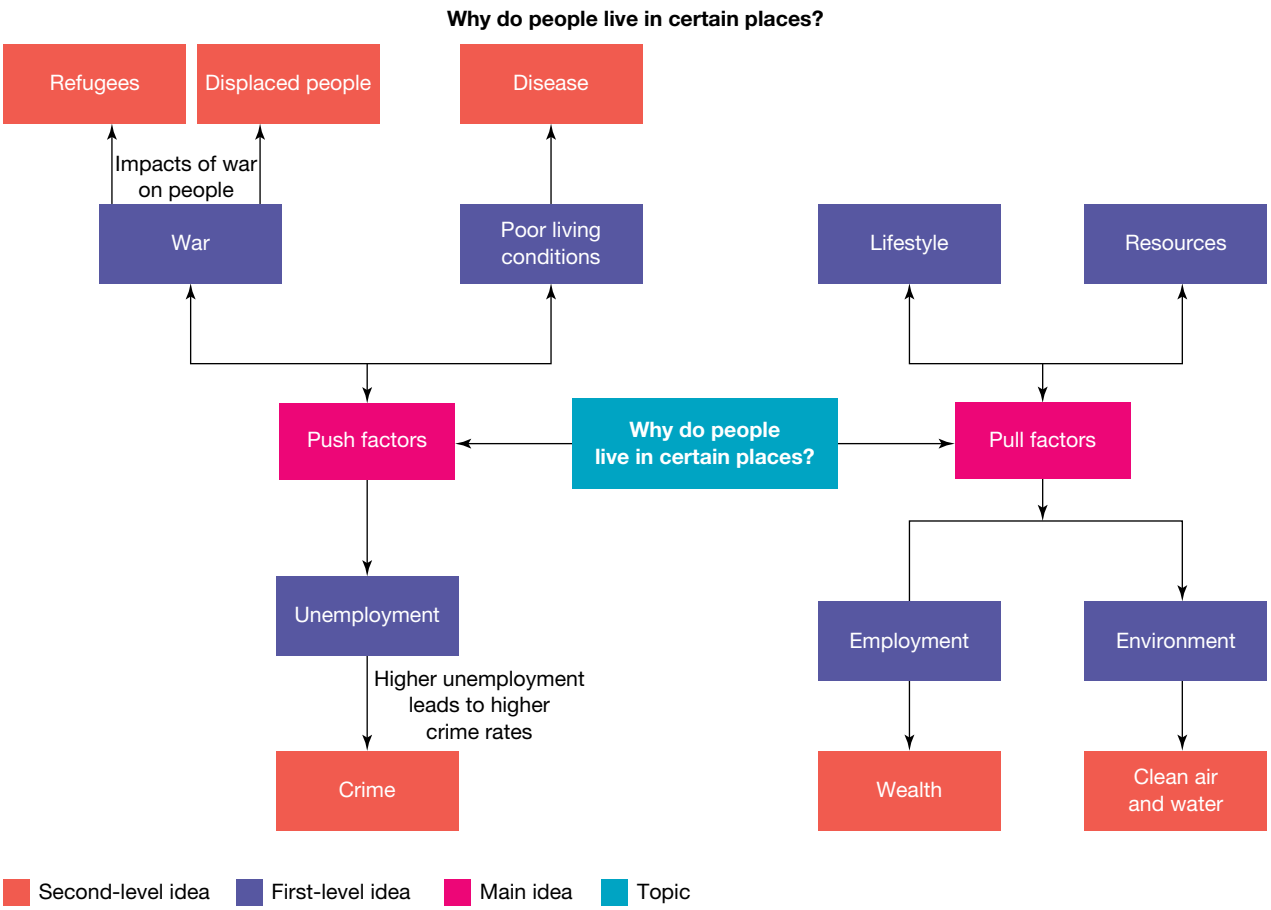


FIGURE 5 Add second-level ideas and give your concept diagram a title.



on Resources

Video eLesson Creating a concept diagram (eles-1640)

Interactivity Creating a concept diagram (int-3136)

8.16.3 Let me do it

Complete the following activity to practise this skill.

8.16 ACTIVITY

1. **Apply** what you have learned in this SkillBuilder to **create** a concept diagram of the reasons Australians live where they do. You may want to structure your concept diagram using some of the following aspects:
   - natural features or built features that attract people to live in certain places
   - push and pull factors
   - your own family's reasons for living where they do, or your classmates' families' reasons for living where they do
   - reasons remote areas are settled
   - lifestyle choices.

Checklist

I have:
- included a title
- neatly constructed and presented the information
- **explained** what each colour represents
- ensured the finished diagram is easy for another person to understand.

LESSON
8.17 SkillBuilder: Interpreting topological maps

LEARNING INTENTION

By the end of this SkillBuilder you should be able to interpret a topological map.

8.17.1 Tell me

What is a topological map?

Topological maps are very simple maps, with only the most vital information included. These maps generally:

- use pictures to identify places
- are not drawn to scale
- provide no sense of distance
- provide general directions
- exaggerate the size of certain places
- do not show exact routes.

However, everything is correct in its interconnection to other points.

How is a topological map useful?

A topological map is useful as a mental map to help you locate important features. Large areas can be drawn to show the viewer the important points. You could use these in class as summary maps of a topic, or as quick sketch maps to illustrate a point or to clarify something for another student.

They are also useful for:

- giving tourists a snapshot of where features are located
- quickly showing how to get to a place
- showing very large transport routes such as bus and train routes across a city
- planning international flights.

A good interpretation of a topological map:

- identifies and communicates key features
- clearly represents and communicates the data.

8.17.2 Show me

How to use a topological map

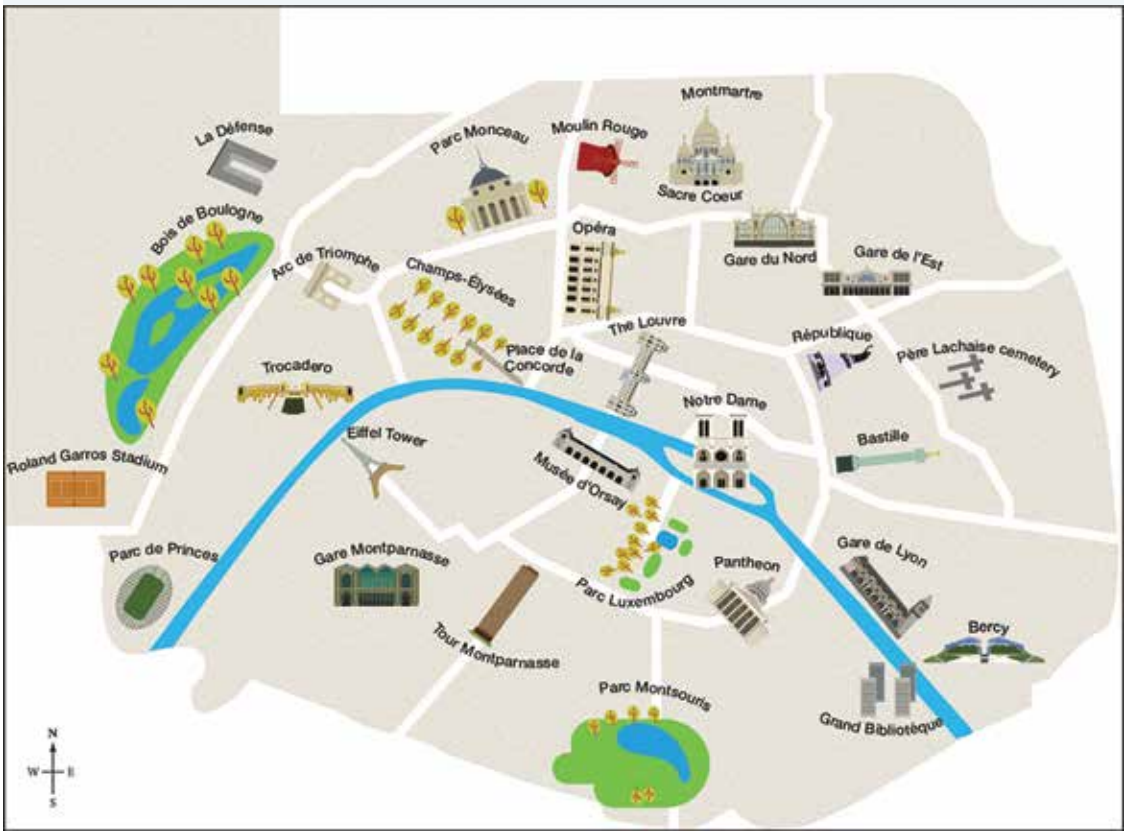
You will need:

- a topological map (see **FIGURE 1**).

Model

The topological map of central Paris shown in **FIGURE 1** is designed for people moving around Paris as tourists. It provides an indication of the major sites that tourists ought to visit, and allows them to see on which side of the river different monuments are found. For example, you would expect to find the Champs-Élysées and the Louvre on the same side of the river and quite close to each other. Major routes are given between monuments but these routes may not be the shortest distance, because no scale is provided with the map. This means judging the best way to get from the Eiffel Tower to Notre Dame Cathedral, for example, is difficult. The actual direction from one monument to the other is unlikely to be exact, because the lack of scale causes features to become distorted. This type of map, however, might help tourists plan their sightseeing, because it gives the user a general idea of where things are located. If going from the Eiffel Tower to the Arc de Triomphe, is it better to stroll along the river and up a major route?

FIGURE 1 A tourist map of Paris and its monuments



Procedure

Step 1

Look all around the topological map and identify the key features being shown. In **FIGURE 1**, almost 30 major tourist attractions of Paris are shown as drawings of each place. Some drawings are larger than others to show the significance and the popularity of these places with tourists.

Step 2

Think about the interconnection between features. On the map in **FIGURE 1**, the interconnection between the places is that each one is a Paris tourist attraction. Roads are shown, but these may not be the optimum route to travel. This pathway represents just one way to connect between the places.

Step 3

Since no scale is provided, could a tourist walk between all these places? Think about possible distances. Consider the distance from the Gare du Nord railway station to the city centre. A tourist may well have travelled this route and be able to give the map a sense of scale. Could you see all these monuments in a day? The answer to both questions is no. Interpreting a topological map gives a first impression, but it is not an accurate map. It may be useful for moving around an area, but it lacks detail.

on Resources

Video eLesson Interpreting topological maps (eles-1736)
Interactivity Interpreting topological maps (int-3354)

8.17.3 Let me do it

Complete the following activities to practise this skill.

8.17 ACTIVITIES

1. Using the child's map shown in **FIGURE 2**, **describe** the route the child takes from home to school. Use the checklist to make sure you cover all aspects of the task.

FIGURE 2 Drawing by a child who walks to school

2. Use your skill in **understanding** and **interpreting** topological maps to answer the following questions.
   a. What is the purpose of this topological map?
   b. **Describe** the pattern of houses along the route.
   c. What symbols have been used to show the sporting area of the school grounds?
   d. Why do you think this child drew the road at such a size and included the road markings?
   e. **Describe** the environment along the route from home to school.

Checklist

I have:

- **identified** and **communicated** key features on the topological map
- clearly **represented** and **communicated** the information in the description.

LESSON
8.18 SkillBuilder: Understanding satellite images

LEARNING INTENTION

By the end of this SkillBuilder you should be able to understand a satellite map.

8.18.1 Tell me

What are satellite images?

Satellite images show parts of our planet from space. They are taken from satellites and transmitted to stations on Earth. Satellites can collect a variety of data, including standard photographic imagery, colour infrared and radar data. They can show Earth in close-up or from far away. Special computer techniques allow data from satellites to be used to highlight patterns on the Earth's surface.

The most common type of satellite image comes from Landsat satellites. They are positioned 700 kilometres above the ground, orbiting the Earth every 100 minutes, and they use special cameras to detect variations in the light reflected from features on Earth. The process of detecting and recording the reflection of light is known as remote sensing.

Different features can be highlighted in satellite images by selecting only certain bands of light reflected from Earth. These bands of light are assigned false colours to help reveal spatial patterns more clearly. In **FIGURE 1**, showing the Mt Lofty Ranges in South Australia, the labels point out the patterns.

Why are satellite images useful?

Satellite images help geographers observe a much larger area of the Earth's surface than photographs taken from an aircraft. They can also provide data relatively quickly, so they are often used to monitor natural disasters, including cyclone activity, bushfires and floods. Digital information from satellites is beamed to stations on Earth as radar or microwave signals. Computers are then used to enhance the images, which enable the study of landforms, farmland, disasters, environmental change, weather patterns and even military targets.

8.18.2 Show me

How to interpret a satellite image

You will need:

- a satellite image (see **FIGURE 2**).

Procedure

When you look at images taken from above, including satellite images, it can be confusing but your ability to interpret what you see will improve with practice. The following steps will help you to systematically gather the most information possible from images.

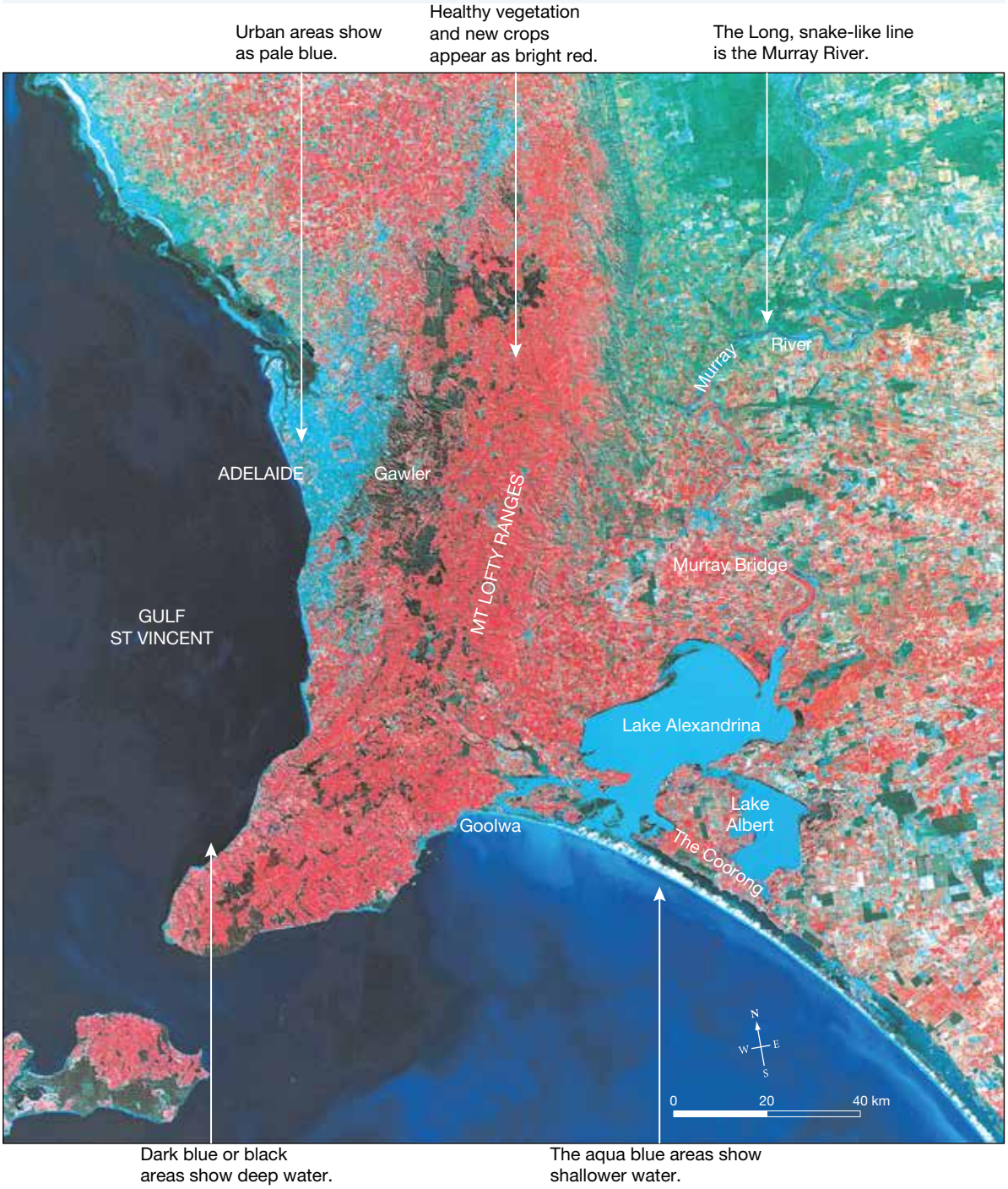
Step 1

Read the title and check for the date indicating when the image was taken. Read any accompanying information.

Step 2

Identify the main features of the image. What stands out? For example, roads will appear as continuous lines intersected by other lines. Rivers tend to be snake-like, and sometimes you may notice trees lining the riverbanks. Dwellings usually have rectangular roofs and are often clustered together.

FIGURE 1 A false-colour satellite image of the Mt Lofty Ranges



Source: © Commonwealth of Australia. Geoscience Australia 1982.

The **FIGURE 2** image of Canberra is centred on Parliament House, although its prominent central flag mast (visible at ground level) does not stand out. There appear to be wide circular roads and, if you can zoom in, cars are visible.

Step 3

Look for and label the biophysical features. For example, the black area is Lake Burley Griffin. Green vegetation in a city might be planted or it might be remnant vegetation. Look at the patterns of green to make predictions. Remnant (or remaining) vegetation will often be in an irregular pattern, whereas planted vegetation may be in rows.

Step 4

Look for and label the built features, such as roads, bridges, sports stadiums and residential housing. Again, look at patterns. Areas of small roofs with road access and surrounding vegetation suggest detached residential housing.

Step 5

Some colours, patterns and shapes may still be puzzling. Obtain a map of the same area — try an atlas or street directory, Google Maps, Bing or Nearmap. Find names of key features to use in your description. If the features you have identified are shown on the map, check whether your analysis so far matches the map. Use the map to investigate the aspects that are still puzzling. Be aware that the image may have been taken at a different date from the date the map was produced; this might explain other differences in what you see.

FIGURE 2 Satellite image of Canberra, by GeoEye, 26 September 2011

Source: © 2016 Digital Globe

On Resources

Video eLesson Understanding satellite images (eles-1643)
Interactivity Understanding satellite images (int-3139)

8.18.3 Let me do it

Complete the following activities to practise this skill.

8.18 ACTIVITIES

If you have ever holidayed on the Gold Coast, you may have visited the Currumbin Wildlife Sanctuary. As seen in **FIGURE 3**, Currumbin generally has more natural vegetation than much of the Gold Coast, partly because it is more difficult to build on the steep hills there, and partly because the forests are valued as wildlife habitat. Currumbin is a popular surf beach and holiday destination.

FIGURE 3 Satellite image of Currumbin on Australia's Gold Coast, 8 May 2000

Source: Satellite image courtesy of GeoEye. Copyright 2009. All rights reserved

Study **FIGURE 3** and answer the following questions. Use the checklist provided to make sure you have covered all aspects of the task.

1. Look carefully at the satellite image and make a list of features you can recognise.
2. Find the bridge that crosses Currumbin Creek. Are any cars on the bridge?
3. What impact have visitors had on the plant life behind the beach?
4. Go to Google Maps and zoom in to Currumbin Beach, Queensland, to find a map of the area shown in **FIGURE 3**. Turn the satellite layer on. What changes can you see?
5. **Suggest** how the biophysical features and topography have influenced the settlement pattern in this area.

Checklist

I have:

- checked the title
- **identified** biophysical and built features
- **compared** the satellite image with another map to check my interpretation.

9 Water as a resource

LESSON SEQUENCE

9.1 Overview 297
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9.3 How is water used as a resource? 302
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LESSON
9.1 Overview

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What effect does the uneven distribution of water resources have on the lives of people?

9.1.1 Water as a precious and finite resource

Viewed from space, Earth is a sphere of blue. Water covers most of our planet. We depend on water for life; in fact, no life is possible without it.

Water is a precious and finite (limited) resource, yet most of Earth's water is too salty for humans, animals or plants to use. The amount of available fresh water on Earth needs to be shared among an ever-growing global population.

Access to water is a basic human right. It is a resource that must be used carefully so that current and future populations can have adequate supplies.

FIGURE 1 shows what all of Earth's water would look like if it was contained in a sphere, in comparison with the size of Earth. This small blue sphere representing all of Earth's water has a diameter of 1385 kilometres.

FIGURE 1 Water covers most of our planet, but the total amount is small compared to the size of the Earth.

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-10541)
Video eLesson	Water as a resource (eles-1615)

LESSON
9.2 What are environmental resources?

LEARNING INTENTION

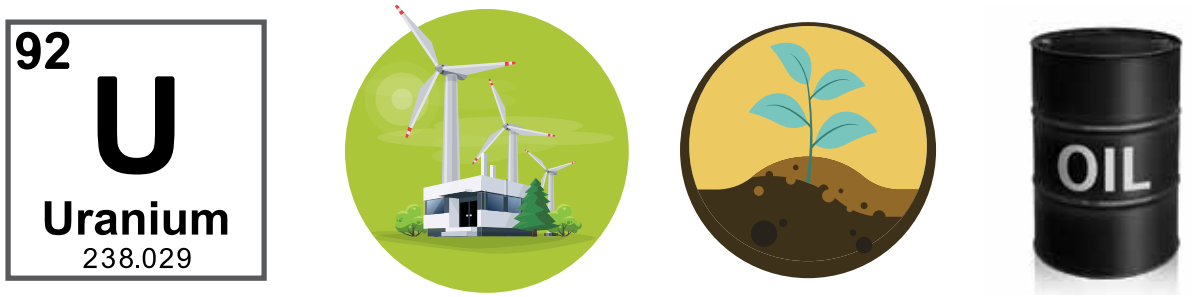
By the end of this lesson you should be able to classify environmental resources as renewable, non-renewable or continuous.

TUNE IN

Did you know that some materials sourced by humans from Earth are able to be replenished in our lifetime?

1. Which of the resources in **FIGURE 1** do you think can be replenished in our lifetime?
2. Discuss which of the resources has an unlimited supply. What factors may control the supply of this resource?
3. In what ways are the resources similar? In what ways are the resources different?

FIGURE 1 People use different kinds of resources.



9.2.1 Why do we need resources?

We depend on resources extracted from Earth to survive — including water to drink, soil to produce our food, and forests and mines to supply other materials. **Environmental resources** are materials found in nature that are necessary or useful to people.

The global distribution of environmental resources depends on geology (the materials and rocks that make up the Earth) and climate. Some minerals are rare and are found in only a few locations. For example, **uranium** is found mainly in Australia. Several countries in the Middle East, such as Saudi Arabia and Iran, have rich oil resources but are short on water. Many countries in Africa, such as Botswana, have mineral resources but lack the money to mine and process them.

The human activities of agriculture, fishing, logging and mining all depend directly on natural resources.

Environmental resources can be classified as renewable, non-renewable or continuous.

Renewable resources can be naturally replaced if they are carefully managed. For example, fish are a renewable resource that we rely on to feed human populations and to support healthy marine environments.

Non-renewable resources cannot be renewed in a short time and are finite. For example, fossil fuels such as oil, coal and natural gas are non-renewable because they take thousands of years to be replaced.

Continuous resources are those resources that are never used up by humans. Examples include solar or wind energy.

environmental resource a material found in nature that is necessary or useful to people

uranium a dense grey radioactive metal used as a fuel in nuclear reactors

renewable resource a resource that can be naturally replaced if carefully managed

non-renewable resource a resource that cannot be renewed in a short time and is finite

continuous resource a resource that is never used up by humans

Think about all the resources you have used today from the time you woke up until the time you reached the school gate. Perhaps you used water to shower, brush your teeth or fill your water bottle. Consider all the different foods that had to be farmed to provide the ingredients for your breakfast and today's snacks. Refer to **FIGURE 2** to identify the environmental resources relied on to produce two products featured in this image. Finally, how did you get to school? If you used a form of transport, a resource likely powered it.

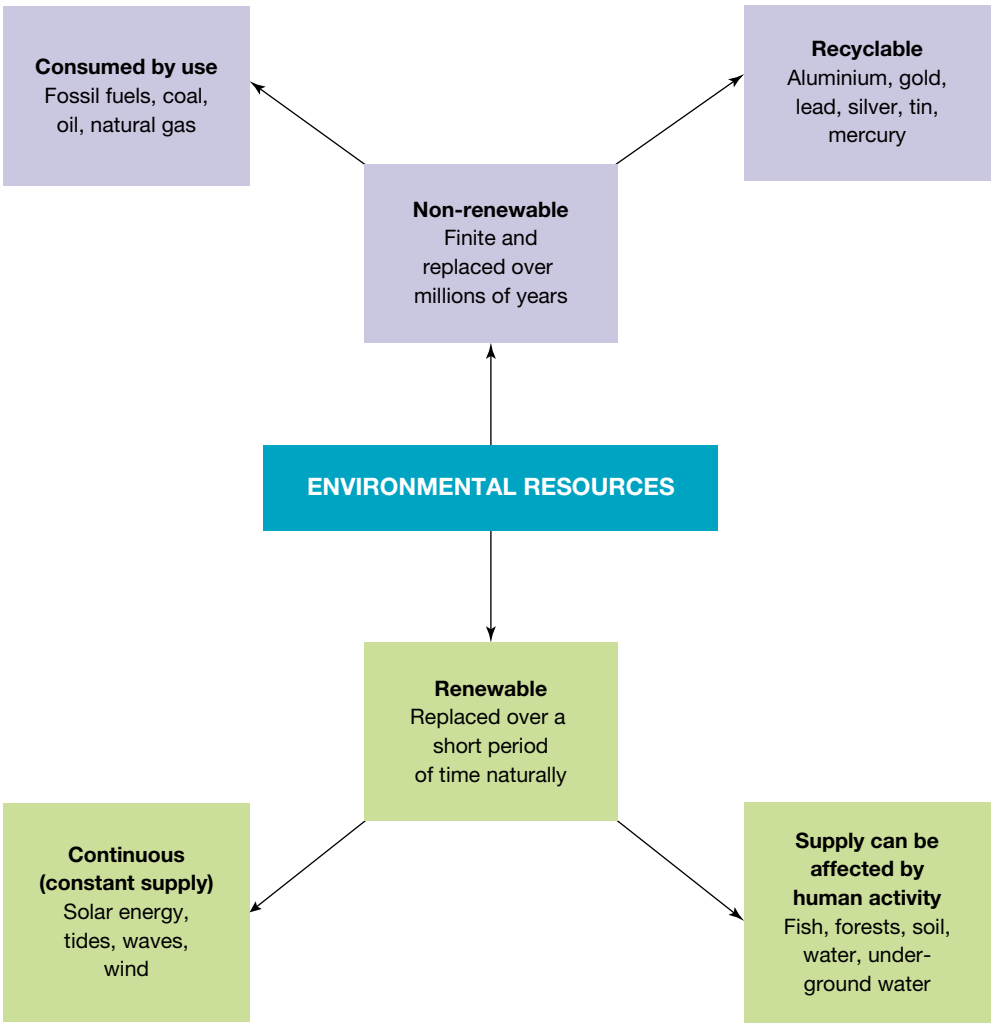
FIGURE 2 Many resources are required to provide a family with breakfast.

9.2.2 How do we classify resources?

Environmental resources either have a finite supply or a constant supply that will be replenished naturally. As **FIGURE 3** shows, the degree of human use and attitudes to resource management allows us to further classify environmental resources. The sustainable use of environmental resources ensures non-renewable resources are recycled and renewable resources are not exhausted beyond their capacity.

tlvd-10520

FIGURE 3 Environmental resources — renewable and non-renewable



9.2.3 What are continuous resources?

Environmental resources that are in constant supply and have an availability that is unaffected by human use are known as continuous. **FIGURE 4** shows a range of renewable environmental resources. Can you list the examples of continuous environmental resources?

FIGURE 4 Some sources of renewable energy: (a) solar, (b) biomass, (c) wind, (d) hydro-electric, (e) geothermal, (f) tidal

SkillBuilders to support skill development

- 8.8 Using topographic maps
- 8.9 Using alphanumeric grid references
- 8.12 Annotating a photograph

9.2 SKILL ACTIVITY: Communicating

Using the images presented in **FIGURE 4**, consider the most reliable and the least reliable energy-producing strategies shown in the images.

1. **Rank** all six of the renewable energy sources from the most reliable to the least reliable. **Justify** your ranking.
2. In your opinion, which of the activities are harmful to people or the environment in which they operate?
3. **Propose** how any of the strategies shown benefit the environment and/or communities.

9.2 Exercise

learnon

9.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 4	2, 5, 6	7, 8

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Check your understanding

1. What are environmental resources?
   - A. Resources that can be replaced over a short period of time.
   - B. Resources that are limited and will eventually run out.
   - C. Radioactive metals used as fuel in nuclear reactors.
   - D. Raw materials that occur in the environment and are necessary or useful to people.
2. **State** the difference between renewable and non-renewable resources.
3. Complete the following table by **listing** two examples of each type of resource.

Renewable	Non-renewable

4. **Identify** which of the following environmental resources are continuous.
   - A. Iron ore
   - B. Soil
   - C. Wind
   - D. Tidal
5. **Explain** what distinguishes environmental resources from non-renewable resources.
6. Which renewable resources are most affected by human activity?
   - A. Fossil fuels, coal, oil, natural gas
   - B. Solar energy, tides, waves, water and air
   - C. Fish, groundwater supply, forests and soil
   - D. Aluminium, gold, lead, silver, tin, mercury

Apply your understanding

Communicating

7. **Explain** what the sustainable use of environmental resources refers to.
8. Refer to **FIGURE 3** to answer the following questions.
   - a. **List** the two sources of renewable energy generated by found in the atmosphere.
   - b. **Identify** places in the world where these two power sources may be more effective. Give reasons for your answer.

LESSON
9.3 How is water used as a resource?

LEARNING INTENTION

By the end of this lesson you should be able to understand how water changes its form and location within the environment.

TUNE IN

Recent Winter Olympic Games venues have used snow machines to ensure events can proceed with reliable snow cover. According to a recent article in *The Conversation,* 'Snow machines expel a fine water mist into the cold, dry atmosphere. Some of the water in each droplet quickly evaporates, carrying away heat and lowering the temperature of the rest of the droplet to below its freezing point.' ('We couldn't have the Beijing Olympics without snow machines. How do they work, and what's the environmental cost?', published 14 February 2022.)

FIGURE 1 A snow machine in action.

1. Identify where and when the last three Winter Olympic Games were held.
2. Brainstorm a list of the water cycle processes you think the snow machines imitate.
3. Predict the local environmental consequences of using snow-making techniques.

9.3.1 The water cycle

All the water on Earth moves through a cycle that is powered by the sun. This cycle is called the water cycle, or **hydrologic cycle**. Water is constantly changing its location (through constant movement) and its form vapour, liquid or solid through processes such as evaporation, condensation and freezing.

Experts estimate that up to 70 per cent of the Earth's fresh water is locked in ice sheets in the Arctic, Greenland and Antarctica. This water is, therefore, a **potential resource** — it exists in a location and in a form in which it cannot be immediately used. Water is also a potential resource when it exists as a gas (water vapour), as salt water or as wastewater.

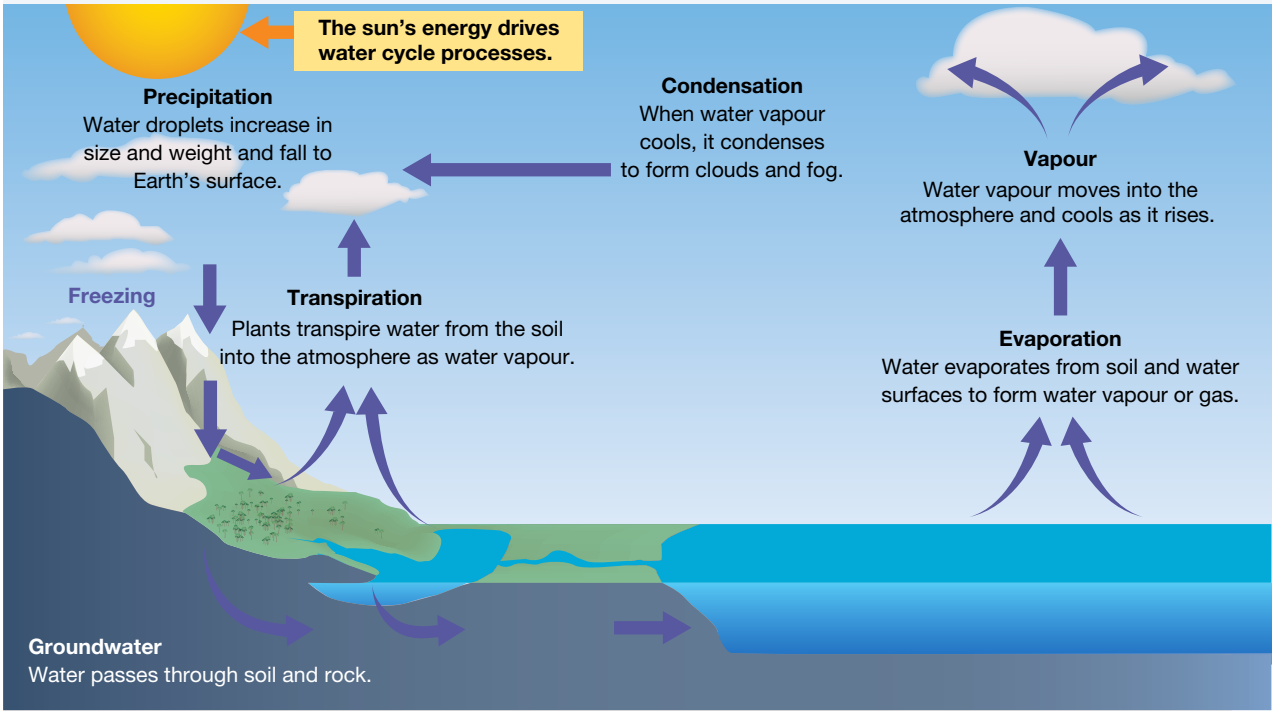
The model of the water cycle in **FIGURE 2** shows how water connects places. Water flows through the environment in different forms and is an essential resource for life. More liveable places are commonly situated on rivers and lakes to allow access to water and a reliable water supply. Rivers connect places and agriculture is connected to water supply (surface or groundwater).

hydrologic cycle another term for the water cycle

potential resource a resource that exists but is unusable in its current state, such as salt water, ice and water vapour

tlvd-10521

FIGURE 2 The operation of the water cycle



9.3.2 How long does water stay in one place?

Water can stay in one place very briefly or it can stay for many thousands of years. It has been calculated that water stays in the **atmosphere** for an average of nine days before it falls to Earth again as precipitation. Water stays in soil for between one and two months. If you live in an area that has experienced drought or a very long summer without rain, you may have noticed that the soil dries out and cracks form. Once the seasons change and it begins to rain, the soil absorbs water again and the cracks disappear.

Water spends between two and six months in snow and rivers but a lot longer in large lakes, glaciers, oceans and **groundwater**. The longest time water stays in one place is in the Antarctic ice sheets. Some ice core samples from Antarctica contain water that is 800 000 years old, but the average is about 20 000 years.

Some of the longest records of our climate have come from large ice sheets over three kilometres thick in Greenland and Antarctica. Ice core samples taken from these places reveal changes to our environment over several hundred thousand years.

FIGURE 3 A scientist working with ice core samples in Antarctica.

atmosphere the layer of gases surrounding Earth

groundwater a process in which water moves down from the Earth's surface into aquifers

9.3 SKILL ACTIVITY: Interpreting and analysing geographical data and information

Use reliable and accurate internet sources to **research** and complete the following.

1. **Identify** which place in the world has the highest recorded rainfall.
   a. What is the name of this place and in which country is it found?
   b. What is the average total rainfall per year (in metric)?
   c. What may be some of the locational factors that help explain this high rainfall total?
2. **Identify** which place in the world has the lowest recorded rainfall.
   a. What is the name of this place and in which country is it found?
   b. What is the average total rainfall per year (in metric)?
   c. What may be some of the locational factors that help explain this low rainfall total?
3. a. How reliable are the sources you used for this research?
   b. **State** one reason for your answer to part **a**.

9.3 Exercise

learnon

9.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 7	4, 6, 9	3, 5, 8, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
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Check your understanding

1. Select the correct option to complete the sentence. Water is a **renewable** / **non-renewable** resource.
2. **Identify** how water can be used as a resource.
   A. Drinking
   B. Washing
   C. Swimming
   D. Agriculture
   E. All of the above
3. **Explain** how the hydrologic cycle moves water across the Earth.
4. **State** if the following are true or false.
   a. The sun's energy interrupts the operation of the water cycle.
   b. It has been calculated that water stays in the atmosphere for an average of nine days.
   c. It is estimated that up to 50 per cent of the Earth's fresh water is locked in ice sheets in the Arctic.
   d. Water spends between two and six months in snow and rivers.
   e. Precipitation is when water vapour cools and condenses to form clouds and fog.
   f. More liveable places are commonly situated on rivers and lakes.
5. **Identify** the place where water stays for the longest time during the operation of the water cycle.

Apply your understanding

Communicating

6. **Explain** how water vapour is related to the process of evaporation.
7. **Explain** how groundwater and surface water are interconnected.
8. **Explain** how ice core samples can be used to help us understand changes to the water cycle over time.
9. **Recall** how surface water reaches the watertable to become groundwater.
10. **Describe** conditions that might result in a watertable rising or falling.

LESSON
9.4 How is groundwater a resource?

LEARNING INTENTION

By the end of this lesson you should be able to understand how groundwater moves through the Earth's surface and provides a valuable resource for people living in places with poor access to reliable rainfall.

TUNE IN

Many countries in western Asia and northern Africa use valuable groundwater resources to grow agricultural crops for local food and trade supplies. The image in **FIGURE 1** shows circular irrigation systems that transform desert areas into farming plots.

FIGURE 1 How can crops be grown in a hot desert, such as this one in Dubai?

1. What do you think irrigation is?
2. Brainstorm three challenges that irrigating low rainfall desert lands may create for farmers.
3. Is the water sourced for this farming project a renewable or non-renewable resource?

9.4.1 Groundwater and the water cycle

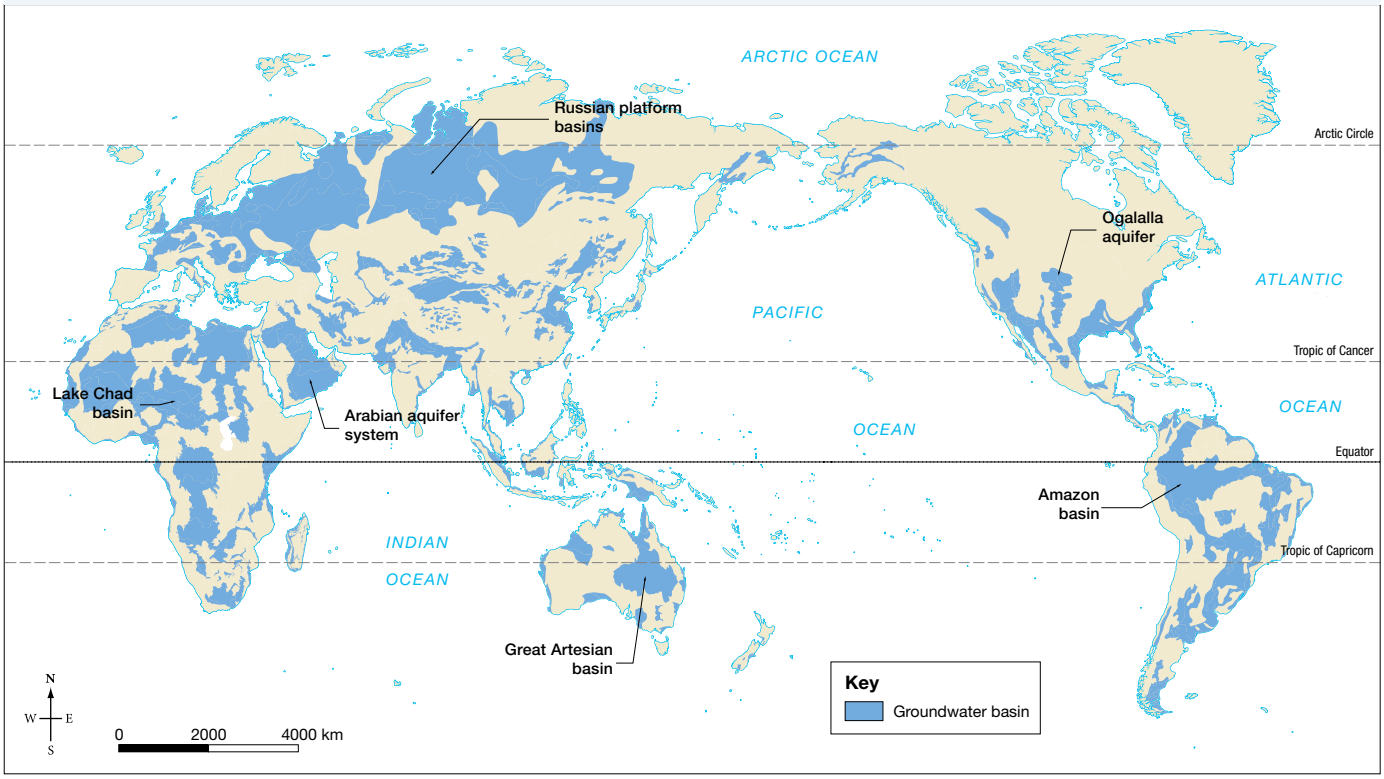
Approximately 1 per cent of Earth's water occurs as groundwater, compared with 0.4 per cent as rivers and lakes and 97.5 per cent as oceans. Groundwater is an important part of the water cycle that is found under the Earth's surface. Many settlements — especially those in arid and semi-arid areas — rely on groundwater for their water supply.

When rain falls to the ground, some flows over the surface into waterways (surface run-off) and some seeps into the ground (infiltration). Any seeping water moves down through soil and rocks that are permeable; that is, they have pores that allow water to pass through them. Imagine pouring water into a jar of sand or pebbles; the water would settle into the spaces between the sand or stones.

Groundwater is water held within water-bearing rocks, or **aquifers**, in the ground. These work like sponges. They hold water in the tiny holes between the rock particles.

aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater; water can move along an aquifer

FIGURE 2 The world's major groundwater basins



Source: BGR & UNESCO 2008: Groundwater Resources of the World 1 : 25 000 000. Hannover, Paris.

9.4.2 Artesian water

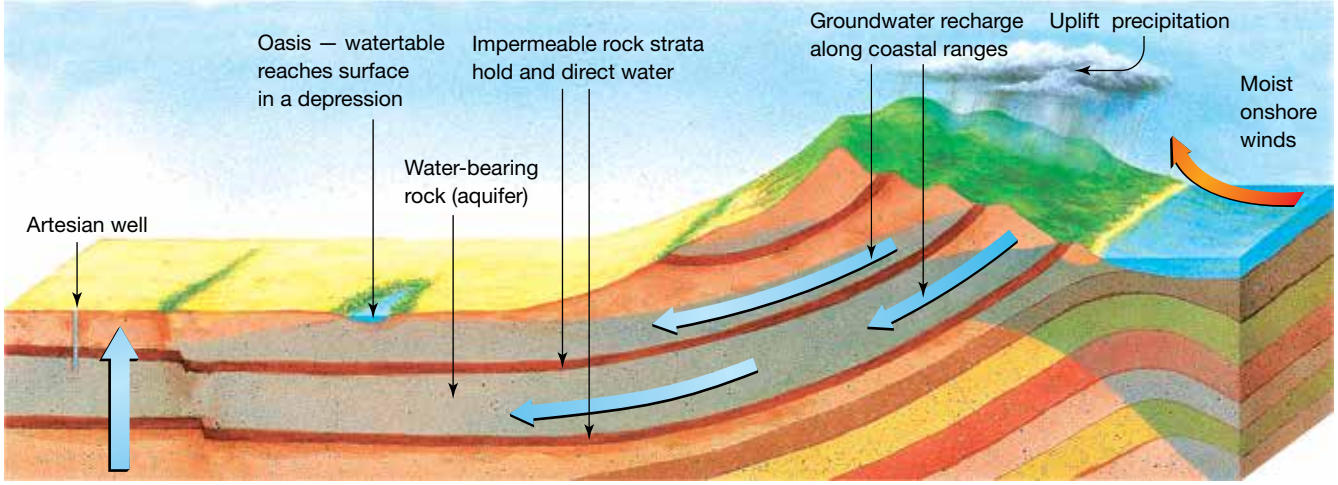
An **artesian aquifer** occurs between impermeable rocks. When a well is bored into an artesian aquifer, water often gushes out onto the surface. This flow will not stop unless the water pressure is reduced or the bore is capped (sealed).

Groundwater and surface water are interconnected — they depend on each other. Groundwater is only replenished when surface water seeps into aquifers. This is called groundwater recharge, (shown in **FIGURE 3** and it is affected by whether a lot of rain or a drought is occurring.

artesian aquifer an aquifer confined between impermeable layers of rock; the water in it is under pressure and can flow upward through a well or bore

tlvd-10522

FIGURE 3 How water moves from the east coast of Australia, where the rainfall is higher and more reliable, and enters the more porous rock layers



Groundwater is a vital resource for drinking, irrigation and industry use. Some industries bottle and sell spring and mineral water, or use it to make soft drinks and beer. Bore water may be used to water parkland, golf courses and crops. Groundwater is also important to the natural environment in wetlands and in supporting unique plants and animals. Groundwater keeps many of our rivers flowing, even during long periods without rain.

For many years now, people believed the supply of groundwater was unlimited. It is actually in danger of running out in some areas, while the large number of wells pumping water are destabilising land surfaces. Jakarta, the capital of Indonesia, and Mexico City, the capital of Mexico, are both sinking at an alarming rate due to groundwater depletion.

If people use more groundwater than is being recharged, aquifers may dry up. Groundwater is very slow-moving and can take many years to move into deep aquifers. For this reason, groundwater is a finite and non-renewable resource, and is often referred to as *fossil water*.

9.4 SKILL ACTIVITY: Questioning and researching using geographical methods

Bahariya Oasis is an ancient settlement located in the Sahara Desert region of Egypt. Agricultural products from the oasis were traded to the Nile Valley.

FIGURE 4 Bahariya Oasis

1. Use the **Bahariya Oasis** Google Earth link in the Resources panel to locate this place.
2. **Describe** the location of Bahariya Oasis in northern Africa.
3. What forms of land use can you see at or near this location?
4. **Suggest** at least three tourist activities available at this location.
5. Zoom out to view more of the surrounding countryside. Circular irrigation described in the Tune In feature in this lesson can be seen to the south of the area.
6. **Suggest** three threats to the local water supply that can be observed from the Google Earth image of Bahariya Oasis.

Resources

Google Earth Bahariya Oasis

9.4 Exercise

learnon

9.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 5, 8	2, 4, 7	3, 6, 9, 10

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Check your understanding

1. **Explain** how important groundwater is to Earth's water supply.
2. **Identify** what the term 'permeable' means.
   - A. A barrier that blocks everything
   - B. A source of renewable energy
   - C. A barrier that holds back some substances and lets others though
   - D. Pressure that occurs between impermeable rocks
3. What is groundwater recharge?
   - A. When water is trapped between impermeable layers of rock
   - B. When the pressure of the water in bores raises it above the land surface
   - C. When water naturally seeps or gushes from the ground
   - D. When surface water seeps into the soil and filters down to aquifers
4. **Explain** the difference between an aquifer and an artesian aquifer. You could use a diagram to help.
5. **Select** the correct options from the provided list to complete the following passage.

drop	rise	rain	bores
water	sunlight	bottom	aquifers

When there is a lot of _____, with much of it infiltrating (seeping into) the soil, the watertable will _____. When this happens, _____ do not have to be sunk as deeply. After extended drought periods, when groundwater is not recharged by rain, or if too much groundwater is being used without recharge, the watertable will _____. Bores need to be dug deeper to reach the _____.

Apply your understanding

Communicating

6. **Describe** how groundwater and surface water are interconnected.
7. **Create** a diagram to show how surface water reaches the watertable to become groundwater.
8. **Describe** the location of the world's groundwater regions.
9. **Explain** what the quality of bore water is like. Is it suitable for humans to drink?
10. Water is a renewable resource. **Explain** why groundwater is sometimes thought of as fossil water and as a non-renewable resource.

LESSON
9.5 How does groundwater connect people?

LEARNING INTENTION

By the end of this lesson you should be able to describe how groundwater promotes social connection in low rainfall environments, and elaborate on the spiritual connection of First Nations Australians to our land and its environmental resources.

TUNE IN

Water is a strong symbol of creation in First Nations Peoples of Australia art. The rainbow serpent is a key symbol of creation, but its journey from underground to the surface also represents groundwater rising to the top via springs. The creation of water sources and where to find them is often told in First Nations stories or through artwork.

FIGURE 1 *Lundari* by First Nations Australian artist Rover Thomas is a painting depicting the Barramundi dreaming site on Dunham River.

The Dreaming story 'How the water got to the plains' is one story that describes how billabongs appeared in the dry inland plains. Use the **How the water got to the plains** weblink in the Resources panel to hear the story told by Butchulla elder Olga Miller and then discuss the story as a group.

on Resources

Weblink How the water got to the plains

9.5.1 How do First Nations Peoples of Australia use ground water?

First Nations Peoples have lived in the Australian landscape since the beginning of the Dreaming, tens of thousands of years by European estimates, and they have had the knowledge to survive many changes and challenges. To access water in the country's dry regions, particularly in Australia's deserts, they have needed to know where to find groundwater.

Many groundwater sources throughout Australia have long been used by First Nations Australians. One of these sources is called a **soak**: groundwater that comes to the surface, often near rivers and dry creek beds, and which can be identified by certain types of vegetation. Another source is known as a **mound spring**: mounds of built-up minerals and sediments brought up by water discharging from an aquifer.

Mound springs of the Oodnadatta Track

The Oodnadatta Track is located in the north-east of South Australia. The track follows the edge of the Great Artesian Basin and the south-western edge of Kati Thanda–Lake Eyre and, along its route, groundwater makes its way to the surface in several locations. The Great Artesian Basin covers more than 20 per cent of the Australia landmass.

The Oodnadatta Track crosses the traditional lands of three Aboriginal nations. In the south, between Lake Torrens and Kati Thanda–Lake Eyre, are the Kuyani people; most of the west of Kati Thanda–Lake Eyre is the land of the Arabana people; and to the north is the land of the Arrernte people.

Many springs have cultural significance today for local peoples, whose ancestors relied on the springs as water sources and as sacred sites for important ceremonies. Knowledge of the springs in this region has been passed down over many generations through **Dreaming** stories.

This knowledge was also passed on to explorers and colonisers. John McDouall Stuart followed this track to complete the first crossing of Australia's interior from south to north in 1862; the overland telegraph was constructed along its pathway; and the Great Northern Railway, which made the land of the Northern Territory accessible for European occupation, followed the same route.

FIGURE 2 Location of the Oodnadatta Track and Great Artesian Basin, one of the world's largest groundwater basins

Source: Spatial Vision/Geoscience Australia

Mound springs were very important for First Nations Peoples of Australia. The springs provided reliable water supplies in a very harsh, dry environment as well as being trading and spiritual places.

Witjira-Dalhousie Springs

Witjira-Dalhousie Springs is a popular oasis in the arid desert region of the northernmost part of South Australia. The Lower Southern Arrente people have used the area for thousands of years as a source of food, shelter and medicine, as well as a special place of cultural significance. Fed by the thermal waters of the Great Artesian Basin, the water in Witjira-Dalhousie Springs is between 34 and 38 °C.

soak place where groundwater moves up to the surface

mound spring mound formation with water at its centre, formed by minerals and sediments brought up by water from artesian basins

Dreaming The Dreaming in First Nations spirituality, the beginning of earth and the cycles of life and nature, explaining creation and the nature of the world, the place that every person has in that world and the importance of ritual and tradition

The springs were strung out over hundreds of kilometres, and they formed part of an important network of trading and communication routes across Australia. As people moved around the region, they traded goods and communicated with other nations and groups. This interconnection allowed them to trade resources such as ochre, stone and wooden tools, bailer shells and pituri. Pituri is a spindly shrub used by First Nations Peoples during ceremonies and to spike waterholes to catch animals for food.

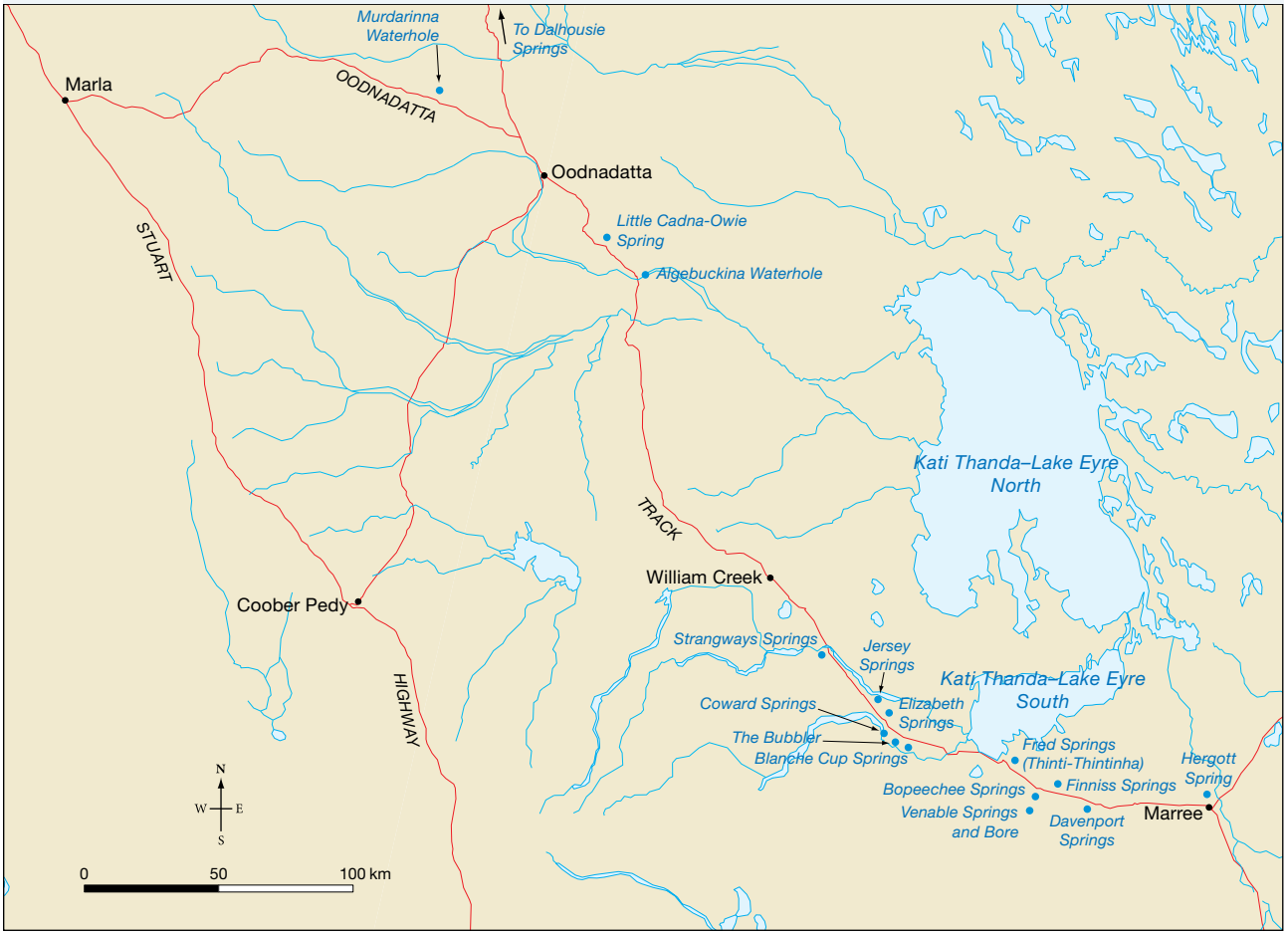
FIGURE 3 Witjira-Dalhousie Springs

9.5.2 Case study: Locating water

First Nations Australians' knowledge of the land and how to survive in it has been passed from generation to generation through Dreaming stories. During the dry seasons and periods of drought, they congregated at the mound springs. These springs were linked by First Nations songs and Dreaming stories and are often connected to rain-making rituals.

tlvd-10523

FIGURE 4 Groundwater springs along the Oodnadatta Track



Source: Redrawn with permission from the SA Arid Lands Natural Resources Management Board; © Copyright Commonwealth of Australia Geoscience Australia 2006

Dreaming stories

Thutirla Pula (Two Boys Dreaming)

This is one of the most important stories of the Wangkangurru and other peoples of central Australia. Thutirla Pula is how the spirits of the Dreaming first crossed the desert they call Munga-Thirri (land of sandhills). The story tells of two boys crossing the Simpson Desert, through Queensland and back to just north of Witjira (Dalhousie) in the Finke River area. The songline contains information on every waterhole or soak that was known in the Simpson Desert. Following this songline meant you could cross the Simpson Desert using available groundwater along the way, taking 600 kilometres off the usual journey south of the Simpson Desert to Kati Thanda–Lake Eyre, then back north along the Diamantina River.

FIGURE 5 The Old Bubbler on the Oodnadatta Track

Thinti-Thintinha Spring (Fred Springs)

The willy wagtail (or thinti-thintinha) danced his circular dance to create this spring and the surrounding soils, which are easily airborne in windy conditions. The moral to the story is that while it is easy to catch the skilful little willy wagtail, you must never do so because of the terrible dust storms that may follow.

9.5 SKILL ACTIVITY: Interpreting and analysing geographical data and information

1. Complete the **Oodnadatta Track** interactivity in the Resources panel.
2. Use Google Earth and enter the search terms 'Oodnadatta' or 'William Creek' to locate the Oodnadatta Track. You can also study **FIGURE 6** below.

FIGURE 6 Aerial view of the William Creek town, South Australia

a. **Describe** the landscape you see.
b. Why is finding groundwater so important in this ***environment***?

3. Use internet research to **investigate** the value of the spring water found in one area of inland Australia.
   a. **Locate** a secondary source that shows what the springs meant to early explorers; for example, select information from an explorer's journal to present a viewpoint.
   b. **Locate** a secondary source that shows what the springs meant to First Nations Australians and select information from it to **present** a viewpoint.
   c. **Locate** evidence to show the importance of springs water sources as social gathering sites.

Resources

Interactivity Oodnadatta Track (int-3079)

9.5 Exercise

learnon

9.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3	5, 8	4, 6, 7

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Check your understanding

1. Why are Dreaming stories important to First Nations Peoples in the Oodnadatta region?
   A. They provide entertainment.
   B. They provide people with knowledge about where water could be found in the Oodnadatta region.
   C. They provide knowledge about where food could be hunted anywhere in Australia.
   D. They provide people with knowledge about agriculture.
2. How do Dreaming stories help people find water in the Oodnadatta region?
   A. By providing information about the rainfall patterns
   B. By including descriptions of place names and specific locations
   C. By providing information about where the lakes and rivers are
   D. By providing information about how to best extract water from the ground
3. A soak is where groundwater can be found at the surface and can be identified by certain types of vegetation. True or false?
4. The Oodnadatta track follows the edge of the Great Artesian Basin and crosses the traditional lands of three Aboriginal nations. **Recall** the names of these three nations.
5. **Explain** the significance of groundwater soaks, mounds and springs to European colonisers and explorers of Australia's inland areas.

Apply your understanding

Communicating

6. **Explain** how Dreaming stories help to identify the cultural value placed on these water environments.

Interpreting and analysing geographical data and information

7. Witjira-Dalhousie Springs in the Great Artesian Basin is a cluster of around 60 mound springs that contain water that is approximately 34 to 38 °C. Study **FIGURE 4** and **propose** a reason the water in Witjira-Dalhousie Springs may be so warm.

Concluding and decision-making

8. The Witjira-Dalhousie springs is a very popular tourist destination. **Suggest** three challenges that tourists may create for the team who manages this precious water resource.

LESSON
9.6 How is water distributed across the world?

LEARNING INTENTION

By the end of this lesson you should be able to describe the distribution of water across the world and explain the impact of climate change on water distribution.

TUNE IN

The quality of our water supply differs across the city or the state we live in.

1. Brainstorm any factors you think might influence the quality of the water supply that comes through our water taps.
2. How would you rate the water quality of the water supplied to your home? Explain your rating.
3. Create a list of your three most important factors when judging water quality (for example, the taste of the water you drink).

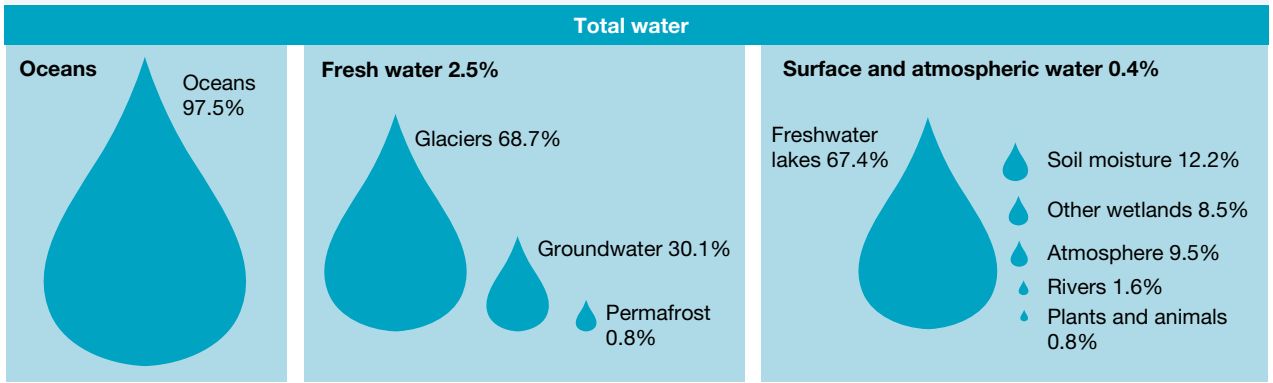
FIGURE 1 How do we measure water quality?

9.6.1 The world's water

Water is vital to our survival and essential to most human activities. Although the Earth appears blue from space, not much of the water we see is available for use. And of the useable fresh water that can be seen, access to it is unequal across the globe.

Water covers about 75 per cent of the Earth's surface. Yet, as **FIGURE 2** shows, almost all this water (97.5 per cent) is salt water and only 2.5 per cent of the world's water is fresh. More than two-thirds (69.5 per cent) of this fresh water is locked up in glaciers, snow, ice and permafrost. Water that exists as salt water, ice and water vapour is known as a potential resource. Of the remaining amount, 30.1 per cent is found in groundwater. Only 0.4 per cent is left — found in rivers, lakes, wetlands and soil as well as in the bodies of animals and plants.

FIGURE 2 The distribution of water on Earth



9.6.2 Global rainfall

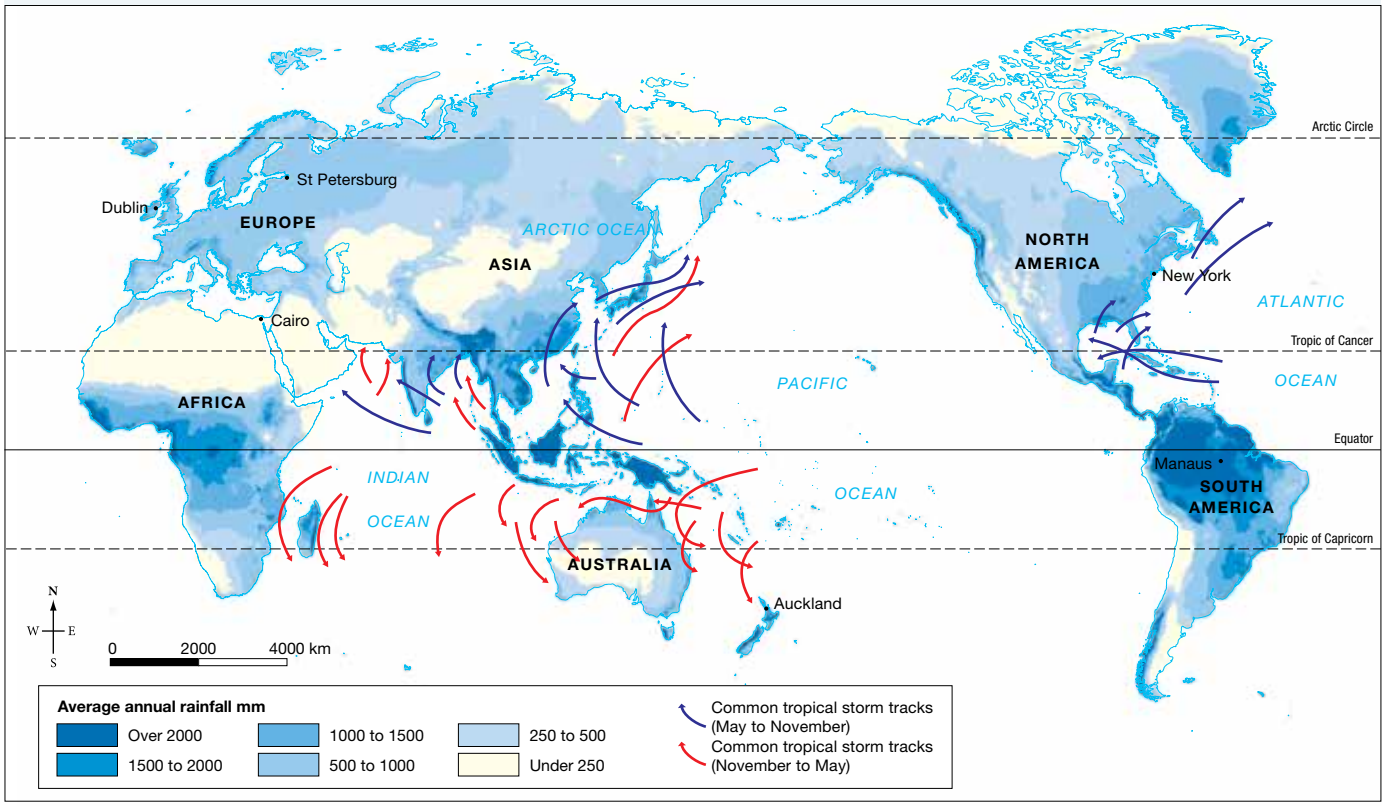
int-8939

tlvd-10524

The Earth's water is constantly moving. Rainfall patterns show which world regions receive more rain than others. The amount of rainfall, or **precipitation**, is related to the amount of water available for people to use. **FIGURE 3** shows the distribution of global rainfall, and comparisons can be made between Australia and other regions.

precipitation a form of water from the atmosphere; e.g. rainfall, snow

FIGURE 3 The distribution of global rainfall



Source: WorldClim

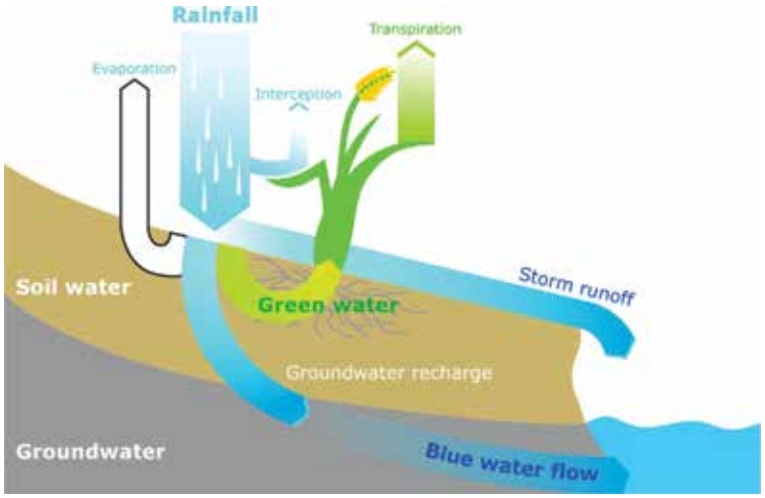
9.6.3 Green and blue water

tlvd-10525

Water is sometimes categorised as blue water and green water. Water that does not run into streams or recharge groundwater but is stored in the soil or stays on top of the soil or vegetation is known as green water. This water eventually evaporates or transpires through plants (see **FIGURE 4**), and is used by crops, forests and grasslands.

Blue water refers to water that flows over the Earth's surface or from groundwater sources. It is available for use. The amount of blue and green water available changes throughout the year, from year to year, and according to changes in the environment.

FIGURE 4 Green water can be lost through evaporation or transpiration.



9.6.4 Climate change and impact on rainfall and run-off

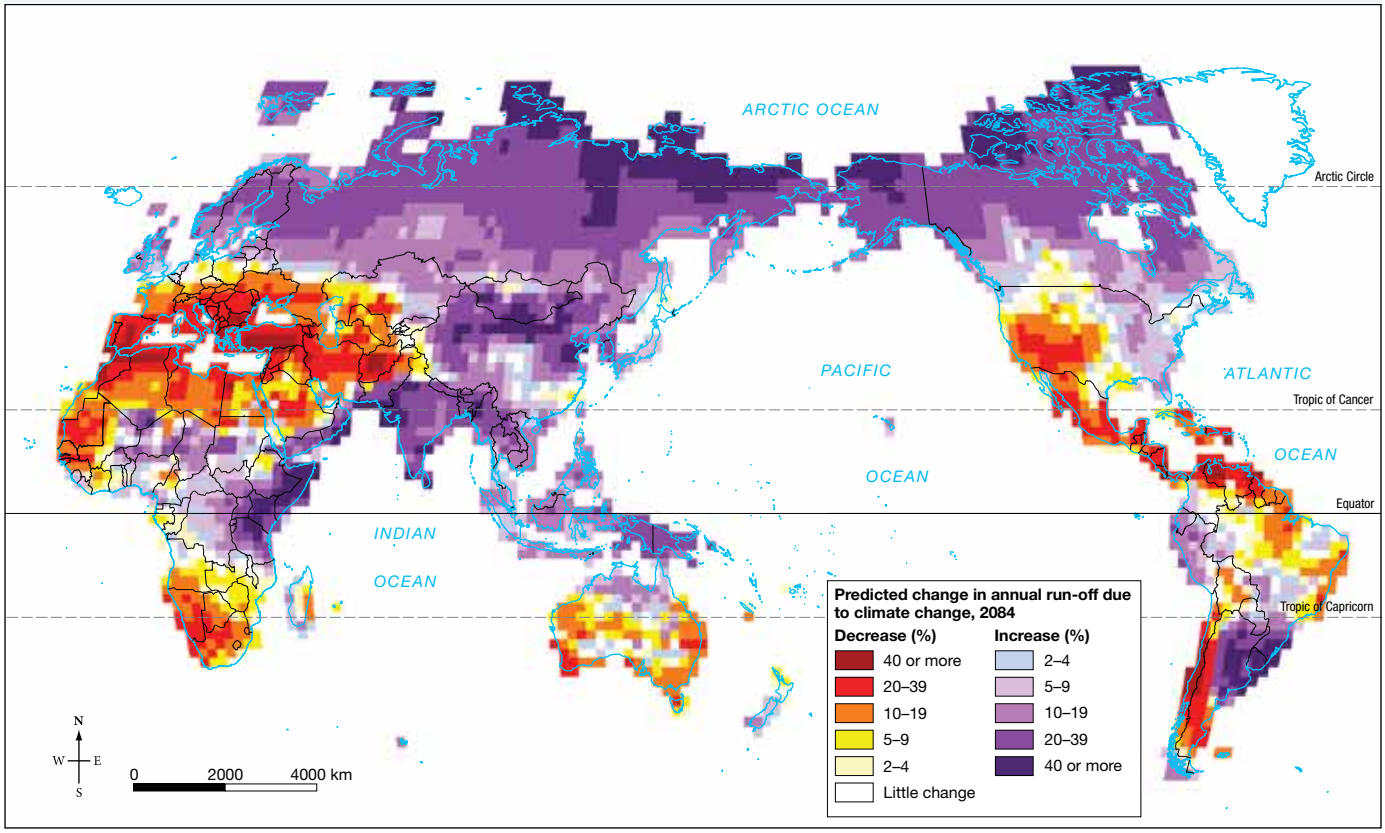
The majority of climate scientists believe that **climate change** will have an impact on rainfall patterns and run-off. Climate models as used in **FIGURE 5** show that areas in the northern latitudes are likely to experience more rain, and areas closer to the equator and mid-latitudes will receive less rain. Some regions will experience droughts, while others will experience high rainfall and even flooding.

climate change any change in climate over time, whether due to natural processes or human activities

tlvd-10526

int-8957

FIGURE 5 Predicted change in annual run-off due to climate change, 2084



Source: Geophysical Fluid Dynamics Laboratory, National Oceanic and Atmospheric Administration

Already, in the last 100 years, global rainfall patterns have changed. In some areas such as North America, South America, northern Europe, and northern and central Asia, rainfall has increased significantly. In other areas such as the Sahel, the Mediterranean, southern Africa and parts of Asia, rainfall has decreased.

9.6 SKILL ACTIVITY: Communicating

1. Work in groups of three to list what might happen to people and the environment in regions that receive the following.
   a. More rainfall than they do now
   b. Less rainfall than they do now
2. **Create** a consequence chart for each.

9.6 Exercise

learnon

9.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4	3, 6	5, 7, 8

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- Receive immediate feedback
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Check your understanding

1. **State** the percentage of the world's water that is the following.
   a. Salty
   b. Available for use by people
2. What percentage of the world's freshwater is locked up in glaciers?
   A. 68.7 per cent
   B. 71.9 per cent
   C. 79.3 per cent
   D. 83.9 per cent
3. How will climate change affect rainfall patterns?
   A. Some places will receive more rainfall and others less.
   B. There will be no change.
   C. All places will receive more rainfall.
   D. All places will receive less rainfall.
4. a. **Outline** the difference between blue and green water.
   b. **List** two things that might change the amount of blue and green water available.
5. Study **FIGURE 5** and an atlas.
   a. Select three regions from the following list that are predicted to receive more run-off due to climate change.
      A. Northern, southern and north-east Africa
      B. Europe — Scandinavian countries and the United Kingdom
      C. South America — south-east Brazil, Uruguay and northern Argentina
      D. Australasia — northern Australia and the South Island in New Zealand
      E. South America — eastern Argentina and Chile, Brazil and the northern countries, and all of Central America
   b. Select three regions from the following list that are predicted to receive less run-off due to climate change.
      A. Northern, southern and north-east Africa
      B. Europe — Scandinavian countries and the United Kingdom
      C. South America — south-eastern Brazil, Uruguay and northern Argentina
      D. Australasia — northern Australia and the South Island in New Zealand
      E. South America — eastern Argentina and Chile, Brazil and the northern countries, and all of Central America

Apply your understanding

Interpreting and analysing geographical data and information

6. Study **FIGURE 3**. **Determine** which of the following statements are true and rewrite any false statements to make them true.
   a. Most places with very low rainfall have lower run-off.
   b. All places with very high rainfall experience increased run-off.
   c. The places with the greatest change in run-off will be northern Russia and northern Canada.
7. Study **FIGURES 3** and **5**. **Describe** how much rain falls in North Africa and West Asia (the Middle East).
8. Study **FIGURES 3** and **5**. **Identify** what is predicted to happen to annual run-off in the regions of North Africa and West Asia as a result of climate change. What impact might this have on people and the environment?

LESSON
9.7 How does Australia's climate affect its water availability?

LEARNING INTENTION

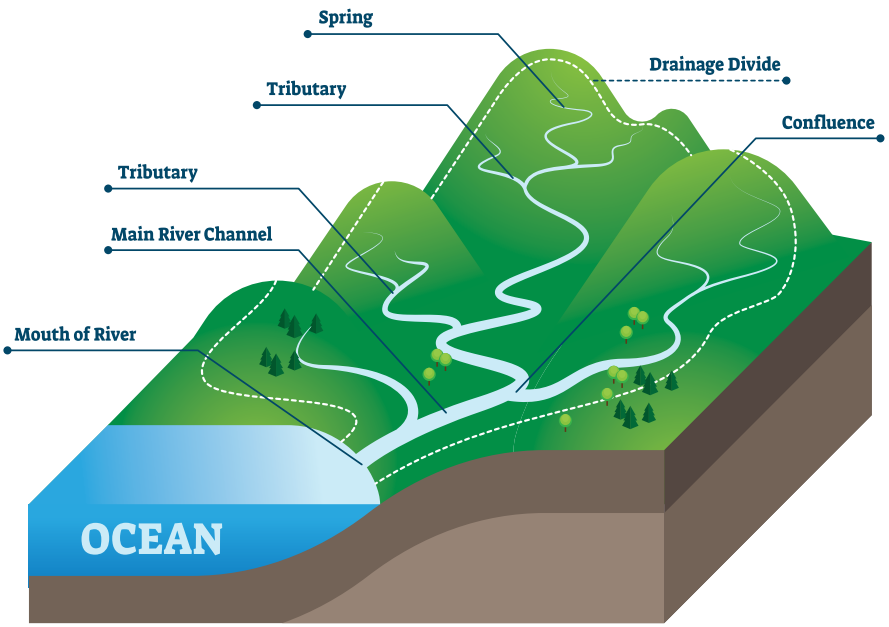
By the end of this lesson you should be able to explain how Australia's climate affects water availability and describe how Australia's different climate areas affect water availability.

TUNE IN

Most of the water that Australians use is found in surface water such as the drainage basin shown in **FIGURE 1**.

1. What direction is this river flowing towards? What evidence supports this response?
2. What do you notice about changes to the shape of the river and to the way it moves as it makes its way to the sea?
3. Brainstorm four ways humans could capture water in this drainage basin for future use.

FIGURE 1 How drainage basins work



9.7.1 Dry, variable and evaporated

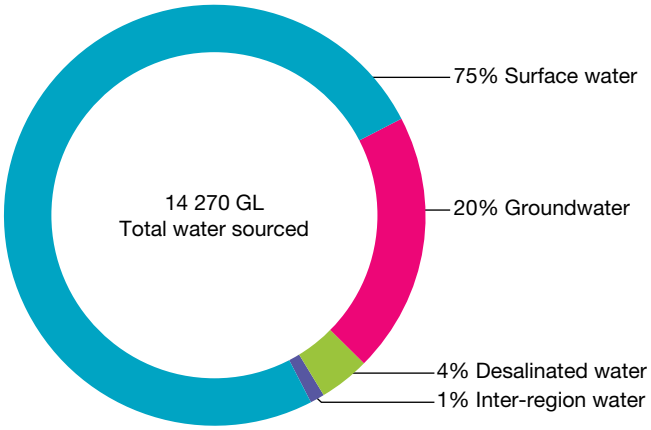
Australia is the driest inhabited continent (only Antarctica is drier), and very little fresh water is available for our use. Rain falls unevenly across the country and from season to season.

The driest part of Australia is around the Lake Eyre Basin, and the wettest locations are places in north-east Queensland and western Tasmania.

The availability of Australia's water resources varies with environmental factors such as climate, rainfall and evaporation.

As **FIGURE 2** shows, 75 per cent of water used in Australia is taken from surface water and 20 per cent of water is taken from groundwater supplies.

FIGURE 2 Sources of water used in Australia, 2019–20



9.7.2 Australia's climate

Weather refers to the daily changes in the atmosphere; however, climate is the average condition of the atmosphere measured over a long period of time. The average totals of rainfall and temperature are useful when climate patterns are being compared.

Australia's climate pattern is shown in **FIGURE 3**. Notice the changes that take place with latitude and distance from the coast.

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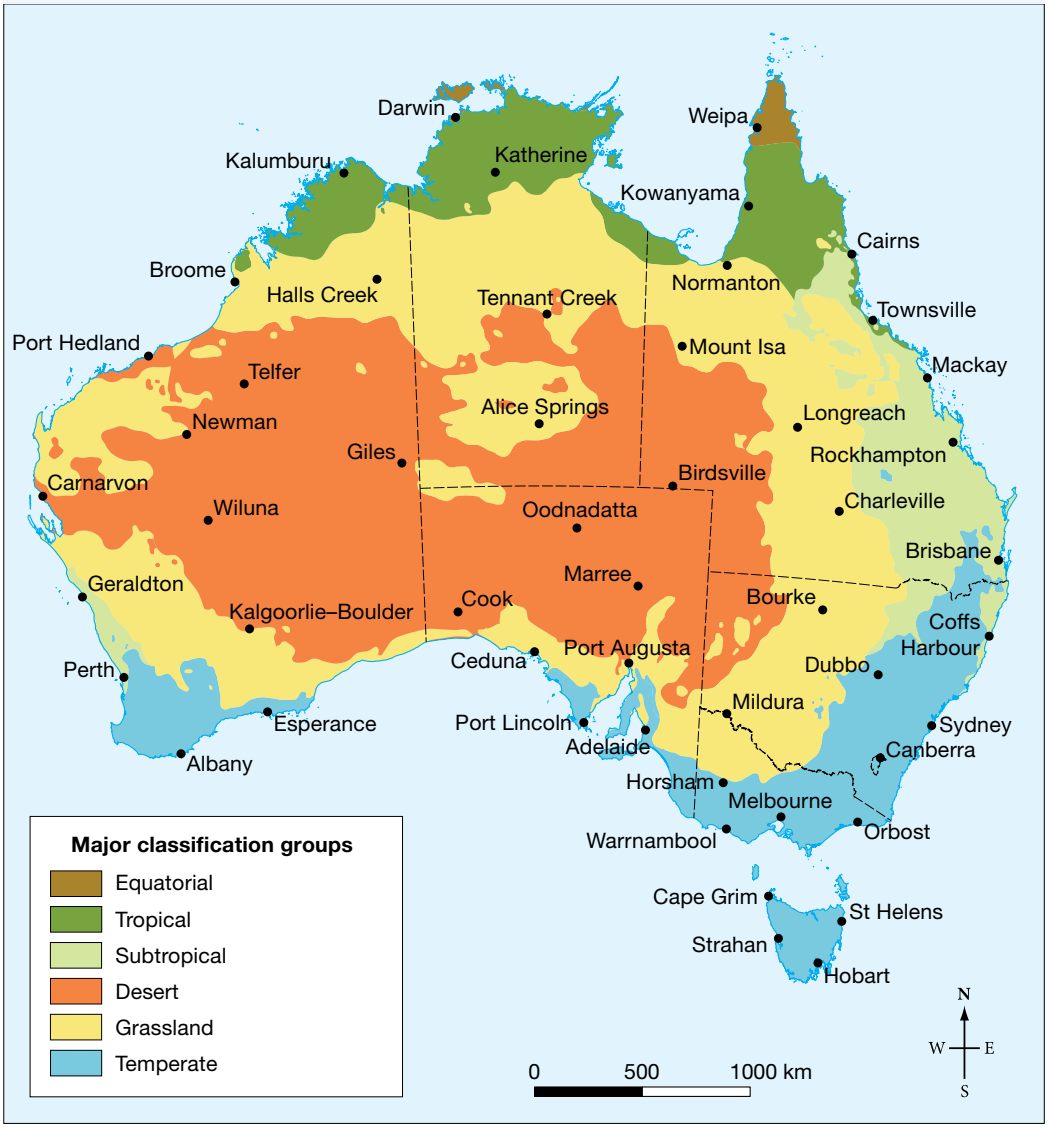
tlvd-10527

FIGURE 3 Climate zones of Australia



Source: Map redrawn by Spatial Vision © Copyright Commonwealth of Australia 2022, Bureau of Meteorology.

9.7.3 Water variability

Rainfall variability is the way rainfall totals in a given area vary from year to year. For example, if an area has low rainfall variability, it means rainfall will tend to be consistent from year to year. Many coastal areas show this kind of rainfall pattern. In contrast, high rainfall variability means rainfall is likely to be irregular from one year to the next; heavy rainfall may occur in some years and little or no rainfall in

rainfall variability the change from year to year in the amount of rainfall in a given location

others. Desert areas in central Australia tend to have low rainfall and high rainfall variability. Refer to **FIGURE 4** and **5** to compare Australia's average annual rainfall with its rainfall variability.

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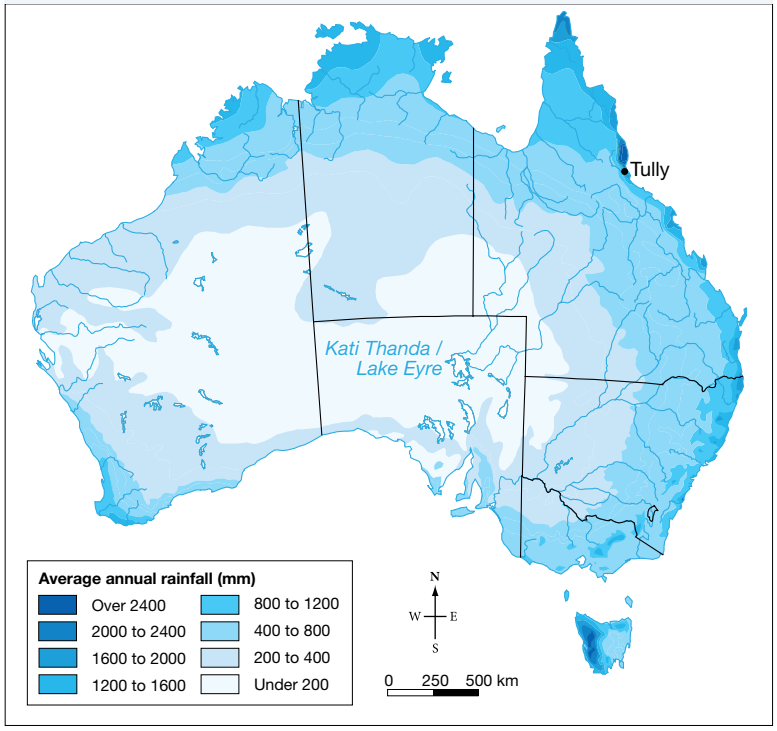
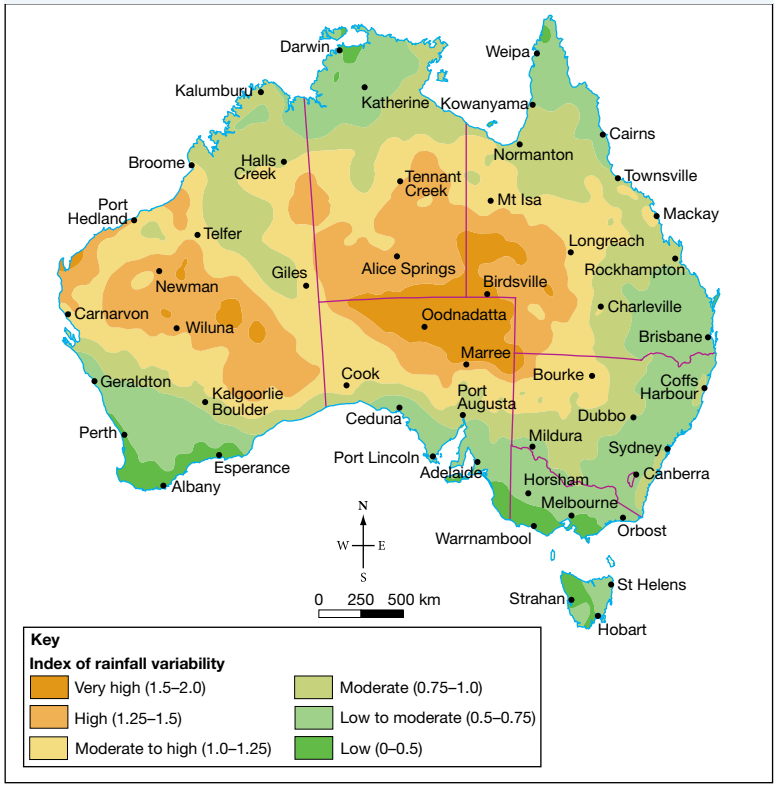
FIGURE 4 Australia's average annual rainfall



Source: Bureau of Meteorology 2003, on the Australian Water Map, Earth Systems Pty Ltd

int-7777

FIGURE 5 Australia's rainfall variability



Source: MAPgraphics Pty Ltd, Brisbane

9.7.4 Evaporation

A challenge for Australians wanting to use water as a resource is that most rainfall does not end up in rivers; much of it evaporates. Of all the water carried by the world's rivers, Australian rivers contain only 1 per cent of that total — even though Australia has 5 per cent of the world's land area. On average, only 10 per cent of our rainfall runs off into rivers and streams or is stored as groundwater. This figure drops to 3 per cent in dry areas and rises to 24 per cent in wetter places. Areas in central Australia are very dry and, as a result, have high **evaporation** rates.

Relative humidity is a measure of the air's moisture content expressed as a percentage of the maximum moisture the air can contain at a certain temperature. Warm air can contain more moisture than cool air.

Relative humidity tends to be higher in coastal regions, as is rainfall, because areas with a lot of surface water have high evaporation. It is also higher in the parts of Australia that have very high rainfall, such as north Queensland and western Tasmania.

evaporation the process by which water is converted from a liquid to a gas and thereby moves from land and surface water into the atmosphere

relative humidity the amount of moisture in the air

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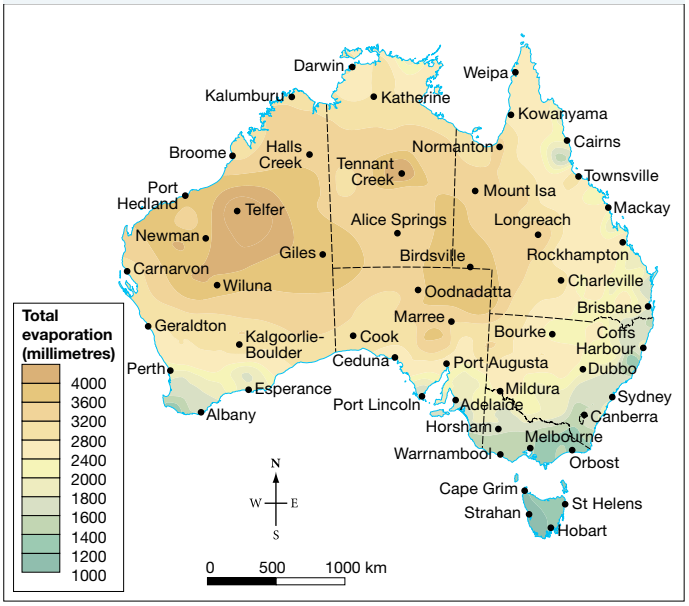
int-7779

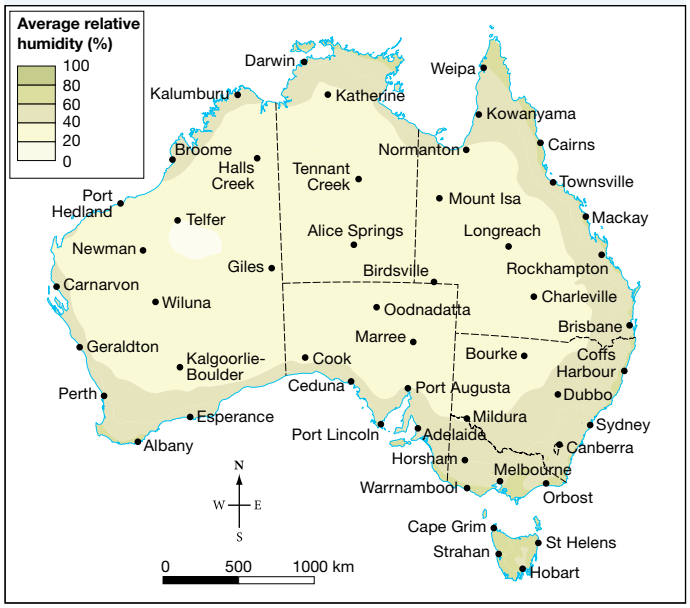
tlvd-10529

FIGURE 6 Average annual evaporation, Australia



Source: Bureau of Meteorology

FIGURE 7 Average relative humidity across Australia



Source: Bureau of Meteorology

9.7 SKILL ACTIVITY: Communicating

1. Find the place where you live on the map of Australia. Study **FIGURES 5, 6** and **7** in this lesson and complete a table similar to the one provided. Compare where you live with another place in your state or territory, and with a place a long way from where you live.

	Average rainfall	Rainfall variability	Average evaporation	Relative humidity
Where I live: _____				
Another place in my state/territory: _____				
A place far from where I live: _____				

2. **Conduct research** online to **list** some of the short-term effects that drought can have on Australia.
3. **Predict** some long-term impacts that Australia and its people would experience if drought continued for up to ten years.

9.7 Exercise

learnon

9.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3	4, 5, 6	7, 8

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Check your understanding

1. Select the correct options from the list provided to complete the following statement about rainfall variability.

amount	high	change	particular
more	irregular	variability	

Rainfall variability is the _____ from year to year in the _____ of rainfall in a _____ location. _____ variability means that rainfall is likely to be _____ from year to year.

2. **Identify** the two regions that receive the most rainfall in Australia.
   - A. South-east Queensland and eastern Tasmania
   - B. North-east Queensland and western Tasmania
   - C. Southern Victoria and northern Tasmania
   - D. New South Wales and the Northern Territory
3. Relative humidity is a measure of the air's moisture content at a certain temperature. True or false?
4. Study **FIGURE 4**. **Identify** where the driest part of Australia is located.
5. Study **FIGURE 5**. **Identify** which parts of Australia have the most variable rainfall.

Apply your understanding

Interpreting and analysing geographical data and information

6. Study **FIGURES 4** to **7**. **Describe** the interconnections between these features of our climate.
7. Use **FIGURES 4, 6** and **7** to record the following statistics for Tennant Creek in the NT.
   - a. Total evaporation
   - b. Average relative humidity
   - c. Average rainfall
8. a. Refer to **FIGURES 3** and **5**. **Determine** the climate zone in Australia that has the most rainfall variability and the climate zone that has the least rainfall variability.
   b. **Predict** the factors that may contribute to this variation in rainfall reliability across Australia.

LESSON
9.8 Investigating topographic maps: The value of water in Noosa

LEARNING INTENTION

By the end of this lesson you should be able to describe perceptions of the social, cultural and economic value of water at Noosa.

9.8.1 Noosa's beaches and rivers

Noosa is about 140 kilometres north of Brisbane, Queensland, between the mouth of the Noosa River and the headland of Noosa National Park. With its beaches and rivers, Noosa demonstrates how water can have value in different ways.

Noosa is a popular tourist destination and, as such, the water at nearby beaches and in local rivers and lakes contributes economic value to the area. Hotels with water views will charge tourists higher prices than those without water views. Similarly, Noosa's water has an aesthetic value — it is visually appealing and is part of the attraction of Noosa. People enjoy looking out to the ocean or over the river. The aesthetic and social value of water helps visitors relax and unwind, and the many water-based activities in Noosa such as cruises, canoeing, surfing and kite-surfing contribute to the culture of place.

FIGURE 1 Visitors enjoy the spectacular views from Noosa National Park.

FIGURE 2 An oblique aerial photograph of Noosa, 2009

FIGURE 3 Many activities for holiday makers at Noosa are water-based.

int-8955

FIGURE 4 Topographic map extract of Noosa

Source: Data based on QSpatial, State of Queensland (Department of Natural Resources, Mines and Energy, Department of Environment and Science), http://qldspatial.information.qld.gov.au/catalogue/

Resources

eWorkbook	Investigating topographic maps — The value of water in Noosa (ewbk-10690)
Digital document	Topographic map of Noosa (doc-39380)
Video eLesson	Investigating topographic maps — The value of water in Noosa — Key concepts (eles-6011)
Interactivity	Investigating topographic maps — The value of water in Noosa (int-8955)
Google Earth	Noosa Heads

9.8 Exercise

learnon

9.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2	3, 5	4, 6

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Check your understanding

1. **State** the contour interval of the map in **FIGURE 4**.
2. **State** the feature at the following area references.
   a. AR0376
   b. AR0470
   c. AR0583.
3. **State** the spot height at AR1081.

Apply your understanding

Communicating

4. **List** different ways in which people use the water around Noosa. What evidence is shown on the map for these uses?
5. **Explain** why you think the settlements around Noosa have developed in their current locations. Support your answer with observations from **FIGURE 4**.

Concluding and decision-making

6. **Predict** how increased tourism and development around Noosa may have an impact on the value of water in the region in the future. In your answer, refer to the economic, aesthetic and cultural/spiritual value of water.

LESSON
9.9 Does everyone have enough water?

LEARNING INTENTION

By the end of this lesson you should be able to identify and explain the three main uses of water by people, and describe what virtual water is and how it affects water consumption.

TUNE IN

Many people are unaware of how much water is used to grow or manufacture common items that we use every day. For example, do you know how much water is used to create the clothes you wear?

Brainstorm the steps involved in creating the T-shirt shown in **FIGURE 1**. Consider the following to help you.

1. What crops are grown to produce the fabric?
2. Identify two processes required to colour and to clean the fabric.
3. How would water be used to produce this garment from the farm to the shops?
4. What is the quality of the water that remains after the garment has been washed and colour dyes have been used?

FIGURE 1 A tie-dyed T-shirt

9.9.1 Water as an environmental resource

All people use water in three main ways: growing food, producing goods and electricity, and using it in the home. The amount of water consumed for each of these uses differs from one place to another. A problem that we face as a global community is that while the total amount of fresh water is fixed, the amount used per person is increasing.

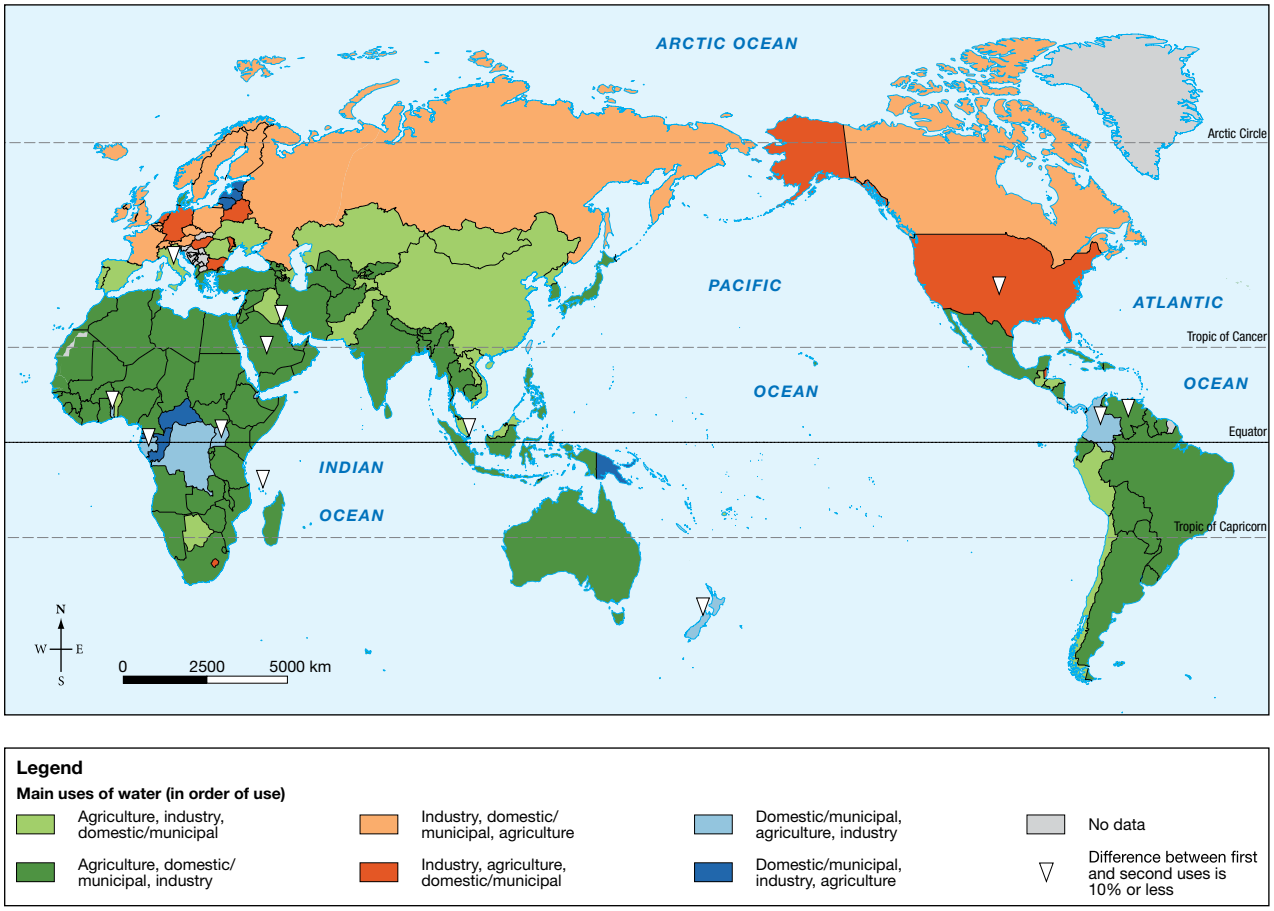
The global average of water use is 1240 cubic metres per person, per year. Some countries such as the United States and Thailand consume nearly twice as much as the global average. Peru and Somalia are examples of countries that consume the least amount of water per person.

FIGURE 2 shows that most of the world's water is used in agriculture, to grow food for the world's increasing population. This is especially the case in the drier parts of the world such as northern Africa and western Asia, where rainfall to grow crops or grass for animals is not enough. A strong interconnection exists between the amount of rainfall in a region and the amount of water used in agriculture.

FIGURE 3 shows how water use varies by region; however, countries within these regions may show a different pattern of water use. In some countries, the water used in agriculture and industry is greater than the amount of water used in homes for domestic use. In other places, people consume more water for domestic use than for either agriculture or industry.

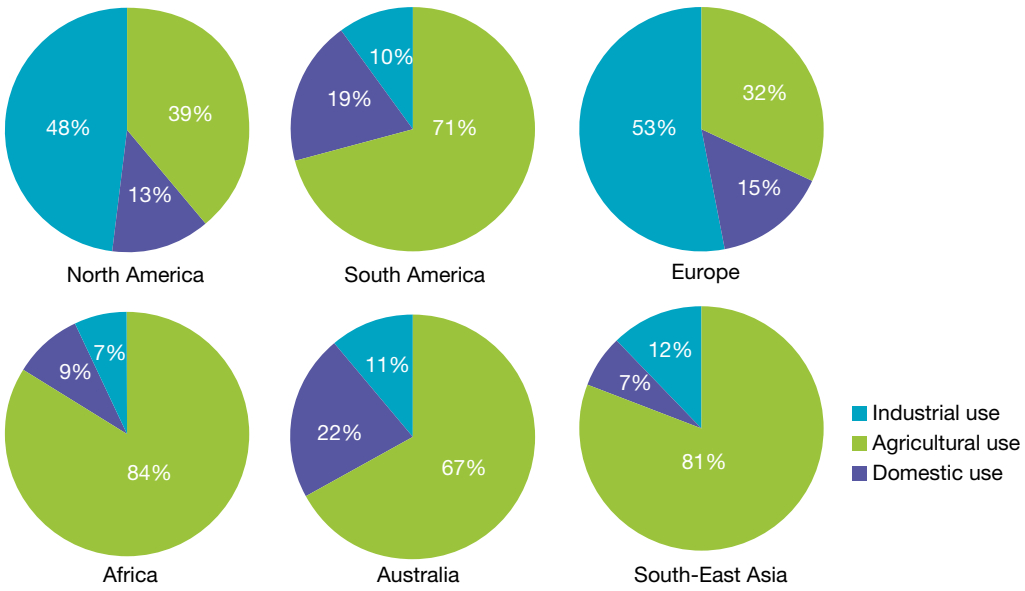
int-8956

FIGURE 2 Countries in the world differ in their use of water.



Source: Mekonnen, M.M. and Hoekstra, A.Y., 2011. National water footprint accounts: The green, blue and grey water footprint of production and consumption' , *Value of Water Research Report Series No. 50,* UNESCO-IHE, Delft, the Netherlands

FIGURE 3 Regional use of water for different purposes



9.9.2 How is water used in Australia?

Agriculture is an important industry in Australia, and it is our thirstiest industry. It produces most of our food requirements and contributes enormously to Australia's export earnings.

Around 70 per cent of Australia's fresh water is used as irrigation for farming. Irrigation water is sourced from many sources, and it is applied to crops using technology. Many crops are grown in dry areas where up to half the available water evaporates from the soil surface or seeps down too low into the ground for plant roots to reach it. The water used in irrigation can be carefully applied to ensure correct amounts needed by plants. In manufacturing industries, most water is used to produce food, beverages and paper.

FIGURE 4 Australia is one of the most irrigated countries in the world.

TABLE 1 Fresh water used to irrigate different crops in Australia

Crop type	Water (gigalitres)	%
Livestock, pasture, grains and other agriculture	8795	56
Cotton	1841	12
Rice	1643	11
Sugar	1236	8
Fruit	704	5
Grapes	649	4
Vegetables	635	4

Note: One gigalitre = 1 000 000 000 litres or one thousand million litres or 400 Olympic-sized swimming pools

9.9.3 What is virtual water?

Water is often a 'hidden' ingredient in the production process for goods and services such as clothing, food and manufacturing. Hidden in a hamburger are 2400 litres of water used to grow the feed for the cattle over many years, to grow wheat for the bread roll, to grow all the other ingredients in the hamburger, and to process all the food. **Virtual water** is a term used to refer to all the water used to produce goods and services, and it needs to be considered in our **water footprint**.

virtual water all the hidden water used to produce goods and services

water footprint the total volume of fresh water that is used to produce the goods and services consumed by an individual or a country

Regions that are water stressed and that export food and other products (such as Australia and some countries in Africa and Asia) are also effectively exporting their precious water in these goods.

FIGURE 5 Water used to wash citrus fruits

9.9 SKILL ACTIVITY: Concluding and decision-making

Use the **Just add water** weblink in the Resources panel to listen to an audio program about the water footprint in food production.

1. **Describe** the relationship between water-stressed countries and food production.
2. **Provide** an example where the water footprint figure is in conflict with the opinion of farmers.
3. **Propose** individual action to reduce your personal water footprint.

on Resources

Weblink Just add water

9.9 Exercise

learnon

9.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5	3, 4, 7	6, 8

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Check your understanding

1. **Identify** what most of the world's water is used for.
   - **A.** Agriculture
   - **B.** Domestic
   - **C.** Industry
   - **D.** Municipal

2. a. Which regions of the world use the majority of their water in agriculture? **Select** all that apply.
   - A. South America
   - B. Europe
   - C. Africa
   - D. North America
   - E. Australia
   - F. South-East Asia

   b. Which countries use water mainly for industrial purposes? **Select** all that apply.
   - A. South America
   - B. Europe
   - C. Africa
   - D. North America
   - E. Australia
   - F. South-East Asia

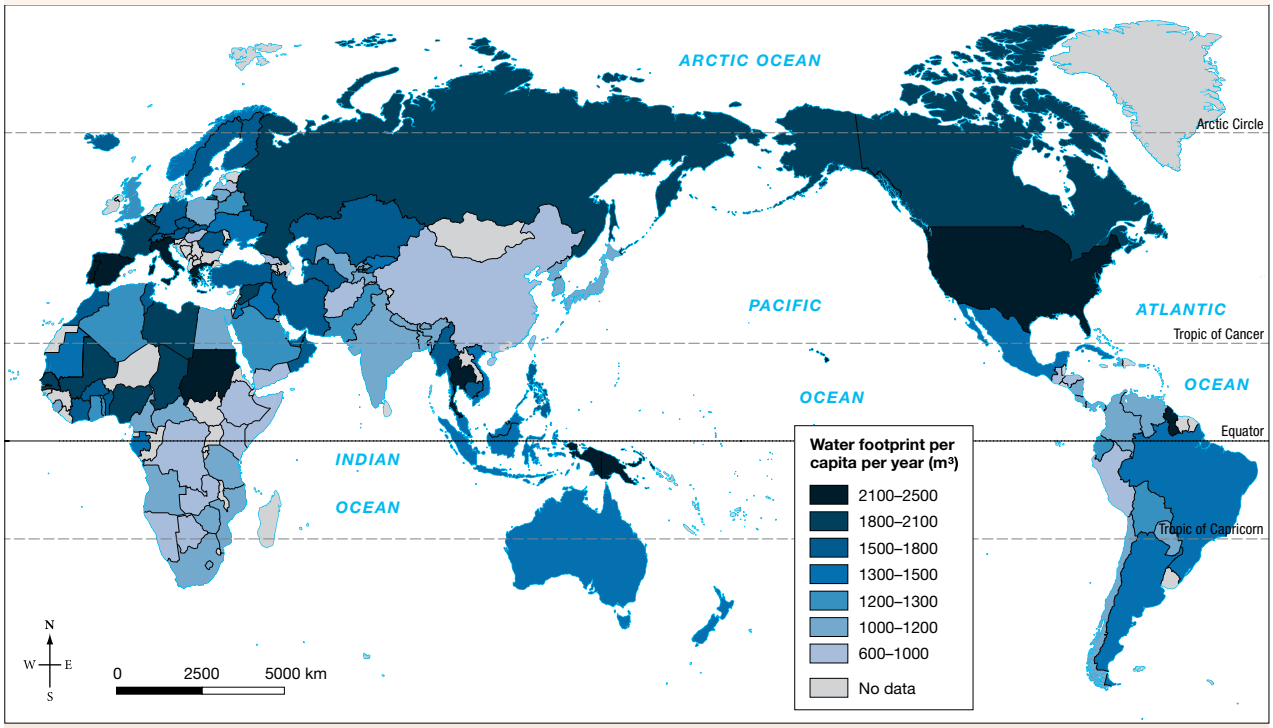
3. **Explain** why some countries might use more water in industry than in agriculture or domestic use.
4. **Define** the terms 'virtual water' and 'water footprint'.
5. **Examine TABLE 1**. **Select** the correct options to complete the following sentences. The crop/s that use the most water are **vegetable** / **cotton and rice** / **grapes** / **grain and pasture.** The crop/s that use the least water are **vegetable** / **cotton and rice** / **grapes** / **grain and pasture.**

Apply your understanding

Interpreting and analysing geographical data and information

6. Refer to **FIGURE 6**. **Describe** the patterns you notice over space of countries with (i) very high and high water footprints and (ii) very low and low water footprints.

FIGURE 6 Average global water footprints



Source: World Water Exchange (2016)

7. a. Study **FIGURE 2** and **determine** which of the following statements are true and which are false. If the statements are false, rewrite the statements with the main uses of water in the correct order of use.
   i. Australia uses most water for agriculture, then industry, and then domestic/municipal.
   ii. Countries in North Africa use most water for agriculture, then domestic/municipal, and then industry.
   iii. Belarus uses most water for industry, then agriculture, and then domestic/municipal.
   iv. Indonesia uses most water for industry, then agriculture, and then domestic/municipal.

   b. If any statements are false, **rewrite** the statements with the main uses of water in the correct order of use.

8. Study **TABLE 2**. Choose two meat, two grain, one dairy, two non-food, two fruit, two vegetable and two processed products from the list.
   Calculate how much water is used to produce a vegetarian diet and a meat-based diet. **Decide** which diet uses more water.

TABLE 2 Global average water used to produce everyday products per kilo (unless otherwise stated)

Product	Global average water (litres)
Apple	
Beef	
Cheese	
Chocolate	
Cabbage	
Cotton shirt (1)	

(continued)

Product	Global average water (litres)
Hamburger (1)	
Mango	
Paper (1 A4 sheet)	
Pork	
Rice	
Tomato	
Wheat	

LESSON
9.10 What water scarcity exists in Australia and the world?

LEARNING INTENTION

By the end of this lesson you should be able to describe the global distribution of water scarcity and explain the interconnection between water quality, sanitation, and health.

TUNE IN

Water is very heavy and difficult to carry. The burden of this water fetching usually falls on girls and women, who carry the heavy load on their head or back.

FIGURE 1 Women and girls often bear the burden of collecting water.

The average distance that women in Africa and Asia walk to collect water is six kilometres. The average weight they carry on their heads or backs is about 20 kilograms.

1. Design a walking course around your school that would be six kilometres in length.
2. Predict how many school bags would be needed to weigh 20 kilograms.
3. Brainstorm the consequences of water collection on the schooling opportunities for girls and young women in these places.
4. Suggest two ways Australians might change their attitude to water use if their supply was more difficult to access.

9.10.1 What is the human right to water?

The right to water is a human right that is protected by many international agreements, yet not everyone has access to this life-giving resource. Water is more important to survival than food. In hot conditions, a person can survive up to three weeks without food but only two or three days without water.

Ideally, each individual needs one cubic metre (1000 litres) of drinking water per year, about 100 cubic metres for other personal needs, and 1000 cubic metres to grow all the food that he or she consumes. **Water stress** occurs when not enough water is available for all demands. A country with less than 1000 cubic metres of renewable fresh water per capita (per person) is under water stress. The term '**water scarcity**' may refer to water shortages or poor access to available water supplies for local communities.

water stress a situation that occurs in a country with less than 1000 cubic metres of renewable fresh water per person

water scarcity when the demand for water is greater than the supply available

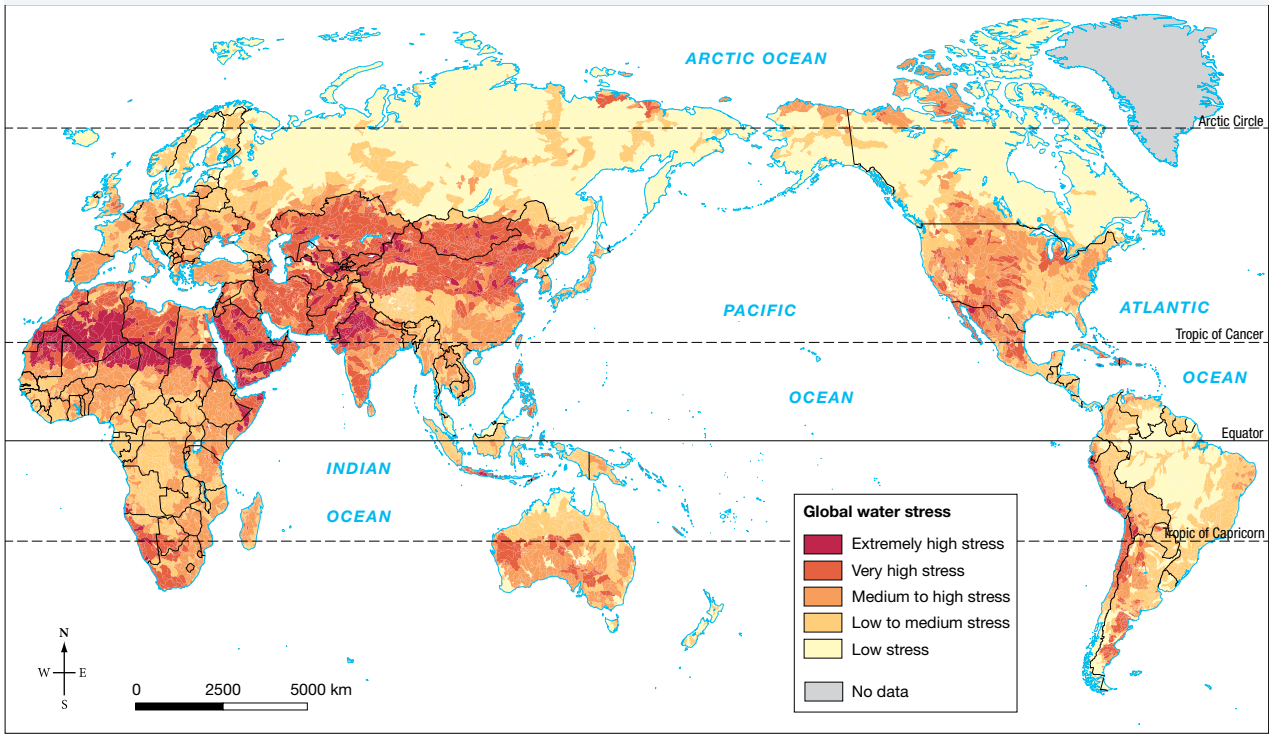
9.10.2 Access to water

FIGURE 2 highlights areas where water stress is extremely high across central Asia and northern Africa. In 2018, the UN estimated that, as climate change conditions take hold, 5 billion people could suffer water shortages by 2050. The problem of lack of water is often worse in rural areas, so many people move from the countryside into towns and cities, hoping for a better water supply. These people are sometimes called water refugees. However, the water in some cities is also inadequate because it is in short supply or is very polluted.

int-8942

tlvd-10530

FIGURE 2 Distribution of global water stress



Source: Aqueduct (2019)

9.10.3 How does dirty water affect health?

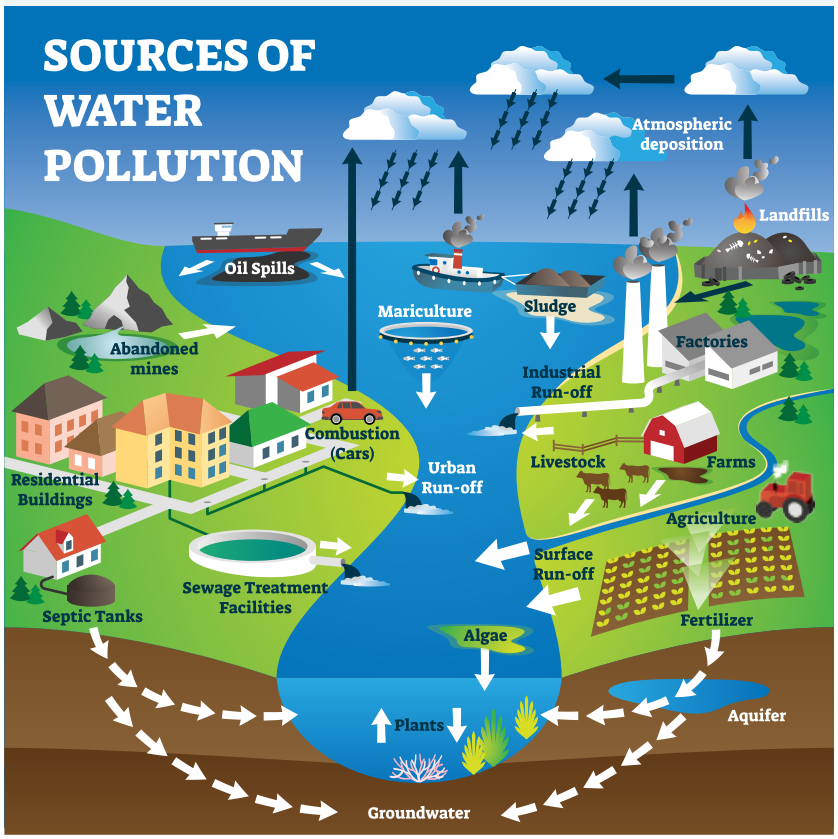
The right to water is linked to many other rights, including the right to food and to health. In 2018, nearly 850 million people in the world had no access to clean water, and more than 2.3 billion people had no safe way of disposing of human waste. Lack of toilets means many people defecate in open spaces or near the same rivers from which they drink. Experts estimate that 90 per cent of sewage in some countries ends up flowing straight into rivers and creeks.

9.10.4 Polluted rivers

Water quality can affect health in many ways. Rivers and streams act as drainage systems and, when it rains, water transports rubbish, chemicals and other waste into drains and, eventually, rivers.

As shown in **FIGURE 3**, different pollutants — including faeces (human and animal), food wastes, pesticides, chemicals and heavy metals — can come from industrial wastewater, domestic sewage, cars, gardens, farmland, mining sites and roads, and flow into waterways. Some countries, cities and local areas are better than others at providing services and enforcing laws to prevent pollutants from entering waterways.

FIGURE 3 Sources of water pollution in a drainage basin



9.10.5 What is a drought?

Australia is the driest inhabited continent on Earth. The main reason Australia is so dry is that much of the continent lies in an area dominated by high atmospheric pressure for most of the year, which brings dry, stable, sinking air to the country. Australia also experiences great variation in its rainfall due to the **southern oscillation** and **El Niño**.

Low average rainfall and extended dry spells are a normal part of life throughout most of Australia. The continent is located in a zone of high pressure that creates conditions of clear skies and low rainfall. Drought conditions occur when the high-pressure systems are more extensive than usual, creating long or severe rainfall shortages.

Droughts affect all parts of Australia over a period of time. Some droughts can be localised while other parts of the country receive good rain. Droughts can be short and intense, such as the drought that lasted from April 1982 to February 1983; or they can be long-lived, such as the 2002 to 2009 drought.

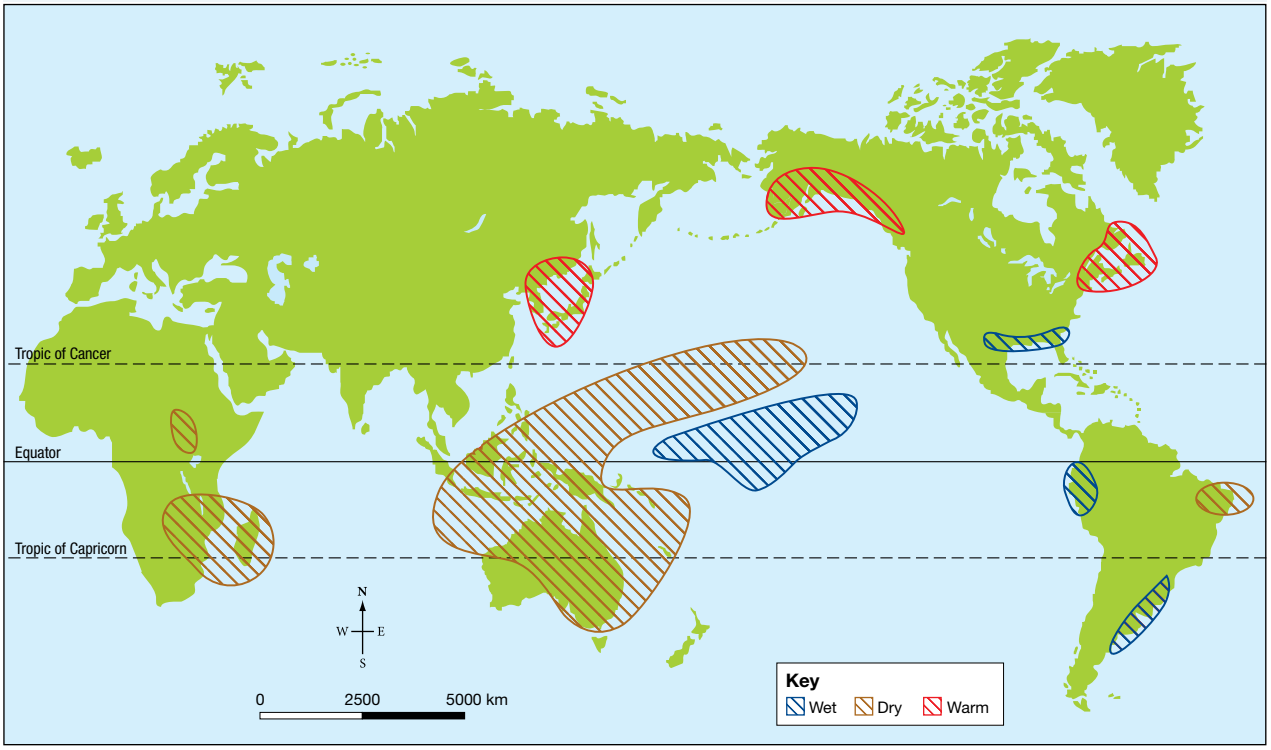
Different weather systems affect different parts of Australia, so all of Australia is highly unlikely to experience drought at the same time.

southern oscillation a major air pressure shift between the Asian and east Pacific regions; its most common extremes are El Niño events

El Niño the reversal (every few years) of the more usual direction of winds and surface currents across the Pacific Ocean; this change causes drought in Australia and heavy rain in South America

int-8943

FIGURE 4 Areas affected by El Niño



Source: MAPgraphics Pty Ltd, Brisbane

9.10.6 Case study: Managing water in the Nile Basin, North Africa

The Nile River is the longest river in the world at 6695 kilometres long. It flows northward through the tropics and the highlands of eastern Africa and drains into the Mediterranean Sea in north Africa. **FIGURE 6** shows how the Nile River flows through medium to extremely high water stressed places.

The Nile Basin (the Nile River and all its tributaries) covers an area of about 3.1 million square kilometres (almost the same area as the Northern Territory). The Basin covers 10 per cent of the African continent.

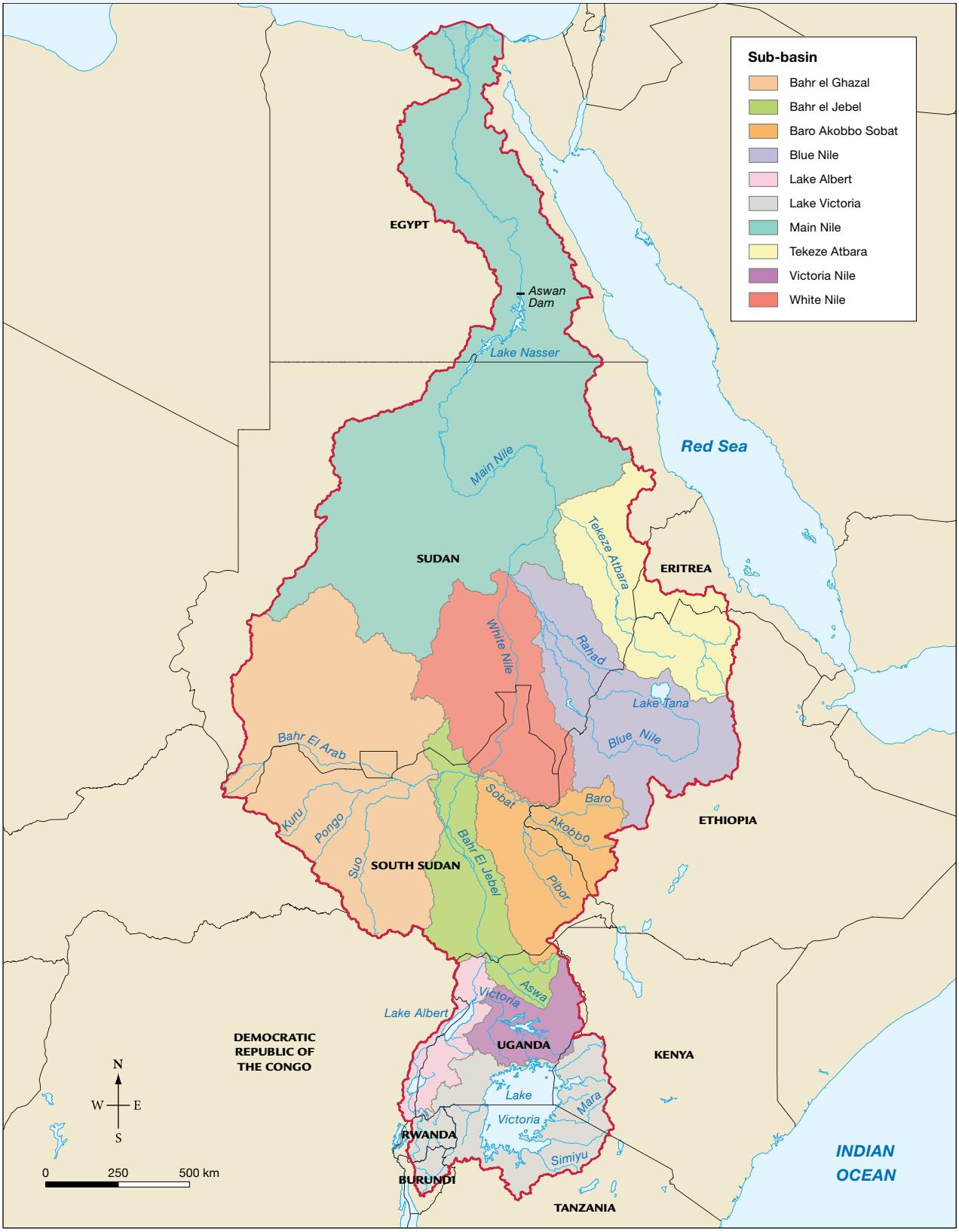
Ten countries share the water and land in the Nile Basin: Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Uganda and United Republic of Tanzania. More than 330 million people live in these ten countries — 160 million live within the watershed boundaries of the Nile Basin and share its water.

Water in the Nile Basin countries is used for hydro-electricity generation, town/city and industrial water supply, agriculture, fishing, recreation, transport, tourism and waste disposal. Most people earn a living in the Nile Basin through agriculture; it sustains millions of people. The topography of the Nile enables power generation, especially in Ethiopia. Hydropower is a major water user in the Nile, relying on water passing through turbines to generate electricity.

FIGURE 5 Farming in the lower Nile relies heavily on river water

int-7785

FIGURE 6 The sub-basins and countries sharing the water and land of the Nile River Basin



Source: Nile Basin Initiative

Nile Basin Sustainability Framework

Since the 1990s, many initiatives and agreements have been introduced regarding sharing the Nile's water. All have been based on a framework for cooperation and trying to ensure use of this important resource is equitable.

Approved in 2011, the Nile Basin Sustainability Framework (NBSF) outlines the guiding principles for water resource management and development across the Nile Basin countries.

This framework guides national policy and seeks to build consensus. It supports transboundary investment projects and promotes shared benefits and environmental concerns to help ensure projects have long-term benefits.

FIGURE 7 As the Nile is a shared resource, careful management is required.

A significant effort was made to strengthen database and shared geographical information system (GIS) skills so that up-to-date water flow and rainfall data are available. Without the NBSF, there would be no guidance for the sustainable development or cooperation in sustainable water management and development in the Nile Basin.

9.10 SKILL ACTIVITY: Questioning and researching using geographical methods

A survey is a useful tool that captures the thoughts and ideas of people about a particular subject such as water use. Questions can be asked verbally, digitally using a survey application or by using a printed question sheet. The choice is yours.

The questions prepared here use a variety of question styles and direct the person with their answers. Closed questions that require a yes or no response are easier to measure and display in a graph. Open-ended questions allow a person to elaborate on the topic.

Task

1. **Survey** the attitudes of three to five friends and family about water use in their personal lives. You may use the sample questions provided or your own questions.

Sample questions:

a. How important is wise water use to you and/or your family? (Please select one option.)
   i. Very important
   ii. Somewhat important
   iii. Not important at all
b. What steps are taken by your family to use water wisely?

2. Once you have conducted the survey, **discuss** the following.
   - How reliable are the results of this survey?
   - What steps could you take in future surveys to improve the quality of your survey results?

9.10 Exercise

learnon

9.10 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 4	3, 6, 7	5, 8, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. How many people in the world do not have access to sanitation?
   - A. 660 million
   - B. 90 per cent
   - C. 2.3 billion
   - D. 315 000
2. **Identify** three key changes drought brings to the environment.
   - A. Loss of soil
   - B. Increased soil fertility
   - C. New soil blows in
   - D. Creation of dust storms
   - E. Severe lack of water
3. **Define** 'water scarcity' and 'water stress'.
4. What is meant by the term 'water refugees'?
   - A. People who live on islands
   - B. People who move because their homes were flooded
   - C. People who take boat people into their homes
   - D. People who move to another location because there is a lack of water where they live
5. Refer to **FIGURE 4** showing the areas affected by El Niño. **State** whether each of the following places will be wetter, drier or warmer during an El Niño event?
   - a. Australia
   - b. Japan
   - c. Canada
   - d. Pacific Ocean
   - e. Madagascar
   - f. Argentina

Apply your understanding

Interpreting and analysing geographical data and information

6. Refer to **FIGURE 3** and your own knowledge to **explain** how rivers become polluted.
7. Refer to **FIGURE 2** and an atlas to answer the following questions.
   - a. **Identify** three countries that are experiencing extremely high water stress.
   - b. **Compare** Australia's level of water stress to New Zealand's.

Communicating

8. If water and sanitation is a human right, **explain** why some people are unable to access fresh water.
9. a. **Identify** two factors that can cause water stress or water scarcity.
   b. **Describe** the impact on a country if it is under water stress or water scarcity.

Interpreting and analysing geographical data and information

10. Read the section 9.10.6 case study on the Nile Basin and study **FIGURE 6**.
    - a. **Identify** the direction in which the Nile River flows towards.
    - b. **Outline** the potential water use conflicts along the Nile River as it makes its way to the Mediterranean sea.

LESSON
9.11 How can people overcome water scarcity?

LEARNING INTENTION

By the end of this lesson you should be able to identify global management strategies to enable water to be shared in a sustainable way.

TUNE IN

Did you know?

- One in three people around the world do not have access to safe drinking water.
- 3.6 billion people do not have access to a safe toilet.

FIGURE 1 A typical household uses water in many ways.

1. Consider the ways water is used in your household.
   a. Predict which appliance in your home uses the most water for one cycle of use: the washing machine, toilet or dishwasher?
   b. Predict how much water is used in an average shower and in an average handwash.
2. Brainstorm the names of three infectious diseases linked to a lack of safe water.
3. Describe one social impact on people that lack of access to a safe toilet could have.

9.11.1 Sustainable Development Goals: working to address water scarcity on a global scale

To promote a more sustainable future where all people gain access to water, sanitation and hygiene, the United Nations has developed 17 Sustainable Development Goals (SDGs). These goals aim to end all forms of poverty, protect the planet and ensure that all people enjoy peace and prosperity, with targets to be reached by the end of 2030. A summary of these 17 goals is shown in **FIGURE 2**.

tlvd-10531

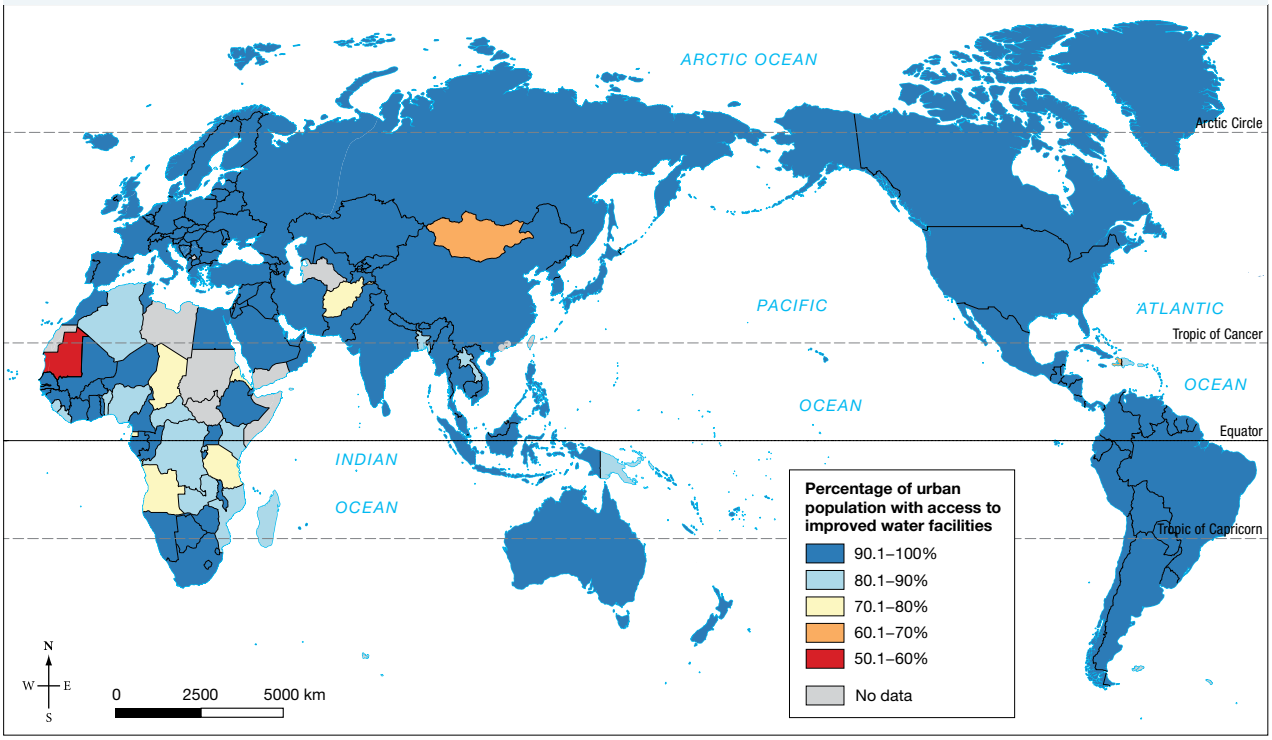
FIGURE 2 The UN Sustainable Development Goals

Goal 6 of the SDGs focuses on clean water and sanitation, and aims to 'ensure access to water and sanitation for all'. From 1990 to 2015 the percentage of people who had access to clean water increased from 76 to 91 per cent. The improvements in water access and sanitation are shown in **FIGURES 3** and **4**.

int-7782

tlvd-10532

FIGURE 3 Percentage of global population with access to improved water facilities, 2015

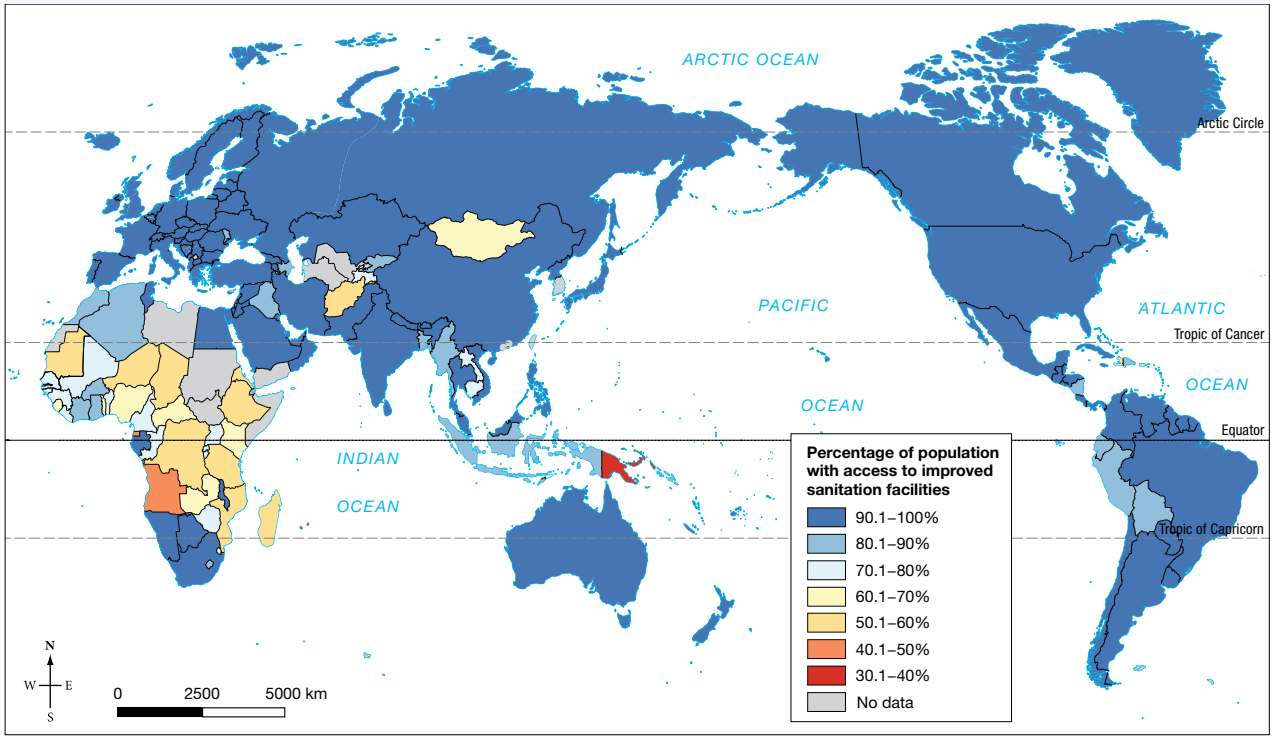


Source: World Bank (2015)

int-7783

tlvd-10533

FIGURE 4 Percentage of global population with access to improved sanitation facilities, 2015



Source: World Bank (2015)

Goal 6

Some of the targets (by 2030) for Goal 6 are to:

- provide universal and equitable access to safe and affordable drinking water for all
- provide access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally
- substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes (this goal was by 2020).

FIGURE 5 Goal 6 of the Sustainable Development Goals

Source: The content of this publication has not been approved by the United Nations and does not reflect the views of the United Nations or its officials or Member States. https://www.un.org/sustainabledevelopment/

9.11.2 Managing Australia's water supply

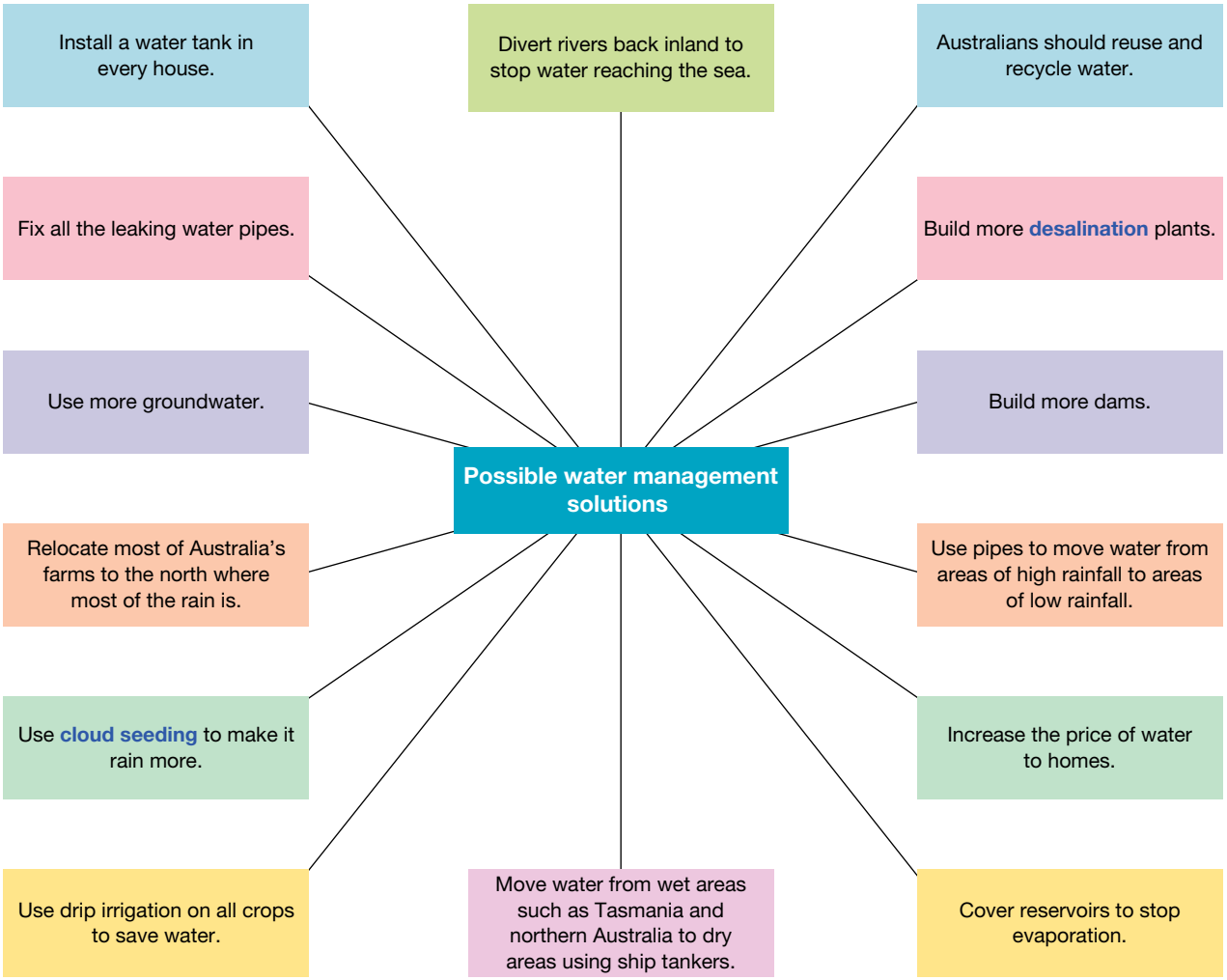
More water cannot be created, but it can be managed better. With a growing global population, and the predicted effects of climate change, the pressure on this finite resource requires a number of solutions.

Introducing effective water management can be a challenge at any scale, whether local, national or global. It needs the cooperation of all users, including farmers, industry, individuals, and upstream and downstream

people in different countries or different states. With all the competing demands on water, management is often easier to approach at a local scale.

FIGURE 6 outlines some of the ways we can develop more efficient uses for Australia's valuable water resources.

FIGURE 6 Possible water management solutions



Agriculture uses the greatest amount of water in Australia (refer to section 9.9.2). Making irrigation systems more efficient and getting more production for every drop of water used makes sense. Some irrigation systems waste up to 70 per cent of their water through leaks and evaporation, so changing the irrigation method can save water. Other management practices include recycling, using desalinated water and using stormwater.

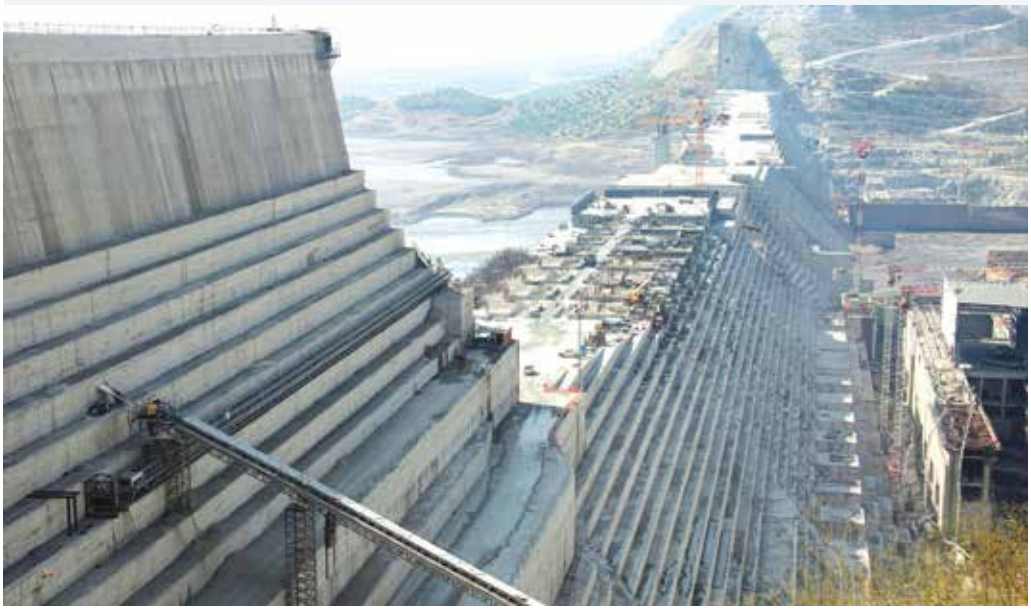
9.11.3 Managing water across borders

About 260 drainage basins across the world are shared by two or more countries, and 13 river basins are shared by five or more countries. Depending on their location in the **catchment**, some countries can suffer reduced access to water because of other countries' usage. This shows the interconnection between places — what happens in one place affects another. Diverting rivers, building dams, taking large amounts of water out for irrigation, and creating pollution can all lead to conflict between countries, states and political groups.

desalination a process that removes salt from sea water
cloud seeding implanting clouds with substances to cause rain
catchment the drainage basin of a river

Country disputes have occurred in the Nile Basin in north Africa, along the Mekong River in Asia, the Jordan River Basin in west Asia (the Middle East) and along the Silala River in South America. **FIGURE 7** shows construction of the Grand Ethiopian Renaissance Dam along an upstream section of the Blue Nile in northern Africa. The dam is being built by Ethiopia to produce hydroelectricity and the effects of the dam has caused a dispute with the downstream countries of Egypt and Sudan.

FIGURE 7 The construction in Ethiopia of Africa's biggest dam has caused regional conflict.



Conflict can also happen within a country, which has happened with the Murray–Darling Basin in Australia, across four states and one territory. Upstream uses of the water impact water quality and water security for downstream users of this precious resource.

Some countries sign international agreements or treaties to try to share water between nations. These include the Rhine and Danube rivers in Europe, and the Ganges and Brahmaputra rivers in Asia.

9.11.4 How can water-borne diseases be reduced?

Access to water does not ensure people have access to clean and fresh water. Dirty water and lack of proper hygiene kill around 315 000 children around the world every year, most of them younger than five. The diseases that can be passed on to people as a result of contaminated water include diarrheal diseases such as cholera, typhoid and dysentery. Malaria, a disease transmitted by mosquitoes, kills about one million people every year.

People use different methods to treat the water they have collected. They can let it stand and settle, strain it through a cloth, filter it, add bleach or chlorine, or boil it. Some people do not treat their water at all.

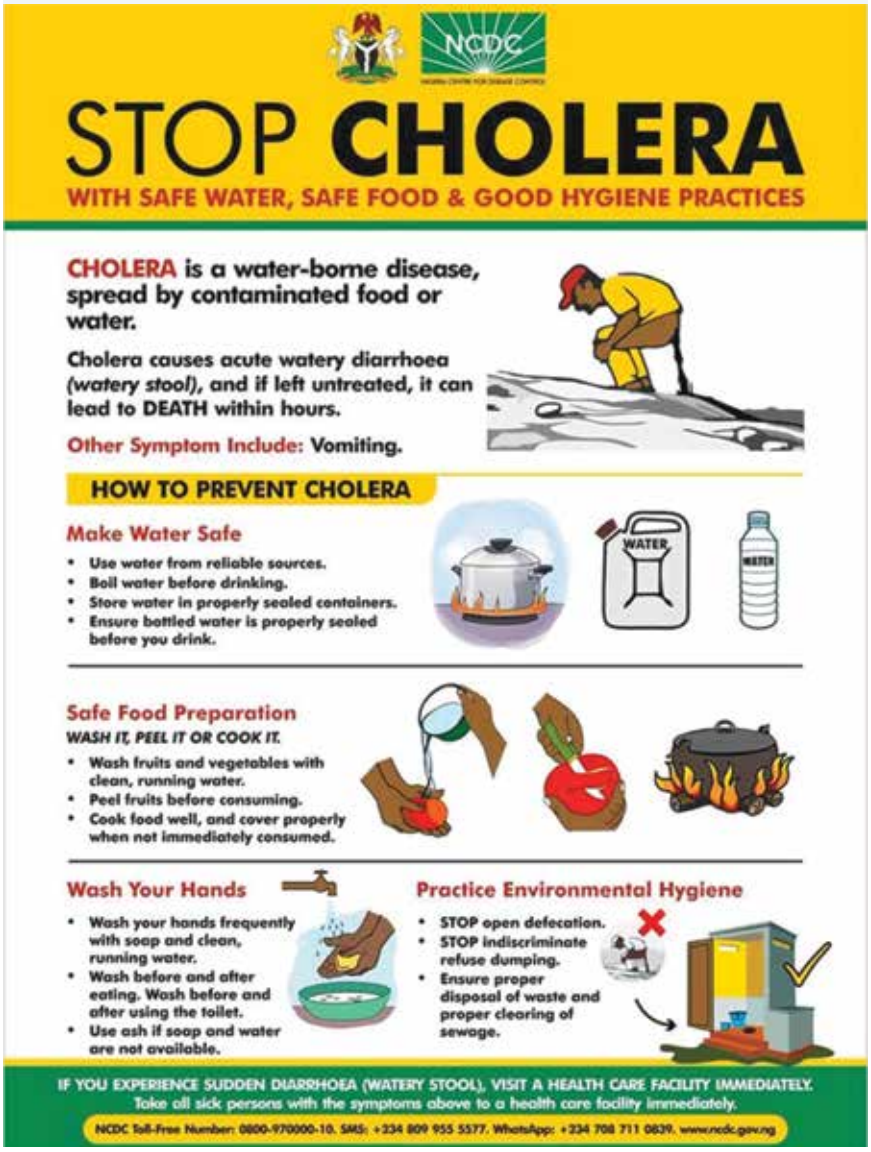
When barely enough water is available to drink or to cook with, it is difficult for people to set aside water for washing hands and cleaning clothes. However, hygiene and sanitation are very important for health.

Many aid groups (such as Water.org, Clean Water Fund, Global Water Challenge and The Water Project) work on projects to improve sanitation and access to clean water. Building cheap and effective toilets and teaching the community about good hygiene all help to reduce disease.

FIGURE 8 Collecting water that is unsafe to drink

FIGURE 9 The Citarum River in Indonesia is one of the most polluted rivers in the world.

FIGURE 10 A poster educating people about cholera and the measures to prevent it



9.11 SKILL ACTIVITY: Communicating

Geographers like to look at patterns over ***space***. Find an atlas map showing population density and compare it with **FIGURE 3**. Refer to countries in North Africa and West Asia in your answers. (Refer to the **Regions** resource in the digital documents section of the Resources panel.)

1. **Name** three coastal and two landlocked countries in these regions.
2. **Conduct research** to find out how many countries in these regions suffer deaths caused by poor sanitation and dirty water.
3. **Name** the continents and regions that have the fewest deaths.
4. Why do you think this spatial pattern exists? (*Hint:* look at maps in your atlas that show wealth.)
5. Many aid agencies work in countries and regions to improve access to sanitation and clean water. **Choose** one of those listed in this topic and find out more about what they are doing. How will their work make a difference to the living conditions of the people?
6. **Plan** a video presentation that is interesting and catchy and will help people understand the action needed to improve access to clean water and sanitation. Use video and video editing programs and internet research in your planning.

Resources

Digital document Regions (doc-17950)

9.11 Exercise

learnon

9.11 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4	3, 5, 6, 8	7, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. **Select** the correct options to complete the sentence. Desalination is a process that removes **pollutants** / **salt** / **clean water** from **sea water** / **river water** / **greywater**.
2. What is the aim of a desalination plant? **Select** the best option from the list provided.
   - A. To provide drinking water
   - B. To add minerals to drinking water
   - C. To produce salt
   - D. To remove salt from spring water
3. **Explain** why it is difficult to manage water when the water supply crosses country or state borders.
4. **Determine** if the following are true or false.
   - a. Goal 6 of the SDGs focuses on clean water and sanitation,
   - b. The 17 Sustainable Development Goals (SDGs) are only aimed at developing countries.
   - c. Dirty water and lack of proper hygiene kill around 200 000 children around the world every year.
5. **Identify** two ways the government attempts to ensure a reliable water supply.

Apply your understanding

Communicating

6. **Explain** what community-led sanitation projects aim to do.

Interpreting and analysing geographical data and information

7. Refer to an atlas, **FIGURE 3** and **FIGURE 4** to answer the following questions.
   - a. **Describe** the location of places with poor access to water and sanitation.
   - b. **Suggest** two reasons these places are unable to access improvements to water and sanitation.

Concluding and decision-making

8. a. From the list of strategies outlined in the poster in **FIGURE 10**, **identify** which would be the most challenging to adopt and why. Which strategy would be the easiest to adopt and why?
   - b. **Indicate** whether each of the following factors are advantages or disadvantages of using recycled water.
     - i. Reduces stress on drinking water
     - ii. Creates jobs
     - iii. Perception of a higher risk of contamination
     - iv. Good for farming through increased nutrients for the soil
     - v. Perception of a potential risk to health

Communicating

9. a. **Explain** how the SDGs aim to improve accessibility to clean water and sanitation.
   - b. **Elaborate** on two ways Goal 6 of the SDGs aims to improve global water stress and water security.
10. **Describe** two sustainable ways of reducing the impacts of drought. Give reasons for your choices.

LESSON
9.12 INQUIRY: What is the water quality of a local waterway?

LEARNING INTENTION

By the end of this lesson you should be able to research the water quality of a local catchment or waterway and produce a report and presentation on your findings.

Background

Water is our most valuable resource, and the management of this vital resource should be a priority at a local, regional and global level. Everybody lives near some sort of catchment—a river, creek, drain or other waterway is usually close to your home, school or neighbourhood. Water quality can affect health in many ways. Rivers and streams act as drainage systems. When it rains, water transports rubbish, chemicals and other waste into drains and, eventually, rivers.

Your team has been selected to research the water quality of a local catchment or waterway and produce a report and presentation on your findings. Be sure to measure water quality at different locations along the river, creek or stream, and try to determine the causes of different water quality.

A full investigation of water quality requires primary and secondary methods of research. **Primary research** in Geography refers to field observations, photographs and data collection that takes place by you or your team on a specific day. **Secondary research** refers to the use of published material that has been prepared by an organisation or another team such as a topographic map, media article or stream watch report.

Examples of primary research methods include:

1. collecting and testing water samples from a body of water
2. documenting evidence of litter and water contamination
3. observing water bugs, which provide evidence of a healthy body of water.

FIGURE 1 When investigating water quality, primary research methods include collecting water samples, documenting evidence of litter and observing water bugs.

primary research collection of original information

secondary research collection of resources on an issue, prepared by others and offering different viewpoints

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task you can use this rubric to self-assess.

Inquiry steps

Step 1: Questioning and researching using geographical methods

Research the main features of your local river catchment area.

- **What** sort of data and information will you need to study water quality 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).

Step 2: Interpreting and analysing geographical data and information

Gain some knowledge of the fieldwork location and requirements before you visit the site.

- Access topographic maps and Google Earth to help you become familiar with the location. Using these tools, **complete** a sketch map of the waterway(s) and label the sites you are going to visit.
  You can then scan your sketch map and have it available electronically on the field trip. Alternatively, use Google Maps to record all the sites you visit.
- **Determine** what equipment and resources you will need to bring with you to each site to collect the data. Working in groups to collect the data is useful, with each group collecting different data at each site.
- Access the supplied data collection templates to use electronically on your mobile device, or print copies.

FIGURE 2 Data can be collected at the site and then entered immediately into data collection templates.

Step 3: Concluding and decision-making

Collect, collate and share your data, and then **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, while others are better 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. Broad descriptions can also be made of your findings, which might include answering some or all of the following:

- Where is water quality highest (best) in the waterway studied?
- Is water quality better in the upper reaches of the river or creek?
- Does an urban waterway have better water quality than a rural waterway?
- Does surrounding land use have an impact on water quality?
- Do large waterways have better water quality than smaller waterways?
- What were the main contributors to poor and good water quality?
- How does surrounding vegetation affect water quality?

Access the **digital documents** section of the Resources panel to download the following:

- Data recording template
- Presentation template
- Record sheets
- Report template

Step 4: Communicating

Communicate your findings. You will now produce a fieldwork report and presentation to present your findings. Your report and presentation should include all of the research that you completed and all evidence to support your findings.

Ensure that your report includes the following:

- a title
- an aim
- a hypothesis (what you think you will find). Write this before you go into the field.
- your findings
- a conclusion.

You will also need to recommend some type of action that needs to be taken to improve water quality in the creek or river you visited.

Complete your self-assessment using the **Inquiry rubric** or access the 9.12 exercise set to complete it online.

on Resources

Digital documents
Inquiry rubric (doc-39245)
Data recording template (doc-39246)
Presentation template (doc-39247)
Record sheets (doc-39248)
Report template (doc-39249)

LESSON
9.13 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

Watch teacher-led videos

Practise questions with immediate feedback

Find all this and MORE in jacPLUS

9.13.1 Key knowledge summary

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

9.2 What are environmental resources?

- People depend on the Earth's environmental resources for survival.
- Environmental resources can be renewable and non-renewable.
- Careful use of environmental resources will ensure their sustainability.
- Australia has an abundance of environmental resources, both renewable and non-renewable. These include minerals, soils, forests and natural scenery.

9.3 How is water used as a resource?

- Water is a renewable resource in most forms.
- The water cycle is a process that cycles water in different forms across places.
- Water connects places as it moves through the environment.

9.4 How is groundwater a resource?

- Groundwater is water stored in aquifers under the ground and is an important source of water for people living in arid and semi-arid regions.
- If more groundwater is used than is being recharged, aquifers may dry up; groundwater can, therefore, be regarded as a finite and non-renewable resource.
- Many groundwater sources throughout Australia have long been used by First Nations Peoples, and passed on in Dreaming stories and songs.

9.5 How does groundwater connect people?

- First Nations Australians use groundwater sources in dry regions to sustain life.
- Many springs and soaks have cultural significance for local Aboriginal Peoples whose ancestors relied on the springs for survival.
- Knowledge of the springs has been passed down over many generations through Dreaming stories.

9.6 How is water distributed across the world?

- Of all the water in the world, only a small fraction is available to people to use.
- Rainfall varies widely across the world.
- Green water, blue water and potential water sources are found in places around the world.
- Climate change is affecting the amount of water available in many locations around the world.

9.7 How does Australia's climate affect its water availability?

- Australia is the driest permanently inhabited continent in the world.
- Australia's rainfall is highly variable even at a global level.

9.8 Investigating topographic maps: The value of water in Noosa

- The environment around Noosa is valued for economic, aesthetic and cultural reasons.
- Management strategies help to ensure the demands of tourist and locals are met.

9.9 Does everyone have enough water?

- Globally, water is mainly used for agriculture, but this varies from region to region.
- Australia uses 70 per cent of its water for agriculture.
- Virtual water includes the water used to manufacture food and goods.
- Some foods and goods require very large amounts of water to be produced.
- Countries that export these high water-use products are virtually exporting their water; countries importing these goods are virtually importing water.
- A strong relationship exists between First Nations Australians' use of water and the landscape.

9.10 What water scarcity exists in Australia and the world?

- Access to adequate and clean water and to adequate sanitation varies across the world.
- Africa has the worst data related to water and sanitation provisions.
- Women are over-represented in the task of fetching and carrying water.
- Australia is the driest inhabited continent on Earth and, although it has several large rivers, the availability of fresh water is scarce.
- A drought is a prolonged period of below-average rainfall, when not enough water is available to supply our normal needs.
- Weather events such as El Niño can produce extended periods of drought.

9.11 How can people overcome water scarcity?

- Water needs to be carefully managed for enough people to receive an adequate supply.
- Access to clean and sufficient water and adequate sanitation reduces health-related deaths.
- Work on the Sustainable Development Goals have resulted in improved access to clean water and sanitation but a lot of work is still to be done to improve this for many more people.
- Cross-boundary water management needs to be carefully planned to ensure upstream and downstream populations share the resource equitably.
- Personal behaviours can help minimise water use and wastage.
- Governments have a significant role in managing drought and water scarcity. Proper water management includes the development of technologies, such as desalination plants, and encouraging more responsible household water use.

9.12 INQUIRY: What is the water quality of a local waterway?

- Water quality will vary depending on the location of the testing site and whether or not rain has fallen in the previous 24 hours.
- All recordings should be dated to add validity to the results.

9.13.2 Key terms

aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater; water can move along an aquifer

artesian aquifer an aquifer confined between impermeable layers of rock; the water in it is under pressure and can flow upward through a well or bore

atmosphere the layer of gases surrounding Earth

catchment the drainage basin of a river

climate change any change in climate over time, whether due to natural processes or human activities

cloud seeding implanting clouds with substances to cause rain

continuous resource a resource that is never used up by humans

desalination a process that removes salt from sea water

Dreaming The Dreaming in First Nations spirituality, the beginning of earth and the cycles of life and nature, explaining creation and the nature of the world, the place that every person has in that world and the importance of ritual and tradition

El Niño the reversal (every few years) of the more usual direction of winds and surface currents across the Pacific Ocean; this change causes drought in Australia and heavy rain in South America

environmental resource a material found in nature that is necessary or useful to people

evaporation the process by which water is converted from a liquid to a gas and thereby moves from land and surface water into the atmosphere

groundwater a process in which water moves down from the Earth's surface into aquifers

hydrologic cycle another term for the water cycle

mound spring mound formation with water at its centre, formed by minerals and sediments brought up by water from artesian basins

non-renewable resource a resource that cannot be renewed in a short time and is finite

potential resource a resource that exists but is unusable in its current state, such as salt water, ice and water vapour

precipitation a form of water from the atmosphere; e.g. rainfall, snow

primary research collection of original information

rainfall variability the change from year to year in the amount of rainfall in a given location

relative humidity the amount of moisture in the air

renewable resource a resource that can be naturally replaced if carefully managed

secondary research collection of resources on an issue, prepared by others and offering different viewpoints

soak place where groundwater moves up to the surface

southern oscillation a major air pressure shift between the Asian and east Pacific regions; its most common extremes are El Niño events

uranium a dense grey radioactive metal used as a fuel in nuclear reactors

virtual water all the hidden water used to produce goods and services

water footprint the total volume of fresh water that is used to produce the goods and services consumed by an individual or a country

water scarcity when the demand for water is greater than the supply available

water stress a situation that occurs in a country with less than 1000 cubic metres of renewable fresh water per person

9.13.3 Reflection

Revisit the inquiry question posed in the Overview:

What effect does the uneven distribution of water resources have on the lives of people?

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.

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10541)
Reflection (ewbk-10543)
Crossword (ewbk-10542)

Interactivity Water as a resource crossword (int-7700)

9.13 Review exercise

Students, these questions are even better in jacPLUS

- Receive immediate feedback and access sample responses
- Access additional questions
- Track your results and progress

Find all this and MORE in jacPLUS

Multiple choice

1. What is the main difference between a renewable and a non-renewable resource?
   - A. Renewable resources are cheaper than non-renewable resources.
   - B. Renewable resources are more expensive than non-renewable resources.
   - C. Renewable resources can be replaced in a longer period of time than non-renewable resources.
   - D. Renewable resources can be replaced in a shorter period of time than non-renewable resources.
2. Which statement explains the phrase 'Freshwater: lifeblood of the planet'?
   - A. Earth is made up of 90 per cent water.
   - B. Rivers and streams carry water.
   - C. Water is precious because it is the basis of all living things.
   - D. Earth is made up of 50 per cent water.
3. Only 2.5 per cent of the world's water is fresh water. Where is most of this locked up?
   - A. Groundwater
   - B. Wetlands
   - C. Glaciers, snow and ice
   - D. Atmosphere
4. How are groundwater and surface water interconnected?
   - A. They are not interconnected but are two different water systems.
   - B. Surface water is evaporated and then precipitated back to Earth.
   - C. Rivers slowly fill up aquifers.
   - D. Groundwater is replenished when surface water infiltrates deep into water-bearing rock or aquifers.
5. What is groundwater?
   - A. Water that collects on the surface of the ground
   - B. Pools of water formed after heavy rainfall
   - C. Water found in the pores within soil, sand and rock in the earth
   - D. Water that has been boiled and is safe to drink
6. Water can be classified as either blue or green water. What does green water refer to?
   - A. Water that is stored in the soil, stays on top of the soil or in plants
   - B. Water that is contaminated by blue-green algae
   - C. Water that is stored in underground aquifers
   - D. Water stored in oceans (salty water)
7. What is the result of unequal access to resources?
   - A. Poverty
   - B. Dropping food prices all over the world
   - C. Rising food prices all over the world
   - D. End to famines

8. When does water scarcity occur?
   - **A.** When the demand for water is greater than the supply available.
   - **B.** When the demand for water is less than the supply available.
   - **C.** When too much water is available to fulfill all demands.
   - **D.** When not enough water is available to fulfil all demands.
9. Approximately 10 per cent of people in the world do not have access to water that is safe to drink. Approximately how many people in the world do not have access to safe drinking water?
   - **A.** 84 million
   - **B.** 8 billion
   - **C.** 844 million
   - **D.** None
10. Investigating geographical issues using primary and secondary research methods ensures many viewpoints and original data are included in the study. What is an example of primary research methods?
    - **A.** A media article about a local river
    - **B.** An image taken by a local photographer of the pollution in the river
    - **C.** Water quality measurements taken by you at the local river
    - **D.** Information about the river from the council website

Short answer

Communicating

11. Answer the following.
    - **a.** **Suggest** three ways that people use groundwater as a resource.
    - **b.** **Explain** how groundwater is used unsustainably.
12. Drinking unsafe water creates a number of problems. **Identify** two impacts of unsafe drinking water on the lives of people in developing countries.
13. **Explain** one social impact of water scarcity on a local community in a less economically developed region.
14. **Explain** two water management strategies used by communities to improve the sustainability of water as an environmental resource.

Concluding and decision-making

15. Climate scientists predict that many areas of the world will receive less rain as global temperatures increase. **Identify** two problems that may arise in regions of the world where rainfall decreases. You should consider problems that may arise for people and for the environment.

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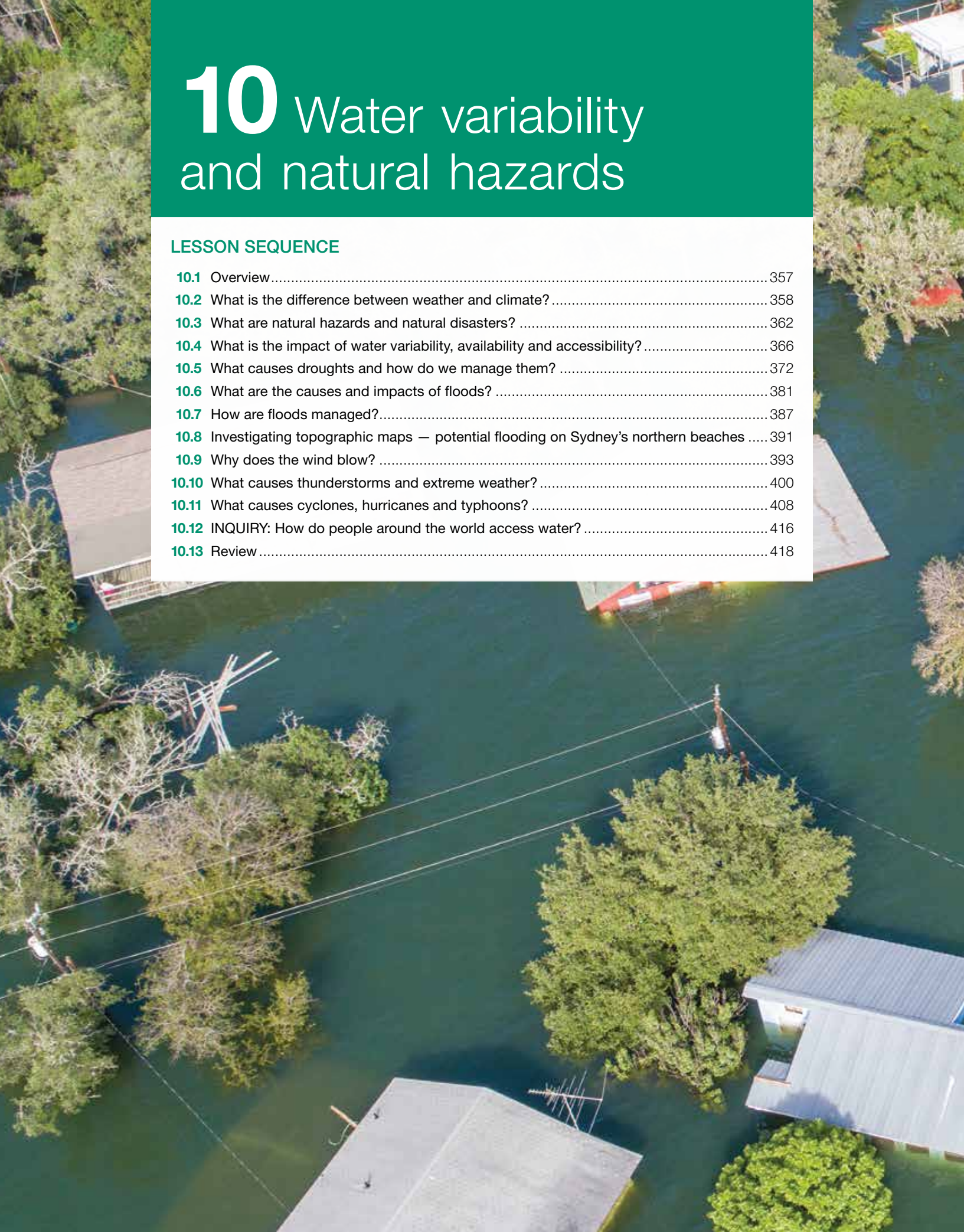
10 Water variability and natural hazards



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LESSON
10.1 Overview

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How does weather and climate, including severe weather events, influence the distribution and wellbeing of human populations?

What impact could the lack of water resources have on communities and how can it be improved?

10.1.1 Introduction

Have you ever wondered why the weather isn't the same across the entire country, state or even city? Weather patterns change depending on a number of geographic factors and this, in turn, influences the frequency and amount of rain received in each location.

Weather influences the level of precipitation experienced in different places. If too little rain falls, drought can develop, sometimes producing heatwaves — days of dry, hot weather. If too much rain falls, flooding will occur. These extreme weather events have many effects, and these can be more severe in certain parts of the world. While we cannot control these events, we can learn from the past and plan to minimise the impacts of these events in the future.

FIGURE 1 Weather changes can produce droughts in some places and flooding in others.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10544)

Video eLesson Water variability and natural hazards (eles-6031)

LESSON
10.2 What is the difference between weather and climate?

LEARNING INTENTION

By the end of this lesson you should be able to understand the differences between weather and climate and how each system plays a role in water availability.

TUNE IN

As you will learn in this lesson, the terms weather and climate relate to connected but separate systems.

Working with a partner, write a list of the weather and climate related events of which you know.

Once you have a completed list, try to classify these into weather events or climate events.

FIGURE 1 Weather and climate are related yet separate systems.

10.2.1 How does weather change?

Our Earth is surrounded by a band of gases called the atmosphere. It protects our planet from the extremes of the sun's heat and the chill of space, making conditions just right for supporting life. The atmosphere has five different layers (see **FIGURE 2**). The layer that starts at ground level and ends about 16 kilometres above Earth is called the troposphere. Our weather is the result of constant changes to the air in the **troposphere**. These changes sometimes cause extreme weather events.

Droughts, **floods**, **cyclones**, tornadoes, heatwaves and snowfalls — even cloudless days with gentle breezes — all begin with changes to the air in the troposphere. The five main layers in the Earth's atmosphere all differ from one another. For example, the troposphere contains most of the **water vapour** in the atmosphere. As a result, this layer has an important link to **precipitation**.

All weather conditions result from different combinations of three factors: air temperature, air movement and the amount of water in the air. The sun influences all three.

First, the sun heats the air. It also heats the Earth's surface, which in turn heats the air even more. How hot the Earth's surface becomes depends on the season and the amount of cloud cover.

troposphere layer of the atmosphere closest to the Earth, extending about 17 kilometres above the Earth's surface, but thicker at the tropics and thinner at the poles; where weather occurs

drought a long period of time when rainfall received is below average

flood inundation by water, usually when a river overflows its banks and covers surrounding land

cyclones intense low-pressure systems producing sustained wind speeds in excess of 65 km/h; they develop over tropical waters where surface water temperature is at least 27 °C

water vapour water in its gaseous form, formed as a result of evaporation

precipitation rain, sleet, hail, snow and other forms of water that falls from the sky when water particles in clouds become too heavy

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FIGURE 2 Structure of the Earth's atmosphere (not to scale)

Second, the sun causes air to move. This is because the sun heats land surfaces more than it heats the oceans. As the warm air over land gets even warmer, it expands and rises. When hot air rises, colder air moves in to take its place.

Third, the sun creates moisture in the air. The heat of the sun causes water on the Earth's surface to **evaporate**, forming water vapour. As this water vapour cools, it condenses, forming clouds. It may return to Earth as rain, dew, fog, snow or hail.

evaporate to change liquid, such as water, into a vapour (gas) through heat

At times these three factors — temperature, air movement and water vapour — can create extreme weather events. Very high air temperatures influence heatwaves; rapidly rising air plays a part in the formation of cyclones; and excess rain can create flooding.

10.2.2 The difference between weather and climate

Weather is the day-to-day, short-term change in the atmosphere at a particular location. Extreme weather events are often described as unexpected, rare or not fitting the usual pattern experienced at a location.

Climate is the average of weather conditions that are measured over a long time. Places that share the same type of weather are said to lie in the same climatic zone. Because of the size of the Australian continent, its climate varies considerably from one region to another.

FIGURE 3 Australia experiences a diversity of weather, which has a major effect on how we live.

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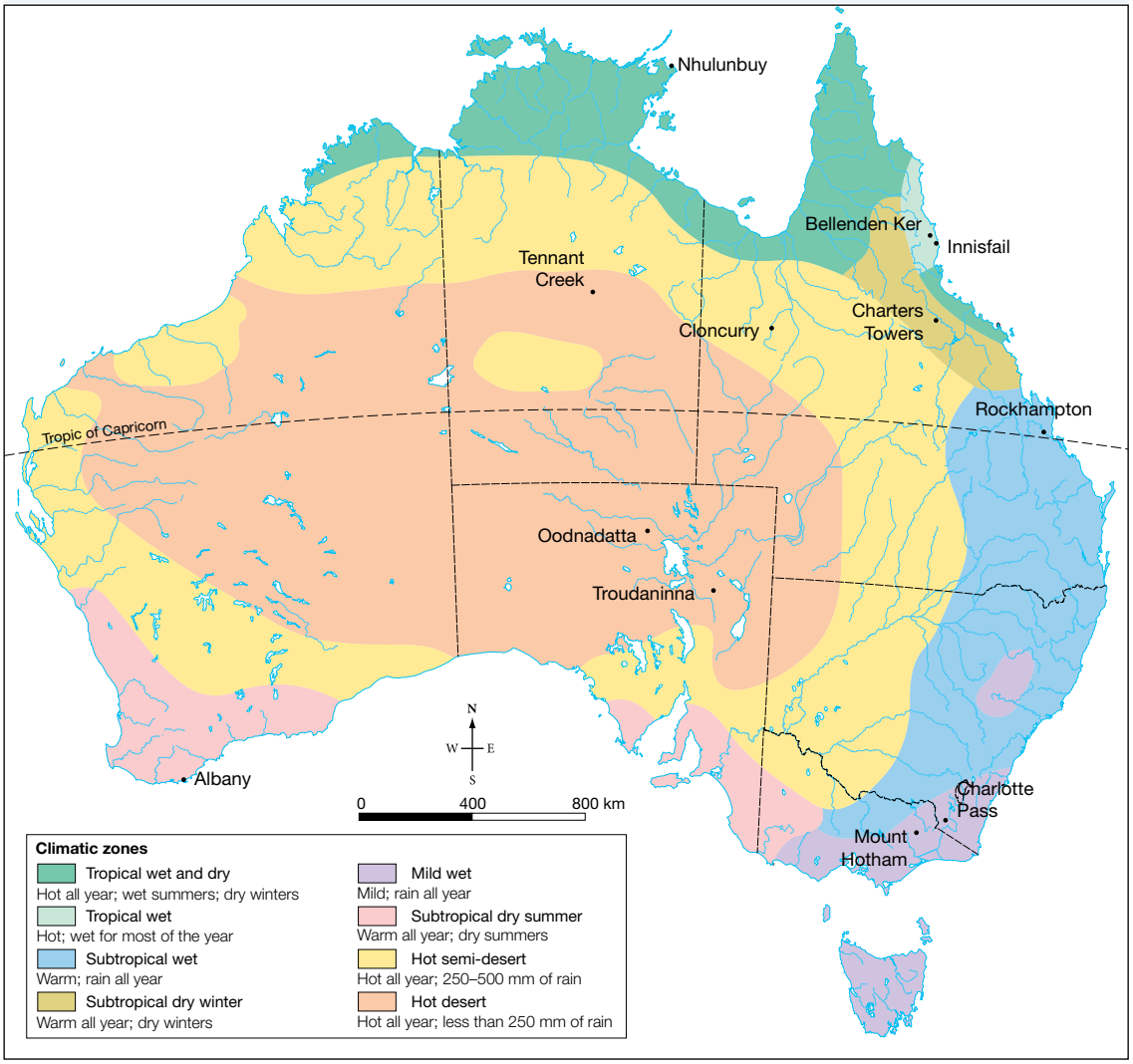
FIGURE 4 Climatic zones of Australia



Source: MAPgraphics Pty Ltd, Brisbane

SkillBuilders to support skill development

- 8.6 reading a weather map
- 8.14 Interpreting diagrams

10.2 SKILL ACTIVITY: Interpreting and analysing

In a magazine or newspaper or online, find a photograph that shows an example of one type of weather.

Paste the picture in the centre of a page and add labels about the impact of that weather on the environment (for example, creating puddles) and on what we do (such as the clothes people wear).

10.2 Exercise

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10.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 8, 9	4, 6	5, 7, 10

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Check your understanding

1. **Identify** the name of the layer of the atmosphere where all Earth's weather happens.
   - A. Troposphere
   - B. Stratosphere
   - C. Mesosphere
   - D. Exosphere
2. The term 'troposphere' refers to the section of the atmosphere where most meteors burn up. It is the coldest part of the atmosphere. True or false?
3. In which levels of the atmosphere are the following features found?
   - a. Most passenger planes: _____
   - b. Orbiting satellites: _____
   - c. Burning meteors: _____
   - d. The Aurora lights: _____
4. **Explain** the difference between weather and climate.
5. Draw three diagrams to help you **explain** the factors that influence the following weather conditions.
   - a. Air temperature
   - b. Air movement
   - c. The amount of water in the air

Apply your understanding

Interpreting and analysing

6. Look carefully at the photographs in **FIGURE 3**.
   - a. **Describe** the weather event in each photograph.
   - b. How would each weather event affect people's lives?
7. Look carefully at the map of Australia's climatic zones in **FIGURE 4**. **Predict** which two settlements, or places, might be at risk of flood. Make sure you **explain** why you chose them.
8. Look at the environment outside a window right now.
   - a. What is the weather like? Do you think it matches the climatic zone in which you live? **Explain**.
   - b. Now check to see your climatic zone using **FIGURE 4**. If your answers are different, **explain** why this may have occurred.
9. **Describe** how the weather affected you yesterday. **Consider** the activities in which you participated either at school or after school.
10. **Describe** the relationship between Australia's climate and the places where we choose to live.

LESSON
10.3 What are natural hazards and natural disasters?

LEARNING INTENTION

By the end of this lesson you should be able to explain how natural hazards can become disasters that affect communities and environment across different scales.

TUNE IN

Both of the images in **FIGURE 1** show volcanic eruptions. One image shows a hazard and one image shows a disaster. Identify the hazard and the disaster, providing a justification for your decision.

FIGURE 1 Hazard or disaster?

10.3.1 What are natural hazards?

Australia is prone to a wide variety of **natural hazards**, which range from drought and bushfire to flooding. Many of these events are part of the weather's natural cycle. However, human actions such as the burning of fossil fuels, overgrazing, deforestation and the alteration of natural waterways have sometimes increased the impact of these hazards.

Natural hazards are different from **natural disasters**. A hazard is an event that is a *potential* source of harm to a community. A disaster occurs as the result of a hazardous event that dramatically affects a community. The four broad types of natural hazard are as follows:

1. atmospheric — for example, cyclones, hailstorms, blizzards and bushfires
2. hydrological — for example, flooding, wave action and glaciers
3. geological — for example, earthquakes and volcanoes
4. biological — for example, disease epidemics and plagues.

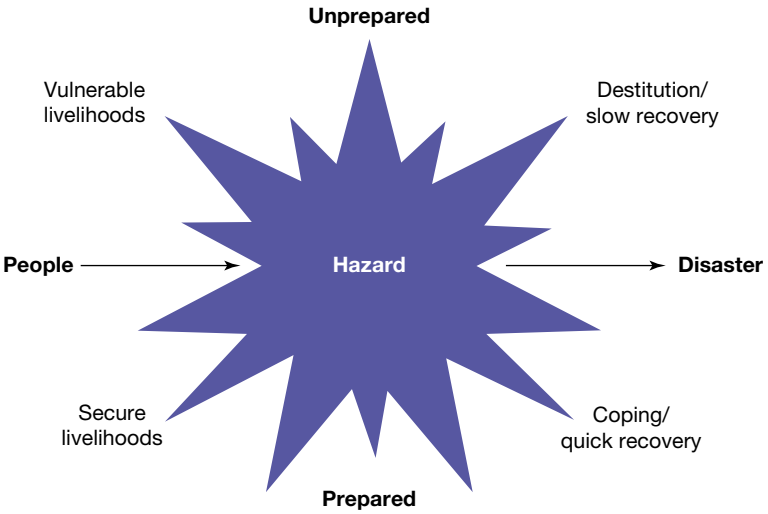
Natural hazards that are linked to the weather are categorised into the atmospheric and hydrological types. Hazards such as flooding and cyclones could also be termed extreme weather events.

natural hazard an extreme event that is the result of natural processes and has the potential to cause serious material damage and loss of life

natural disaster an extreme event that is the result of natural processes and causes serious material damage or loss of life

Some natural hazards are influenced by the actions of people and where they choose to locate themselves. For example, the severity of a flood depends not only on the amount and duration of rainfall that occurs. Humans can influence floods by building on floodplains and not planning well for disaster. Environmental degradation and poor urban planning can also turn natural hazards into natural disasters.

FIGURE 2 The link between vulnerability and disaster



Australia's costliest natural disasters

The following are some of Australia's costliest natural disasters from the last 50 years:

- *Floods, Queensland and New South Wales, 2022:* 22 deaths, estimated $10 billion cost.
- *Bushfire, 'Black Summer', Australia-wide, 2019–20:* 34 deaths, $103 billion cost.
- *Drought, Australia-wide but mainly in New South Wales, 2018:* $12 billion cost.
- *Floods, Queensland, New South Wales and Victoria, 2010–2011:* 35 deaths, 20 000 homes destroyed in Brisbane alone, $5.6 billion cost.
- *Bushfire, 'Black Saturday', Victoria, 2009:* 173 deaths, 2029 houses lost, more than $4 billion cost.
- *Earthquake, Newcastle, 1989:* 13 deaths, 50 000 buildings damaged, more than $4 billion cost.
- *Cyclone, Cyclone Tracy, Darwin, 1974:* 65 deaths, 10 800 buildings destroyed, $4.18 billion cost.

World's most deadly recent disasters

The following are the world's most deadliest disasters so far in the twenty-first century:

- *Earthquake, Haiti, 2010:* estimated range 100 000 to 316 000 deaths.
- *Tsunami, Indian Ocean 2004:* approximately 230 000 deaths.
- *Cyclone, Cyclone Nargis, Myanmar, 2008:* at least 146 000 deaths.
- *Earthquake, Sichuan, China, 2008:* approximately 87 400 deaths.
- *Earthquake, Kashmir, Pakistan, 2005:* approximately 79 000 deaths.

Risk is the possibility of negative effects caused by a natural hazard. Therefore, the type of hazard experienced, along with the **vulnerability** of the people affected, will determine the risk faced. The poorest people in the world are vulnerable because their ability to recover from the impact of a hazard is hampered by their lack of resources. In an event such as a flood or earthquake, for example, people lose their personal belongings, homes and livestock, which are often linked to their incomes, continuing the cycle of poverty. However, in regions that are adequately prepared, and where there is support to cope and rebuild, people recover more quickly.

vulnerability the state of being without protection and open to harm

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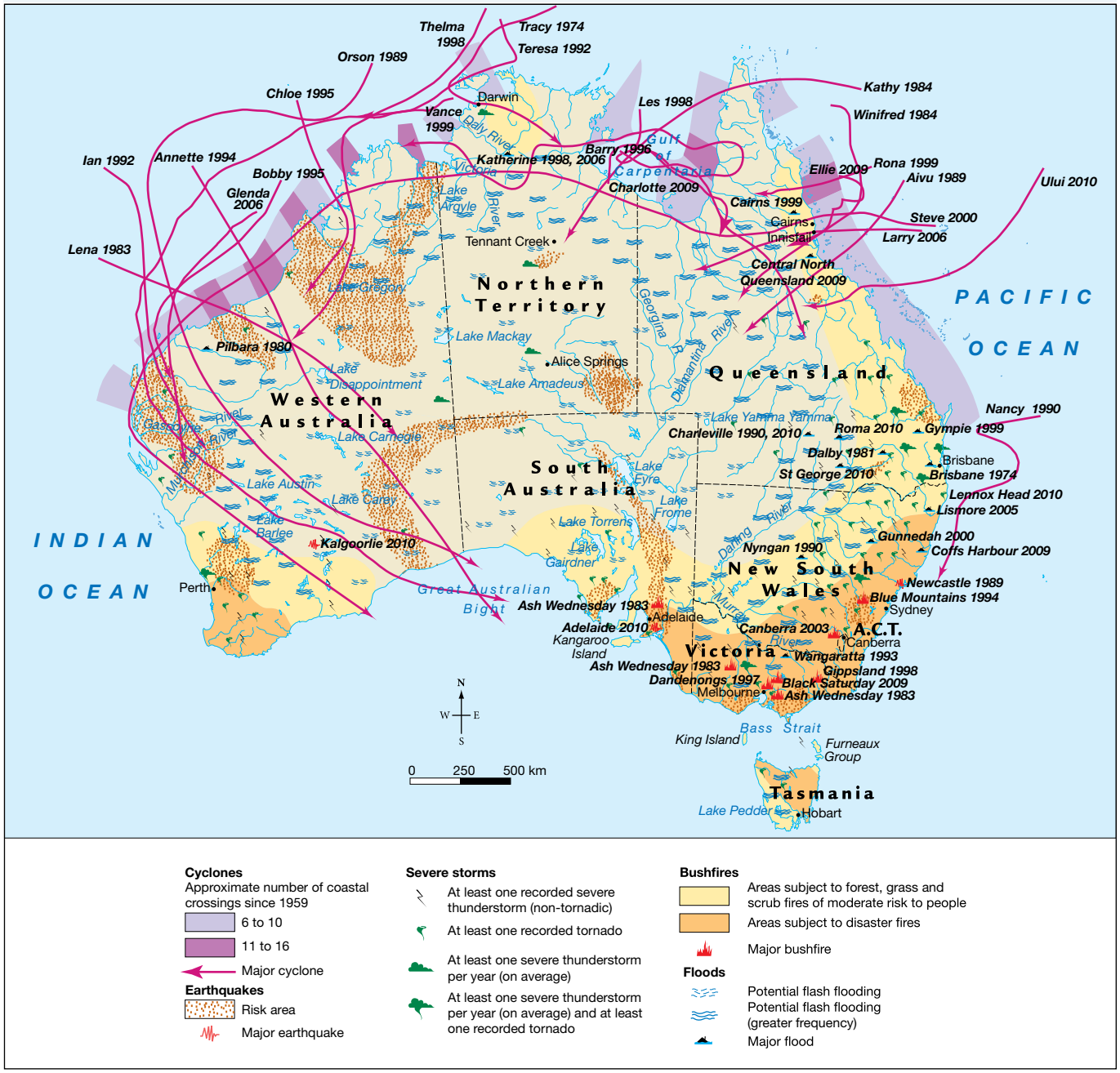
FIGURE 3 Australia's natural hazards and disasters



Source: MAPgraphics Pty Ltd, Brisbane

10.3 SKILL ACTIVITY: Questioning and researching using geographical methods

Using the internet, **research** a recent disaster that has occurred in an Asian country. **Describe** the following aspects of the disaster.

1. What was the original hazard and how did this hazard become a disaster?
2. What were the impacts of the disaster?
3. How were these impacts managed?

10.3 Exercise

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10.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
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Check your understanding

1. Complete the following sentence to **explain** how natural hazards and natural disasters differ.
   A _____ is the potential for an event to occur, while a _____ is when the event begins to affect people and environments.
2. A flood is both a natural and human hazard. True or false?
3. **Explain** why the risk of experiencing a natural disaster depends on the geographical location of a community.
4. **Describe** key changes that natural hazards and natural disasters can cause to an environment.
5. **Match** the following natural disasters to the correct details provided by placing the corresponding letter in the answer column.

Earthquake		**a.** Darwin, 1974: 65 deaths, 10 800 buildings destroyed, $4.18 billion cost
Drought		**b.** Haiti, 2010: estimated range 100 000 to 316 000 deaths
Cyclone Nargis		**c.** Australia-wide but mainly in New South Wales, 2018: $12 billion cost
Flood		**d.** Myanmar, 2008: at least 146 000 deaths
Cyclone Tracy		**e.** Queensland, New South Wales and Victoria, 2010–2011: 35 deaths, $5.6 billion cost

Apply your understanding

Communicating

6. Refer to **FIGURE 3**.
   a. What types of natural disasters occur most often in Australia?
   b. **Describe** the location of Australia's cyclone hazard zone.
   c. Give one example of a place that has suffered a bushfire disaster.
   d. What type of hazards are places around Newcastle subject to?
   e. What would be the likely impact of a large earthquake occurring in the earthquake-risk area in the Northern Territory?
7. The casualty rate for the Haitian earthquake is heavily debated. **Suggest** possible reasons for a lack of accuracy in this case.
8. Is your local area at risk of any natural disasters? If so, **identify** the category of disaster that is most likely to affect your area.
9. **Explain** the difference between risk and impacts in reference to natural disasters.
10. What role can Australia play in supporting countries in our region that experience frequent natural disasters?

LESSON
10.4 What is the impact of water variability, availability and accessibility?

LEARNING INTENTION

By the end of this lesson you should be able to explain the impact of water variability, availability and accessibility, and how this differs between countries.

TUNE IN

In many countries, women and children walk for several kilometres each day, just to collect water. These journeys can commonly take over six hours.

If women and children are spending this much time collecting water, what other opportunities are they missing?

Discuss this issue with a partner and document your observations.

FIGURE 1 In some countries, women and girls can spend up to six hours each day collecting water.

10.4.1 Water, water everywhere?

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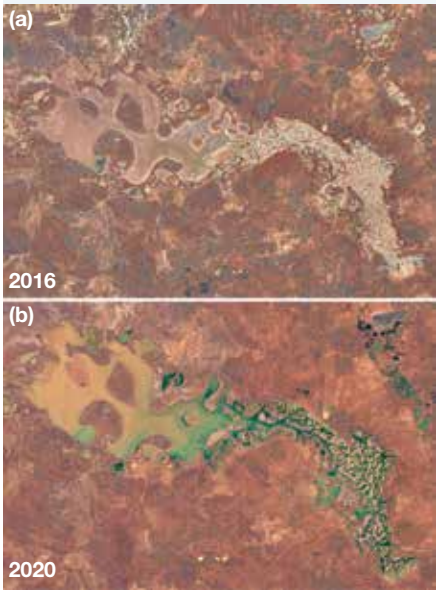
Wouldn't it be amazing if anyone, no matter where they were in the world, could simply turn on a tap to watch high-quality drinking water pour out? Wouldn't it be incredible if every farmer in the world knew exactly when and how much it was going to rain so that they could plan their planting cycles accordingly? Unfortunately, this is far from reality for millions of people around the world, and tens of thousands of people in Australia as well. In communities across the world, significant variability exists in the amount of water that is available and accessible. Before an investigation of issues such as drought, flooding and other meteorological hazards can be conducted, it is necessary to discuss the following different but connected terms: water variability, water availability and accessibility, and water scarcity.

FIGURE 2 Lake Carnegie as it is regularly seen (a) and after unseasonably high rainfall (b)



10.4.2 Water variability

The amount of rainfall a location receives can vary significantly, and depends on a number of seasonal and environmental factors. Locations can often see inconsistency in the amount of rain received across a range of time frames. This is known as water variability, and is most severe in locations that experience

extreme environmental conditions. Australia experiences a particularly high degree of water variability. This fact itself may not surprise you, especially if you live along Australia eastern coast. However, you may be surprised to learn that water variability also impacts some of the country's driest environments. Bureau of Meteorology Research Scientist Dr Blair Trewin explains this variability through the example of Lake Carnegie in central Western Australia. Lake Carnegie receives an average annual rainfall of only 225 millimetres per year. (For comparison, Melbourne's annual average rainfall is 518 millimetres, while Adelaide receives 547 millimetres per year, Sydney 1042 millimetres and Brisbane 1080 millimetres.) Yet on just one day in 2020, 270 millimetres of rain fell on Lake Carnegie (more than its yearly average). The difference in the landscape can be clearly seen in **FIGURE 2**. Similar variability can also be observed in **FIGURE 3**, which shows many other areas of extreme rainfall variability, including locations in outback New South Wales, Queensland, Western Australia, South Australia and the Northern Territory.

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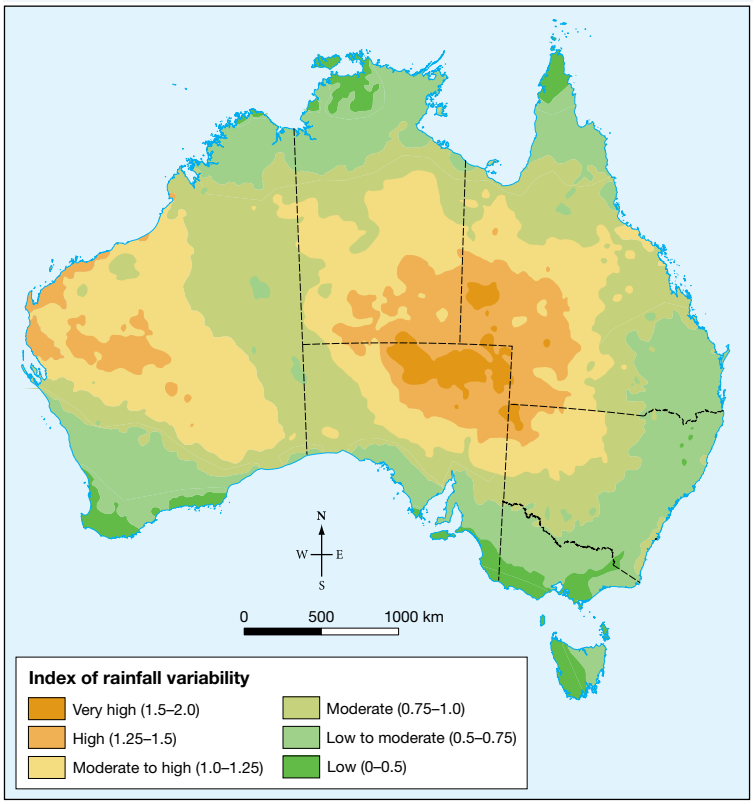
FIGURE 3 Australia's rainfall variability from 1900 to 2019



Source: Map redrawn by Spatial Vision © Copyright Commonwealth of Australia 2020, Bureau of Meteorology.

What influences Australia's water variability?

The unique characteristics of Australia's rainfall patterns are largely due to the influence of two equally unique climate events — **El Niño** and La Niña. El Niño and La Niña are the warm and cool phases of a recurring climate pattern across the tropical Pacific, known as the El Niño–Southern Oscillation, or ENSO for short.

El Niño and La Niña

Australian droughts are heavily influenced by what **meteorologists** call an El Niño event. In a normal year, warm surface water is blown west across the Pacific Ocean towards Australia. This brings heavy rain to northern Australia, Papua New Guinea and Indonesia. On the other side of the Pacific, South America experiences drought. When an El Niño event occurs, these winds and surface ocean currents reverse their direction. The warm, moist air is pushed towards South America, producing rain in South America and drought in Australia.

El Niño the reversal (every few years) of the more usual direction of winds and surface currents across the Pacific Ocean; this change causes drought in Australia and heavy rain in South America

meteorologist a person who studies and predicts weather

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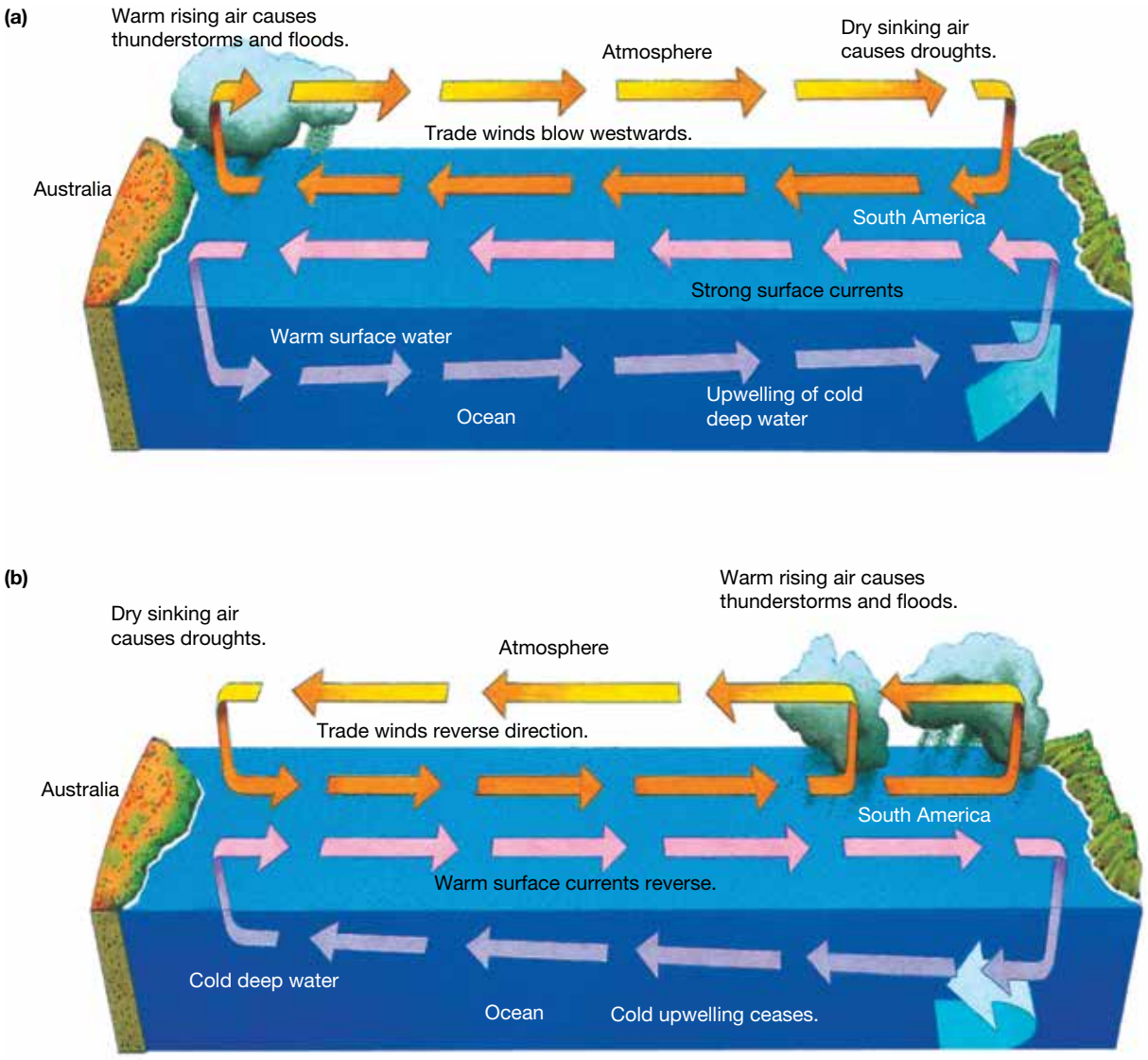
FIGURE 4 Weather events in (a) a typical year and (b) an El Niño year



El Niño and the southern oscillation

Fluctuations in rainfall have several causes that are not fully understood. Probably the main cause of major rainfall fluctuations in Australia is the **southern oscillation**, which is a major air pressure shift between the Asian and east Pacific regions. The strength and direction of the southern oscillation is measured by a simple index called the Southern Oscillation Index (SOI). The SOI is calculated from monthly or seasonal fluctuations in air pressure between Tahiti and Darwin. In an average rainfall year with 'typical' pressure patterns, the SOI is between −10 and +10. If the SOI is strongly negative (below −10), this means that the air pressure at sea level in Darwin is higher than in Tahiti, and an El Niño event occurs.

During an El Niño event, less than average rainfall is experienced over much of Australia. During this period, drought will occur. If the SOI becomes strongly positive (above +10), this means the air pressure in Darwin is much lower than normal and a La Niña event occurs. During this period, above average rainfall will occur.

In recent years, scientists have made great advances in understanding and forecasting El Niño and southern oscillation events. The National Climate Centre in Australia produces outlooks on rainfall three months ahead. These outlooks are proving to be of great value to farmers, and especially valuable for ecologically sustainable development in rural areas.

southern oscillation a major air pressure shift between the Asian and east Pacific regions; its most common extremes are El Niño events

10.4.3 Water availability and accessibility

Imagine that it is lunchtime on a regular school day. Your stomach has been rumbling all morning and it is finally time for lunch. You open your bag and staring back at you is a lunchbox filled with all your favourite foods. We can say that your lunch is *available* because it is there for you, ready to be used. We can also say that your lunch is *accessible* because you can easily get to it. If you have lunch in your bag but it's not yet lunchtime, then your lunch is available but it is not accessible. This simplified example can be used to explain the difference between a location's water availability and accessibility. The distinction between these two terms is important — firstly, to understand the reasons a location may not have reliable water and, secondly, to develop solutions to improve the supply of water.

Although 70 per cent of the Earth is water, a tiny proportion of that water is available for human consumption. Of that 70 per cent, 96.5 per cent is contained in our oceans, with only 2.6 per cent present as freshwater. However, the majority of *that* water is trapped with glaciers, icecaps and groundwater, with just 1.2 per cent of that 2.6 per cent present in surface water. If we keep following this surface freshwater, we discover that, again, a remarkably small percentage of water is available for direct human consumption, largely in rivers and lakes. These statistics (see **FIGURE 5**) clearly demonstrate that the availability of fresh water on a global scale is significant issue. With the seemingly never-ending increase of human population, the scope of this issue becomes even more apparent.

For some countries, water *accessibility* is a greater concern than *availability.* Papua New Guinea can be used as an example of such a country. Located directly to the north of Australia, Papua New Guinea is the third wettest country in the world, with an average annual rainfall of over 3000 millimetres. This incredibly large amount of rain shows us that it is not the availability of water that is the problem for Papua New Guinea. Instead, the accessibility of water in Papua New Guinea is affected by the country's extremely mountainous topography and its dense jungle environments. These geographic characteristics make it difficult for the people of Papua New Guinea to collect and distribute water across the country. Sadly, this means that although Papua New Guinea has strong water availability, it has poor water accessibility. This, in turn, negatively influences Papua New Guinea's economic capability, making it one of the poorest countries in the world.

FIGURE 5 Water availability breakdown

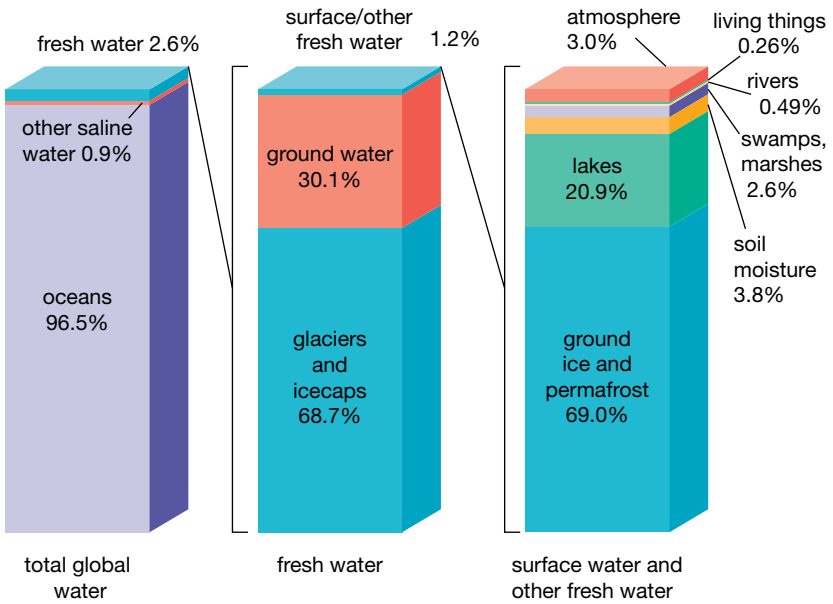


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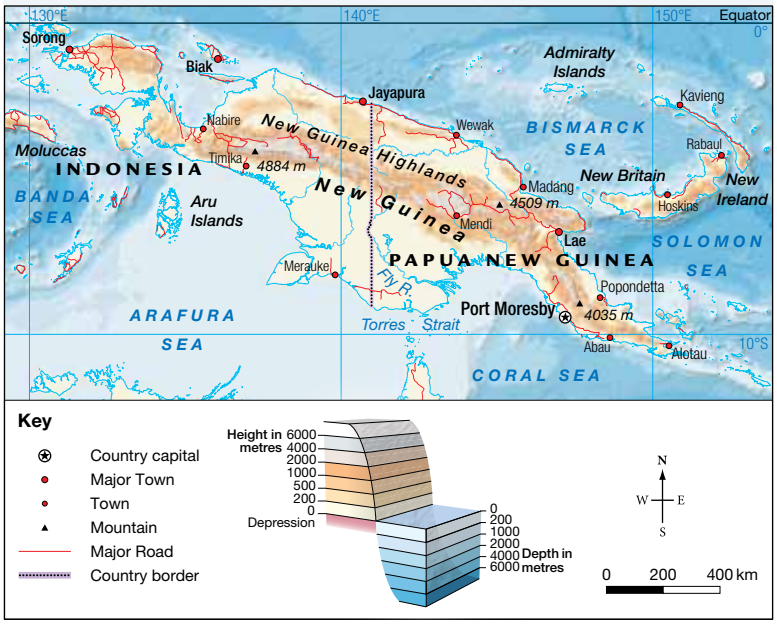
FIGURE 6 This topographic map highlights how difficult it is for the people of Papua New Guinea to collect and distribute water.



Source: Based on data from Natural Earth and ETOPO1: doi:10.7289/V5C8276M. Map drawn by Spatial Vision.

10.4.4 Water scarcity

The last aspect of water variability is scarcity. Water scarcity is defined as deficiency or lack of safe water supply. This does not simply refer to locations that lack sufficient rainfall or flow of water (often referred to as physical water scarcity).

Water scarcity can affect any location, particularly those which have rapidly increasing populations. In these locations, the demand for water is far greater than supply.

This is a particular problem in countries that have both high populations *and* low water availability or accessibility — such as those located in in Sub-Saharan Africa.

Countries with low economic capacity are also commonly affected by water scarcity. Often, the solutions to water scarcity (digging wells, effective water catchment, and water distribution and treatment infrastructure) require significant financial investment.

Unfortunately, these are investments that vulnerable countries can simply not afford to make.

10.4 SKILL ACTIVITY: Communicating

The World Health Organization has published a fact sheet that explains the issues and impacts that a lack of fresh drinking water can have on a country.

Use the **Drinking water fact sheet** weblink in your Resources panel and **create** your own infographic on these issues. You may want to focus on a specific country or even a region to provide a reference point for your infographic.

Resources

Weblink Drinking water fact sheet

10.4 Exercise

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10.4 Exercise

Learning pathways

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Check your understanding

1. **Match** each of the terms to the statement provided that best describes it by placing the corresponding letter in the answer column.

Water variability		**a.** Water that is readily accessible for consumption and use.
Water availability		**b.** The amount of rainfall a location receives can vary significantly and depends on a number of seasonal and environmental factors.
Water accessibility		**c.** The quantity of water that can be used for human purposes.

2. The majority of the Earth's fresh water is trapped in glaciers. True or false?
3. **Identify** any problems that can be caused by a high degree of water variability.
4. What are the key reasons Australia experiences such high water variability?
5. **State** the key difference between water availability and accessibility.
6. El Niño is the result of the interconnection that occurs between Australia and South America. True or false?

Apply your understanding

Communicating

7. Refer to the sources in this lesson to **describe** the areas that become (a) wetter, (b) drier and (c) warmer during an El Niño event.
8. Papua New Guinea receives over 3000 millimetres of rain per year, yet still has poor water accessibility. **Discuss** how this is possible.
9. Consider the map in **FIGURE 6**. **Describe** the interconnection between Papua New Guinea's topography and its water accessibility.
10. What do you think is more important — water availability or water accessibility? **Justify** your response.

LESSON
10.5 What causes droughts and how do we manage them?

LEARNING INTENTION

By the end of this lesson you should be able to explain why droughts occur and describe the impacts of drought in Australia.

TUNE IN

The two photographs in **FIGURE 1** both show Menindee Lakes, a system of nine large but relatively shallow lakes, located in south-west New South Wales on the Darling River. Identity the similarities and differences between the two photographs.

FIGURE 1 Menindee Lakes, a series of lakes along the Darling River, during rainy and drought conditions

10.5.1 What is a drought?

Australia is the driest inhabited continent on Earth. The main reason Australia is so dry is that much of the continent lies in an area dominated by high atmospheric pressure for most of the year, which brings dry, stable, sinking air to the country. Australia also experiences great variation in its rainfall due to the southern oscillation and El Niño (refer to lesson 10.4).

Low average rainfall and extended dry spells are a normal part of life throughout most of Australia. The continent being located in a zone of high pressure that creates conditions of clear skies and low rainfall. Drought conditions occur when the high-pressure systems are more extensive than usual, creating long or severe rainfall shortages. A drought is a prolonged period of below-average rainfall, when not enough water is available to supply our normal needs. Because people use water in so many different ways and in such different quantities, there is no universal amount of rainfall that defines a drought.

The term *drought* should not be confused with low rainfall. Sydney could experience a drought and have more rainfall during that period than Alice Springs, for example, which could be experiencing above-average rainfall. If low rainfall meant drought, much of Australia would be in drought most of the time.

Droughts affect all parts of Australia over a period of time. Some droughts can be localised while other parts of the country receive good rain. Droughts can be short and intense, such as the drought that lasted from April 1982 to February 1983; or they can be long-lived, such as the Millennium Drought.

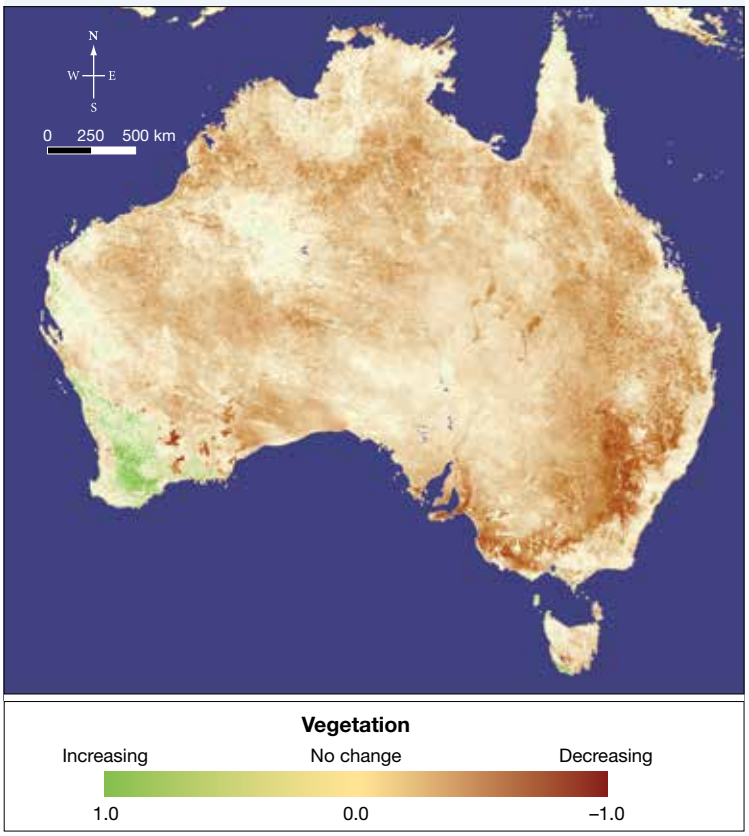
Different weather systems affect different parts of Australia, so all of Australia is unlikely to experience drought at the same time.

10.5.2 Impacts of drought: the Millennium Drought

Drought can have devastating impacts for communities and natural environments. Droughts can be relatively brief or they can last for years or decades. Droughts can be localised or they can be widespread. The impacts of a drought are directly related to its severity, scale, longevity and the existing socio-economic conditions of the affected region.

The prelude to the Millennium Drought in Australia began in the late 1990s with a period of extremely dry conditions followed by a strong El Niño event. This event eventually subsided in the early 2000s; however, although some significant rainfall occurred in the following years, it was not enough to break the drought being experienced across much of south-eastern Australia. Dry conditions persisted for several years, with the drought reaching the peak of its severity in 2006. During this year, the situation became dire for people and communities in South Australia, Victoria, New South Wales and Queensland. The Murray–Darling Basin recorded its second driest season since 1900, as did the entire state of South Australia — which only recorded 108 millimetres of rain for the whole year! Conditions again improved slightly in some areas but the drought and its impacts still persisted. It was not until a La Niña event began in 2010 that the Millennium Drought was officially declared over.

FIGURE 2 Extent of the drought — changes in vegetation cover, 2005



Source: Spatial Vision

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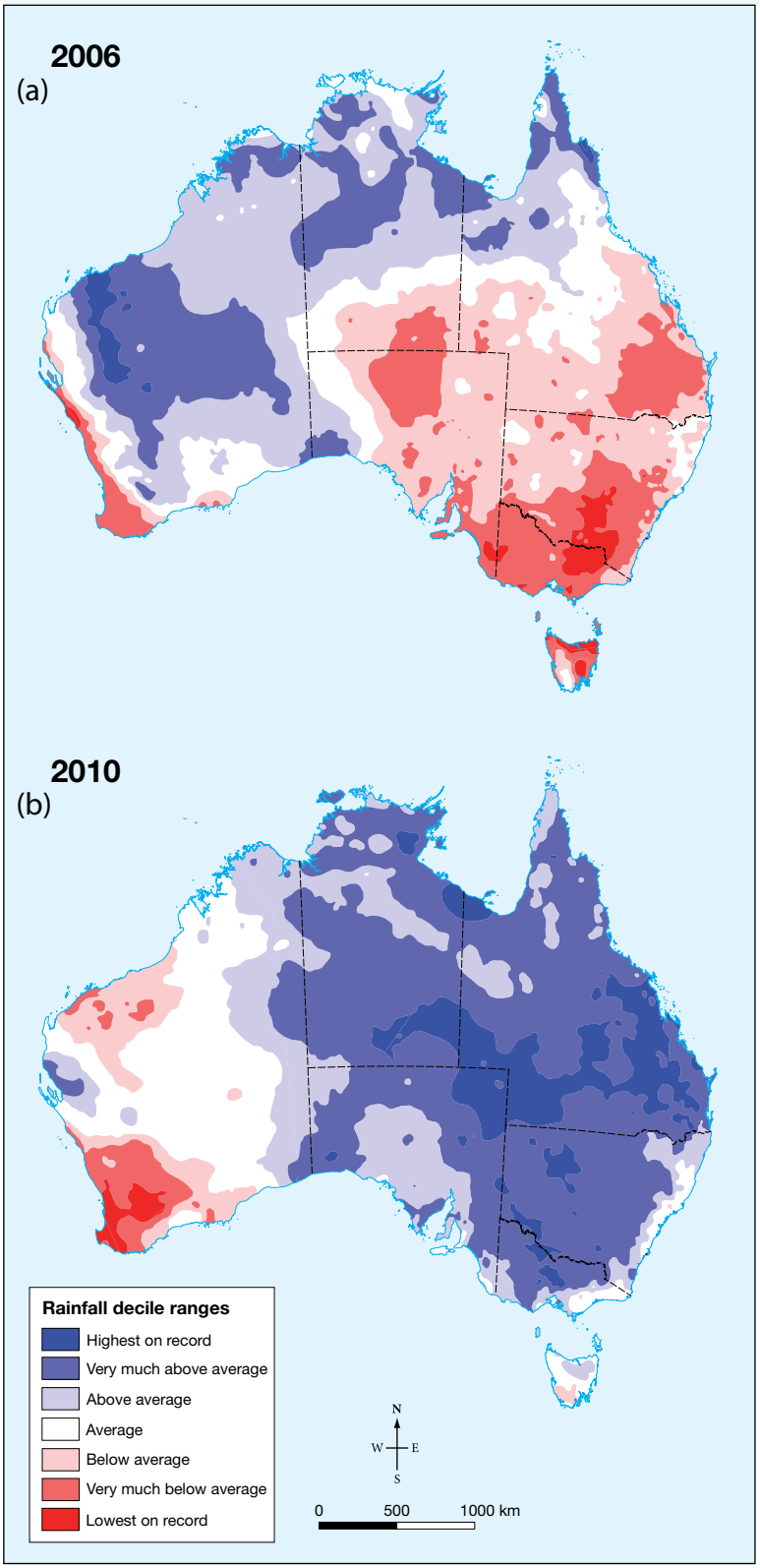
In rural towns, jobs were lost and many businesses failed. Some people found themselves forced to leave drought-affected areas in search of other work. Many never returned. Very long droughts cause rural communities much heartache, and this can result in the break-up of families. The conditions can also lead to severe depression in some individuals. However, the Australian government set up a fund that farmers and people in agricultural businesses can apply to for financial relief when their incomes are disrupted by drought. Counselling hotlines are also available to offer support.

When Australia experiences a drought, agriculture suffers first and most severely, but eventually the impact spreads. Due to the severe lack of water caused by the Millennium Drought, many farmers faced production losses because they were not able to sustain their crops or sufficiently feed their livestock. This had negative economic impacts:

- By 2004, dairy farmers had experienced a 4.5 per cent drop in their incomes.
- Cotton crops were devastated by the shortage of water, affecting up to 20 cotton communities and approximately 10 000 people in the industry.
- Some communities had to cut production by 60 to 100 per cent.
- Cattle and sheep farmers found it hard to find stockfeed, and prices increased. As a result, herds grew smaller.

Along with these economic and social impacts, the Australian environment suffers in drought. Droughts have a bad effect on topsoil in Australia. During drought conditions, millions of tonnes of topsoil may be blown away (see **FIGURE 4**). This loss takes many years to replace naturally, if it is ever replaced. The loss of topsoil can make many regions far less productive, making it harder for farmers to recover once the drought has broken.

FIGURE 3 Australia's annual rainfall in 2006 (a) and 2010 (b)



Source: Map redrawn by Spatial Vision © Copyright Commonwealth of Australia 2021, Bureau of Meteorology.

FIGURE 4 'Dust' (topsoil) blown from drought-affected inland Australia blankets Sydney, 23 September 2009

on Resources

Video eLesson Weather events in a typical year and an El Niño year (eles-2275)
Weblink News report: dust storms

10.5.3 Managing the impact of drought

During times of extreme water shortages, governments, communities and individuals often attempt to ensure a reliable water supply. The Millennium Drought in Australia sparked many different water-saving actions. Since it is difficult to manage a drought once it has begun, the key management strategies involve drought *prevention*.

Option 1: government action

The Queensland Government developed the South-East Queensland (SEQ) water grid in order to secure alternative sources of water in an environment that seemed to be growing drier. Although the project began back in 2004, it remains an excellent example how the impacts of drought can be managed. This strategy aimed to connect the water sources of the region through a pipe network that could move water to different areas and thus meet the needs of local communities. The grid includes existing dams, three water treatment plants and a desalination plant, all connected by approximately 450 kilometres of pipes.

In 2008, the Western Corridor Recycled Project was completed at a cost of $2.5 billion. This project is part of the SEQ water grid and is the largest recycled water scheme in Australia. The project can supply up to 230 megalitres per day of recycled water to industry and power plants. The water also has the potential to be used by farmers and to top up drinking supplies. However, these last two uses of recycled water have created wide debate among communities.

FIGURE 5 The desalination plant at Tugun produces drinking water for south-east Queensland.

The desalination plant at Tugun on the Gold Coast can provide up to 133 megalitres of drinking water per day. Essentially, this project produces drinking water by removing salts and other minerals from sea water. This technology is very successful and has been used in other regions of Australia for years, including Coober Pedy, where desalination is used to treat bore water. Internationally, approximately 7500 plants are in operation. These desalination plants enable safe drinking water to be produced without having to rely on rainfall.

Water measurements

- 1 ML = 1 megalitre
- 1 megalitre = 1 000 000 litres
- 10 megalitres = 4 Olympic-size swimming pools

Stages of the desalination process

1. Sea water is piped from the ocean through a submerged inlet tunnel to the plant.
2. At the pre-treatment stage, particles in the sea water are micro-filtered, the pH is adjusted, and an inhibitor is added to control the build-up of scale in pipelines and tanks.
3. The sea water is forced through layers of membrane to remove salt and minerals. Concentrated salt water is separated and returned to the ocean.
4. During post-treatment, small amounts of lime and carbon dioxide are added to the water, along with chlorine for disinfection.
5. For the Tugun plant, the desalinated water is blended with other Gold Coast water supplies and joins south-east Queensland's water grid to supply homes and industry.

Based on information from www.watersecure.com.au.

In times of drought, governments may introduce water restrictions to limit the pressure placed on water supplies by individual households and businesses. They may also introduce **incentive** schemes that provide a **rebate** on water-saving devices such as water tanks, which help relieve the strain on the water supply.

incentive encourages a person to do something

rebate a partial refund on something that has already been paid for

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FIGURE 6 The SEQ water grid

Source: Seqwater

Option 2: You and me — personal action

During 2019–20, 11 231 gigalitres of water was used by Australian households. Although this figure was down on household water use from the previous year, it is still a large amount of water. With so much water used in our homes, this domestic use seems an obvious place for water conservation to begin.

FIGURE 7 Collecting rainwater from your roof can provide water for flushing toilets, watering the garden or washing the car. Making changes in the bathroom such as a shower timer or adding an attachment to your tap can also help you save water.

Many of our day-to-day activities require the use of water. We can take action to use this water more efficiently to ensure it is not wasted. Some ideas include:

- putting aerators on taps so less water comes out
- using a hose with a shut-off nozzle
- cleaning driveways and paths with a broom rather than a hose.

More ideas are shown in **FIGURE 8**. Personal action can have a big impact. If every individual seeks to minimise wastage, significant water savings can be achieved.

FIGURE 8 Ways we can use water wisely

Ensure your next washing machine has lots of water-efficiency stars.

Ensure you completely fill your dishwasher before using it.

Don't keep the tap running when washing fruit and vegetables. Wash them in a bowl instead.

Install a dual-flush toilet.

Dispose of tissues in the bin — don't flush them down the toilet.

Have short showers. Try for three minutes!

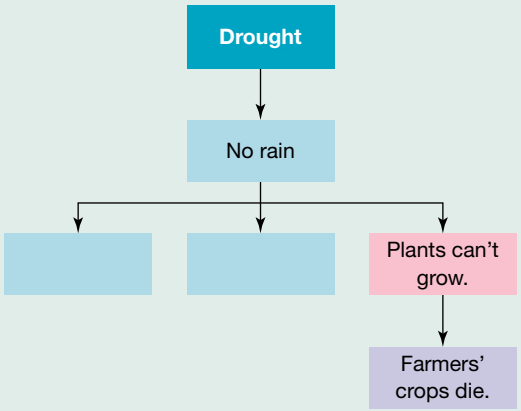
Don't run the tap when brushing your teeth.

Use a water-saving showerhead and keep a bucket in the shower for excess water to use on the garden.

Cover soil in mulch and water the garden in the early morning or evening to reduce evaporation.

10.5 SKILL ACTIVITY: Communicating

1. Think about all the environmental, economic and social impacts of drought. **List** these impacts.
2. Using this list, **create** a flow diagram to illustrate how these three groups relate to, connect to and influence each other.
   Use the provided flow diagram to get you started. You can add more boxes and arrows to show how elements are connected.
3. **Compare** your flow diagram with the class, add further connections.



10.5 Exercise

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10.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 8	2, 4, 6, 7	5, 9, 10

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- Receive immediate feedback
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Check your understanding

1. What is drought?
   - **A.** A long period of below-average rainfall, when not enough water is available to supply our normal needs.
   - **B.** A long period of average rainfall, when not enough water is available to supply our normal needs.
   - **C.** A long period of above-average rainfall, when enough water is available to supply our normal needs.
   - **D.** A long period of average rainfall, when enough water is available to supply our normal needs.
2. Why Australia is so dry?
   - **A.** The temperature is too high.
   - **B.** Rainfall is too low.
   - **C.** It is dominated by high-pressure systems.
   - **D.** It is dominated by low-pressure systems.
3. Complete the following sentence to **explain** what desalination is.
   Desalination is a process that removes _____ from _____.
4. **Identify** two ways the government attempts to ensure a reliable water supply.
5. **List** and **explain** the factors that contributed to the severity of the Millennium Drought.

Apply your understanding

Communicating

6. **Describe** three ways in which droughts can affect environments.
7. **Describe** three ways in which droughts can affect communities.
8. **Explain** why all of Australia is unlikely to be affected by drought at the same time.
9. Will the SEQ water grid be effective in managing water during a drought period? **Justify** your response.
10. Reducing personal water use is an excellent strategy to minimise the impacts of drought. **Determine** what obstacles you believe prevent people from reducing their personal water use.

LESSON
10.6 What are the causes and impacts of floods?

LEARNING INTENTION

By the end of this lesson you should be able to investigate the causes and impacts that floods can have on environments and communities.

TUNE IN

After hours of trying to keep the floodwaters at bay, you've made the decision to flee your house.

You only have 10 minutes to throw your most treasured possessions in your dingy and head to higher ground.

Write a list of the items that you would bring with you. Consider how your priorities might change in those few minutes. Share some of your chosen items with the class.

FIGURE 1 What would you pack if you had to evacuate during a flood?

10.6.1 Why does it flood?

Floods are naturally occurring hazards that can cause devastating impacts for natural environments and communities alike. As you will learn in this lesson, the threat posed by floods to human populations can be increased due to our tendency to establish settlements on floodplains. A floodplain (**FIGURE 2**) is an area of relatively flat land that borders a river and is covered by water during a flood. Floodplains are formed when the water in a river slows down in flat areas. The river begins to meander and gradually deposits **alluvium**, which builds up the floodplain and other landforms such as deltas.

These fertile, flat areas are used for farming and settlement around the world. In Australia, many of our richest farmlands are on floodplains, and towns are often built on them, close to the rivers. Such towns are subject to flooding. The possibility of flood is also increased when vegetation in **catchment areas** has been cleared or modified. Native vegetation can slow down run-off and reduce the chance of flooding.

alluvium the loose material brought down by a river and deposited on its bed, or on the floodplain or delta

catchment area the area of land that contributes water to a river and its tributaries

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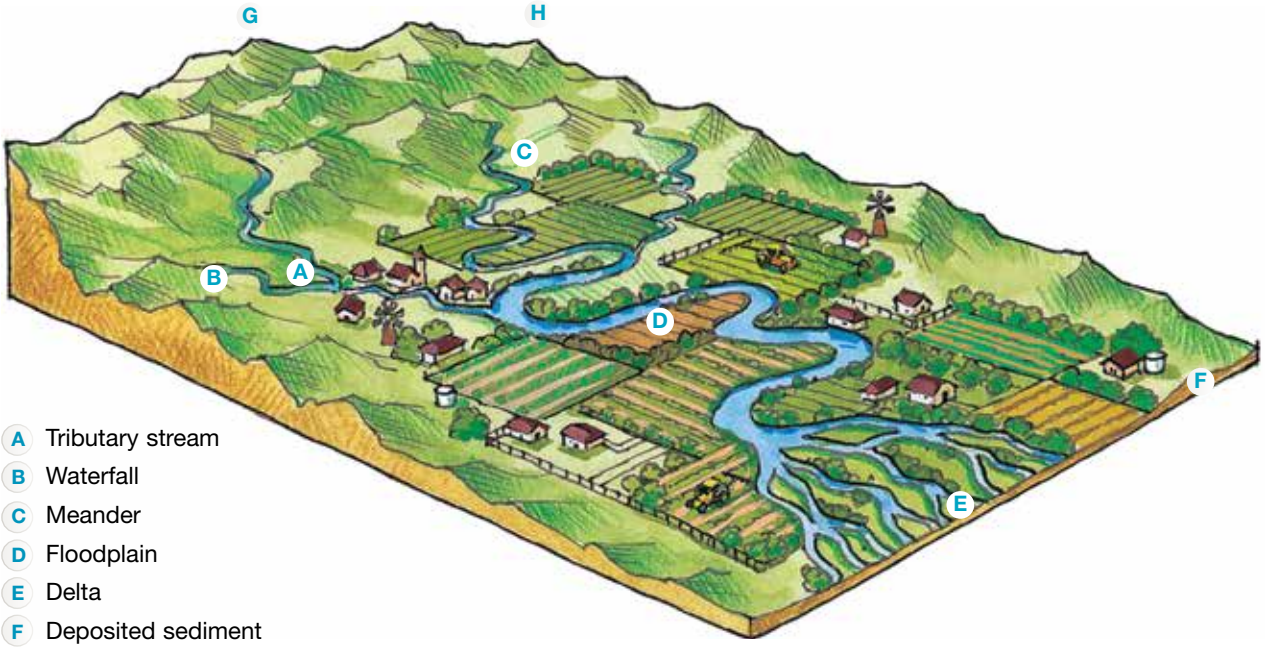
FIGURE 2 Flat, fertile floodplains are often preferred areas for settlement and farming.



A Tributary stream
B Waterfall
C Meander
D Floodplain
E Delta
F Deposited sediment
G Mountains
H Watershed

10.6.2 Types of floods

Even though Australia is the driest of all the world's inhabited continents, we experience periods of very heavy rainfall and flood. Flood disasters in Australia damage property, kill livestock and cause the loss of human life. In some cases, entire sections of a town have been washed away, as in 1852, when one-third of the town of Gundagai disappeared.

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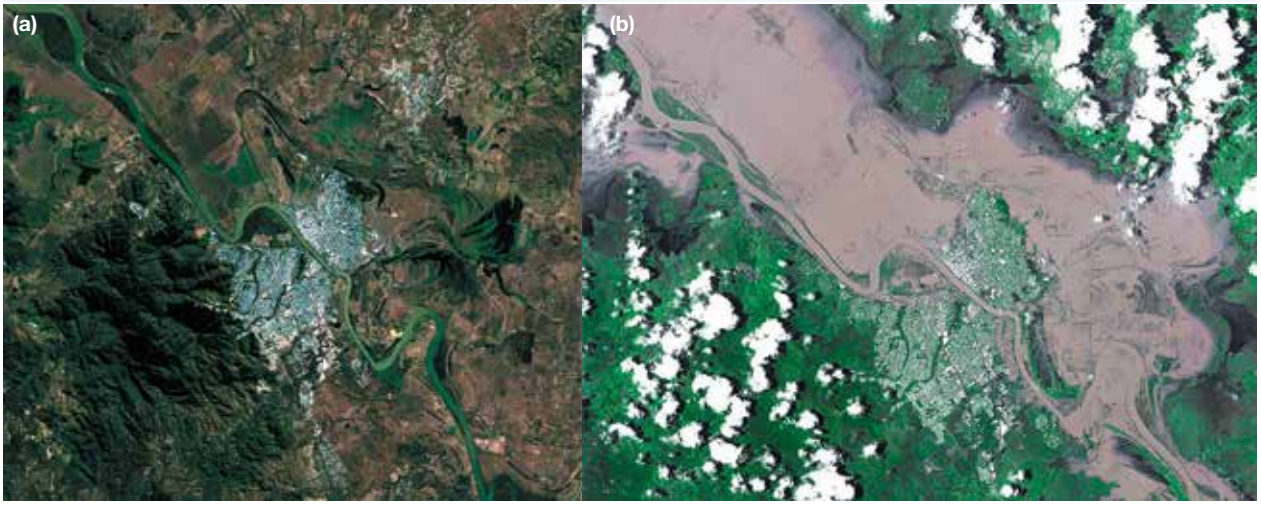
FIGURE 3 How did the floods affect Rockhampton? Rockhampton (a) before the 2011 flood and (b) after the flood



The three main types of flood are:

1. *Slow-onset floods:* these occur along the floodplains of inland rivers, and may last for weeks or months. They are caused by heavy rain and run-off upstream. The water can take days or weeks to affect farms and towns downstream.
2. *Rapid-onset floods:* these occur in mountain headwaters of larger inland rivers or rivers flowing to the coast. The rivers are steeper and the water flows more rapidly. Rapid-onset floods are often more damaging because people have less time to prepare.
3. *Flash floods:* these are caused by heavy rainfall that does not last long, as occurs in a severe thunderstorm. This type of flooding causes the greatest risk to property and human life because it can happen so quickly. It can be a serious problem in urban areas where drainage systems are inadequate.

FIGURE 4 The Lismore floods

10.6.3 CASE STUDY: The Queensland floods, 2011 and 2022

When the Brisbane River broke its banks on 11 January 2011, Australians were shocked and saddened by the devastation left in its wake. Thankfully those affected were able to gain some comfort from the assistance they received from the community as they began the slow process of recovery. However, this is not always an option for those affected by floods in other regions of the world. Australia has experienced several flooding events since 2011, some even more significant than the Brisbane floods. The 2022 floods experienced in Brisbane and parts of south-eastern Queensland were far more significant.

During the 2022 floods, greater Brisbane received 676 millimetres of rain in just three days! However, a discussion of the 2011 flooding event allows us to compare what happened in Brisbane to another flooding event that occurred on the other side of the world on the exact same day.

Queensland, Australia, 2011

Country background

Australia is considered a developed nation with a strong economy. Australians earn on average $52 000 per person. Approximately 26 million people live in Australia, with 5.2 million of those living in Queensland. About 84 per cent of all Australians are located within 50 kilometres of the coast.

Why?

The flooding that affected this region in 2011 was due to a strong La Niña event. Long periods of heavy rain over Queensland catchments caused rivers to burst their banks.

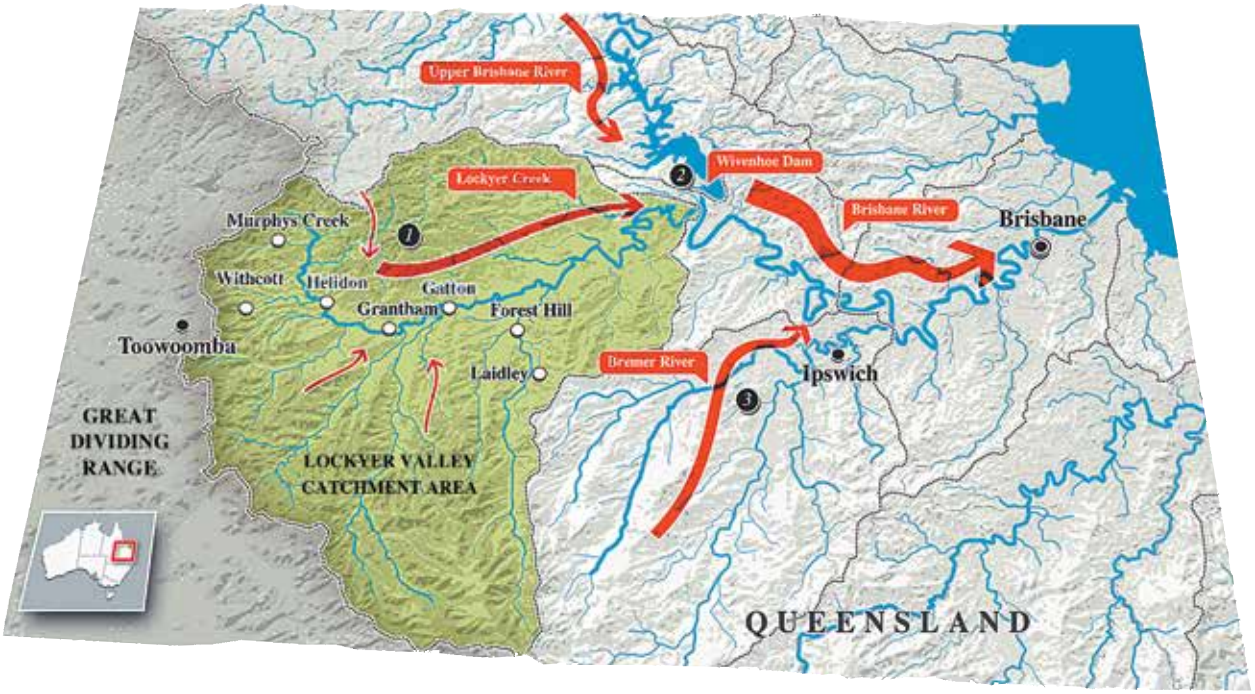
Effects

- Three-quarters of the state was declared a disaster zone.
- At least 70 towns and over 200 000 people were affected.
- There were 35 deaths.
- The cost to the Australian economy was at least $10 billion.
- Up to 300 roads were closed, including nine major highways.
- Over 20 000 homes were flooded in Brisbane alone.
- Massive damage and loss of property occurred.

Assistance and recovery

- $1.725 billion was raised by the federal government via a flood levy in the tax system.
- $281.5 million was raised through the Disaster Relief Appeal set up by the then Queensland premier, Anna Bligh.
- Over $20 million was donated to aid agencies such as the St Vincent de Paul Society to help those suffering.
- About $1.2 million was raised through charity sporting events such as Rally for Relief, Legends of Origin and Twenty20 cricket.
- The Australian Defence Force was mobilised to help with the clean up.
- The Mud Army was formed, consisting of 55 000 volunteers registered to help clean up the streets; thousands more unregistered people joined them.
- Improvements were made to dam manuals to help manage the release of water from dams during floods.

FIGURE 5 Anatomy of a flood



Town heights above sea level in metres: Toowoomba, 700 m; Murphys Creek, 704 m; Withcott, 262 m; Helidon, 143 m; Grantham, 110 m; Gatton, 111 m; Forest Hill, 95 m; Laidley, 135 m; Ipswich, 54.8 m; Brisbane 28.4 m.

1. Floodwaters from **Lockyer Creek**, which flows into **Brisbane River**. The Lockyer Valley was hit by more than 200 mm of rain.
2. More than 490 000 million litres were released from **Wivenhoe Dam** into Brisbane River.
3. Floodwaters from the **Bremer River**, which is also fed by the **Lockyer Valley**. After passing Ipswich, where it burst its banks, the Bremer River flows into the Brisbane River.

10.6.4 CASE STUDY: The Brazil floods, 2011

State of Rio de Janeiro, Brazil, 2011

Country background

Brazil is considered a developing nation. Brazilians earn on average $10 200 per person per year.

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Approximately 212 million people reside in Brazil, with 650 000 living in the three towns worst affected by the flooding.

Why?

Due to the equivalent of a month's rain falling in 24 hours on 11 and 12 January 2011, flash flooding occurred in a mountainous region in Rio de Janeiro State and São Paulo State. Hillsides and riverbanks collapsed due to landslides. It is believed that illegal construction and deforestation may have contributed to the instability of the land.

Effects

- Approximately 900 people died — most of them in poverty-stricken areas with poor housing conditions and no building policies.
- Forty per cent of the vegetable supply for the city of Rio de Janeiro was destroyed.
- Around 17 000 people were left homeless.
- Widespread property damage occurred, most of it to homes built riskily at the base of steep hills.

FIGURE 6 Areas affected by the floods in Brazil, 13 January 2011

Source: Spatial Vision

Assistance and recovery

- $460 million was set aside by Brazil's president for emergency aid and reconstruction.
- Troops were deployed to help.
- Clothes and food were donated to the area from other Brazilians.
- About $450 million was loaned by the World Bank.
- Support was given by internal and international charities.

FIGURE 7 Hills collapsed after the heavy rains, destroying homes.

10.6 SKILL ACTIVITY: Interpreting and analysing

In a table, **classify** (in point form) the impacts on people, the economy and the environment of the Brisbane and Brazilian floods.

10.6 Exercise

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10.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 7	3, 8, 10	4, 5, 6, 9

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Check your understanding

1. What are the three main types of floods? **Select** all possible answers.
   - A. Slow-onset floods
   - B. Rising floods
   - C. Sinking floods
   - D. Rapid-onset floods
   - E. Casual floods
   - F. Flash floods
2. A floodplain is an area of relatively hilly land that is near a river and is always covered by water. True or false?
3. What is alluvium and why is it important to agriculture?
4. Think back on the floods mentioned in this lesson.
   - a. **Explain**, in your own words, the three causes of the Brisbane floods.
   - b. **Explain** the causes of the Brazil floods.
   - c. **Compare** the causes of these two floods by identifying the similarities and differences between them.
5. Read the case studies on the 2011 Brisbane and Brazil floods.
   - a. **Compare** the scale of these floods.
   - b. Give reasons for the differences in the scale of these floods.

Apply your understanding

Concluding and decision-making

6. Should people continue to build on floodplains? Why or why not? Think globally when formulating your argument. Consider environmental, cultural and economic factors that could have an impact on a person's reasoning when choosing a place to settle.
7. Why do floods occur on floodplains and in deltas?
8. How might the effects of floods in urban spaces differ from effects in rural spaces?
9. Suggest a few strategies that could be implemented to lessen the impact of floods if they occurred in Brisbane and Brazil regions again.
10. Imagine both Brisbane and Brazil had been given warning that these floods were going to occur. Suggest at least two changes you would expect in relation to the impacts of these two flood events.

LESSON
10.7 How are floods managed?

LEARNING INTENTION

By the end of this lesson you should be able to describe and evaluate different methods of flood control and management.

TUNE IN

Sandbags are a commonly used strategy to combat rising flood waters.

1. Suggest how sandbags can protect buildings and homes from the impacts of floods.
2. Evaluate the success of sandbagging as a flood management strategy.
3. Describe another strategy that could be used instead of sandbagging.

FIGURE 1 Sandbags are often used during floods.

10.7.1 Flood management

Managing the effects of floods is important if the amount of damage caused is to be minimised. Unfortunately, not all countries have the same resources to tackle this problem. Those countries that are able to invest in flood-prevention **infrastructure** have a greater chance of reducing the risk of flood.

infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines

FIGURE 2 Lake Wivenhoe, Queensland, at 190 per cent capacity, January 2011

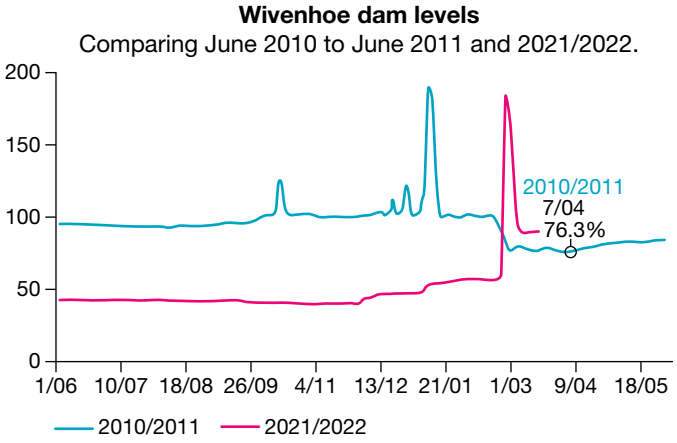
The most common form of flood management is to build a barrier that prevents excess water from reaching areas that would suffer major damage. Levees (see **FIGURE 4**), **weirs** and dams are examples of structures that are built to contain floodwaters. Dams that are used to stop flooding need to be kept below a certain level to allow space for floodwater to fill. Wivenhoe Dam in south-east Queensland was built in response to floods in 1974 (see **FIGURE 2**).

weir a barrier across a river, similar to a dam, which causes water to pool behind it; water is still able to flow over the top of the weir

However, some debate emerged about whether this dam could have been used more effectively during the 2010–2011 floods. During these floods, engineers had some difficult decisions to make. If they allowed the dam to become too full, they risked flood waters spilling over the side of the dam and eroding the dam wall.

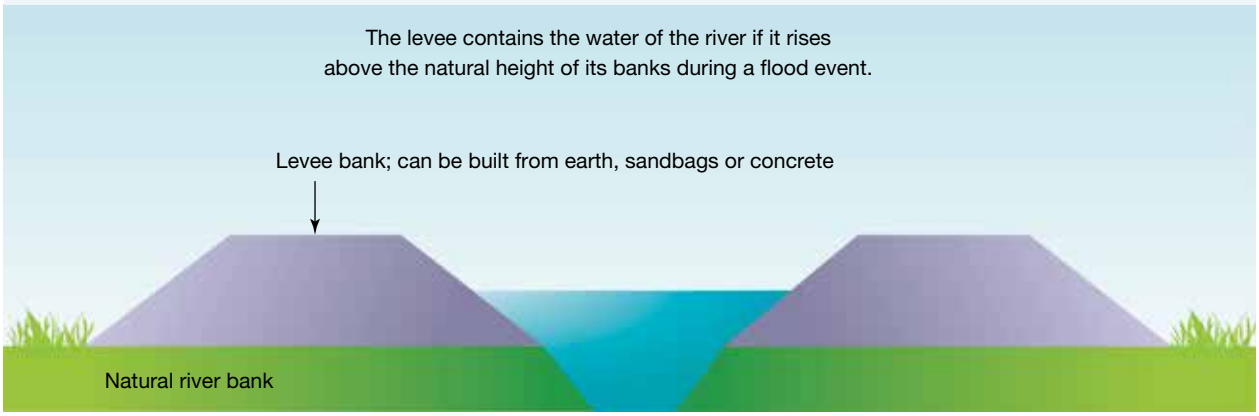
Yet by releasing water through the spillway, the engineers actually contributed to the severity of the flood. **FIGURE 3** compares the levels of the Wivenhoe Dam during the 2011 floods to those during the floods of 2022. Although Wivenhoe was more full during the 2011 event, the rate of increase in the 2022 was far greater.

FIGURE 3 Wivenhoe Dam levels, 2011 and 2022



Source: ABC News and Seqwater

FIGURE 4 An artificial levee



To prevent London being flooded during unusually high tides and storm surges, the city constructed the Thames Barrier, a system of floodgates that stretch across the width of the river (see **FIGURE 5**). The barrier is activated when predicted water levels are above a certain height. If this happens, the gates rise to stop the incoming water. Once the water recedes, the danger has passed and the gates are lowered.

DISCUSS

Around the world, floods are becoming more frequent and their impact on people and the environment more damaging and costly. Write an argument that supports and then an argument that would challenge the following viewpoint: People should not be allowed to live in areas that are prone to flooding.

Another way to manage the risk of damage from floods is to stop building on low-lying land that is subject to regular flooding events. Unfortunately, in many urban areas this land has been developed, which increases the chance of property damage in a flood.

Since 2006, the Brisbane City Council has offered a residential property buy-back scheme. This scheme gives people the opportunity to sell their property to the council if they live in a low-lying area that has a 50 per cent chance of flooding every year. People will not be allowed to build on this land again. For this initiative to be successful, the price offered by the council needs to be similar to what the owners would get in a private sale; otherwise, there is no incentive to use it. The owners of 207 properties were presented with this opportunity; only 45 had accepted the offer before the 2011 floods swept through Brisbane.

Unfortunately, not all countries have the finances to fund property buy-backs or large-scale barrier building. Bangladesh, for example, experiences annual flooding during the **monsoon** season. In response to this, homes are usually built on raised land above flood levels or on stilts.

In order to prepare the population for the arrival of floods, Bangladesh has developed a flood forecasting and warning system that can be broadcast via newspapers, television, radio, the internet and email. Regrettably, due to the growing population in the capital of Dhaka, building is now occurring on low-lying land that was previously used to store floodwater (see **FIGURE 6**). As a result, many people are still being affected by flooding. In 1998, 65 per cent of Bangladesh was **inundated**, and 20 million people needed shelter and food aid for two months. In this flood, 1050 people lost their lives, which remains the most significant flood in Bangladesh's history.

FIGURE 5 The Thames flood barrier

FIGURE 6 In Dhaka, homes are built on stilts to avoid the floodwaters.

monsoon rainy season accompanied by south-westerly summer winds in the Indian subcontinent and South-East Asia

inundate to cover with water, especially floodwater

10.7 SKILL ACTIVITY: Concluding and decision-making

1. Use the **Bureau of Meteorology** weblink in your Resources panel to find out more about flood warnings.
2. **Create** an information sheet that could be released to a rural community about to be affected by a major flood event. Ensure your information sheet includes tips on what to do before, during and after the event.
3. Search for the area you live in and check any flood warnings it has had in the past.

Resources

Weblink Bureau of Meteorology
Google Earth Lake Wivenhoe

10.7 Exercise

learnon

10.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 7	3, 4, 9	5, 6, 8, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. What flood management techniques are being used in Brisbane?
   - A. Free sand bags
   - B. Construction of dams
   - C. Coupons to use on boat hire
   - D. Property buy-back scheme
2. Where are you at most risk from flood when building?
   - A. On flood plains
   - B. In the high country
   - C. Several kilometres from the river
   - D. In the desert
3. Look at **FIGURE 4** and use it to **define** the term 'levee'.
4. How can an early warning system reduce the risk of a flood disaster?
   - A. It allows people to adequately prepare for the flood.
   - B. It allows people to sell their homes before they flood.
   - C. People know they need to purchase extra brooms.
   - D. People know they should go on holidays at this time.
5. **Explain** the interconnection between population growth and the risk posed by floods.

Apply your understanding

Communicating

6. **Predict** what would happen if a dam, built to prevent floods, was already full to capacity and the area received more heavy rainfall? What might be some of the consequences?
7. Dams are the most common method used to manage the impacts of floods. **Outline** why you think this is the case.
8. The River Thames in London has unique geographic conditions that need to be managed. **Explain** these conditions and how engineers have attempted to solve the problems these conditions can cause.
9. **Explain** the dilemma Wivenhoe Dam engineers faced in 2011. What would you have done in the same situation?
10. Bangladesh faces severe floods on a yearly basis. **Evaluate** why building dams would not help manage the impact of these floods successfully.

LESSON

10.8 Investigating topographic maps — potential flooding on Sydney's northern beaches

LEARNING INTENTION

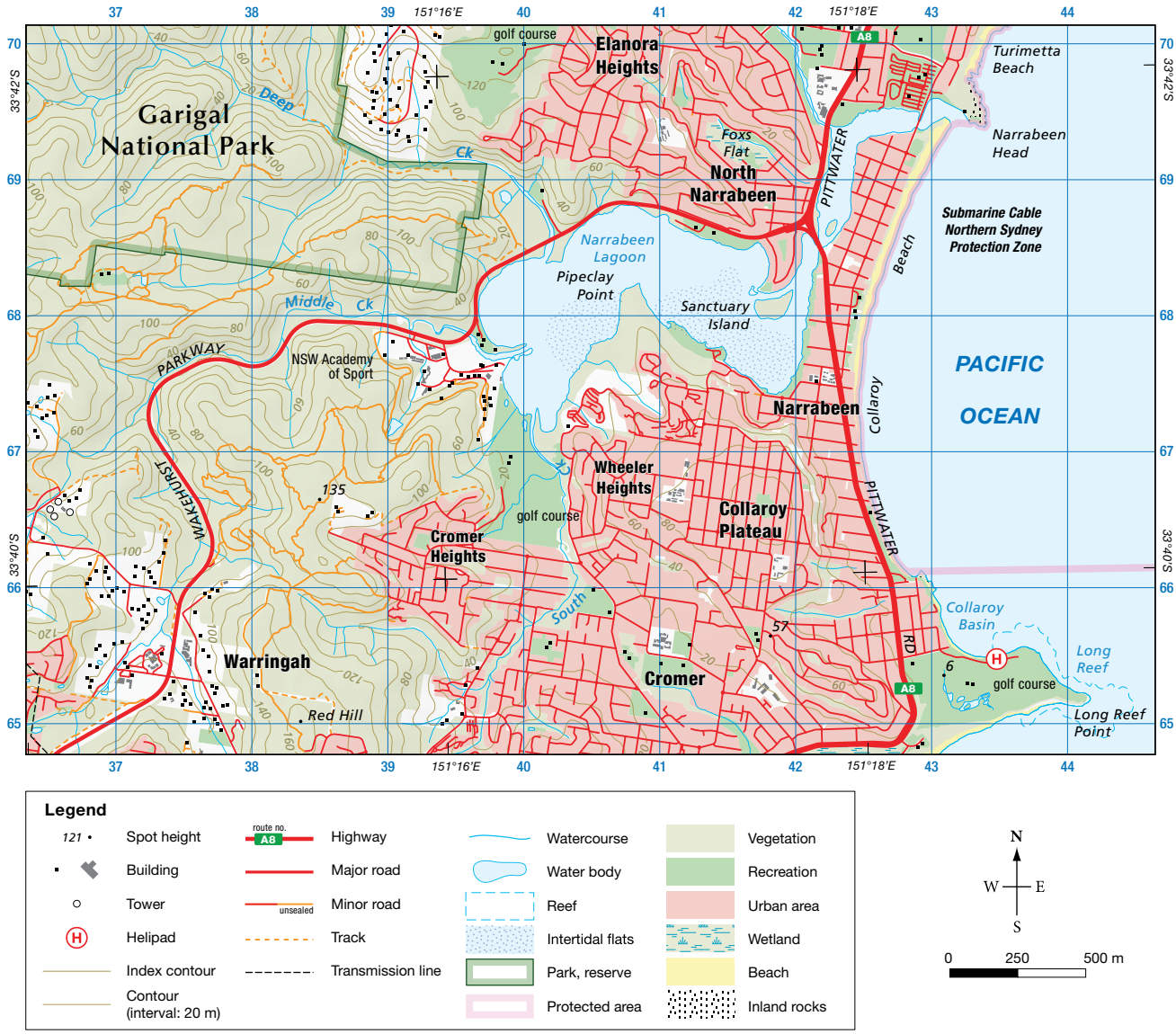
By the end of this lesson you should be able to identify on a topographic map some places that are likely to be affected by flooding.

10.8.1 Narrabeen Lagoon

Narrabeen Lagoon is 55 square kilometres in size and is the largest coastal lagoon in the Sydney region. The suburbs around the lagoon support many residents who are attracted to the relaxed coastal lifestyle of the

int-8556

FIGURE 1 Topographic map extract of Narrabeen Lagoon



Source: Land and Property Information, NSW.

northern beaches. Tourists are attracted to the area for the range of outdoor recreational opportunities such as fishing, kayaking, cycling, sailing, walking and picnicking.

The main body of Narrabeen Lagoon is fed by stream flow that drains off surrounding elevated suburbs. The lagoon is connected to the sea by a narrow channel that is often blocked by sand movement along North Narrabeen beach. Severe storms can result in flooding of the low-lying suburbs and roads. Rainfall totals and river levels are monitored throughout the catchment, and warnings are issued to motorists and residents when flooding is predicted.

Resources

eWorkbook	Investigating topographic maps — Potential flooding on Sydney's northern beaches (ewbk-10545)
Digital document	Topographic map of Narrabeen Lagoon (doc-39382)
Video eLesson	Investigating topographic maps — Potential flooding on Sydney's northern beaches — Key concepts (eles-6012)
Google Earth	Narrabeen Lagoon

10.8 Exercise

learnon

10.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3	1, 4	5, 6

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. **Identify** the direction of stream flow along Deep Creek.
2. What is the area reference of the following?
   a. Cromer Heights
   b. Sanctuary Island
   c. The lagoon mouth (where the lagoon flows out to the sea)
3. **Identify** the human feature found at the following.
   a. GR390705
   b. GR422687
   c. GR435655

Apply your understanding

Interpreting and analysing

4. The Wakehurst Parkway is an important link between places in Sydney's north.
   a. Where do you think the flood gates that block the road during flooding are located?
   b. Use evidence from the map to **explain** why you think this would be a good location for the gates.
5. Download the map or print the digital document version from your online Resources panel. **Highlight** the areas that you think are likely to flood.
6. Which areas would require residents to evacuate during flooding? **Explain** why.

LESSON
10.9 Why does the wind blow?

LEARNING INTENTION

By the end of this lesson you should be able to explain the role that wind plays in creating weather conditions.

TUNE IN

Wind turbines provide clean, reliable and renewable energy. Do you believe that using wind turbines on a larger scale could be useful in Australia? Outline the positive and negatives of wind turbine use.

FIGURE 1 Wind turbines provide clean, reliable and renewable energy.

10.9.1 How wind influences weather

The Earth's atmosphere protects us from the extremes of the sun's heat and the chill of space, making conditions right to support life. The air in the lowest layer of the atmosphere is called the troposphere. Weather is the result of changes in this layer of the atmosphere (refer to lesson10.2).

The air around us has weight. The weight of the air above us pushes down on the surface, creating pressure. If we were to tie a **barometer** to a hot air balloon, we would see the pressure readings fall as the balloon rises in the atmosphere. This is because less air is higher up in the atmosphere. You may have read about mountain climbers and athletes having difficulty breathing when they are at high altitudes.

barometer an instrument used to measure air pressure

Air pressure

When a person blows up a balloon, the pressure inside the balloon is higher than the surrounding air. When the neck of the balloon is released, the air rushes out of the balloon, as shown in **FIGURES 3** and **4**. This is wind. If we did not have wind, temperatures would continue to rise over the equator and decrease at the poles.

Meteorologists are able to measure air pressure using a unit of measure called a millibar. The average weight of air is about 1013 millibars. Measurements higher than this indicate areas of high pressure; here, the air is sinking. Measurements lower than 1013 millibars indicate areas of low pressure; here, the air is rising. Wind is caused by air moving from areas of high pressure to areas of low pressure.

FIGURE 2 A barometer is an instrument used to measure atmospheric pressure

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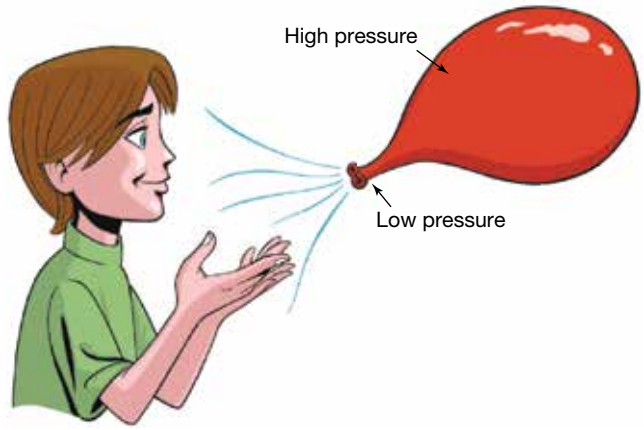
FIGURE 3 The pressure inside a balloon is higher than the pressure of the surrounding air.

FIGURE 4 When the neck of the balloon is released, air rushes out, moving from a space of high pressure to one of low pressure.



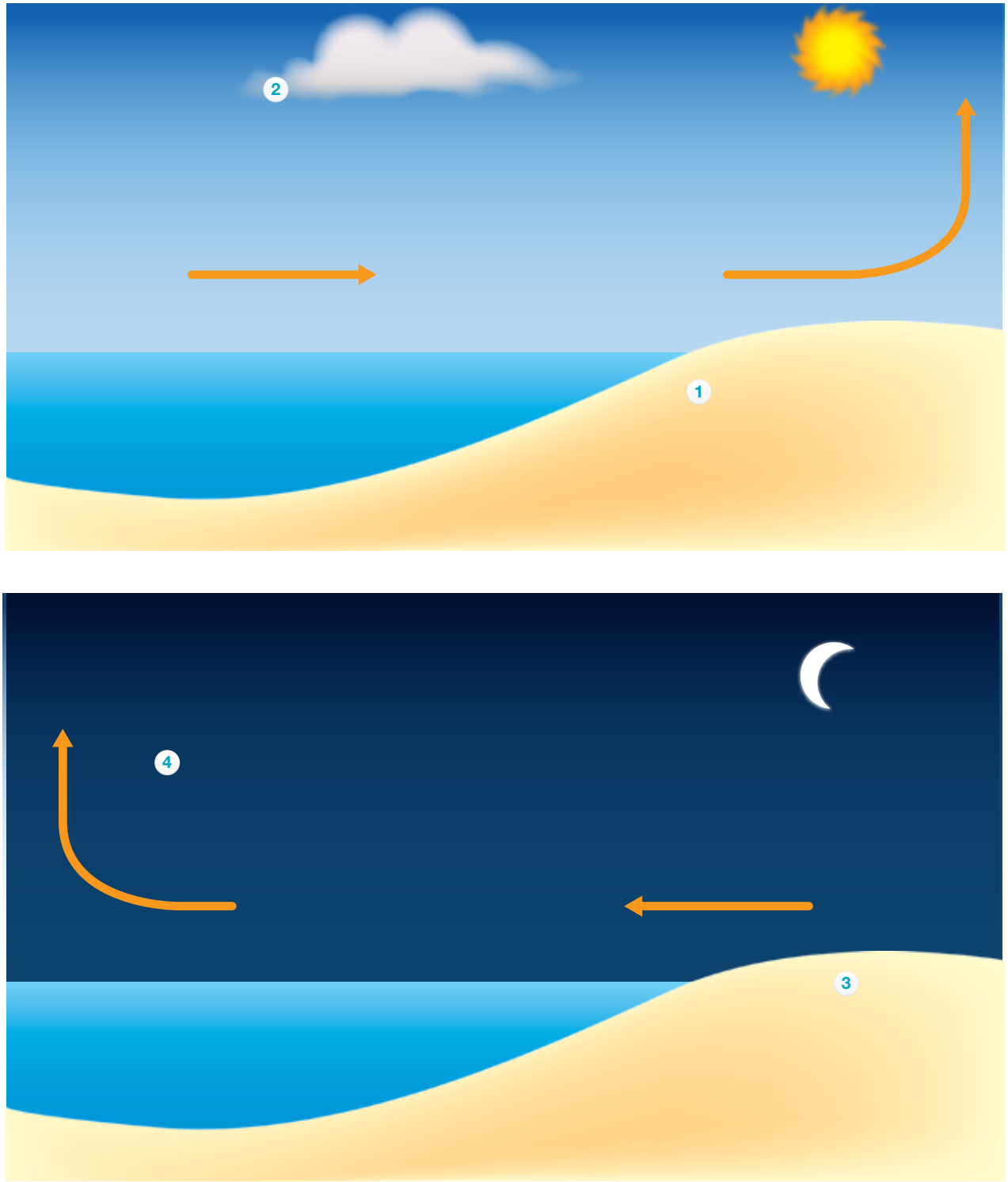
Effects of the sun

Variations in air pressure are the result of the heating effect of the sun and the rotation of the Earth. The warming influence of the sun varies with the time of day (see **FIGURE 5**) and latitude (distance from the equator). Temperatures are higher in the middle of the day, and higher at the equator than at the poles.

Warm air is also less dense than cold air. This is because as the air heats, it expands, causing it to rise. Air pressure over the equator is less than at the poles. As the warm air over the equator rises and expands, cooler air from near the poles rushes in to replace it. As a result, air is circulated around the Earth, and this movement of air is what we call wind.

FIGURE 5 On a small scale, this diagram shows the effect of the sun on a sea breeze.

Land heats up and cools down more quickly than the sea.

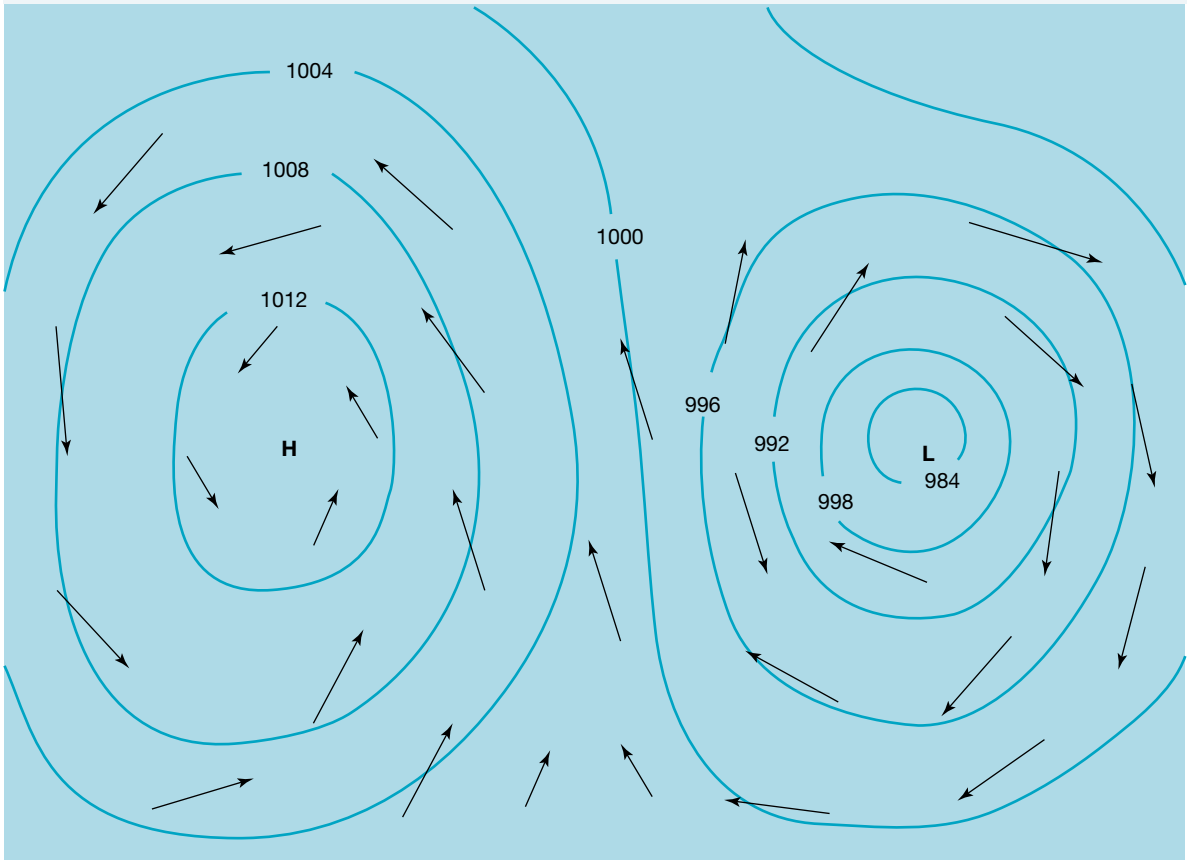


1. During the day the air above the land heats up, expands and rises.
2. The atmospheric pressure above the land drops and air moves in from above the sea, where the air pressure is higher. This causes a sea breeze or an onshore breeze.
3. During the evening, the temperature of the land drops much faster than the temperature of the sea.
4. The air above the sea becomes hotter than the air above the land, so it rises and a breeze flows from the coast out to sea, reversing the effect.

Effect of the Earth's rotation

The rotation of the Earth on its axis causes the air above the surface of the Earth to be deflected rather than to travel in a straight line. This causes the wind to circle around high- and low-pressure systems. The direction in which winds circle depends on whether you are in the northern or southern hemisphere. As the air moves from an area of high pressure to an area of low pressure, winds circle in the opposite direction in each hemisphere. In an area of high pressure, the winds circle in an anticlockwise direction in the southern hemisphere and a clockwise direction in the northern hemisphere. This deflection of winds is known as the Coriolis effect (see **FIGURE 6**).

FIGURE 6 Wind is caused by air moving from areas of high pressure to areas of low pressure. Its direction is influenced by the rotation of the Earth.



10.9.2 How is wind shown on a weather map?

Differences in air pressure lead to variations in the strength of the wind. You can work out the strength of the wind by looking at weather maps, the behaviour of objects or by using instruments designed to measure the strength of the wind. Winds are named according to their source. This means that a northerly wind is coming from the north and a southerly from the south.

If you study the **isobars** on a weather map, you will notice that they are not evenly spaced. Look closely at the map in **FIGURE 7**. The wind is strongest in the southern regions of this map, where the isobars are close together, and gentler in the northern parts of the map, where the spacing between them is much greater.

The symbols shown in **FIGURE 8** are also commonly used on weather maps to give a more accurate representation of wind speed and to provide information on the direction of the wind.

isobars lines on a map that join places with the same air pressure

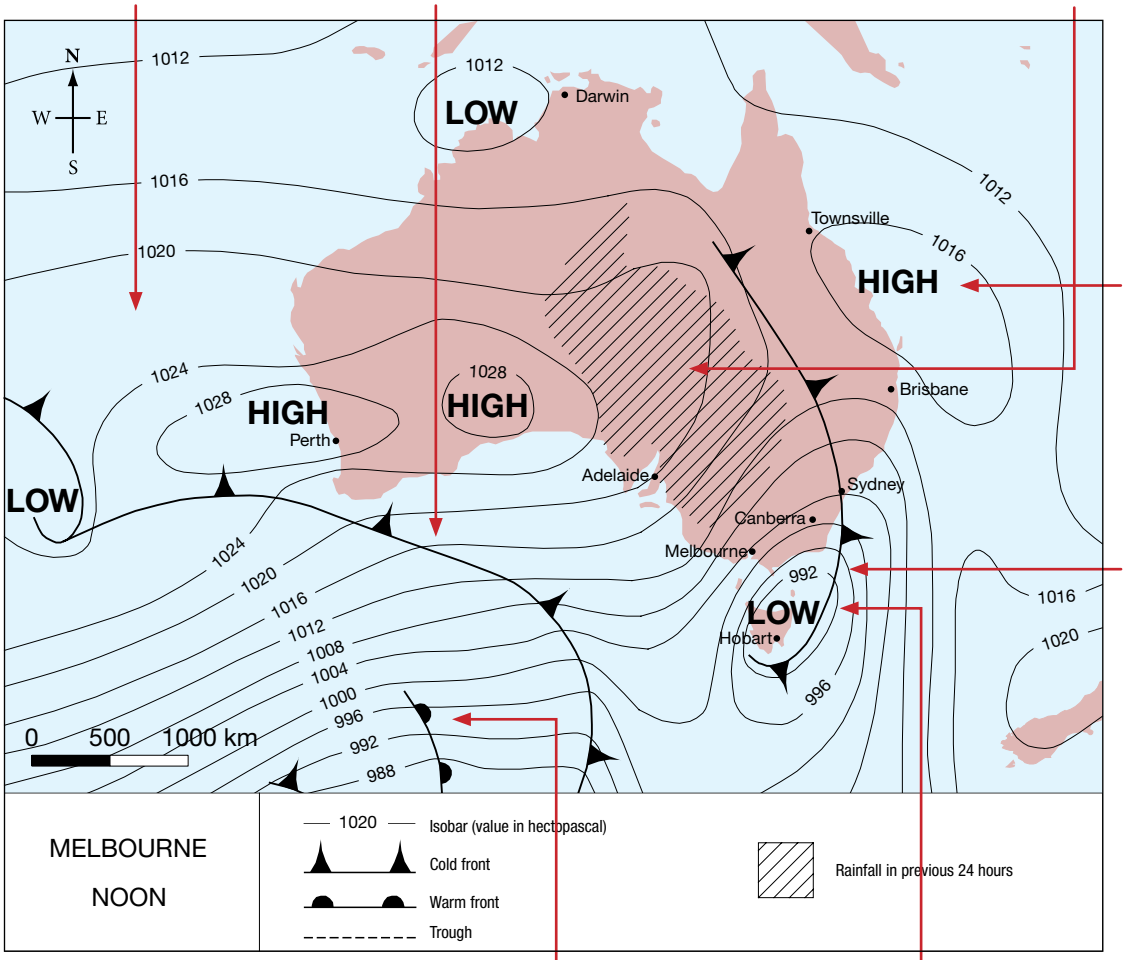
tlvd-10549

FIGURE 7 A typical weather map

Greater distance between isobars indicates wind is weaker in these regions.

Cold front advancing from west to east — towards southern Australia. Note how the isobars behind it are close together, indicating strong winds.

Shading indicates rain fell in the previous 24 hours.



Source: MAPgraphics Pty Ltd, Brisbane.

High pressure system. Note how the isobar is joining points with an atmospheric pressure of 1016 (higher than 1013 average).

The cold front that has just passed over Melbourne has brought unsettled, rainy weather behind it. More rainy weather is likely for Melbourne when the cold front coming towards it from the west gets closer.

The main influences on Melbourne's weather are the low pressure system south of it, the high pressure system to the north-west, and the cold fronts to the west and east.

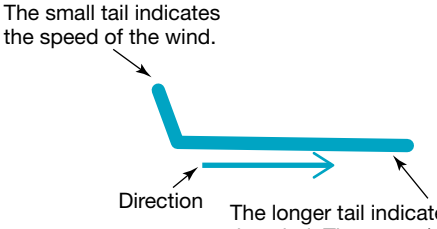
Warm front advancing from west to east behind the cold front. Note the lower atmospheric readings on the isobars.

Low pressure system. Note how the isobar is joining points with an atmospheric pressure of 992 (lower than the 1013 average).

FIGURE 8 Symbols commonly used to indicate wind strength

calm (0–2 km/h)	3–7 km/h	8–12 km/h
13–17 km/h	18–22 km/h	23–27 km/h
28–32 km/h	33–37 km/h	38–42 km/h
43–47 km/h	48–52 km/h	53–57 km/h

FIGURE 9 Reading wind symbols on a weather map



The longer tail indicates the direction of the wind. The arrow (not used on actual weather maps) shows the direction in which the wind is moving. This is a westerly wind (blowing from the west).

FIGURE 10 The Beaufort scale is based on the observable impact of winds.

0 Calm
Less than 2 km/h
Smoke rises vertically

1 Light air
2–5 km/h
Smoke drift shows wind direction, wind vanes don't move

2 Light breeze
6–12 km/h
Wind felt on face, wind vanes move

3 Gentle breeze
13–20 km/h
Leaves and small twigs in motion, hair disturbed, clothing flaps

4 Moderate breeze
21–30 km/h
Dust and loose paper move, small branches move

5 Fresh breeze
31–40 km/h
Small trees with leaves begin to sway, wind force felt on body

6 Strong breeze
41–51 km/h
Large branches move, umbrellas difficult to use, difficult to walk steadily

7 Moderate gale
52–63 km/h
Whole trees in motion, inconvenience felt when walking

8 Gale
64–77 km/h
Twigs broken off trees, difficult to walk

9 Strong gale
78–86 km/h
People blown over, slight structural damage, including tiles blown off houses

10 Whole gale
88–101 km/h
Trees uprooted, considerable structural damage

11 Storm
102–120 km/h
Widespread damage

12 Hurricane/cyclone
Greater than 120 km/h
Widespread devastation

on Resources

Interactivity Highs and lows (int-3086)

10.9 SKILL ACTIVITY: Interpreting and analysing

Over the course of the next week, collect weather maps from the daily newspaper or online and find your location.

1. Is the weather being influenced by a high- or a low-pressure system?
2. Will the wind be moving in a clockwise or anticlockwise direction? Give reasons for your answer.

3. Using the weather maps you collected, and the observations you made, **write** a weather forecast for tomorrow. In your forecast, refer to both wind speed and direction.
4. Collect tomorrow's weather map and make observations. Record your findings.
5. **Compare** what you have written for this activity. How accurate were your predictions? Suggest factors that might influence the accuracy of such predictions and changes that you observe.

10.9 Exercise

learnon

10.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 8	3, 4, 7	5, 6, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

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Check your understanding

1. What is wind?
   - A. Air mixing with the water in the oceans
   - B. Air circulating around the Earth
   - C. A noise heard when the weather changes
   - D. A build-up of pressure
2. **Explain** why you are not affected by the pressure of the atmosphere.
3. **Identify** the two factors that influence wind.
   - A. Air pressure
   - B. Where it occurs in the atmosphere
   - C. Temperature variations
   - D. The number of pressure systems
4. Use the provided terms to complete the following sentence and **explain** the role the sun plays in causing wind.

sun	poles	circulation	cooling
heating	pressure	systems	air

The _____ heats and cools the _____ above the surface of the Earth. Its _____ and cooling effects vary from the equator to the _____. This heating and _____ leads to the development of _____ systems. The sun helps drive the Earth's _____ pattern as air moves between different pressure _____.

5. **Describe** the change that difference in air pressure causes.

Apply your understanding

Interpreting and analysing

6. **Determine** the interconnection between our atmosphere and the weather we experience at the Earth's surface.
7. Using **FIGURE 7**, **describe** the wind speeds and directions in Western Australia and along the east coast of Australia on that day.
8. Refer to **FIGURES 7** and **9**. **Create** wind symbols to represent the following wind speeds and directions.
   - a. Northerly; 28–32 kph
   - b. South-westerly; 8–12 kph
   - c. Easterly; 13–20 kph
9. Refer to **FIGURE 7**; a cold front is approaching Brisbane. **Describe** how the weather will change when the cold front arrives.
10. **Evaluate** the relationship between the Coriolis effect and wind.

LESSON
10.10 What causes thunderstorms and extreme weather?

LEARNING INTENTION

By the end of this lesson you should be able to identify the causes and characteristics of thunderstorms and other types of extreme weather.

TUNE IN

Extreme weather can occur in range of different environments and take an even greater range of forms.

Recall a situation when you experienced an extreme weather event yourself. Write a brief story about the event, including a description of the type of weather you saw and the impacts the event caused.

FIGURE 1 What extreme weather events have you experienced?

10.10.1 What causes thunderstorms?

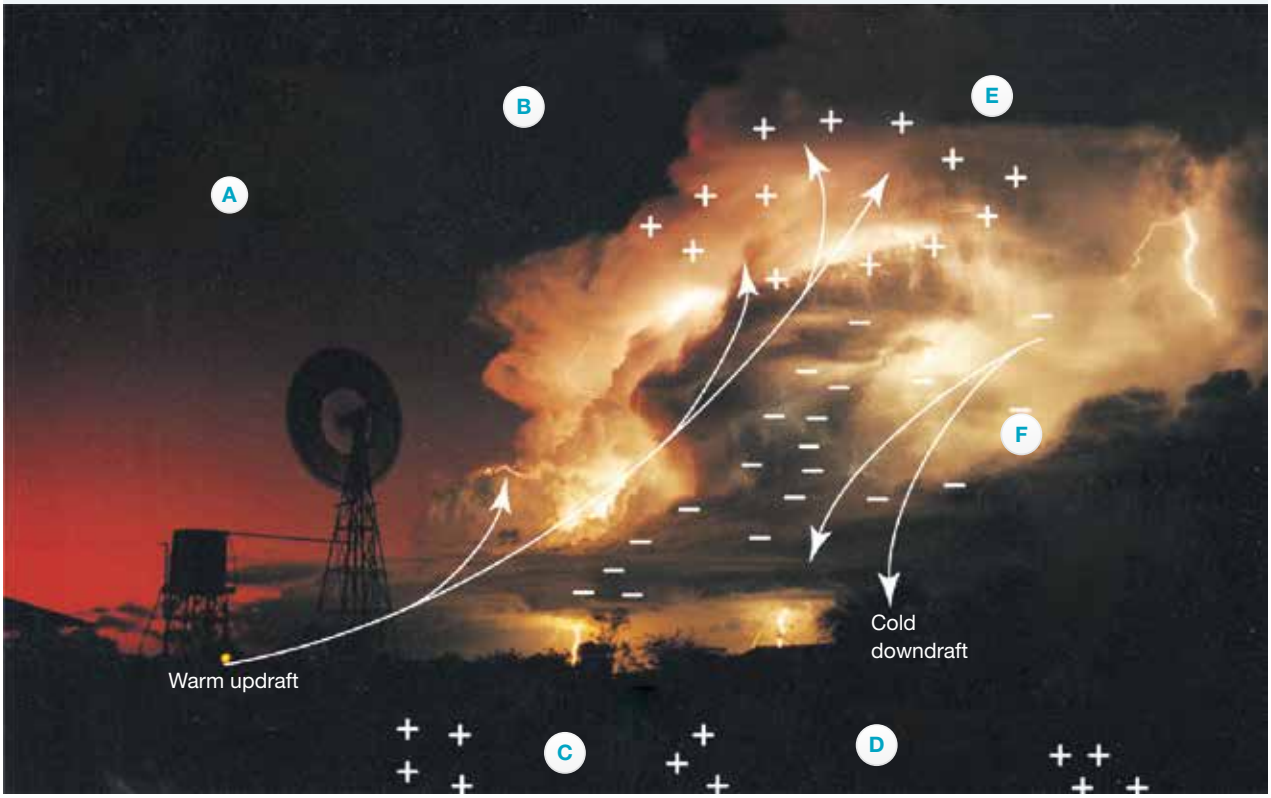
Thunderstorms, also known as electrical storms, form in unstable, moist atmospheres where powerful updrafts occur, which happens when a cold front approaches. Around the Earth, experts estimate 1800 thunderstorms occur each day, along with 8 million lightning strikes per day! Darwin is the thunderstorm capital of Australia with an average of 80 thunderstorms per year. Yet this pales in comparison to Lake Maracaibo in Venezuela, which averages nearly 300 thunderstorms per year!

The Vikings thought thunder was the rumble of Thor's chariot. (He was their god of thunder and lightning.) Lightning marked the path of his mighty hammer Mjöllnir when he threw it across the sky at his enemies. Today we know that thunderstorms occur when large **cumulonimbus clouds** build up enough static electricity to produce lightning, as shown in **FIGURE 2**. Lightning instantly heats the air through which it travels to about 20 000 °C — more than three times as hot as the surface of the sun. This causes the air to expand so quickly that it produces an explosion (thunder). The time between you seeing a lightning flash and hearing the crash of thunder tells you how far away the lightning is (a 5-second delay means that the lightning is 1.6 kilometres away).

cumulonimbus clouds huge, thick clouds that produce electrical storms, heavy rain, strong winds and sometimes tornadoes; they often appear to have an anvil-shaped flat top and can stretch from near the ground to 16 kilometres above the ground

tlvd-10544

FIGURE 2 How a thunderstorm works



A As air currents in a cumulonimbus cloud become more violent, they fling ice crystals and water droplets around faster. The more these crystals and droplets smash into one another, the more friction builds up. This creates huge energy stores of static electricity in the cloud.

B Lighter particles with a positive electric charge drift upwards. Heavier particles with a negative charge sink.

C The ground below the cloud has a positive charge.

D Lightning travels to the ground via the shortest route. This is why it sometimes strikes buildings or tall trees.

E A bolt of lightning actually consists of a number of flashes that travel up and down between the cloud and the ground. This happens so quickly we can't see it.

F The difference in energy between the positive charge on the ground and the massive negative charge at the bottom of the cloud becomes huge. A lightning bolt corrects some of this difference.

10.10.2 Severe thunderstorms

According to the Bureau of Meteorology, a thunderstorm can be classified as severe if it has one or more of the following features.

- Flash flooding. Thunderstorms often move slowly, dropping a lot of precipitation in one area. The rain or hail may consequently be too heavy and long-lasting for the ground to absorb the moisture. The water then runs off the surface, quickly flooding local areas.
- **Hailstones** that are two centimetres or more in diameter. The largest recorded hailstone had a diameter of 20.3 centimetres and a circumference of 47 centimetres.
- Wind gusts of 90 kilometres per hour or more. Cold blasts of wind hurtle out of thunderclouds, dragged down by falling rain or hail. When the drafts hit the ground, they gust outwards in all directions.

hailstone an irregularly shaped ball of frozen precipitation

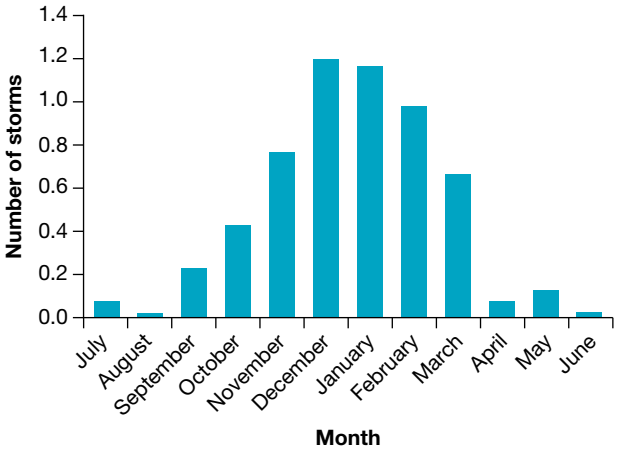
In the right conditions, tornadoes can occur. These are rapidly spinning updrafts of air that can develop as a result of thunderstorm activity. Although severe tornadoes are not common in Australia, around 400 tornadoes have been recorded here.

10.10.3 When do thunderstorms occur?

Thunderstorms can occur at any time of the year, but they are more likely to occur during spring and summer, as shown in **FIGURES 3** and **4**. This is due mainly to the warming effects of the sun and the fact that warm air can hold more moisture than cold air.

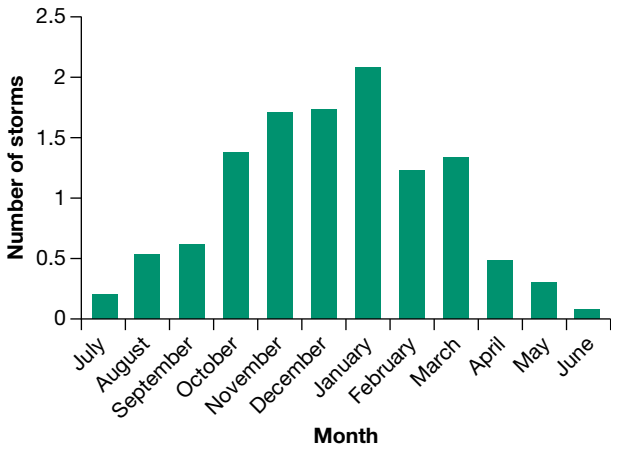
Thunderstorms are created when cooler air begins to push warmer, humid air upwards. As the warm air continues to rise rapidly in an unstable atmosphere, the cloud builds up higher and begins to spread. Thunderstorms can quickly develop when the atmosphere remains unstable or when it is able to gather additional energy from surrounding winds.

FIGURE 3 Average monthly distribution of thunderstorms in Darwin



Source: Bureau of Meteorology

FIGURE 4 Average monthly distribution of thunderstorms in Melbourne

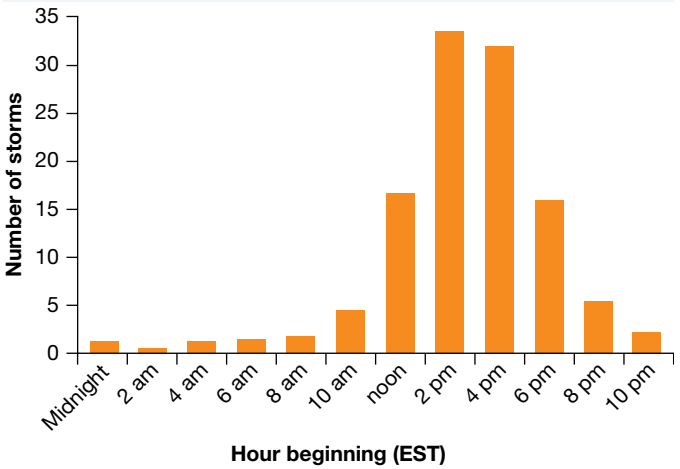


Source: Bureau of Meteorology

The time of day when thunderstorms are more likely is shown in **FIGURE 5**. You will notice that thunderstorm activity is greater in the afternoon. This is linked to the daily heating of the Earth by the sun, which peaks in the afternoon.

When we think about thunderstorms, we often think only of the high winds, thunder and lightning, but significant damage is also caused by hailstones. Any thunderstorm that produces hailstones large enough to reach the ground is known as a **hailstorm**. Hailstones in Australia tend to range in size from a few millimetres to the size of a tennis ball (see **FIGURE 6**).

FIGURE 5 Hourly distribution of thunderstorms in New South Wales and the Australian Capital Territory



Source: Bureau of Meteorology

hailstorm any thunderstorm that produces hailstones large enough to reach the ground

10.10.4 Inside a storm

January 2016 saw widespread supercell storm activity across Queensland, New South Wales, Victoria and South Australia.

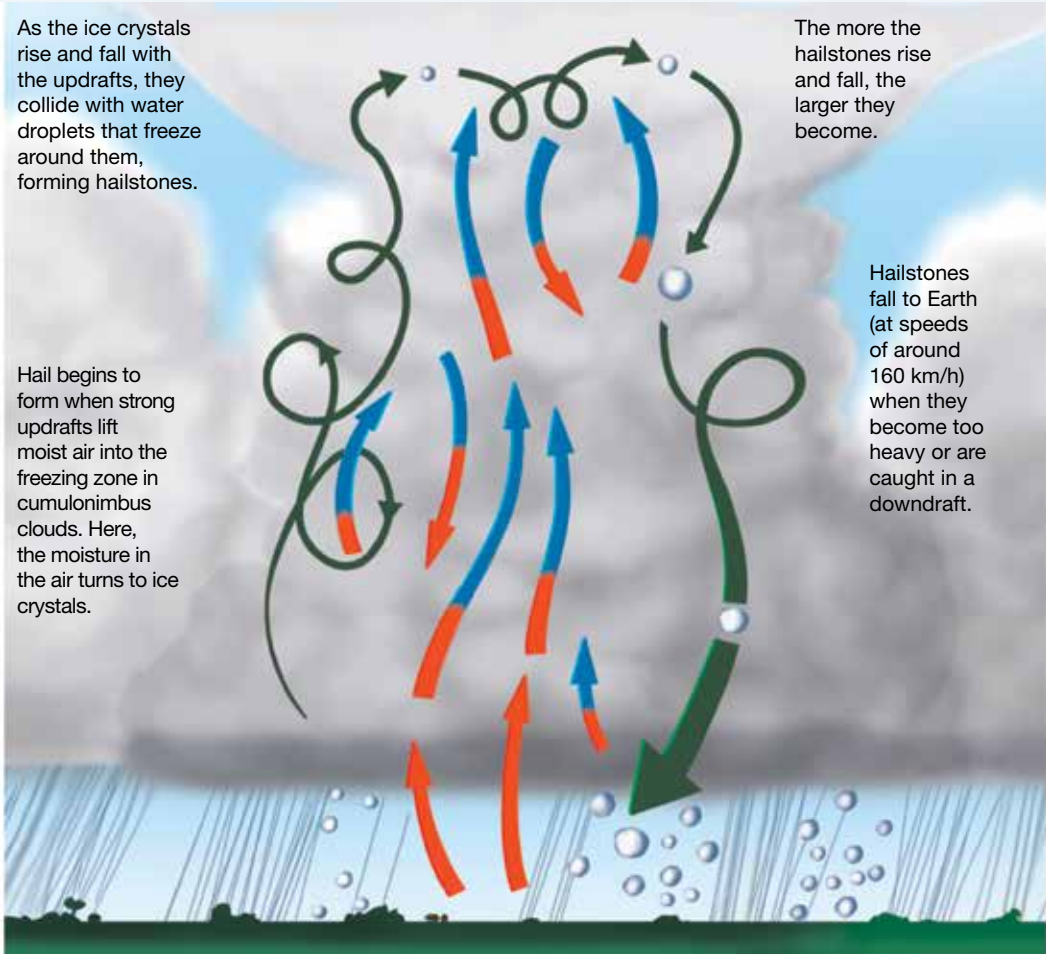
On 13 January, Melbourne sweltered through temperatures of about 43 °C. Intense thunderstorm activity with wind gusts up to 100 kilometres per hour swept through in the early evening, causing the city to be blanketed by a cloud of dust. Up to 1000 homes were left without power.

The following day, a severe storm struck Sydney with winds gusting up to 98 kilometres per hour bringing down power lines, damaging buildings and cars, and causing flash flooding. More than 40 000 homes and businesses reported power outages. The temperature plummeted by more than 10 °C in five minutes. Emergency services responded to 145 storm-related incidents, including a gas leak.

FIGURE 6 Hailstones can be the size of a golf ball or even bigger.

tlvd-10545

FIGURE 7 How a supercell hailstorm forms



A supercell storm has extremely strong updrafts. These keep hailstones suspended longer than regular storms, allowing hailstones to grow bigger. To form cricket-ball sized hailstones, there must be updrafts of around 160 km/h.

On 16 January, Townsville recorded 91 millimetres of rain in 30 minutes, resulting in flash flooding that left many motorists stranded. The rain continued to fall, with 181 millimetres recorded in two hours. Wind gusts of more than 100 kilometres accompanied the massive storm that has been described as a once-in-a-100-year event.

Unfortunately, while large areas were inundated, the rain had little impact on the region's water storages.

Both Adelaide and Sydney were pummelled by supercell storms on January 22. The worst hit areas were in the Adelaide Hills and Fleurieu Peninsula where 20 000 homes lost power and the SES responded to 61 calls for help.

In 30 minutes, 35 millimetres of rain was recorded, resulting in flash flooding, while hailstorms measuring two centimetres in diameter carpeted parts of the city. Wind gusts of up to 90 kilometres per hour were recorded at the airport.

Meanwhile, Sydney was warned to prepare for the worst, to secure vehicles and loose items, unplug electronic equipment and to stay indoors as the city braced itself for more storms, following from those experienced in previous days.

The intense storm activity was the result of the large number of hot days. Flash flooding, damaging winds, hail and lightning were set to continue.

On 29 January, the tourist hot spots around the Gold Coast and Sunshine Coast were lashed by severe storm activity. Wind gusts of more than 100 kilometres per hour were recorded.

FIGURE 8 The force of a storm tore this tree from the ground.

FIGURE 9 In June 2016, another supercell storm hit Sydney. Waves up to eight metres high crashed into the shoreline at Collaroy Beach and caused extensive damage.

on Resources

Weblink The Gap storm

10.10.5 What is a blizzard?

Periods of intense snowfall characterised by high winds and snow are known as snowstorms. These can be just as deadly as any other storm. The most dangerous snowstorm of all is the blizzard.

The difference between a snowstorm and a blizzard is the strength of the wind. A snowstorm is officially recognised as a blizzard when wind speed is sustained above 56 kilometres per hour or has frequent gusts in excess of this speed for more than three hours. Visibility in a blizzard is also reduced to less than 400 metres. In the most extreme cases, it may be difficult to see beyond a metre ahead. Often snow does not fall during a blizzard, but is blown into snowdrifts capable of burying people and objects. Variations in air pressure cause strong winds when warm air and cold air meet. It is these strong winds and cold conditions that cause a blizzard to develop.

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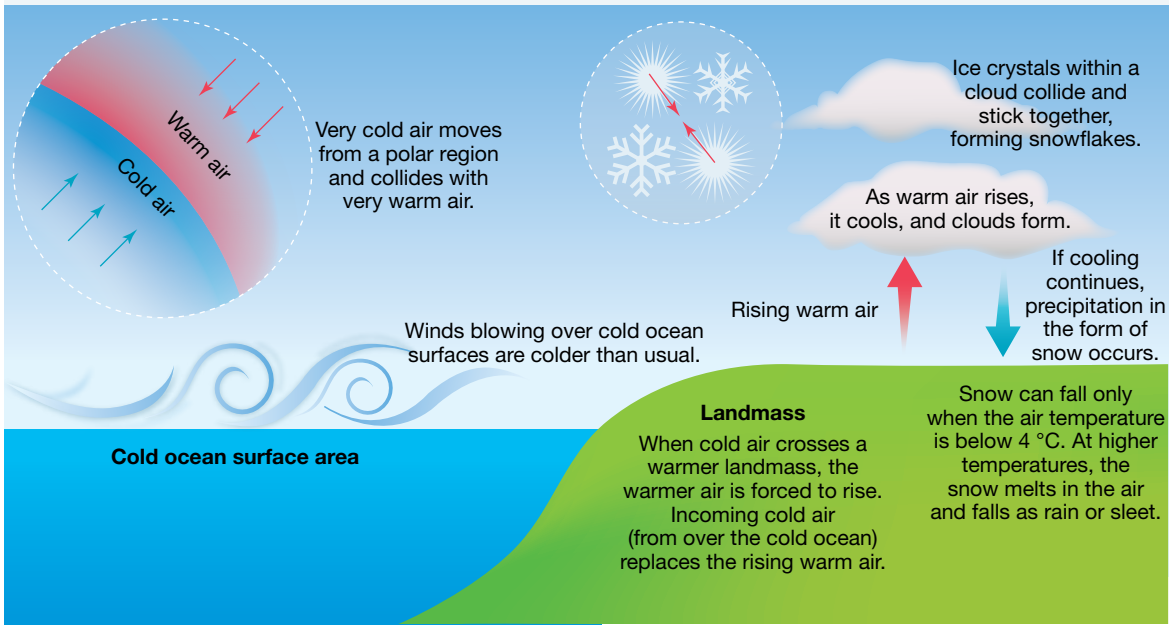
FIGURE 10 How a blizzard forms



Why are blizzards dangerous?

During snowstorms, snow can pile up and it can become impossible to know the depth of the snow, making it difficult to move about. The risk increases of falling through thin ice or into deep **crevasses**. Snow also tends to pile up on slopes. Where the snow load is greater than can be supported by the slope, the risk of **avalanches** develops (see **FIGURE 11**). An avalanche can be triggered by an earthquake or loud noises such as those produced by a gunshot or by animals. During blizzards a condition known as a **whiteout** can occur. This means there is so much snow that visibility is severely affected and may be limited to just one metre. People and animals cannot tell the difference between the Earth and the sky, and quickly become disoriented, lose their way and risk freezing to death.

In the extreme cold associated with snowstorms and blizzards, people are at increased risk of **hypothermia**, **frostbite** and suffocation.

Researchers in Antarctica have to contend with snow build-up in some parts of the continent. The Halley VI Research Station (**FIGURE 12**) has been built on steel legs that can be raised. Skis have been attached to these legs, so that the entire station can be moved in order to eliminate the dangers associated with accumulating snow.

crevasse a deep crack in ice

avalanche rapid movement of snow down a slope, usually under the influence of gravity; can also be triggered by animals, skiers or explosions

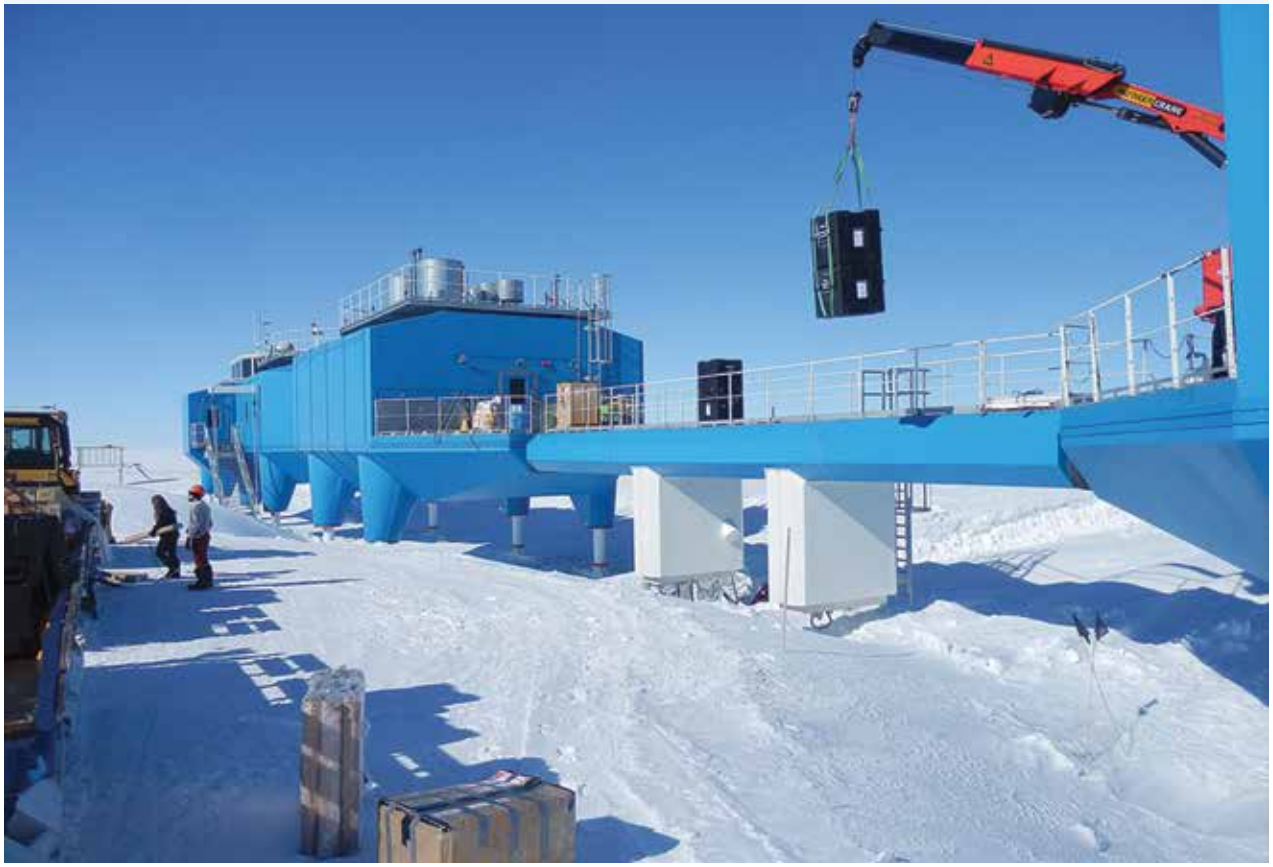
whiteout a weather condition where visibility and contrast is reduced by snow; individuals become disoriented because they cannot distinguish the ground from the sky

hypothermia when a person's core body temperature falls below 35 °C and the body is unable to maintain key systems; risk of death without treatment

frostbite damage caused to the skin when it freezes, brought about by exposure to extreme cold; extremities such as fingers and toes are most at risk, along with exposed parts of the face

FIGURE 11 An avalanche

FIGURE 12 The Halley VI Research Station in Antarctica



10.10 SKILL ACTIVITY: Communicating

Use the diagrams in this lesson to **create** your own sketch of a supercell storm. Using words such as evaporation, condensation and precipitation, annotate your diagram to **explain** how storms develop.

10.10 Exercise

learnon

10.10 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 7, 8	3, 4	5, 6, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. **Identify** three features associated with thunderstorms.
   - A. Massive cloud build-up
   - B. Thunder
   - C. Lack of clouds
   - D. Silence
   - E. Lightning
2. a. **List** the changes to the environment and types of damage that might result from thunderstorm activity.
   b. Next to each type of damage indicate:
   - whether the damage is caused predominantly by wind or water
   - whether the damage tends to occur to the natural or built environment.
3. Study **FIGURE 7.** Number each step in the provided table in order to **illustrate** how hailstones are formed.

Ice crystals rise and fall with updrafts; water droplets freeze around them.	_____
Hailstones grow in size with each updraft.	_____
Strong updrafts lift moisture to the freezing zone.	_____
Hailstones fall to Earth when they are too heavy to remain suspended.	_____
Moisture freezes and turns into ice crystals.	_____

4. **Suggest** reasons people in earlier civilisations assumed weather events were the work of the gods.
5. **Explain** why thunderstorms can cause so much damage to the natural and human environments.

Apply your understanding

Interpreting and analysing

6. Study **FIGURE 7**, which shows a supercell storm. **Write** a paragraph **explaining** why hailstones can vary so much in size.
7. During which seasons of the year are thunderstorms more likely? **Justify** your answer.
8. Study **FIGURE 5**. **Identify** which hours of the day most severe thunderstorms occur. Why?
9. Think of three actions you could do to protect yourself in a thunderstorm. **Explain** the rationale behind the actions you have chosen.
10. **FIGURES 8** and **9** show damage that resulted from thunderstorm activity. Refer to the Beaufort scale (**FIGURE 10** in lesson 10.9) and **predict** the wind speeds that might have been associated with this thunderstorm.

LESSON
10.11 What causes cyclones, hurricanes and typhoons?

LEARNING INTENTION

By the end of this lesson you should be able to explain the nature of cyclones and describe the impacts they can cause to environments and communities.

TUNE IN

Some areas around the world are particularly prone to cyclones, hurricanes and typhoons.

In 2022, the countries that were most exposed to tropical cyclones included Japan, the Philippines and the Bahamas.

1. Consider what you might do if you lived in a place where these extreme weather events were more common.
2. Discuss with your class the impact these weather events may have on the community and the environment in these locations.

FIGURE 1 The aftermath of a typhoon in Iwaizumi, Japan 2016

10.11.1 What is a cyclone?

Tropical cyclones (called hurricanes in the Americas and **typhoons** in Asia) can cause great damage to property and significant loss of life. Some 80 to 100 tropical cyclones occur around the world every year in tropical coastal areas located north and south of the equator. Australia experiences, on average, about 13 cyclones per year.

Cyclones form when a cold air mass meets a warm, moist air mass lying over a tropical ocean with a surface temperature greater than 27 °C. Cold air currents race in to replace rapidly rising, warm, moist air currents, creating an intense low-pressure system. Winds with speeds over 119 kilometres per hour can be generated. Cyclones are classified using the scale in **TABLE 1**.

typhoon the name given to cyclones in the Asian region

TABLE 1 Classification of cyclones using the Saffir–Simpson Scale

Category	Wind gust speed/ocean swell	Damage
1	Less than 125 km/h, 1.2–1.6 m	Mild damage
2	126–169 km/h, 1.7–2.5	Significant damage to trees
3	170–224 km/h, 2.6–3.7 m	Structural damage, power failures likely
4	225–279 km/h, 3.8–5.4 m	Most roofing lost
5	More than 280 km/h, more than 5.4 m	Almost total destruction

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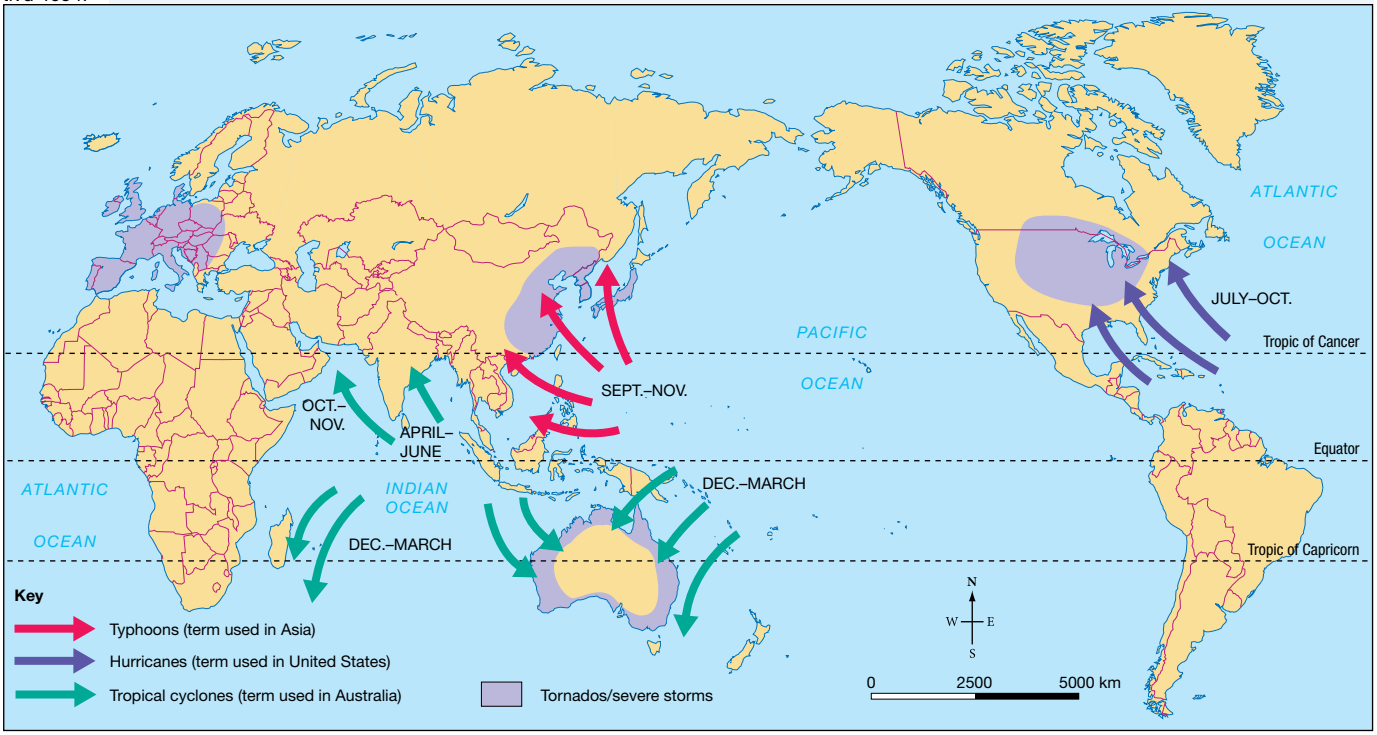
FIGURE 2 World distribution of tropical cyclones by names used in different regions



Source: Spatial Vision

FIGURE 3 shows the continuous cycle of evaporation, condensation and precipitation associated with cyclones. At first, the winds spin around an area about 200 to 300 kilometres wide. As the winds gather energy by sucking in more warm moist air, they get faster. In severe cyclones, winds may reach speeds of 295 kilometres per hour. The faster the winds blow, the smaller the area around which they spin; this is called the eye. The eye might end up being only about 30 kilometres wide. Around the edge of the eye, winds and rain are at their fiercest. However, in the eye itself, the air is relatively still, and the sky above it may be cloudless.

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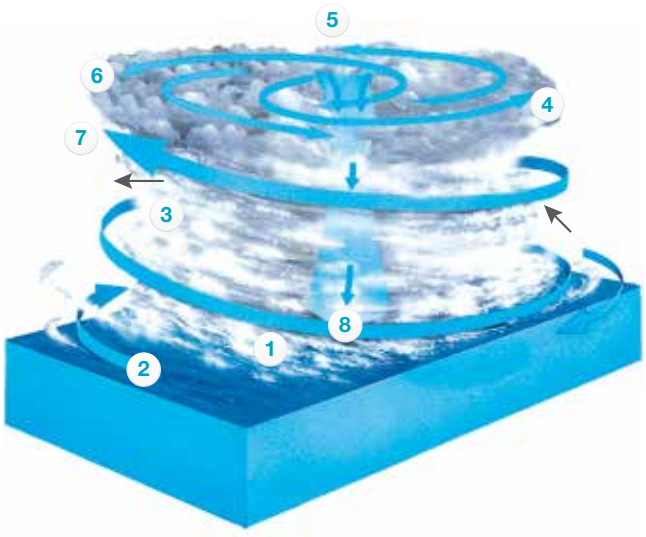
FIGURE 3 How a cyclone forms



1. Warm sea water evaporates and rises.
2. Low pressure centre creates converging winds, which replace rising air.
3. Warm air spirals up quickly.
4. Warm moist air is drawn in, providing additional energy.
5. Water vapour fuels cumulus clouds.
6. In the upper atmosphere, the air moves away from the eye.
7. Storm moves in direction of prevailing wind.
8. Descending air in the eye of cyclone.

What damage is caused by tropical cyclones?

Tropical cyclones can cause extensive damage if they cross land. **Gale force winds** can tear roofs off buildings and uproot trees. **Torrential rain** can often cause flooding, as can **storm surges**.

When a tropical cyclone approaches or crosses a coastline, the very low atmospheric pressure and impact of strong winds on the sea surface combine to produce a rise in sea level, as shown in **FIGURE 4**.

gale force wind wind over 62 kilometres per hour

torrential rain heavy rain often associated with storms, which can result in flash flooding

storm surge a sudden increase in sea level as a result of storm activity and strong winds; low-lying land may be flooded

FIGURE 4 Flooding caused by storm surges

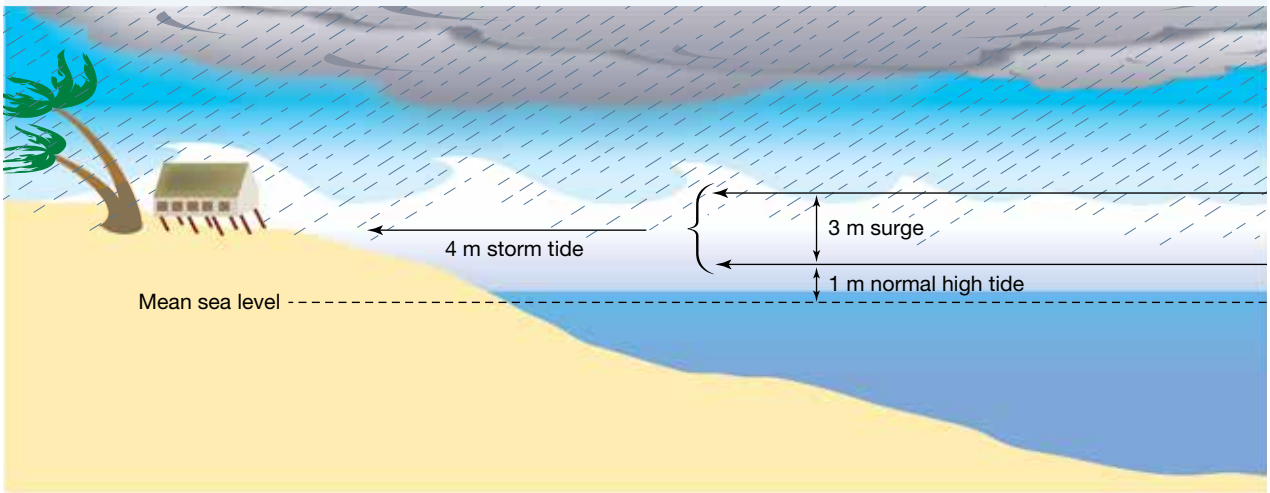


FIGURE 5 Satellite image of Hurricane Katrina, which caused massive damage in New Orleans, United States, in 2005

10.11.2 CASE STUDY: How did Cyclone Winston affect Fiji?

On 7 February 2016, a tropical disturbance was noted north-west of Port Vila, Vanuatu, tracking in a south-easterly direction. By 11 February, it had acquired gale-force winds. Over the next few days, Cyclone Winston went through a cycle of intensifying, weakening and stalling until finally developing into a category 5 cyclone on 19 February.

The following day, shortly before making landfall on Viti Levu, Fiji, Cyclone Winston reached its peak intensity. Sustained winds of 230 kilometres per hour, with gusts of up to 285 kilometres per hour and a central pressure reading of 915 millibars, were recorded.

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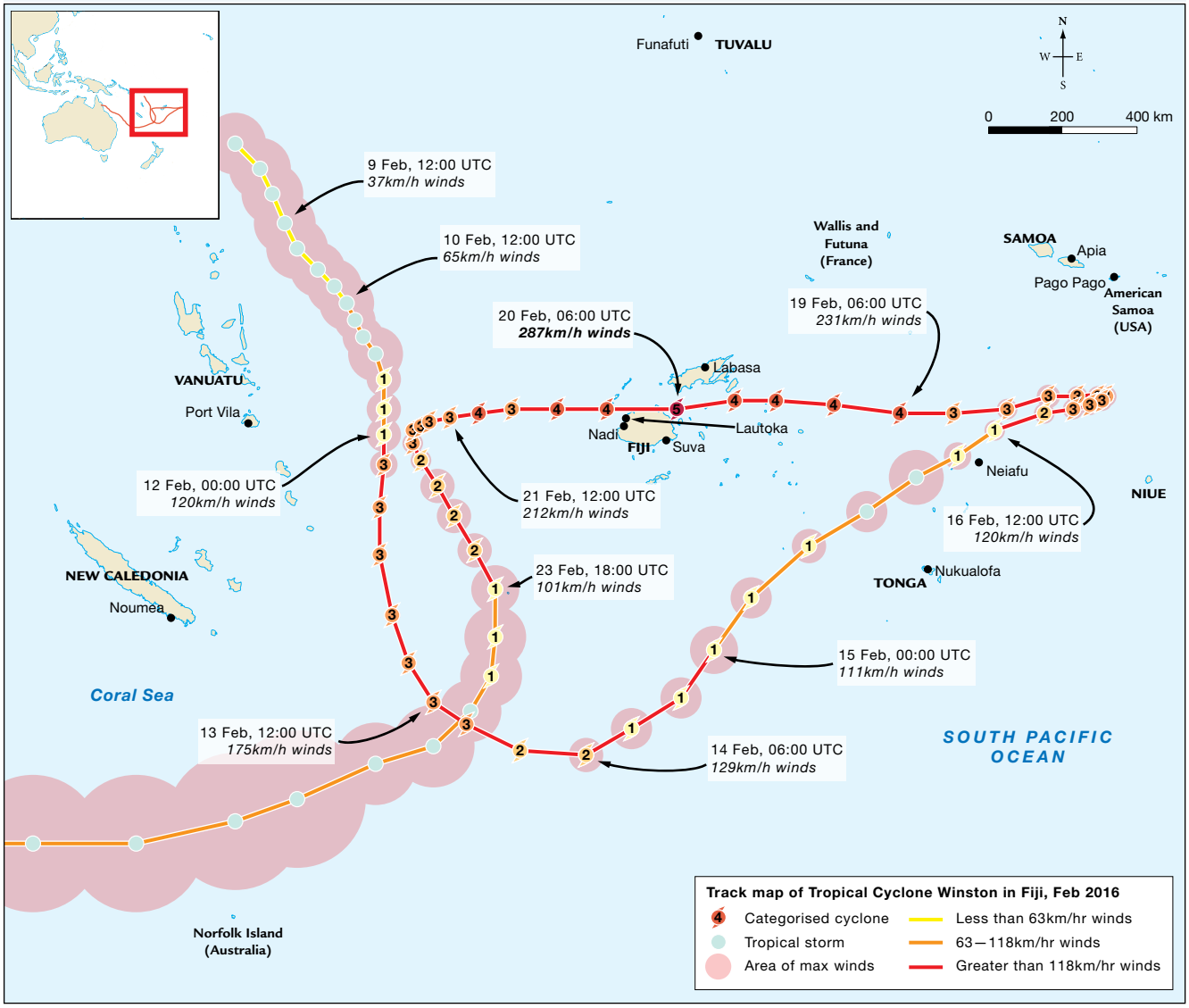
FIGURE 6 A track map of Cyclone Winston



Source: National Hurricane Center, National Oceanic and Atmospheric Administration

FIGURE 7 The power of a cyclone

How much damage was caused?

Cyclone Winston has been described as the most powerful storm to strike in the southern hemisphere. Strong winds battered the island nation of Fiji, with damage multiplied by a 4-metre storm surge.

The damage bill has been estimated at more than US$650 million. More than 40 people were killed and communication was cut, leaving at least six outer islands isolated for days. In the years prior to Cyclone Winston, the Fijian government had invested heavily in infrastructure, much of which was washed away. Homes and community facilities were flattened in many communities, with some villagers losing all their possessions (see **FIGURES 8** and **9**). Large regions were left without electricity and water. A week after the cyclone, around 45 000 people were still living in evacuation centres.

Fiji's largest industries are sugar cane and tourism. The sugar cane industry suffered around US$83 million worth of loss. This figure does not take into account the more than 200 000 people who depend on this industry for their livelihood. Additionally, thousands of acres of root crops were lost. The damage to the tourism industry was mixed. While Denaru Island resorts were still able to operate, this was not the case on some of the outer islands. Despite their losses, many of the local villages that depend on tourism were encouraging tourists to return and they were still operating.

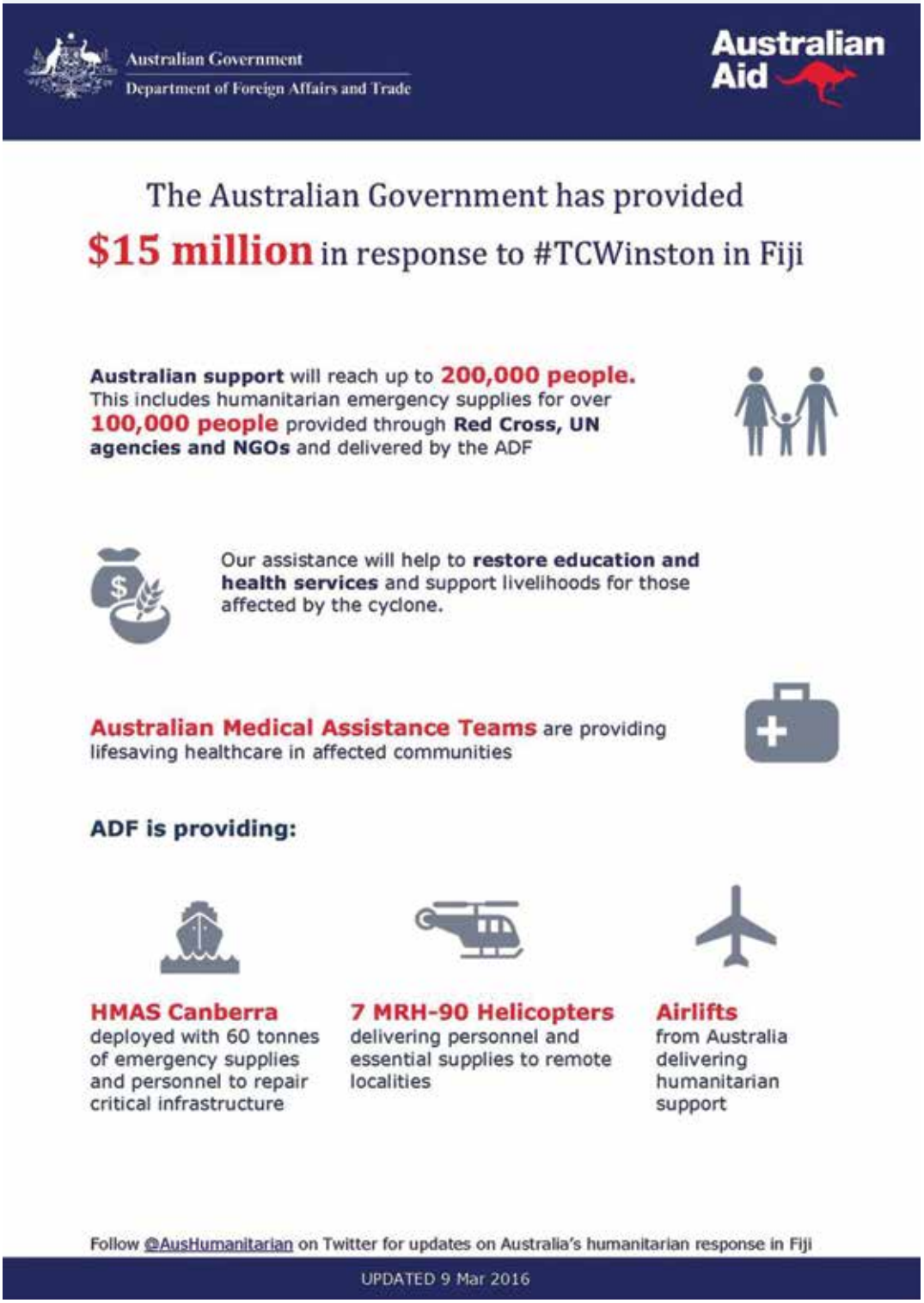
FIGURE 8 Whole communities were left devastated by Cyclone Winston.

FIGURE 9 Additional damage was caused by a 4-metre storm surge.

What aid did Australia provide?

Both Australia and New Zealand were quick to aid Fiji. Australia worked not only with the Fijian government (see **FIGURE 10**), but also with the island nation of Tonga, which was also affected by Cyclone Winston.

FIGURE 10 Australia's aid operation following Cyclone Winston



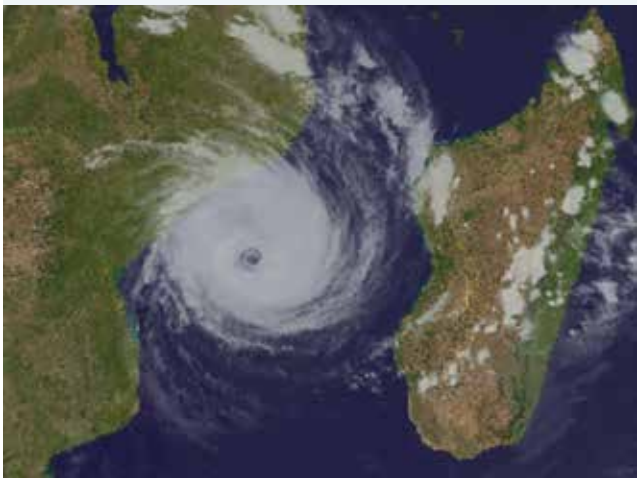
Were other areas affected?

The east coast of Australia experienced large waves in the wake of Cyclone Winston, forcing the closure of some popular tourist beaches. Despite warnings from authorities, surfers risked serious injury and even death to take advantage of the huge swells created along the New South Wales and Queensland coastlines. Beaches were still closed a week after Fiji was devastated.

10.11.3 CASE STUDY: Impacts of Tropical Cyclone Idai

In general, the African continent does not experience as many cyclones or extreme storms as other places in the world. While cyclones may be infrequent, they have been no less disastrous. Tropical Cyclone Idai was not only the worst cyclone to affect Africa, but also one of the deadliest cyclones in the entire Southern Hemisphere, killing 1300 people.

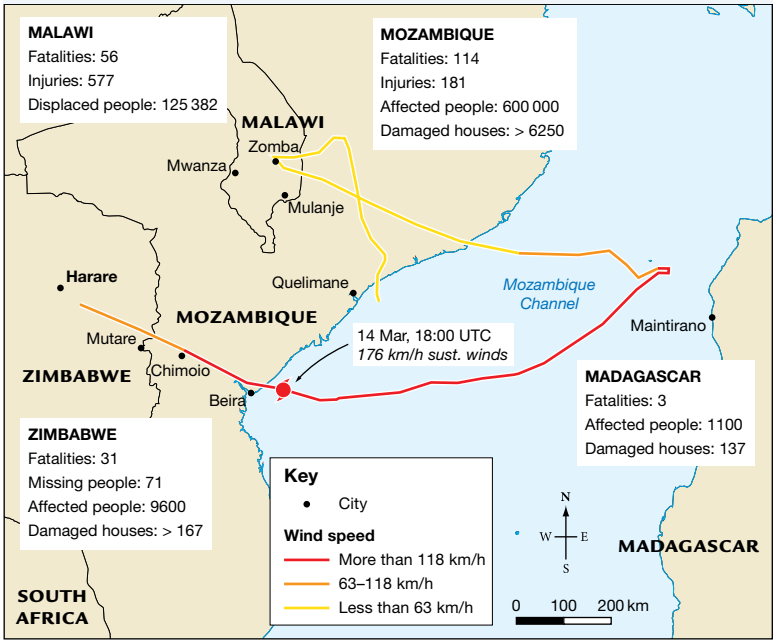
FIGURE 11 Cyclone Idai off the coast of Mozambique



Cyclone Idai began as a tropical depression off the coast of Mozambique on 4 March 2019. The storm made landfall the following day and, for a brief while, showed signs of weakening. However, the cyclone then strengthened, reaching its peak on 14 March 14 with winds of 190 kilometres per hour. Over the next week, Cyclone Idai weakened but stayed active in the area for an unusually long period time.

As Cyclone Idai travelled south, it caused severe flooding in Mozambique, Malawi, Zimbabwe and Madagascar. These countries are all relatively poor, so the impacts of Cyclone Idai were devastating for the region. Even a year after the initial disaster, more than 100 000 people were still living in resettlement sites in Mozambique.

FIGURE 12 The impacts of Cyclone Idai



Source: Map redrawn by Spatial Vision based on the map © European Union, 2019. Map produced by JRC. The boundaries and the names shown on this map do not imply official endorsement or acceptance by the European Union.

What damage was caused?

As well as the 1300 recorded fatalities, an estimated 3 million people were affected by Cyclone Idai. In Mozambique alone, Cyclone Idai is estimated to have caused US$773 million in damages. As the people of the region struggled to deal with the initial impacts of the cyclone, they soon encountered secondary impacts. Much of this region is extremely low-lying, making it susceptible to flooding. Water-borne diseases such as cholera swept through the region, causing further deaths and suffering for already affected communities. Due to the initial damage to infrastructure, it was extremely difficult for authorities and non-government organisations to provide effective relief to suffering communities and individuals. Valuable agricultural land was also destroyed by Cyclone Idai.

FIGURE 13 Flooding in Mozambique after Cyclone Idai

FIGURE 14 Workers providing assistance to people affected by Cyclone Idai

What relief was provided?

Due to the scale of the disaster, local aid agencies were quickly overwhelmed by the impacts of Cyclone Idai. The presidents of both Malawi and Zimbabwe soon declared respective states of emergency and immediately requested international assistance. The United Nations was quick to respond, making U$20 million available in emergency funds. The United Nations World Food Program was particularly concerned about the availability of food and safe drinking water. Foreign governments as well as non-government organisations also provided assistance to people in the affected regions. South Africa, the United Kingdom, Canada and the European Union were among the key providers of financial aid and 'on-the-ground' assistance.

10.11 SKILL ACTIVITY: Questioning and researching

Using the information in this lesson **create** a comparison table that details the key similarities and differences between Cyclone Winston and Cyclone Idai.

10.11 Exercise

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10.11 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
3, 4, 6, 7	1, 2, 8	5, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
- Track results and progress

Find all this and MORE in jacPLUS

Check your understanding

1. **Identify** why a tropical cyclone dies out if it moves inland.
   - **A.** It has run its course.
   - **B.** It loses its supply of moisture.
   - **C.** This is the natural cycle of storms.
   - **D.** It doesn't; it merely changes its name.

2. How does the scale of a cyclone vary?
   A. According to the wind speeds generated
   B. According to the time of the year they develop
   C. Depending on which hemisphere they form in
   D. All of the above
3. What conditions do tropical cyclones need in order to develop?
4. In other places tropical cycles are called hurricanes or typhoons. True or false?
5. **Explain** the changes that a storm surge can cause to a coastal area.

Apply your understanding

Communicating

6. **Describe** how the damage would differ between a category 1 and category 5 cyclone.
7. **Propose** why people are more likely to be killed or injured after the eye of the cyclone has passed.
8. Cyclones are associated with destructive winds and the displacement of large volumes of water. Which of these events do you think would cause the most damage to the natural and built environment? **Justify** your answer.

Interpreting and analysing

9. Refer to **FIGURE 2**, which shows the world pattern of tropical cyclones over space.
   a. **State** the time when most cyclones occur north of the equator. When do most cyclones occur south of the equator? **Suggest** a reason for this difference.
   b. **Identify** the parts of Australia most at risk from cyclone activity.
10. If the water source for cyclones is the ocean over which they form, **analyse** why strong winds and flooding occur in places inland from the coast.

LESSON
10.12 INQUIRY: How do people around the world access water?

LEARNING INTENTION

By the end of this lesson you should be able to research how different characteristics of a country influence the availability of and access to water, and communicate your findings.

Background

The world's natural resources are not distributed equally. Some countries have an abundance of natural resources and fertile land, while other countries are entirely composed of desert biomes. The same can also be said for the distribution of water resources.

Countries that have rivers that are fed by melting glaciers (such as India and Bangladesh) have a steady supply of water. Countries that rely on rainfall to fill rivers, streams and lakes are often at the mercy of prevailing weather patterns. And then there are countries that receive plenty of rain, but their people have poor access to water resources. In these situations, both natural and human factors are causing poor water access.

FIGURE 1 People in different countries have varying availability of water and access to water.

Before you begin

Access the **inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Consider the following:

a. What do you know about the ways that people in countries other than Australia access water? What about for people living in remote and isolated locations? Or those living in desert locations?
b. How could water access be improved for these people?
c. What are the differences between countries with poor water access and countries with good access to water?

Step 1: Write your inquiry question

In this inquiry, you will be exploring access to water around the world.

Step 2: Questioning and researching using geographical methods

Research your inquiry question. For example:

- How can both the human and natural characteristics of a country influence the availability of, and access to, water?

Step 3: Interpreting and analysing

Choose two countries that have poor access to fresh water. The countries you chose for your report must have different key factors that cause their poor water access. For example, you need to choose one country that has poor fresh water access caused by natural factors and one country that has poor fresh water access caused by human factors. Although a degree of overlap always exists between these factors, you should be able to distinguish between the two categories.

Step 4: Concluding and decision-making

Create a comparison table. You don't need to include all the information you collected. Instead, read through your research notes and decide what parts of research are *the most relevant* to a discussion of access to water. For example, the climate of a country is directly related to water access, but the main religions followed is not relevant to water access.

Step 5: Communicating

Communicate your findings about how both the human and natural characteristics of a country influence the availability of, and access to, water.

Complete your self-assessment using the **Inquiry rubric**, or access the 10.12 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39376)

LESSON
10.13 Review

Hey students! Now that it's time to revise this topic, go online to:

- **Review your results**
- **Watch teacher-led videos**
- **Practise questions with immediate feedback**

Find all this and MORE in jacPLUS

10.13.1 Key knowledge summary

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

10.2 What is the difference between weather and climate?

- The Earth's atmosphere protects us from the extremes of the sun's heat, creating conditions that support life.
- Our weather is the result of constant changes to the air in the troposphere. These changes sometimes cause extreme weather events.
- All weather conditions result from different combinations of three factors: air temperature, air movement and the amount of water in the air.
- Weather is the day-to-day, short-term change in the atmosphere at a particular location.
- Climate is the average of weather conditions that are measured over a long time.

10.3 What are natural hazards and natural disasters?

- Australia has a wide range of environments and a diverse array of weather conditions.
- Natural hazards are common in Australia, including drought, floods and bushfires.
- A hazard is an event that is a *potential* source of harm to a community.
- A disaster occurs as the result of a hazardous event that dramatically affects a community.
- The four broad types of natural hazard are atmospheric, hydrological, geological and biological.

10.4 What is the impact of water variability, availability and accessibility?

- The amount of rainfall a location receives can vary significantly, and depends on a number of seasonal and environmental factors.
- Locations can often see inconsistency in the amount of rain received across a range of time frames.
- The unique characteristics of Australia's rainfall patterns are largely due to the influence of two equally unique climate events — El Niño and La Niña.
- When an El Niño event occurs, winds and surface ocean currents reverse their direction. Warm, moist air is pushed towards South America. This produces rain in South America and drought in Australia.
- A remarkably small percentage of water is available for direct human consumption.
- For some countries, water *accessibility* is a greater concern than *availability.*

10.5 What causes droughts and how do we manage them?

- A drought is a prolonged period of below-average rainfall, when not enough water is available to supply our normal needs. No universal amount of rainfall defines a drought.
- Sustained periods of drought can have varied and significant impacts on environments and communities.
- Effective management and preventative strategies can reduce the impacts of droughts. Since drought management often requires financial investment, the ability of poorer countries to withstand the pressures of drought are not as high as more wealthy countries.
- Individuals can help prevent and manage the impacts of drought through responsible personal water usage.

10.6 What are the causes and impacts of floods?

- A floodplain is an area of relatively flat land that borders a river and is covered by water during a flood. Floodplains are formed when the water in a river slows down in flat areas.
- These fertile, flat areas are used for farming and settlement around the world.
- The three types of floods are slow-onset, rapid-onset and flash floods.

10.7 How are floods managed?

- Managing the effects of floods is important if the amount of damage caused is to be minimised. Unfortunately, not all countries or communities have the same resources to tackle this problem.
- The most common form of flood management is to build a barrier that prevents excess water from reaching areas that would suffer major damage. Levees, dams and floodgates are all examples of such barriers.

10.8 Investigating topographic maps — potential flooding on Sydney's northern beaches

- Topographic maps can help us identify places that are likely to be affected by flooding.

10.9 Why does the wind blow?

- Earth's atmosphere protects us from the extremes of the sun's heat and the chill of space, making conditions right to support life.
- Wind is caused by air moving from areas of high pressure to areas of low pressure.
- The direction in which winds circle depends on whether you are in the northern or southern hemisphere. As the air moves from an area of high pressure to an area of low pressure, winds circle in the opposite direction in each hemisphere.

10.10 What causes thunderstorms and extreme weather?

- Thunderstorms, also referred to as electrical storms, form in unstable, moist atmospheres where powerful updrafts occur, which happens when a cold front approaches.
- Severe thunderstorms occur when a storm has one or more of the following features: flash flooding, hailstones, or wind gusts of 90 kilometres per hour or more.
- Thunderstorms can occur at any time of the year, but are more likely to occur during spring and summer.
- A snowstorm is officially recognised as a blizzard when wind speed is sustained above 56 kilometres per hour or has frequent gusts in excess of this speed for more than three hours.

10.11 What causes cyclones, hurricanes and typhoons

- Cyclones form when a cold air mass meets a warm, moist air mass lying over a tropical ocean with a surface temperature greater than 27 °C. Cold air currents race in to replace rapidly rising, warm, moist air currents, creating an intense low-pressure system.
- Cyclonic wind strength is measured by the Saffir–Simpson Scale.
- When a tropical cyclone approaches or crosses a coastline, the very low atmospheric pressure and impact of strong winds on the sea surface combine to produce a rise in sea level.

10.12 INQUIRY: How do people around the world access water?

- The distribution of water resources across the world is not equal, and both natural and human factors can cause poor water access.
- The different ways that water is accessed in different locations affects people's lives.

10.13.2 Key terms

alluvium the loose material brought down by a river and deposited on its bed, or on the floodplain or delta

avalanche rapid movement of snow down a slope, usually under the influence of gravity; can also be triggered by animals, skiers or explosions

barometer an instrument used to measure air pressure

catchment area the area of land that contributes water to a river and its tributaries

crevasse a deep crack in ice

cumulonimbus clouds huge, thick clouds that produce electrical storms, heavy rain, strong winds and sometimes tornadoes; they often appear to have an anvil-shaped flat top and can stretch from near the ground to 16 kilometres above the ground

cyclones intense low-pressure systems producing sustained wind speeds in excess of 65 km/h; they develop over tropical waters where surface water temperature is at least 27 °C

drought a long period of time when rainfall received is below average

El Niño the reversal (every few years) of the more usual direction of winds and surface currents across the Pacific Ocean; this change causes drought in Australia and heavy rain in South America

evaporate to change liquid, such as water, into a vapour (gas) through heat

flood inundation by water, usually when a river overflows its banks and covers surrounding land

frostbite damage caused to the skin when it freezes, brought about by exposure to extreme cold; extremities such as fingers and toes are most at risk, along with exposed parts of the face

gale force wind wind over 62 kilometres per hour

hailstone an irregularly shaped ball of frozen precipitation

hailstorm any thunderstorm that produces hailstones large enough to reach the ground

hypothermia when a person's core body temperature falls below 35 °C and the body is unable to maintain key systems; risk of death without treatment

incentive encourages a person to do something

infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines

inundate to cover with water, especially floodwater

isobars lines on a map that join places with the same air pressure

meteorologist a person who studies and predicts weather

monsoon rainy season accompanied by south-westerly summer winds in the Indian subcontinent and South-East Asia

natural disaster an extreme event that is the result of natural processes and causes serious material damage or loss of life

natural hazard an extreme event that is the result of natural processes and has the potential to cause serious material damage and loss of life

precipitation rain, sleet, hail, snow and other forms of water that falls from the sky when water particles in clouds become too heavy

rebate a partial refund on something that has already been paid for

southern oscillation a major air pressure shift between the Asian and east Pacific regions; its most common extremes are El Niño events

storm surge a sudden increase in sea level as a result of storm activity and strong winds; low-lying land may be flooded

torrential rain heavy rain often associated with storms, which can result in flash flooding

troposphere layer of the atmosphere closest to the Earth, extending about 17 kilometres above the Earth's surface, but thicker at the tropics and thinner at the poles; where weather occurs

typhoon the name given to cyclones in the Asian region

vulnerability the state of being without protection and open to harm

water vapour water in its gaseous form, formed as a result of evaporation

weir a barrier across a river, similar to a dam, which causes water to pool behind it; water is still able to flow over the top of the weir

whiteout a weather condition where visibility and contrast is reduced by snow; individuals become disoriented because they cannot distinguish the ground from the sky

10.13.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How does weather and climate, including severe weather events, influence the distribution and wellbeing of human populations?

What impact could the lack of water resources have on communities and how can it be improved?

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 you view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10544)
Reflection (ewbk-10527)
Crossword (ewbk-10687)

Interactivity Water variability and natural hazards crossword (int-8949)

10.13 Review exercise

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Multiple choice

1. Our weather is the result of changes in what?
   - A. The distance of the Earth from the Sun
   - B. The composition of gases in the Earth's atmosphere
   - C. The numbers of hours in a day
   - D. The constant changes to the air in the troposphere
2. Weather describes day-to-day observations. What does climate refers to?
   - A. The average weather conditions over a long period of time
   - B. The average weather conditions between places
   - C. The average weather conditions for an entire country
   - D. Nothing; weather and climate are interchangeable terms.
3. A hazard is an event which is a _____ source of harm to a community.
   - A. definite
   - B. potential.
   - C. small
   - D. large
4. A disaster occurs when a hazardous event _____ a community.
   - A. occurs in
   - B. overwhelms
   - C. threatens
   - D. involves
5. What is the risk a hazard poses to a community determined by?
   - A. The type of hazard and the vulnerability of the community
   - B. The type of hazard and the size of the community
   - C. The type of hazard and the demographics of the community
   - D. The type of hazard and the location of the community
6. Which of these statements provides the most accurate definition of a drought?
   - A. A prolonged period with no rainfall
   - B. A prolonged period with average rainfall
   - C. A prolonged period with below-average rainfall
   - D. A prolonged period with inconsistent rainfall

7. What are Australia's weather patterns heavily influenced by?
   - **A.** El Niño and La Niña
   - **B.** Our extreme southerly location
   - **C.** The relative dryness of our country
   - **D.** Our lack of mountainous regions
8. Floodplains provide what benefits to human civilisations?
   - **A.** Reliable access to water
   - **B.** High-nutrient soil
   - **C.** Enabling agricultural activity
   - **D.** All of the above
9. What are the three main types of floods?
   - **A.** Slow-onset, deep floods, flash floods
   - **B.** Slow-onset, rapid-onset, flash floods
   - **C.** Slow-onset, large area, flash floods
   - **D.** Slow-onset, regional, flash floods
10. What is the effect of differences in air pressure on the wind?
    - **A.** Changes its direction
    - **B.** Changes its temperature
    - **C.** Changes its strength
    - **D.** All of the above

Short answer

Communicating

11. **Explain** the difference between the terms 'water variability', 'water accessibility' and 'water availability'.
12. Increased population growth will cause more water scarcity around the world. **Discuss** how this connection is possible.
13. Drought presents a far greater risk to communities than floods. Do you agree or disagree with this statement? **Explain** your opinion in detail.
14. **Explain** how climate change is increasing the risk of hazards becoming disasters.
15. **Determine** what kind of response provides the best assistance to communities affected by disasters — government support, foreign aid or the work of non-government organisations.

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11 Choosing a place to live

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LESSON
11.1 Overview

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What do people consider when choosing a place to live?

11.1.1 Introduction

We all live in different places. Places are important to people, whether the places are regional or metropolitan, remote or central. No two places are alike; they differ in appearance, size, features and access. In your mind's eye, try to picture the difference between your place and a city in Sweden (you may need Google to help you with that one). Perhaps even picture what the school down the road looks like compared to yours — what are the differences? Why did you choose to go to your current school instead of that one? You probably have a list of the similarities and differences between these places, and you're probably already deciding which place you prefer.

When people move, they ask themselves similar questions. Why does your family live in the place that it does? Why do many Australians live in big cities near the coast? Have you thought about the reasons your parents chose the place or environment in which you now live? When making these choices, people consider the cost, proximity to family and friends, and access to facilities and resources. This topic will take you through why people choose to live where they live.

FIGURE 1 Where would you choose to live?

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10546)

Video eLesson Choosing a place to live (eles-1619)

LESSON
11.2 What creates a sense of place?

LEARNING INTENTION

By the end of this lesson you should be able to define the geographical concept of place, describe how places are similar and different, and explain how places are viewed differently by people.

TUNE IN

Think of your favourite place — it could be your house, your city, your local park or the cinema. Create a mind map listing all the things about that place that make it special. An example has been provided for you in **FIGURE 1**.

FIGURE 1 Features that make Adelaide special

11.2.1 A sense of place

Places are central to the study of Geography. This is because geographers are interested in where things are found on Earth and why they are there. But what exactly is a place?

To understand what a place is, think about **location** and **region**. Each place has a unique identity that makes it different from other places. A combination of characteristics is specific to that place, making it individual. A sense of place comes from being aware of what makes that location significant and seeing its special qualities.

place specific area of the Earth's surface that has been given meaning by people

location a point on the surface of the Earth where something is to be found

region any area of varying size that has one or more characteristics in common

The characteristics of a place can come from:

1. natural features
2. human features — that is, features built by people
3. a combination of natural and human features.

Eventually, one or more of these features becomes a symbol of that place.

FIGURE 2 Christ the Redeemer statue, Rio de Jeneiro, Brazil

FIGURE 3 Disney World, Orlando, Florida, United States

FIGURE 4 The Taj Mahal in Agra, India

FIGURE 5 The Grand Canyon, Utah, United States

FIGURE 6 Table Mountain, Cape Town, South Africa

FIGURE 7 Golden Gate Bridge, San Francisco, California, United States

FIGURE 8 The Great Wall of China

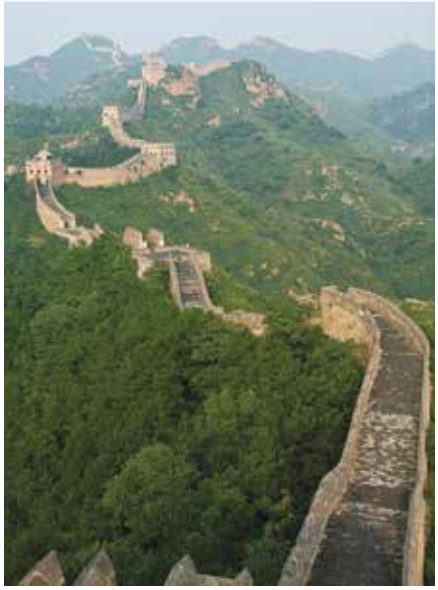

FIGURE 9 Purnululu in Western Australia

on Resources

Google Earth Taj Mahal
Grand Canyon
Disney World
Table Mountain
Purnululu

11.2 SKILL ACTIVITY: Concluding and decision-making

1. Using the images included in this lesson, **list** all the **natural** features, **human** features and any **combinations** in a table similar to the one provided.

	Natural	Human	Combination
Rio de Janeiro, Brazil			
Disney World, USA			
The Taj Mahal, India			
The Grand Canyon, USA			
Table Mountain, South Africa			
Golden Gate Bridge, USA			
The Great Wall of China, China			
Purnululu, Australia			

2. Which, in your opinion, is the most liveable of these places? **Explain** your answer.
3. Using the mind map you created at the start of this lesson, **write** a short advertisement to entice someone to move to this place. Make sure you mention a **natural**, **human** and **combination** of features in your writing.

11.2 Exercise

learnon

11.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3	4, 6, 7	5, 8, 9, 10

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Check your understanding

1. **Identify** the correct definition of the term 'location'.
   - A. A specific area on the Earth's surface that has been given meaning by people.
   - B. A point on the surface of the Earth where something is to be found.
   - C. Any area of varying size that has one or more characteristics in common.
   - D. Any place that can be visited.
2. **Identify** the correct definition of the term 'place'.
   - A. A specific area on the Earth's surface that has been given meaning by people.
   - B. Any area of varying size that has one or more characteristics in common.
   - C. A point on the surface of the Earth where something is to be found.
   - D. Any location that is being used by humans.
3. **Identify** the correct definition of the term 'region'.
   - A. A point on the surface of the Earth where something is to be found.
   - B. A specific area on the Earth's surface that has been given meaning by people.
   - C. Any area of varying size that has one or more characteristics in common.
   - D. A country or continent only.
4. Study the images in **FIGURES 2** to **9**. **Describe** five characteristics in the environment of each feature that create its individual sense of place.
5. Of all these characteristics, **state** which one you believe to be the most important in creating an identity for that place in the minds of people.

Apply your understanding

Interpreting and analysing geographical data and information

6. Do you think that people's favourite places would vary with the age of the individual? Explain your answer.
7. Study the images in **FIGURES 2** to **9**. **Suggest** reasons these places have become famous around the world.

Communicating

8. **Name** and **describe** a place you have visited and enjoyed that is predominantly made up of natural characteristics.
9. **Name** and **describe** a place you have visited and enjoyed that is predominantly made up of human characteristics.
10. No matter where we live, we all live in the one place: Earth. From what you have learned so far, **define** what a place is in your own words. What do you think would be the characteristics of a place that would appeal to anyone, wherever they come from? (*Hint:* What feelings do you have when you are in a place that you like?)

LESSON
11.3 Why do people live in certain places?

LEARNING INTENTION

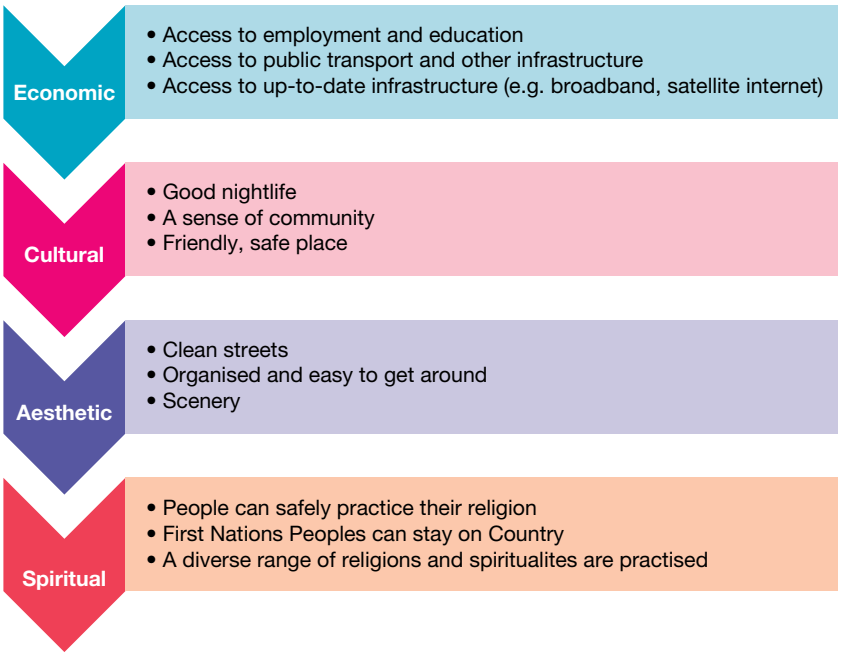
By the end of this lesson you should be able to explain the reasons people choose to live in certain areas, explain the objective and subjective measures people use when evaluating a place to live, and describe how places change over time.

TUNE IN

Why would someone choose to live in a busy city, or a rural town with only a couple of stores? We choose places to live for many reasons, and **FIGURE 1** shows the four factors that guide these decisions.

Imagine you had to select a new place for your family to live. Refer to the four factors in **FIGURE 1** and, in pairs, discuss the features you'd be looking for in each factor.

FIGURE 1 Economic, cultural, aesthetic and spiritual factors influence where you live.



11.3.1 Push and pull factors

People choose to live in specific places for a wide range of reasons. These reasons can be broadly divided into **pull factors** and **push factors**. Pull factors are those that attract or 'pull' a person to a place, whereas push factors are those that discourage or 'push' people away from a place. The combination of reasons varies from person to person, and what one person may see as an advantage, another person may see as a negative.

pull factors positive aspects of a place; reasons that attract people to come and live in a place

push factors reasons that encourage people to leave a place and go somewhere else

It is also true, though, that the reasons people choose to live in a place often change over time. Sometimes, these reasons might even be connected to the very existence of the place — or its changing nature.

Four factors influence the liveability of places or why people decide to live there:

1. available financial resources (money)
2. employment
3. relationships with other people (for example, wanting to be near family or moving for a partner's job)
4. lifestyle.

Many of these factors change throughout a person's life. For example, where a 20-year-old single person wants to live is often quite different from where someone in their forties or someone with a partner and two teenage children may want to live.

In other situations, the reason for living in a place may disappear; this is the case for a number of towns throughout regional Australia. In Western Australia, for example, the township of Kanowna is situated 22 kilometres east of Kalgoorlie, and was established after gold was discovered in 1893. Within a short period of time, the population had grown to over 12 000, and **infrastructure** such as a hospital, railway line, school, post office and at least ten hotels had been constructed.

As the gold discoveries eventually dried up, the population drifted away. The township was abandoned by the mid-1950s. Interest in the geology of the area returned in the 1970s and after new deposits were uncovered in the late 1980s, the Kanowna Belle Gold Mine began operation in 1993. With the mine located only 19 kilometres from Kalgoorlie, the majority of workers choose to live there, unless they are **fly in, fly out (FIFO)** employees. As of the 2016 census, only ten people still lived in the original gold mining township of Kanowna.

Cossack has a similar story to Kanowna. Established in the late 1860s around 200 kilometres west-south-west of Port Hedland, it was renamed after the HMS Cossack in 1871 and became a base for the pearling industry in Western Australia. The development of the pastoral industry in the Pilbara region and the discovery of gold also attracted people to the port town.

In 1898, a cyclone destroyed a significant portion of the town and, as the size of pearling and transport ships began to increase in the early 1900s, the harbour was no longer suitable to accommodate these. In light of these challenges, the pearling industry was relocated to Broome, a new port was opened at Port Samson, and the town of Cossack was eventually abandoned in the 1950s. Most of the historic buildings in the town were built in the 1880s and have been redeveloped as tourist attractions; tourists can either walk or drive the 5-kilometre Cossack Heritage Trail.

infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines

fly in, fly out (FIFO) workers who fly to work in remote places, work 4-, 8- or 12-day shifts and then fly home

FIGURE 2 The restored courthouse is one of the attractions on the Cossack Heritage Trail.

FIGURE 3 The Customs House and Store is another attraction on the Cossack Heritage Trail.

Many of the towns in the north-eastern United States were established as manufacturing towns. At first they were located near major ports or iron ore and coal deposits, and some closed down when these resources ran out. In more recent times, factories such as the one shown in **FIGURE 4**, which is near Baltimore, have closed down because the owners could no longer compete with the goods produced at a lower cost in China and other South-East Asian countries. With no other jobs available, people left the area, and it fell into a state of urban decay. By 2018, however, Baltimore is once again thriving, especially with many STEM jobs.

FIGURE 4 A disused factory near Baltimore

11.3.2 Economic, cultural, aesthetic, and spiritual factors

Push and pull factors are the broad factors associated with where people choose to live. These factors can then be drilled down into to look at more specific factors. People may be pulled to a place — because of their work, for example — but they will end up staying in a place because of a range of reasons. These reasons are broken into **economic**, **cultural**, **aesthetic** and **spiritual** factors. A brief outline of each of these factors is provided in **FIGURE 1** at the start of this lesson.

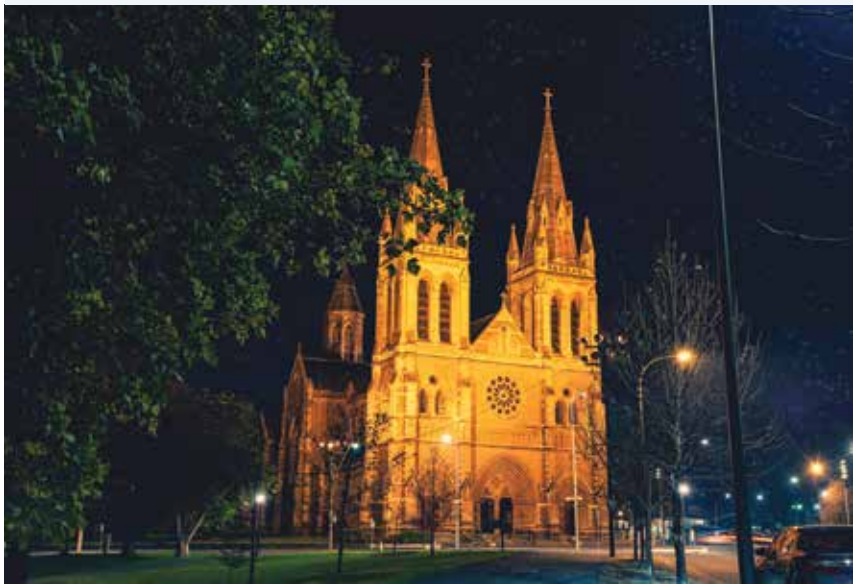
Some examples of these different liveability factors are illustrated in **FIGURES 5** to **8**. Each example represents a different part of the world, highlighting that people are drawn to all kinds of different places, and then stay there for a range of reasons.

FIGURE 5 Economic factor: London's famous double-decker buses, a key feature of the city's public transport system

FIGURE 6 Cultural factor: celebrating the Holi Festival in India

FIGURE 7 Aesthetic factor: driving through the Grampians National Park near Dunkeld in Victoria

FIGURE 8 Spiritual factor: St Peter's Cathedral in Adelaide, South Australia



11.3.3 Objective and subjective measures

When moving somewhere, most people hope that each location has something from all four of these factors. This doesn't happen all the time. For example, Shaun may move from Perth to Darwin for work (an economic factor) but when he gets there, may realise Darwin doesn't have the nightlife he really wanted (a cultural factor). This is an example of an **objective** and a **subjective** reason for living somewhere.

Shaun's job is an objective reason for moving to Darwin — work is available there so he must go. The lack of nightlife is subjective for Shaun, because while it may not be his vibe, a whole lot of people who live in Darwin love the nightlife. Some more objective and subjective measures are listed in **FIGURE 9**.

FIGURE 9 Objective and subjective reasons are also behind living somewhere.

Objective	Subjective
☐ Access to transportation	☐ Places of worship
☐ Access to clean water	☐ Access to different forms of entertainment
☐ Access to education and employment	☐ The scenery and the look of the place

11.3 SKILL ACTIVITY: Interpreting and analysing geographical data and information, Concluding and decision-making

1. **Rank** your order of preference for the liveability factors listed (1 = most important; 4 = least important) and **explain** why you gave each its ranking.

Economic	Cultural	Aesthetic	Spiritual

Ranking	Reason

2. Conduct a survey of five of your classmates on why they live where they do.
   a. Ask your classmates to ask their parents or caregivers why they chose to move to this location.
   b. Gather their responses in the table provided.

Classmates	Why did your parents or caregivers move here?
Classmate 1	
Classmate 2	
Classmate 3	
Classmate 4	
Classmate 5	

3. **Classify** your own parent or caregiver answer and the answers from your five classmates into **economic**, **cultural**, **aesthetic** and **spiritual** categories.

Responder	Economic	Cultural	Aesthetic	Spiritual
Own parents or caregiver				
Classmate 1				
Classmate 2				
Classmate 3				
Classmate 4				
Classmate 5				

4. **Present** the answers using a column graph, correctly and fully labelled.
5. As a class, **discuss** the pattern of reasons shown by each graph, and the possible explanations for this. For example, how important is culture to people?
6. a. Use Google Earth to look up the location of the current settlement of Cossack in Western Australia.
   b. **Calculate** the distance between Cossack and the nearby town of Wickham, and Port Samson.
   c. **Study** the land use and features of the environment around all three locations. **Identify** the economic, cultural, aesthetic and spiritual uses of the land. **Label** these uses as possible push or pull factors.

Resources

Interactivity Push/pull factors (int-3089)

Google Earth Baltimore, USA
Kanowna
Cossack

11.3 Exercise

learnon

11.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4, 5	1, 6, 7	8, 9, 10

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Check your understanding

1. **Define** each of the following terms in your own words.
   a. Cultural
   b. Aesthetic
   c. Spiritual
   d. Economic
2. **Select** the correct option. When choosing a place to live, **employment** / **religion** / **education** is a subjective factor.
3. **Select** the correct option. When choosing a place to live, **spirituality** / **the nightlife** / **employment** is an objective factor.
4. **Determine** whether the following statements are true or false.
   a. Pull factors are negative aspects of a place; they don't attract people to come and live in a place.
   b. Push factors are reasons that encourage people to leave a place and go somewhere else.
   c. Access to employment and education are cultural factors.
5. Briefly **explain** what happened in Cossack, Western Australia.

Apply your understanding

Communicating

6. **Identify** and **justify** the push and pull factors that exist for people thinking about whether they should move to Baltimore today.
7. **Define** the term 'urban decay' in your own words.
8. **Suggest** reasons some people continue to live in decaying urban environments, and why others might choose to move.

Interpreting and analysing geographical data and information

9. Study **FIGURE 4**. **Identify** some of the specific signs that indicate an area is in urban decay.

Concluding and decision-making

10. Consider the information on Kanowna and imagine that you have been employed at the Kanowna Belle Gold Mine. You have been given the option of housing within Kalgoorlie or within the original Kanowna township. Consider the potential advantages and disadvantages of both options and **explain** what your final decision would be.

LESSON
11.4 What are liveable places?

LEARNING INTENTION

By the end of this lesson you should be able to create a mind map of your neighbourhood and compare it with a Google map to analyse the similarities and differences between the two maps.

TUNE IN

Each suburb or town can be very different from its neighbouring areas. You might enjoy some things about your neighbourhood that others might never have noticed. Let's explore what you might include in your perfect place.

1. Make a list of the ten 'must-haves' for your perfect place.
2. Uh-oh! You only have enough money for five things! To help with your decision-making, rank your must-haves on a continuum from least important to most important.
3. Now you have ranked your top five, pick one of these and explain why it's important and how it makes your place perfect.

FIGURE 1 The beauty of a place may be important to you.

11.4.1 My place

What is your **neighbourhood** or local place like? All of us live in a **community**, and these are often centred on the place where we live, or go to school or work.

Teenagers have different types of local places that have special meaning for them, each one at a different scale: their bedroom, home and neighbourhood.

When you live in a neighbourhood, you become familiar with all the things that help to create the character of the place. Sometimes a neighbourhood is made up of people who have similar interests and beliefs, whether these be cultural, sporting, environmental or job-related. Other neighbourhoods have a mixture of people from different backgrounds, creating a vibrant, multicultural community identity. The fact that Australian neighbourhoods can be so different is what makes Australia such an interesting place to live in.

Neighbourhoods have always existed in Australia. The **Country** that is special to many First Nations Australians is often based on language. For instance, the Noongar people consists of 14 First Nations Australian communities who lived in what is now the south-west region of Western Australia before Europeans arrived. Each community spoke its regional dialect and controlled a territory that had definite boundaries. This means these people saw, and often still see, their neighbourhood as the region in which people spoke the same language and had the same customs, such as marriage rituals. People were, and are, socially connected.

neighbourhood a region in which people live together in a community

community a group of people who live and work together, and generally share similar values; a group of people living in a particular region

Country the place where a First Nations Australian comes from and where their ancestors lived; it includes the living environment and the landscape

Because nearly 90 per cent of Australians live in towns and cities, most people likely live in a street that is part of a suburb, town or city, and which itself is part of a state or territory. On the other hand, some Australians do not live in urban areas, but still live in their own communities that are just as distinctive as neighbourhoods in towns and cities. How can we describe where our local place is and what it is like? Sometimes, people try to use words to do this, but it is not an easy task. Geographers have no such trouble, however; they can use maps.

FIGURE 2 First Nations groups of South West Western Australia

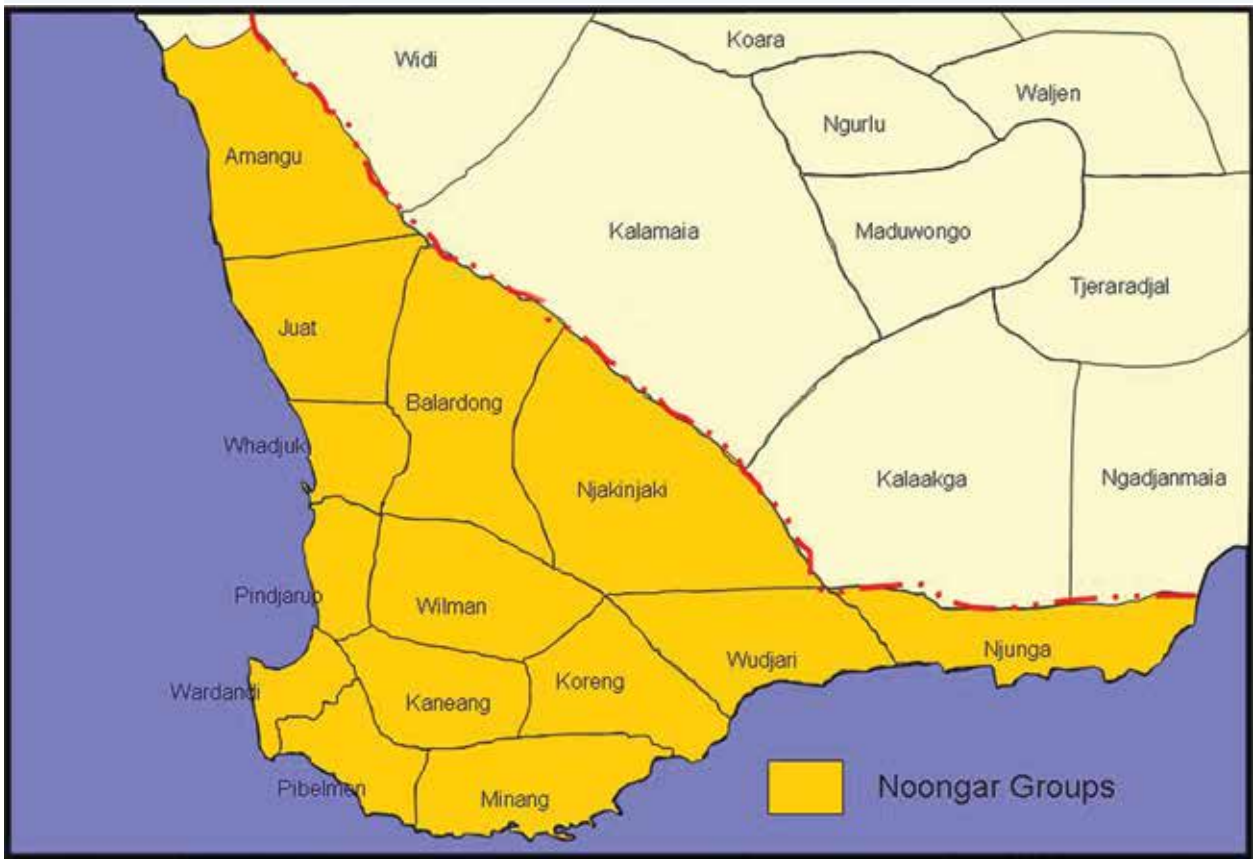
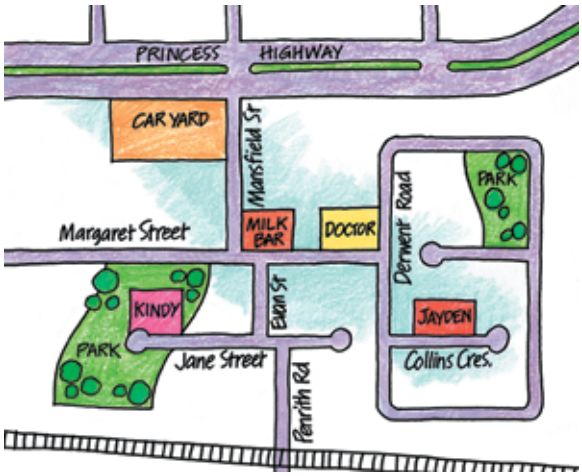


FIGURE 3 Mental map of Jayden's local place (a) by Jayden and (b) by Annette, Jayden's mother

(a)

(b)



11.4.2 What makes Australia so liveable?

Where is your favourite place in Australia? Have you been to a holiday paradise, one that you think would be the perfect place to live? Is the climate perfect, the scenery spectacular? Is it safe, fun and the place for adventure? Is this place in a city, in the **wilderness** or in the next street? Is it paradise because your friends or family live there or because of the natural or **built environment**?

Among the most popular and beautiful tourist destinations in Australia are the Great Barrier Reef, Uluru, Melbourne, Sydney, the Gold Coast, the Great Ocean Road, Monkey Mia, Kakadu, the Tasmanian Wilderness, the Blue Mountains, Port Arthur, Byron Bay, Kangaroo Island and Ningaloo Reef.
Many of these places have unique landscapes, located within naturally stunning environments. Four of these are predominantly built environments: Sydney, Melbourne, the Gold Coast and Port Arthur. The remaining ten places are best known for their natural, often **remote**, and almost wilderness environments.

Some of these wonderful places are found in or close to cities and large towns; some have significant local populations; and some are quite remote. They are all places that attract large numbers of visitors every year. People come to see or experience an **aspect** of the local environment that brings them pleasure.

FIGURE 4 shows the location of five of Australia's most popular places for tourists.

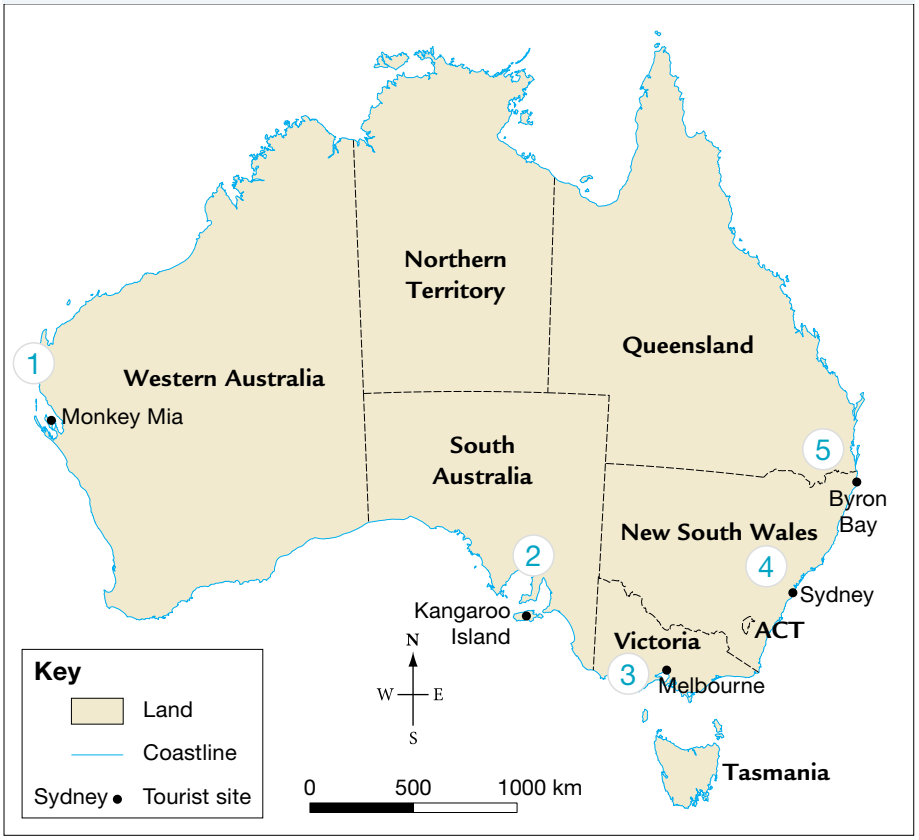
wilderness a natural place that has been almost untouched or unchanged by the actions of people

built environment a place that has been constructed or created by people

remote a place that is distant from major population centres

aspect feature or quality, or the direction something is facing

FIGURE 4 Five of Australia's most popular places for tourists



Source: Spatial Vision

These places are often perfect for a holiday but they may also be a place to live. Is it mostly the excitement of a big city, the natural beauty, or some other factor that makes you decide which place is the most liveable? The following provides some further information on the five locations from **FIGURE 4**.

1. Monkey Mia is an environment where you can experience natural wildlife by interacting with dolphins. It is located in Shark Bay on the coast of Western Australia, 850 kilometres north of Perth. For over 40 years, a small pod of dolphins has come ashore to connect with beachgoers. The Department of Environment and Conservation provides staff who supervise the feeding of fish to these dolphins each day. It is an unusual opportunity for people to see wild dolphins up close, quite near to the shore. Monkey Mia is a place of great natural beauty without a huge tourist resort attached. Most visitors camp. It is an important stop on the around-Australia tourist trail. At the 2016 census, fewer than 800 residents lived near the Monkey Mia Resort.

FIGURE 5 Seeing wild dolphins up close is an attraction for tourists to Monkey Mia.

2. Kangaroo Island is a place of natural beauty. It is Australia's third largest island, found about 160 kilometres south of Adelaide. It is a wildlife lover's paradise, being home to many native Australian animals in their natural habitats, including koalas, kangaroos, seals and penguins. It has remote, unspoiled beaches and interesting rocky outcrops. Although first settled in the late 1830s, its present population of over 4200 is the highest it has ever been. It was originally settled as a fishing and farming community but today is better known as a tourist destination.

FIGURE 6 Kangaroo Island is known for its abundance of wildlife.

3. Melbourne is the second-largest and often ranked as the most **liveable city** in Australia. (Ranked most liveable city in the world 2011–2017, second to Vienna in 2018 and 2019 and pushed to eighth spot in the 2021 rankings, according to the *Economist* magazine.) It is the capital of Victoria and home to over five million residents in 2022. It is an attractive destination for tourists, who enjoy visiting its major sporting and cultural events, shops, restaurants and theatres. Melbourne is located beside Port Phillip Bay and on the Yarra River. It is not a city known for its beautiful natural environment, but it has become known for its distinctive laneways, bars and café culture.

liveable city a city that people want to live in, which is safe, well planned and prosperous and has a healthy environment

FIGURE 7 Melbourne is attractive for both residents and tourists.

4. Sydney is a built environment in a beautiful setting and is Australia's largest and oldest city. It is often called the 'Harbour City'. Sydney is popular with both domestic and international tourists and is home to nearly 5.5 million residents in 2022. It has many attractions, including restaurants, beautiful beaches, theatres, galleries and iconic landmarks. It has a beautiful natural environment with varied experiences provided by the built environment. This makes it an extremely popular destination for everyone.

FIGURE 8 Sydney has many cultural and environmental attractions.

5. Byron Bay is a beachside town in northern New South Wales, located 160 kilometres south of Brisbane. It is a very relaxed place with a local community that includes many artists and retired hippies. It is an important surfing place, with easy access to offshore reefs and stunning beaches. It has become a popular place for 'schoolies' end-of-year celebrations. In 2022, Byron Bay Shire had a population of nearly 35 000 people in (9500 in the township of Byron Bay), who rely heavily on tourism and agriculture for their income.

FIGURE 9 Byron Bay's natural beauty and laidback atmosphere attract residents and tourists.

on Resources

Interactivity How did they live here? (int-8950)
Weblink Nothing like Australia

11.4 SKILL ACTIVITY: Interpreting and analysing

1. **Create** a mental map of your neighbourhood or local place. A mental map is a drawing or map that contains your memory of the layout and distribution of features in a place. Locate your house in the centre of the sheet and work outwards from there. The map should be as detailed as possible. Include features such as:
   - streets and their names
   - houses of friends or family
   - shops, parks, trees, post boxes, telephone poles, pedestrian crossings, railway lines and stations
   - anything you can remember, but the map must be drawn from memory.
2. **Present** the map using geographical rules (BOLTSS). Since you are not drawing the map to a scale, write 'Not to scale' in the correct position. Remember to use conventional colours and symbols as far as possible.
3. **Compare** your map to an actual map of your neighbourhood.
   a. In what ways was your map accurate?
   b. Which features did you not mark on your map?
   c. Which parts of your neighbourhood did you know well and which did you not know well?
   d. Think of reasons to explain your answers to (c).
4. **Design** a map of your most liveable place. Consider the natural and built environments; distance to a city, services, job and recreational opportunities; climate; and lifestyle. **Annotate** your map to **explain** why this is where you would like to live. Use the **Nothing like Australia** weblink in the Resources panel to help find your ideal location.

11.4 Exercise

learnon

11.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 10	4, 5, 6, 7	8, 9

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Check your understanding

1. A neighbourhood is a region in which people live together in a community. True or false?
2. **Select** the correct option. Approximately **10** / **30** / **60** / **80** / **90** per cent of Australians live in towns and cities.
3. **Identify** which city was named the 'most liveable city' in the world in 2018.
   - **A.** Melbourne
   - **B.** Vienna
   - **C.** Vancouver
   - **D.** Sydney
4. In your own words, **define** the term 'liveable city'.
5. Study **FIGURE 3**, which shows two mental maps of the same neighbourhood place. One is drawn by Jayden, a seven-year-old boy, and the other is drawn by his mother.
   a. **Compare** the two maps by drawing up a table similar to the following and filling in the spaces.

	Features that are different	Features that are similar
Land use		
Transport		
Street layout		
Relative sizes		
Names of places		
Other		

   b. **Identify** reasons to explain the major similarities and differences between the maps drawn by Jayden and his mother. Think about factors such as age, duties during the day, transport and friendships.

Apply your understanding

Concluding and decision-making

6. After reading about the five places described in section 11.4.2, which of these places is most similar to your most liveable place? **Explain** your answer.
7. If you wished to work as a national park ranger, **identify** which of the places in **FIGURE 4** would be best?
8. If you were planning a career in the theatre, which of the places in **FIGURE 4** would be best? **Justify** your response.
9. If you wished to live in a relaxed coastal environment close to a capital city, which of the places in **FIGURE 4** would be best? **Justify** your response.

Communicating

10. Consider **FIGURE 3**. **Explain** why you think people might describe the same place in different ways.

LESSON
11.5 What is it like living in remote places?

LEARNING INTENTION

By the end of this lesson you should be able to explain why people move to remote or rural places, and discuss strategies that could be used to ensure the sustainable survival of rural and remote places.

TUNE IN

Deciding to move can be a big decision, especially if you are moving to somewhere that is very different from your current home. This could mean making the move from an urban city area to a remote or rural area.

1. What do you think of when you hear 'remote' and 'rural'?
2. What would make someone move from the inner city to somewhere remote or rural?

FIGURE 1 Would you move to a rural area?

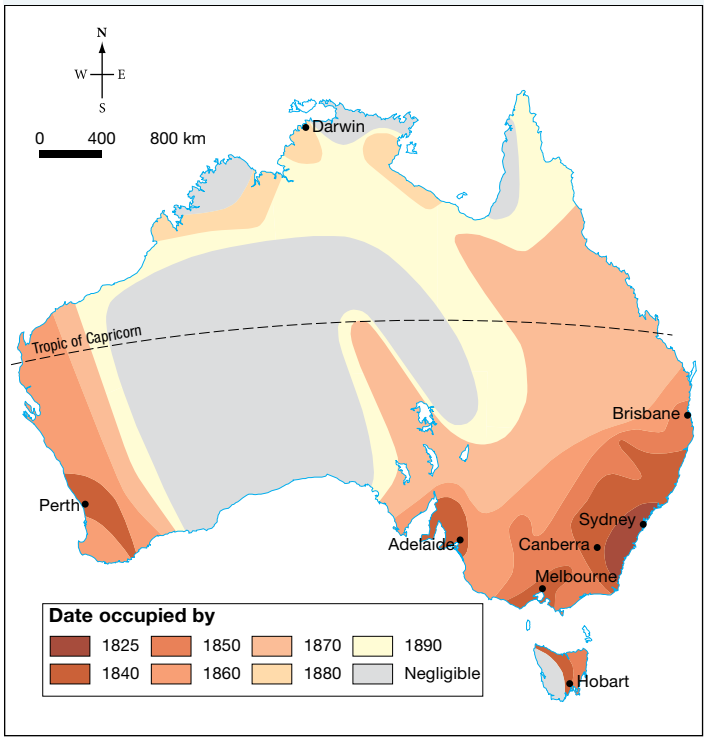
11.5.1 Settling inland Australia

int-7797

For over 100 years, a small percentage of Australians have been moving away from large cities and coastal regions to live in more remote locations. They are often searching for new farmland or the mineral resources of the inland. Why do some people choose to live in places where their nearest neighbour is 50 kilometres away and it takes six hours to get to the closest supermarket? Why do they find remote places more liveable?

The potential to relocate people inland has never been faster or easier. The interconnection provided by modern transport and the high-speed communication provided by phone and internet should mean that technology has reduced remoteness. However, the general shift of Australia's population for the last 100 years has been towards the major cities and away from the country. In 2016, the average age of farmers in Australia was 56 years and getting older (this was up 17 years from 2010). Most children of farmers leave the country and seek education and work opportunities in large cities.

FIGURE 2 Stages in European land occupation in Australia



Source: © Spatial Vision

Over the past 100 years, governments and private industry have made many attempts to encourage people to occupy the more remote places of Australia. Soldier settlement programs and mining developments are two such schemes.

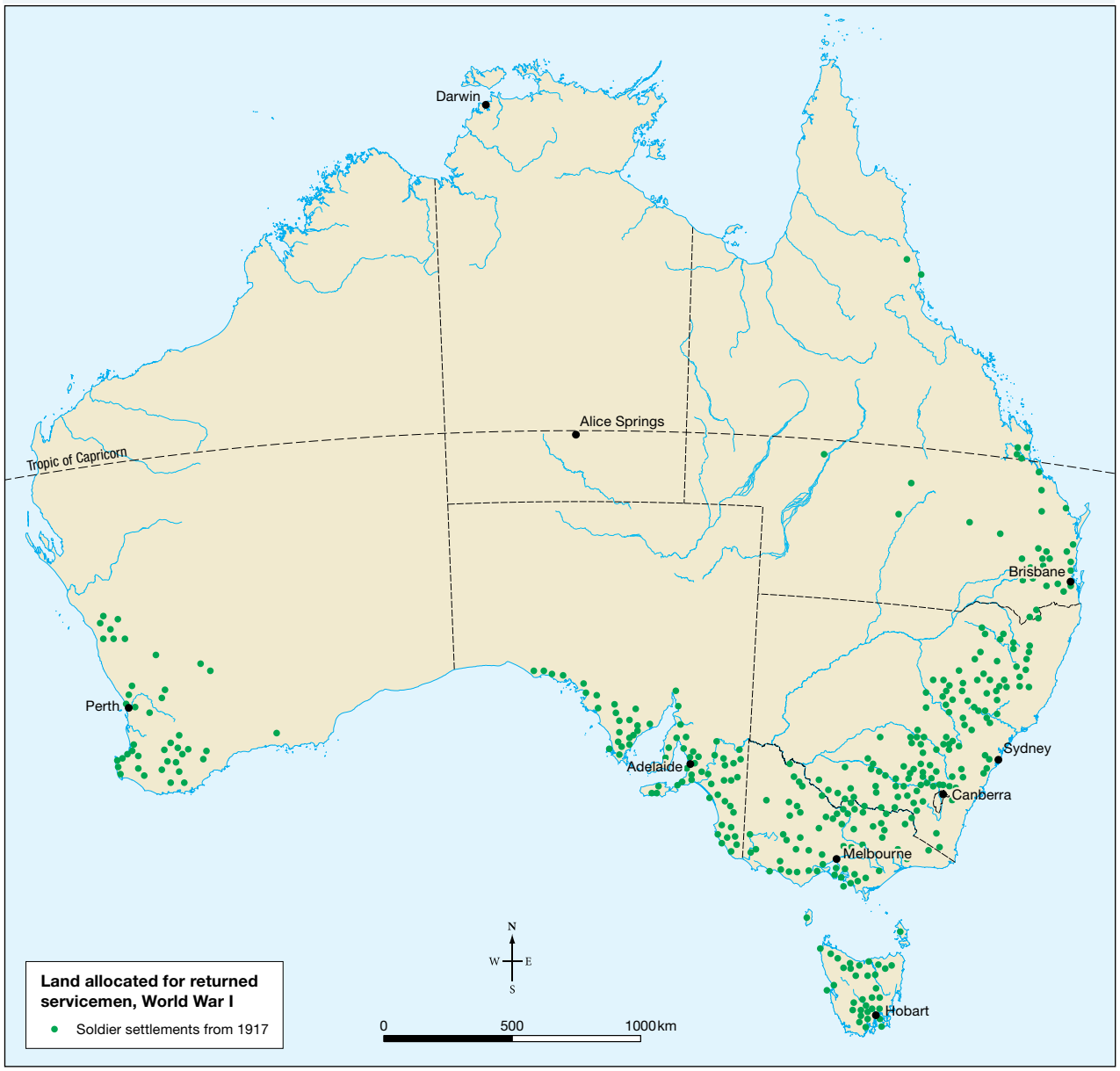
Soldier settlement schemes

After both World War I and World War II, the state and federal governments of Australia began a program of providing land to returned soldiers. This was to give these soldiers work, but it was also seen as a way of attracting people to otherwise sparsely inhabited places.

After World War I, more than 25 000 soldiers were resettled in places such as the Wheatbelt and south-west region in Western Australia, Merbein and Mortlake in Victoria, Griffith and Dorrigo in New South Wales, Murray Bridge and Kangaroo Island in South Australia and the Atherton Tableland in Queensland. The settlers were expected to stay on their land for at least five years and to improve the quality of the land they were farming. Many of these settlements were not successful because the soldiers were not always suited to farming, the farms were often too small, and farmers did not have enough money to invest in stock or equipment.

After World War II, a similar scheme was much more successful, because farms offered were bigger, and roads, housing and fences were supplied.

FIGURE 3 Location of soldier settlement areas, 1917



Source: Spatial Vision

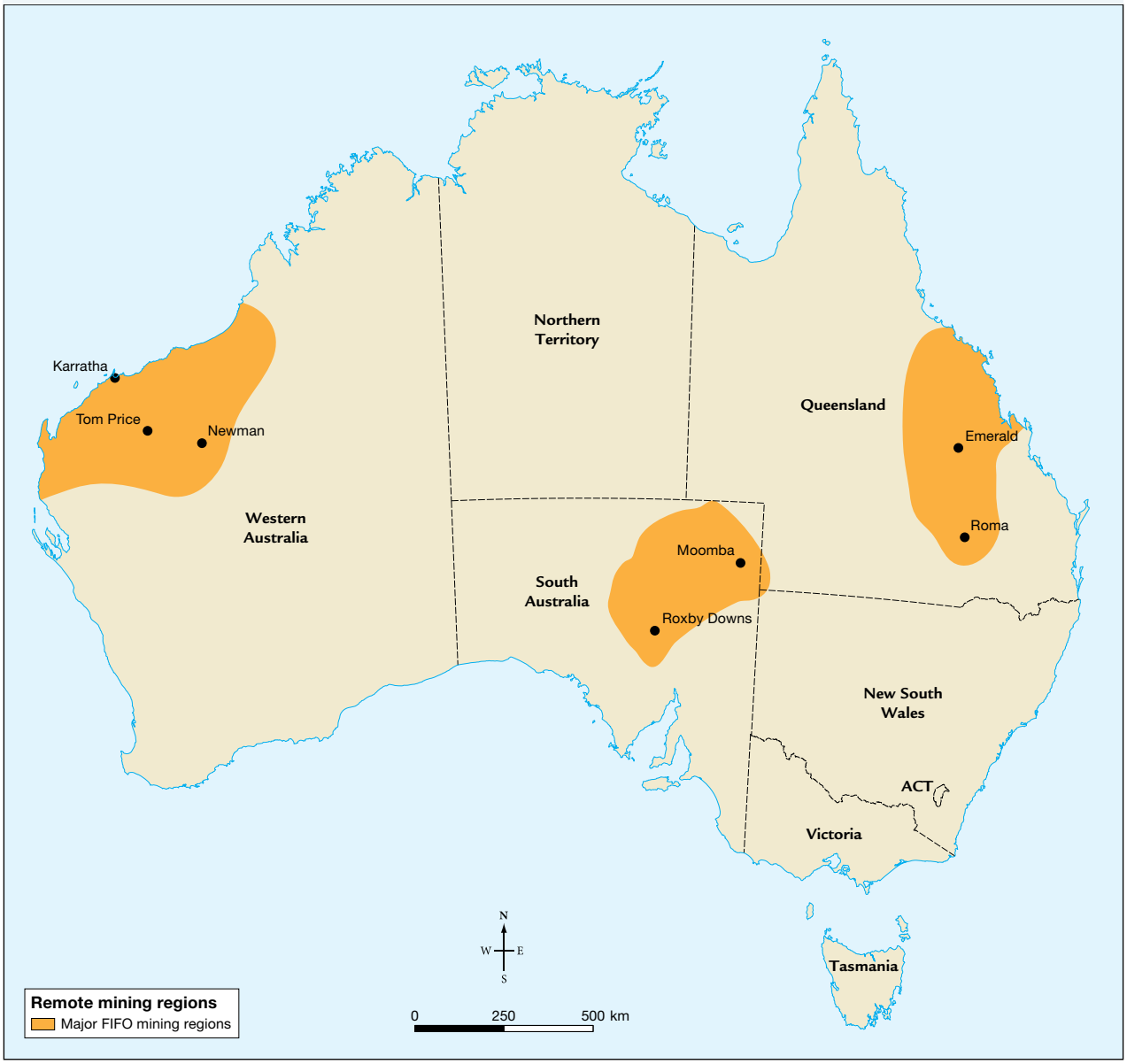
Remote mining communities

Karratha, Broken Hill and Tom Price are examples of current mining towns that are just as remote as the goldrush towns of Bathurst and Ballarat were in the 1850s and 1860s.

Today, flying from Perth to Tom Price in Western Australia only takes one and a half hours, yet it can be difficult to attract workers to mines in this region. Wages are high; workers in the mining and construction industry in these locations can earn between $90 000 and $120 000 per year. Fewer jobs are now available because the mining boom has passed, but skilled workers are still attracted to these remote places.

FIGURE 4 Mount Tom Price mine and Tom Price township

FIGURE 5 Location of remote mining regions



Source: Spatial Vision

Some workers fly in and fly out (FIFO) for their shifts. In 2017, experts estimated that between 75 000 and 90 000 Australians fly in for a shift that may last several weeks, eventually flying home for their days off.

11.5.2 Moving for more space

During the COVID-19 pandemic, many Australians decided to leave the hustle and bustle of the big cities and move to regional and rural areas. One reason for this move was the series of lockdowns that were needed to stop the spread of the virus. Some people argued, if they must stay home, why not stay somewhere with a big backyard and a view? Another reason was because the pandemic brought about new ways of learning and earning.

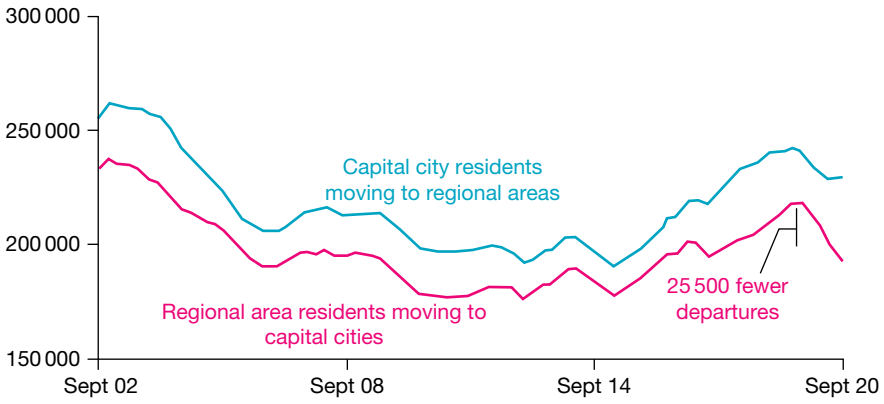
Because the internet was now fast enough and stable enough in most areas to allow students to learn from home and for their parents to work from home — via Zoom meetings and various other face-to-face communication platforms — some people opted for the laid-back lifestyle afforded to them by country living. Following the extended lockdowns in Melbourne and Sydney, a population shift occurred from the city to the country. The Australian government's Centre for Population studied this phenomenon and in late 2020 released a report highlighting that in the year to September 2020, regional areas had a net gain of 36 200 people.

FIGURE 6 Most students switched to remote learning during the COVID-19 pandemic.

FIGURE 7 Working from home also became the norm during the COVID-19 pandemic.

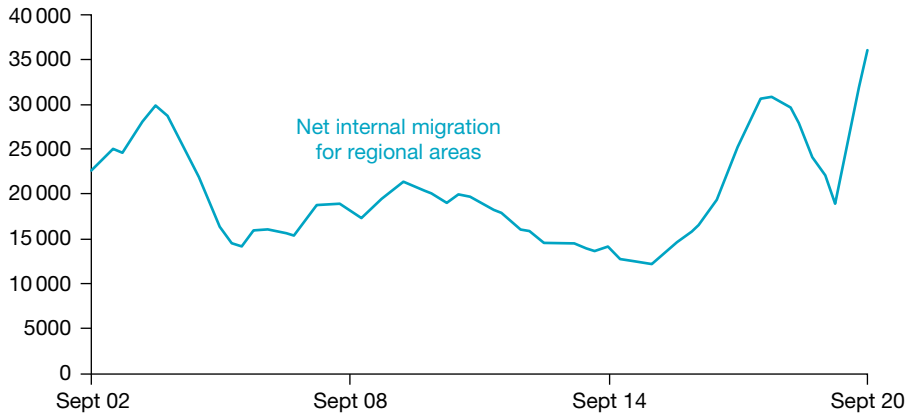
tlvd-10517

FIGURE 8 Movements between capital cities and regional areas in 2020



Source: Migration between cities and regions: A quick guide to COVID-19 impacts, Centre for Population, 2020.

FIGURE 9 Net internal migration for regional areas in 2020

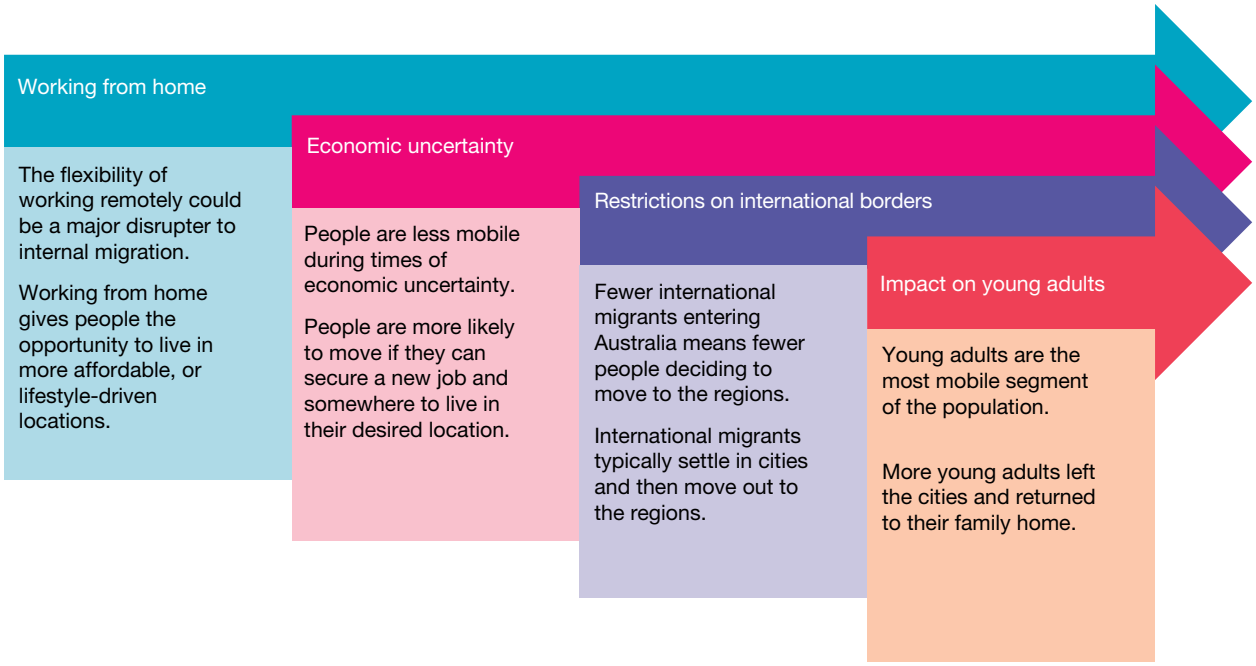


Source: Migration between cities and regions: A quick guide to COVID-19 impacts, Centre for Population, 2020.

The Centre for Population identified four key drivers that influenced internal migration in Australia during the COVID-19 pandemic. These drivers are shown in **FIGURE 10**.

int-8934

FIGURE 10 Four key drivers influenced internal migration in Australia during the COVID-19 pandemic.



Source: Migration between cities and regions: A quick guide to COVID-19 impacts, Centre for Population, 2020.

11.5.3 Rural settlement

Some people live in rural areas because they are involved in primary industries. Others provide services. Griffith is a large town (population 17 000) in the Murrumbidgee Irrigation Area in New South Wales. The climate in this area is semi-arid (warm, with unreliable rainfall). The land became productive farmland after **irrigation** was provided in 1912. Reliable water and available farmland attracted many people to this area.

irrigation water provided to crops and orchards by hoses, channels, sprays or drip systems in order to supplement rainfall

Two main types of farm are in this area.

- Type A farms are usually about 220 hectares in size (a hectare being 10 000 square metres). Each year they grow a combination of rice, corn, wheat, vegetables and pasture, and graze beef cattle. Irrigation water is usually used.
- Type B farms are **horticulture** farms, and are usually about 20 hectares in size. They grow a combination of permanent crops that may include grapes, peaches, plums, and citrus fruit such as oranges. Many of these plants last for many years, and irrigation is always needed.

FIGURE 11 Farms in the Griffith area support businesses in the town.

11.5.4 Are rural communities sustainable?

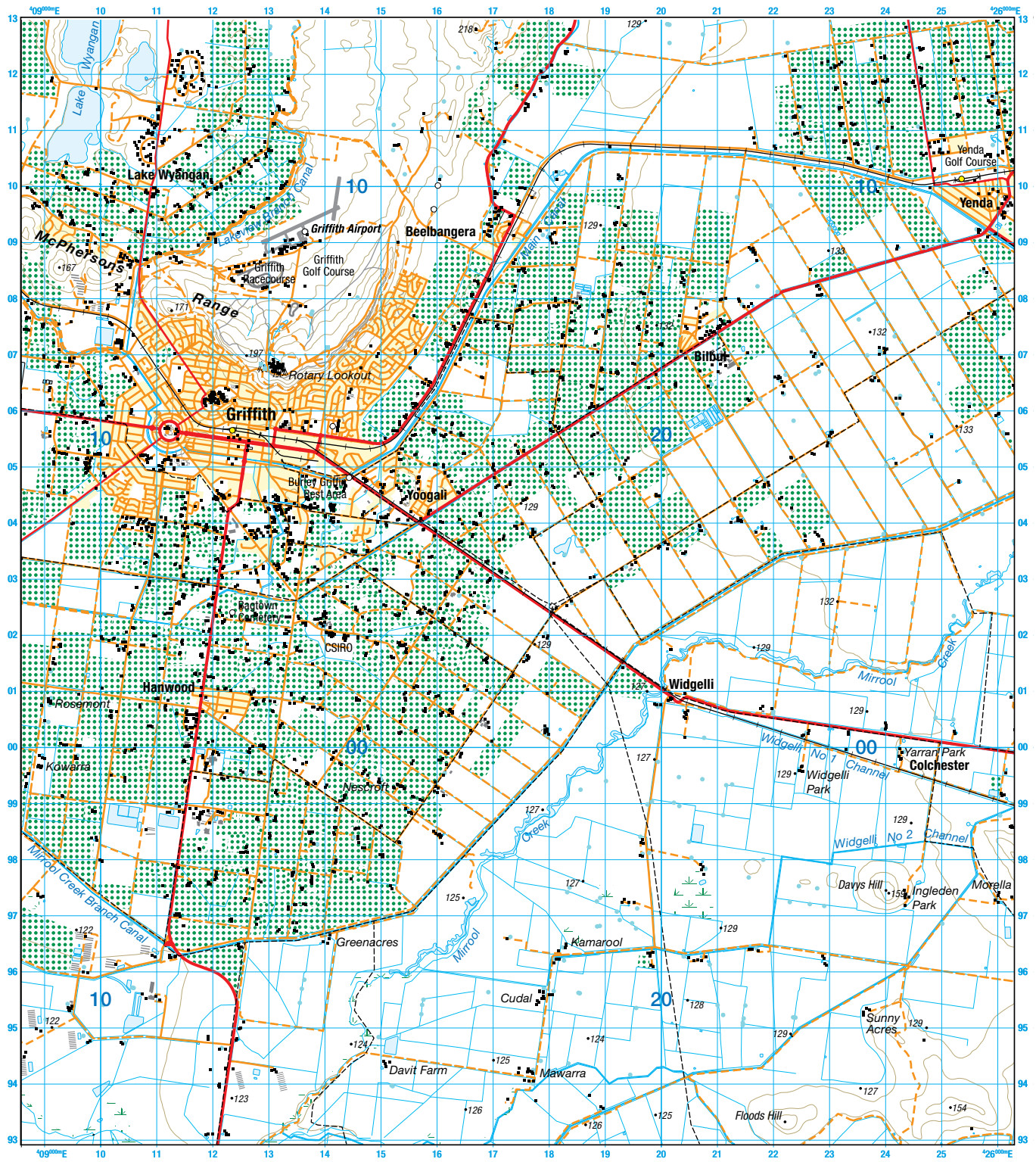
Rural communities are an important part of Australia's social identity, but (based on long-term trends) they are facing significant change and challenges in maintaining their population. Many are experiencing a decline because young people are leaving in search of education and employment. Some rural communities are able to alter this trend, and are surviving against the odds. Others have not fared so well.

Coober Pedy is a vibrant multicultural town in the far north of South Australia, 850 kilometres north of Adelaide and 700 kilometres south of Alice Springs. The town is located in one of the most **arid** environments of Australia. The traditional custodians of the land are the Antakirinja people. The town's name may have come from the name Kupa Piti, meaning 'white man's hole'. Opal was discovered in February 1915 and, after several cycles of boom and bust, the town expanded rapidly during the 1960s. Opal developed into a multi-million dollar industry, and the town is sometimes called the 'Opal Capital of the World'.

horticulture the growing of garden crops such as fruit, vegetables, herbs and nuts

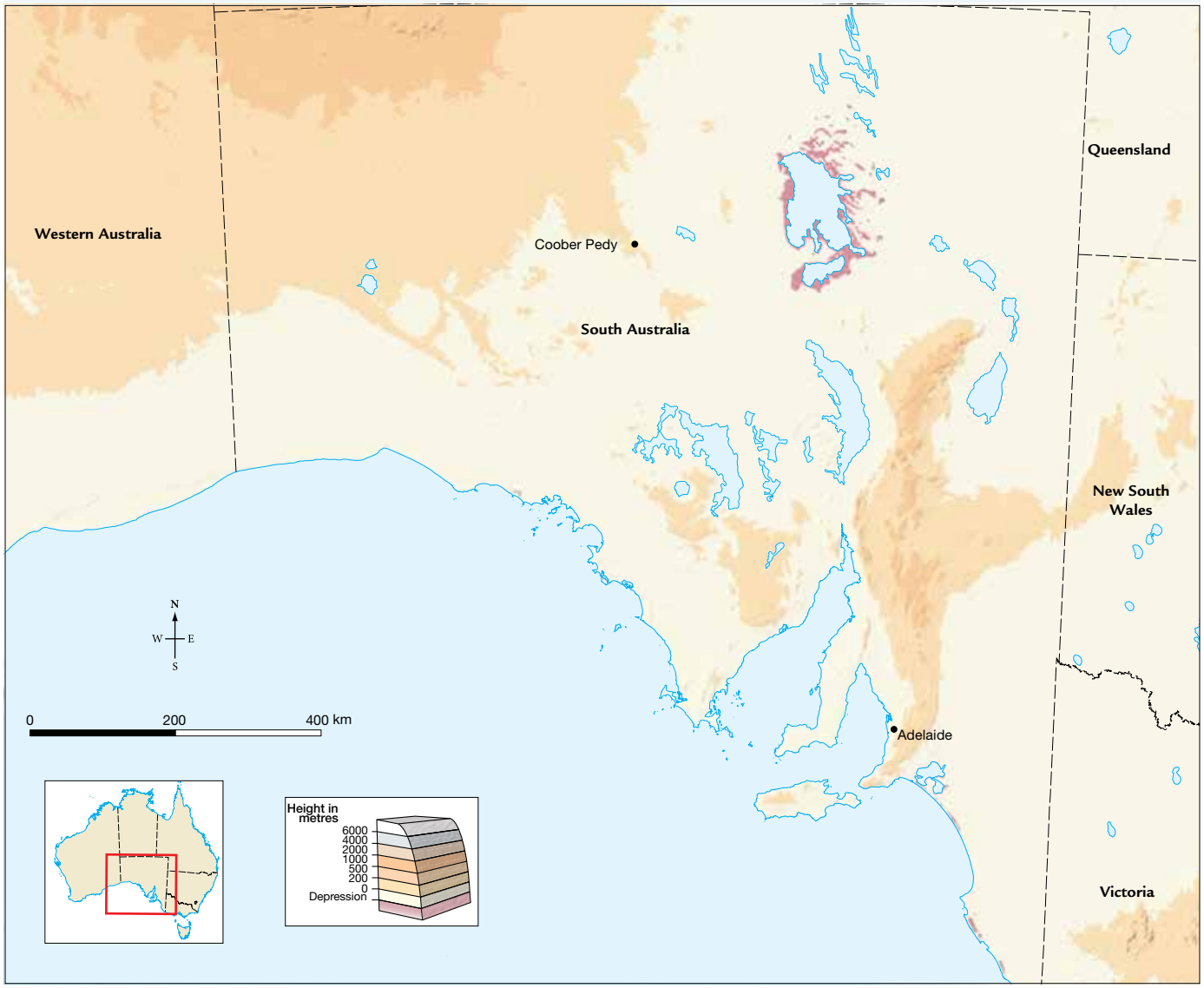
arid lacking moisture; especially having insufficient rainfall to support trees or plants

FIGURE 12 Topographic map extract of Griffith



Source: Spatial Vision

FIGURE 13 Coober Pedy location map



Source: Spatial Vision

Opal continues to be important to Coober Pedy's identity and economy, but the town now draws its income from mining services, tourism and public services. Coober Pedy has a large Antakirinja community, and the town's population has now declined, with an estimated 1762 people in the 2016 census.

What does the future hold for Coober Pedy?

Coober Pedy is widely known for its underground housing (see **FIGURE 16**), an effective and environmentally friendly response to the town's searing summer heat and chilly desert evenings. Recent exploration has revealed significant deposits of iron ore, copper, gold and coal in the area, along with platinum, palladium and rare earths.

Yet in 2014, the Cairn Hill iron ore/copper/gold mine 55 kilometre south-east of Coober Pedy was closed due to low iron ore prices.

int-5292

The location of the town makes it an ideal centre for mining services, and a base for the delivery of state and federal government services in the region. This presents an opportunity for the town to reverse its steady population decline and again see growth in its economy and population.

Coober Pedy has good hospital and medical services, primary and secondary schooling, a TAFE campus, childcare services and police.

However, these services are under some pressure, and the recruitment and retention of medical professionals continues to be a problem.

This rural environment is extremely remote, so many of the pastoral properties in the region have been linked to telecommunication services since 1987. The Stuart Highway provides the main transport and service route for the town.

FIGURE 14 Climate graph for Coober Pedy, South Australia

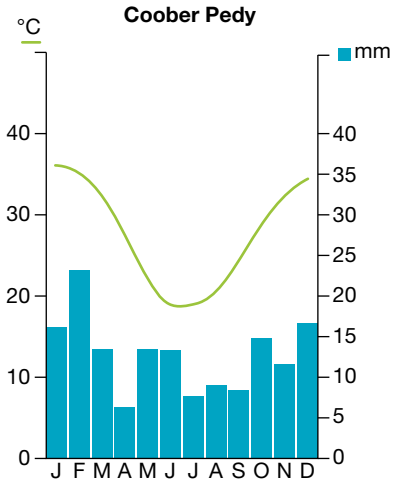


FIGURE 15 Along with other South Australian fields, Coober Pedy produces most of the world's opal. Mullock heaps create Coober Pedy's distinctive landscape.

FIGURE 16 Much of Coober Pedy's population lives underground to take advantage of the cooler and more stable underground climate.

DISCUSS

Discuss strategies that could be implemented to entice more people to live in Coober Pedy and reverse its population decline. Develop a list of possible strategies that could be implemented.

11.5.5 A question of survival

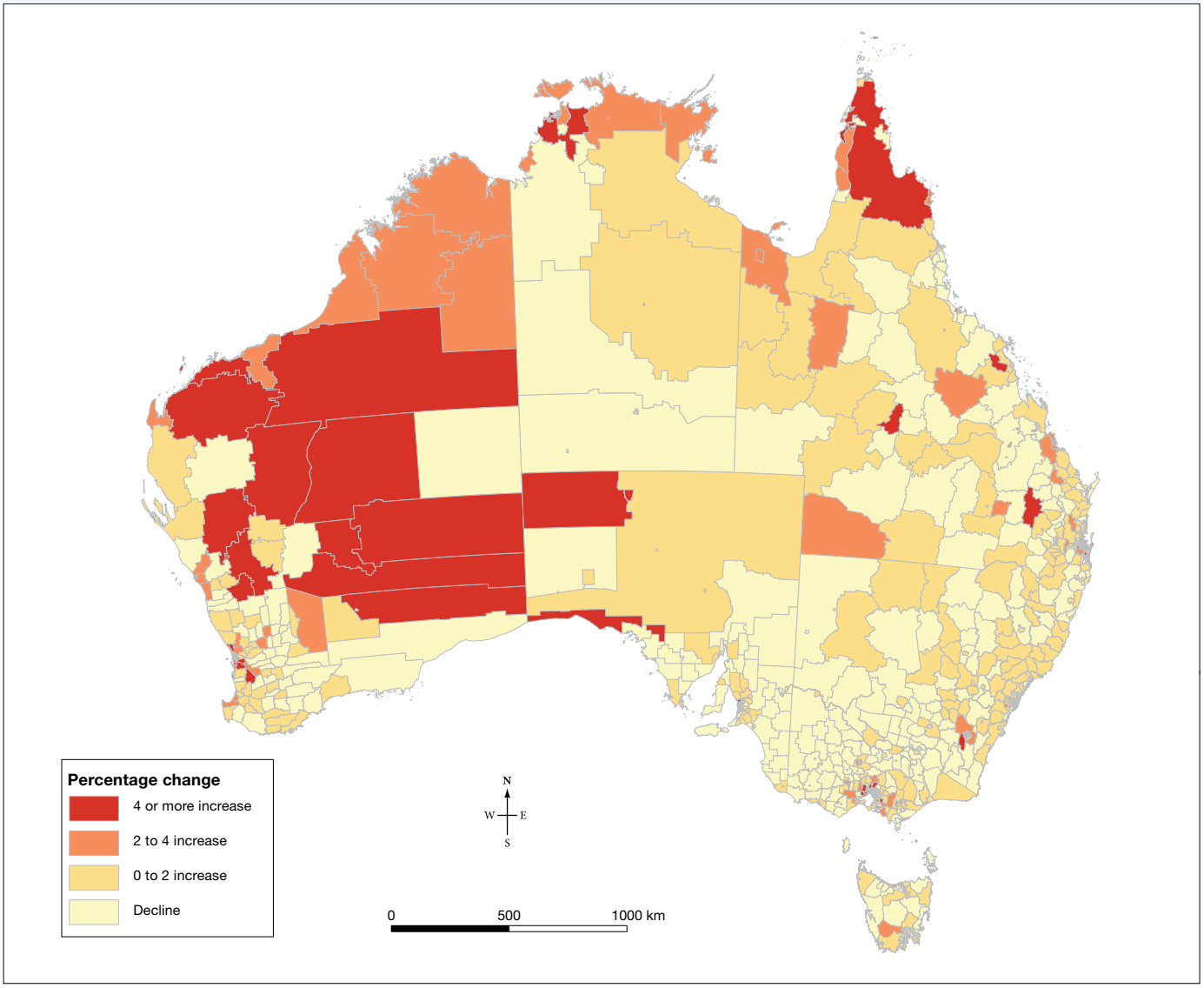
Many rural communities are facing global pressures, such as more overseas competition and fluctuations in the Australian dollar, which can affect the prices of commodities (such as minerals, wool and beef). Climate change and resultant droughts and floods also affect these rural communities. The rural communities that are not experiencing the trend of people moving to urban areas (see **FIGURE 17**) all have one thing in common: they have discovered another source of income. They may have shifted their focus to growing olives or grapes, or perhaps made use of a natural environmental resource such as a nearby national park.

In some cases, a rural community is unable to reinvent itself or tackle the problem effectively. The loss of an industry such as mining may have terrible effects on employment, leaving the resident population with lower incomes and few job prospects.

int-8935

tlvd-10518

FIGURE 17 Australia's population increase and decrease 2011–2016



Source: Spatial Vision

SkillBuilders to support skill development

- 8.8 Using topographic maps
- 8.14 Interpreting diagrams

on Resources

Digital document	Topographic map extract — Griffith (doc-17952)
Interactivity	Remote living (int-3090)
Weblink	Soldier settlement
Google Earth	Tom Price township
	Griffith

11.5 SKILL ACTIVITY: Questioning and researching using geographical methods

1. Do you think the population shifts caused by the COVID-19 pandemic and lockdowns are permanent or just an immediate reaction to the pandemic? In small groups, **decide** where you stand and then **conduct research** into this trend.
2. **Report** your findings back to the class. Your report must include up-to-date data, graphs and charts, and be multimodal (using PowerPoint, Prezi or Google Slides, for example).

11.5 Exercise

learnon

11.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	6, 7	5, 8

These questions are even better in jacPLUS!

- Receive immediate feedback
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Check your understanding

1. **Define** what makes a place remote.
   - A. It is close to a city centre.
   - B. It is in the countryside.
   - C. It is a long way from major population centres.
   - D. It has a population of fewer than 1000.
2. **Determine** whether the following statements are true or false.
   - a. FIFO reduces remoteness.
   - b. During 2020, the number of people moving to the regions increased.
3. Which of the following is *not* an incentive to leave the hustle and bustle of the city and move to a remote location?
   - A. Good internet access
   - B. The ability to work from home
   - C. Busy streets
   - D. Increased variety and number of cultural events
4. **Identify** which of the four key drivers identified by the Centre for Population caused an increase of internal migration during the COVID-19 pandemic.

Apply your understanding

Interpreting and analysing geographical data and information

5. Refer to **FIGURE 12**.
   - a. **Determine** the main use for farmland in the area surrounding Griffith.
   - b. **Sketch** the symbol of this land use.
   - c. Is this an example of farming type A or type B?
   - d. **Identify** two natural factors and two human factors in **FIGURE 12** that might have influenced people to choose to live in the Griffith area.
6. **Describe** why rural communities are under threat.
7. **Describe** the change in the speed of settlement of inland Australia that is illustrated by **FIGURE 17**.
8. Study **FIGURE 3**. Use your atlas to **compare** the location of soldier settlements with a rainfall map of Australia. Were soldier settlements located in places that receive good rainfall for farming?

LESSON
11.6 Why do people choose to live in the country?

LEARNING INTENTION

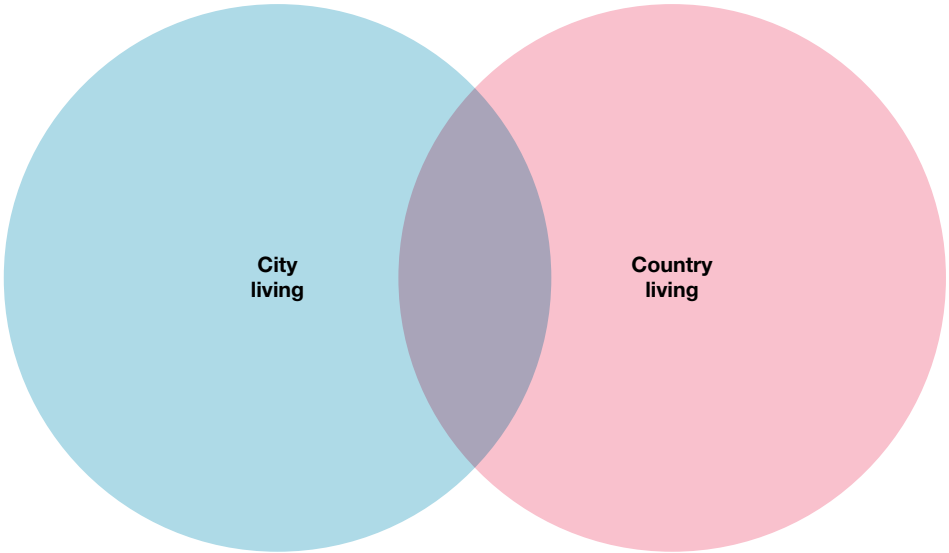
By the end of this lesson you should be able to identify the characteristics of a country town, and explain why country towns are becoming more popular.

TUNE IN

City living and country living share some similarities, but also have quite a few differences. Think about your experience living where you do to help you complete this task.

Create a Venn Diagram similar to the example in **FIGURE 1** to list the similarities and differences between city living and country living.

FIGURE 1 City living versus country living



11.6.1 The attraction of the country

Country towns come in all shapes and sizes. They can be small centres with only a post office and general store or they can be substantial towns. Because most of Australia's population and businesses are concentrated in the capital cities, even people who live in quite large towns outside the capital cities see themselves as living in the country.

Even though most Australians live in large urban centres, the rural or country regions are very important because this is where food is grown, **natural resources** are extracted and ecosystems can flourish. Many Australians travel to country places for holidays and many dream of moving to the country. The attractions of country places include cheaper housing, less traffic, a greater sense of safety, and the allure of living within and around natural environments.

natural resources resources (such as landforms, minerals and vegetation) that are provided by nature rather than people

DISCUSS

How do you feel about living in different places? The following nine statements refer to different opinions about living in rural areas or cities.

- Rural areas are peaceful, have lots of space and clean air.
- Cities provide more choice in activities and places to live.
- I feel isolated in cities.
- Pollution and noise in big cities impair living conditions.
- I don't feel safe in big cities because of crime.
- Rural areas have great communities with people supporting one another.
- The natural environment in many rural areas is very attractive.
- I feel isolated in rural areas.
- Jobs and transport are more accessible in cities.

Complete a diamond ranking diagram by writing the statement you most agree with at the top and the one you most disagree with at the bottom. Then choose the next two top and bottom statements and the final three in the middle of the ranking. Explain your ranking to another person. How might these rankings change if they were completed by people who live in places different from where you live? Can you test this hypothesis?

11.6.2 Demography

The **demographic** characteristics of country places are influenced by location and activities in the surrounding area. For instance, Leongatha is located on the South Gippsland Highway, 135 kilometres south-east of Melbourne, Victoria. Reliable rainfall and good soil make the area one of the most productive in Victoria. Dairy farming is the main type of farming, and the milk-processing factory is the largest single employer in town. Another town, Coleraine, is located on the Glenelg Highway, 350 kilometres west of Melbourne. The farms in this region are generally large. Sheep and cattle grazing are the main types of farming, and no major business is located in the town.

TABLE 1 Predicted population for selected Victorian places

Local government area	2011		2031	
Municipality	% aged under 20	% aged over 65	% aged under 20	% aged over 65
Melbourne (urban)	24.3	23.8	13.0	17.1
South Gippsland Shire (rural includes Leongatha)	24.8	21.9	19.5	28.1
Southern Grampians Shire (rural includes Coleraine)	25.8	21.6	19.6	30.3

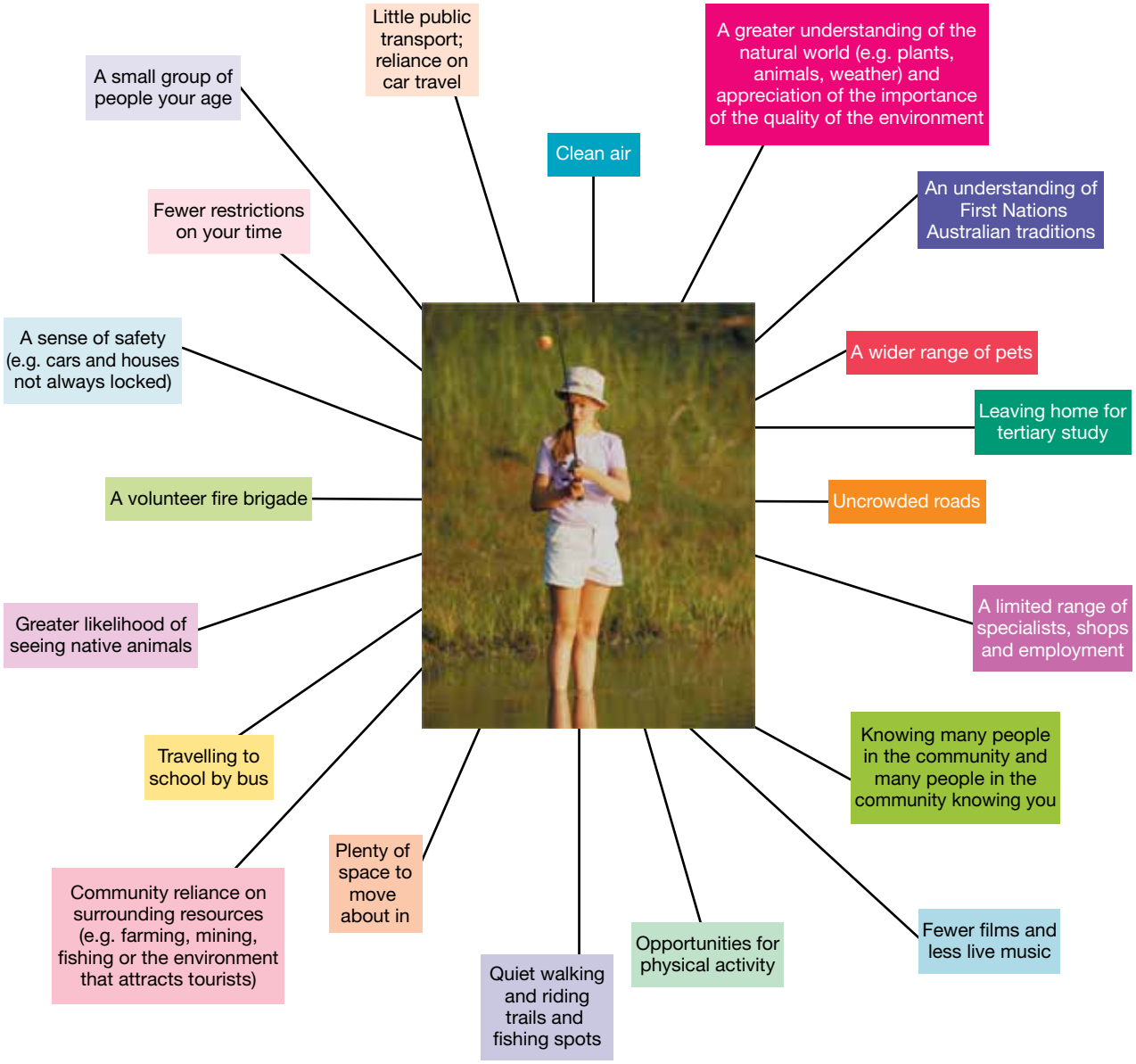
A sense of belonging

Living in the country provides opportunities to be involved in a wide range of community activities. Activities might have an economic focus (such as fundraising), an environmental focus (such as Landcare) or a social focus (such as youth groups). A common outcome of all activities is the way they contribute to a sense of connectedness or belonging.

Even small towns commonly provide a range of sports. Sports provided in a town as large as Leongatha might include Australian Rules football, cricket, Little Athletics, tennis, equestrian events, bowls, fishing, cycling, croquet, skateboarding, golf, swimming, basketball, netball, table tennis, badminton, karate, gymnastics, squash and taekwondo. Also likely available are cultural activities and entertainment, such as films, brass bands, Guides, Scouts, art galleries, dancing and theatre groups.

demographic describes statistical characteristics of a population

FIGURE 2 Growing up in country town might mean . . .

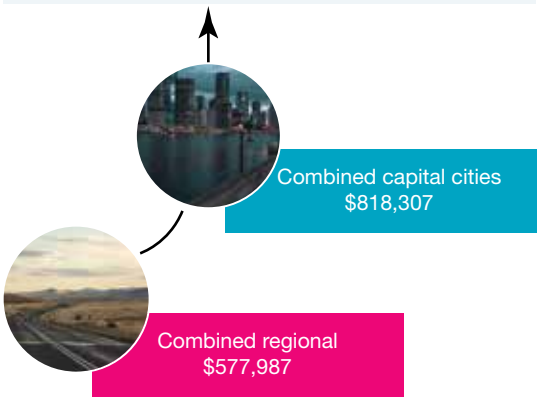


11.6.3 Access to services

Living in the city undoubtedly has its advantages when it comes to accessing all the services people need. Cities provide ample public transport, and medical, education and employment services.

People who live in the city are spoiled for choice. However, ready access to these services comes at a hefty price tag. **FIGURE 3** highlights the combined median house price for Australian cities versus the combined median house price for regional Australia.

FIGURE 3 The median house price in capital cities versus regional Australia



With the internet becoming more and more a part of everyday life, and with increasing demand for faster speeds and more reliable technology across Australia (including in the regions), the advantage of cities when it comes to access to services is slowly eroding. People now have access to the same sort of services, sometimes from the comfort of their own home.

Transport — road and rail

Transport is one of the most important aspects that people consider when deciding where to move. After all, you can't move somewhere if you can't get there. One of the most common ways of travelling across Australia is by using the roads and highways, and the rail network. Regional centres are connected to capital cities via a vast network of roads, highways and railways. These move not only people to places, but also goods and services.

All of Australia's regional centres are connected to their capital cities or other capital cities via the National Land Transport Network (see **FIGURE 4**). On top of this, the rollout of the National Broadband Network has connected more people to the information superhighway. So while distance remains a challenge, access to new communications technology has meant that distance doesn't seem so far.

FIGURE 4 National Land Transport Network, including road and rail

Source: Department of Infrastructure, Transport, Regional Development and Communications

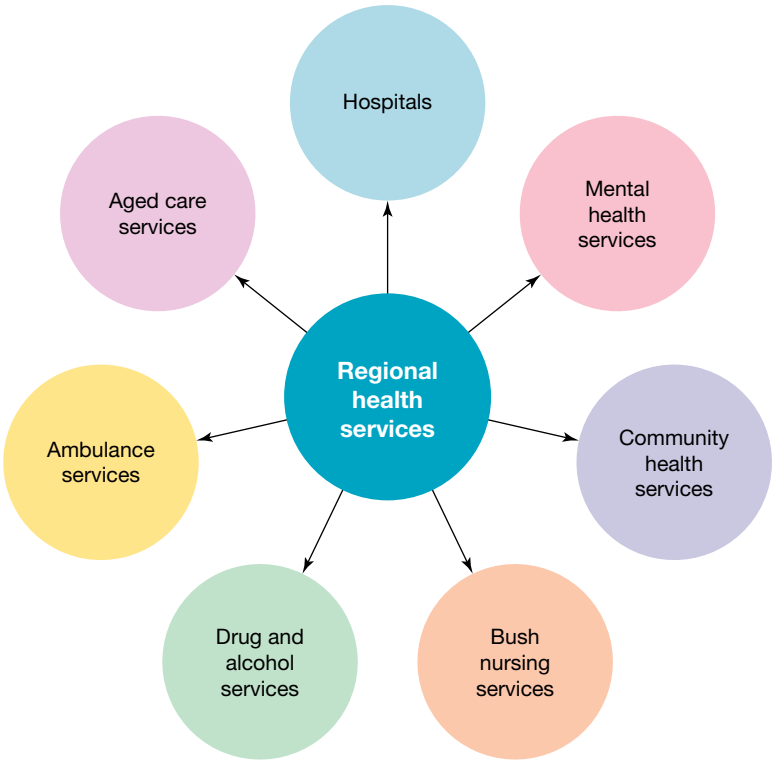
Medical

As with their city counterparts, a range of health services are available to people in regional locations across Australia.

Due to factors such as smaller populations and reduced local demand, the availability of resources and the need to provide high-quality healthcare, not all health services are available in all regional areas. This is a challenge for people living in these regional areas but, again, the internet has come to the rescue.

Telehealth has become a popular and efficient means for people living in remote and rural areas to access high-quality healthcare. Between March 2020 and February 2022, approximately 96 million telehealth services were delivered to almost 17 million patients. On top of telehealth, numerous state government initiatives are available to residents in rural areas that can help with accessing important medical services, including assistance with transport.

FIGURE 5 A range of regional health services are available.

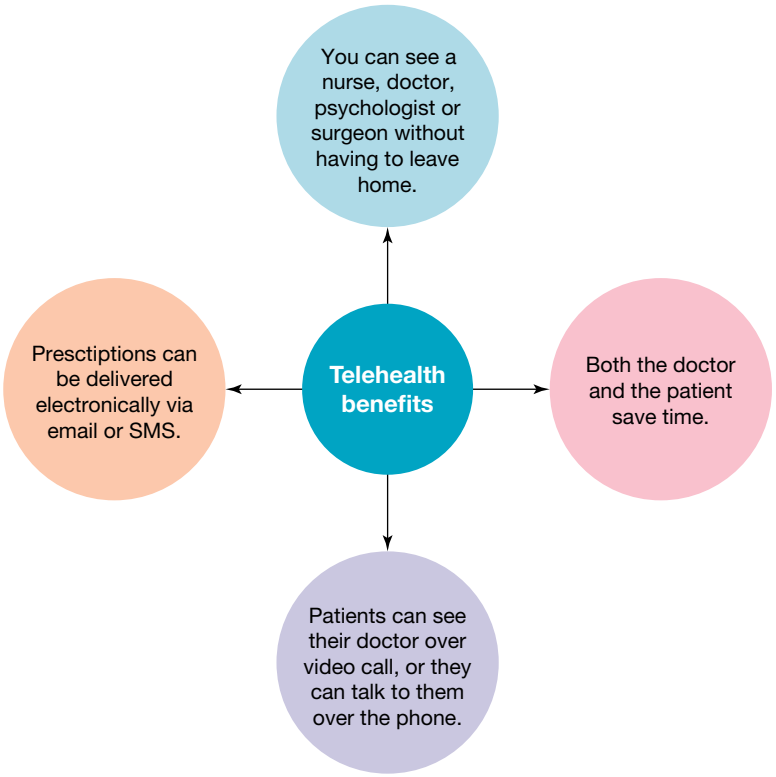


Education

Undoubtedly, the number of metropolitan schools is greater than the number of regional schools. However, rural and regional areas offer many opportunities for students. Schools, universities and TAFEs are all available in the regional centres of Australia. However, students in regional and rural areas face additional challenges accessing high-quality education.

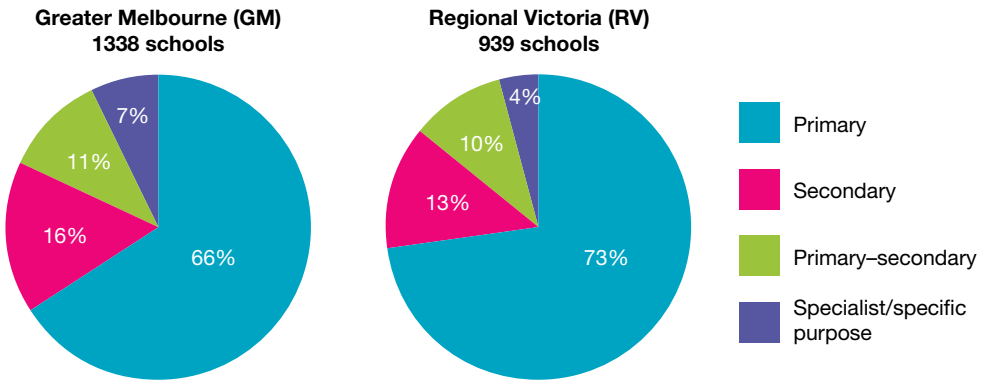
Again, though, the development of the internet and other technology has led to increased investment in online teaching and learning, with a lot of schools, universities and TAFEs offering purely online courses. This allows for people to work from home (say, on their farm) and continue their education. Maximising the potential for students to study online can also contribute to increasing the number of students in regional and rural areas completing study at university or TAFE.

FIGURE 6 Telehealth offers many benefits.



int-8936

FIGURE 7 Breakdown of metropolitan and regional schools in Victoria



Source: Victorian Registration & Qualifications Authority

While the internet has helped counter some of the barriers to getting a high-quality education in regional and rural settings, a range of reasons remain as to why education in regional Australia is both beneficial and challenging. These are outlined in **FIGURE 8**.

FIGURE 8 Advantages and challenges of education in regional Australia

Advantages	Challenges
Smaller class sizes	Fewer resources
Teacher knows all of their students	Fewer subjects offered
Smaller schools	Specialist teachers difficult to find
A strong sense of community. The school can become the heart of the town	Post-school employment opportunites can be limited

11.6 SKILL ACTIVITY: Questioning and researching using geographical methods

Some rural areas have been growing over recent years. Working in small groups, your task is to investigate why.

1. Visit the **ABS Regional Population** interactive map on your Resources tab.
2. Zoom into your state and then **choose** one of the regional local government areas (LGAs) that is showing some growth.
3. Hover over the LGA to access the Components of Population Change. Note them down.
4. **Research** the LGA, exploring the towns and cities within it, along with tourist attractions, and access to services, employment and education.
5. **Create** a presentation (for example, poster, PowerPoint or YouTube video) for the class that communicates your findings and outlines why you think this LGA has been growing.

on Resources

Weblink ABS Regional Population interactive map

11.6 Exercise

learnon

11.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7	8, 9, 10

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Check your understanding

1. **Determine** which of the following opinions is about living in rural areas.
   - **A.** Rural areas are peaceful, have lots of space and clean air.
   - **B.** People feel isolated in cities.
   - **C.** Rural areas have great communities with people supporting one another.
   - **D.** All of the above.
2. **Select** the best answer from the list provided to fill in the gaps.

capital	substantial	Australia's	large	Country

_____ towns come in all shapes and sizes. They can be small with only a post office and general store, or they can be _____ towns. Because most of _____ population and businesses are concentrated in the _____ cities, even people who live in quite _____ towns outside the capital cities see themselves as living in the country.

3. **Determine** whether the following statements are true or false.
   - **a.** People who live in country centres have a strong sense of identity, connectedness and belonging.
   - **b.** It is predicted that in 2031, 13 per cent of Melbourne's urban population will be under the age of 20.
4. **State** the common outcome of community activities.

Apply your understanding

Communicating

5. **State** three opportunities in your community for young people to feel socially connected
6. **State** three ways that country and regional centres can overcome access to essential services such as education and medical care.

Interpreting and analysing

7. In Australia, the trend is for people to move away from the country to the major cities. **State** three reasons you think this happens.
8. Country towns are critical to the rest of Australia. **Explain** what role country towns can play on a national scale.
9. **Identify** the characteristics in **FIGURE 2** that are attractive to you. Are most of these characteristics social, economic or environmental?

Communicating

10. **Describe** how governments might use demographic information from country towns.

LESSON
11.7 Why do people choose to live in the city?

LEARNING INTENTION

By the end of this lesson you should be able to explain the interconnection between push and pull factors and the growth of cities, and identify places in Australia that are growing at the fastest rate.

TUNE IN

People have very different opinions about where they like to live. Some people choose to live in a city. Using the images in **FIGURES 1** and **2** as inspiration, brainstorm a list of all the good and bad things about city living.

FIGURE 1 View of Manhattan from the Rockefeller Centre

FIGURE 2 New York's Times Square at night

11.7.1 The growth of the suburbs

Which place in Australia is growing the fastest? If a place is liked by lots of people, does that make it the best? What makes a suburb the most popular? Coastal areas have always been a popular place for Australians to relax and holiday. Is the fastest growing place in Australia near the coast?

People might move to a new place for many different reasons. As outlined in lesson 11.3, the attractions that entice people to live somewhere are called its pull factors. Pull factors include cheaper housing, better climate, more job opportunities and improved lifestyle. People can also be forced to leave their home and move to a new place. These reasons are known as push factors. Loss of your job or business, poor school or health facilities, and a natural disaster, such as flood or fire, are examples of push factors.

After the 2016 Census, the Australian Bureau of Statistics, which collects information for the Australian government, highlighted that four of the five fastest growing suburbs in Australia were in Melbourne. The other suburb was in Perth. Over recent years, Melbourne has been Australia's fastest growing capital city (although this growth slowed during the COVID-19 pandemic and resulting lock downs). It is not surprising that Melbourne often tops tables as the world's most liveable city.

In Western Australia, the areas that experienced the highest growth rates across 2018–2019 were the Alkimos–Eglinton region in Perth's outer north-west (which increased by 12 per cent), North Coogee (9.6 per cent) and the Casuarina–Wandi region in Perth's south-west (9.2 per cent).

What makes the Gold Coast such a great place to live?

The Gold Coast's warm weather, beach culture and holiday lifestyle have attracted many new residents.

FIGURE 3 Net migration to the Gold Coast between 2011 and 2016

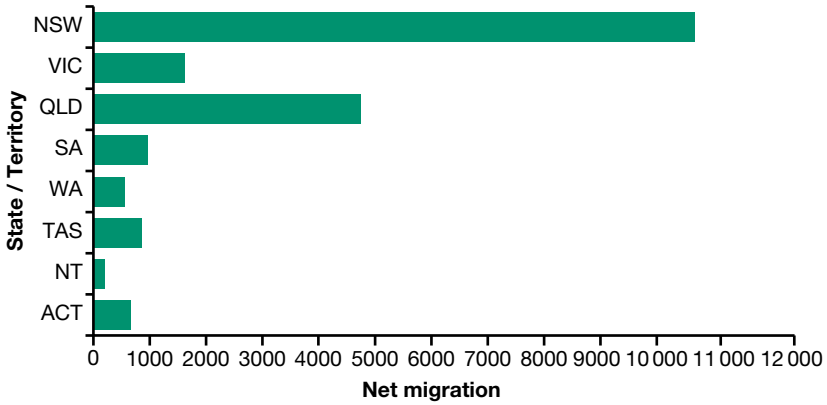
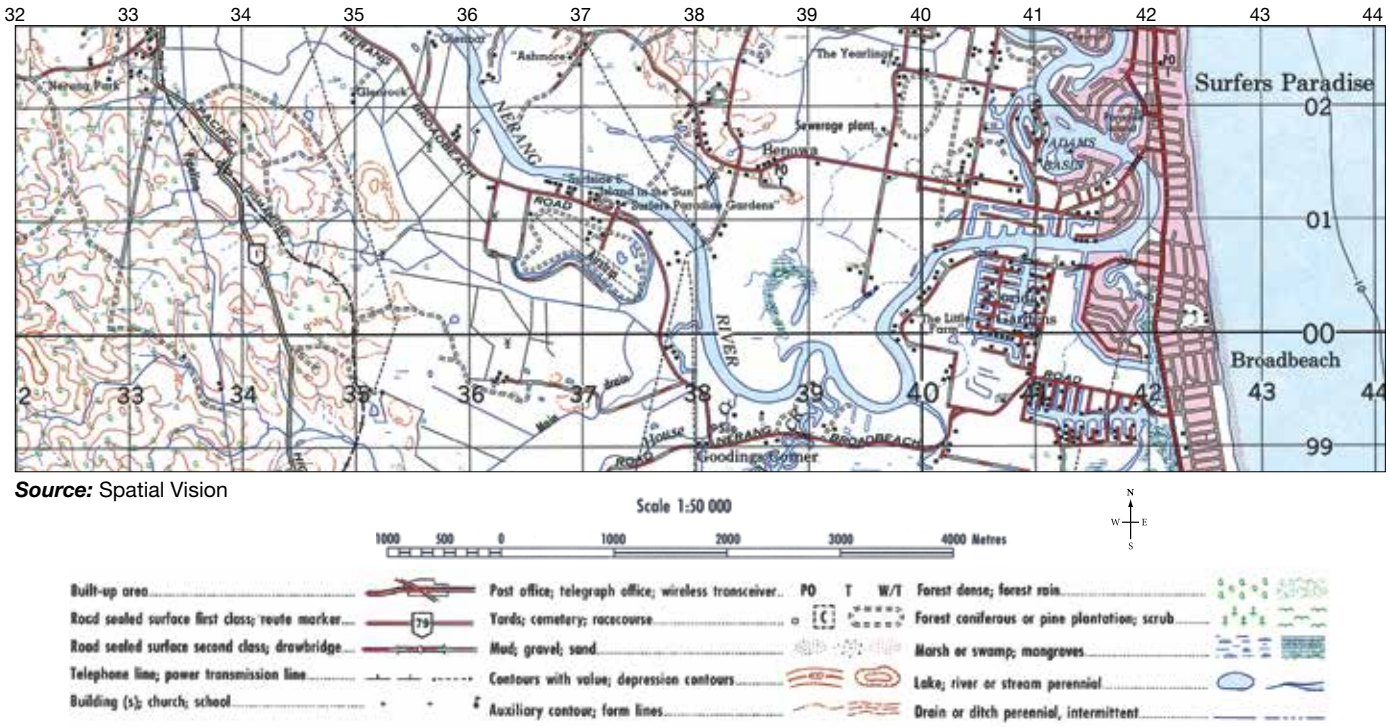


FIGURE 3 shows that most of the new arrivals came from New South Wales. Many were attracted to the place their family visited on holiday, and they later decided to make it their permanent home. The Gold Coast is now the sixth-largest urban area in Australia. It is a major tourist destination, offering a wide range of work opportunities, community facilities and intercity and interstate transport links by road, rail and air. Many new residents are older Australians who have retired to this place. The increased population has placed pressure on the coastal environment, as well as on the existing infrastructure of schools, hospitals, roads and housing.

Use Nearmap or Google Maps to access an **aerial photograph** of the Gold Coast region today. Compare this to **FIGURE 4**, showing the changes that have occurred to the land use here over the past 55 years.

aerial photograph a photograph taken of the ground from an aeroplane or satellite

FIGURE 4 Topographic map extract of the Gold Coast region in 1967



Source: Spatial Vision

An AFL expansion team, and the Commonwealth and Olympic Games

The main Australian Rules football states are Victoria, South Australia, Western Australia and Tasmania along with the First Nations Australian communities of the Northern Territory. In March 2009, the Gold Coast Football Club, now named the Gold Coast Suns, was established, supported financially by the Australian Football League (AFL). The club's establishment on the Gold Coast has seen a rise in youth participation in AFL in the region.

FIGURE 5 Official destination logo for Brisbane

brisbane
australia

The Gold Coast was also chosen to host the 2018 Commonwealth Games. Metricon Stadium at Carrara, the home of the Gold Coast Suns, was temporarily transformed and increased in capacity to host the athletics events as well as the opening and closing ceremonies for the Commonwealth Games. Australia has hosted five Commonwealth Games, but this was the first time they were not held in a state capital city.

The Gold Coast isn't the only city in Queensland to play host to major international sporting events. In 2032, Brisbane will host the Games of the 35th Olympiad — also known as the 2032 Summer Olympics. Brisbane was chosen because of its high percentage of existing venues (thanks, 2018 Commonwealth Games!) and its experience in organising major events. The city plans to use approximately 84 per cent of its existing venues, with the Brisbane Cricket Ground, commonly known as the Gabba, set to be rebuilt to become the lead venue.

FIGURE 6 Brisbane's Story Bridge

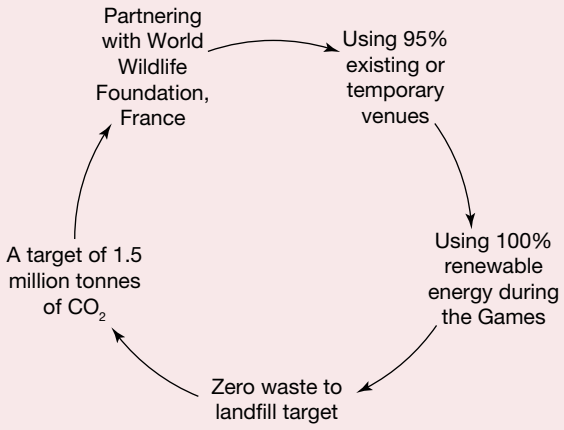
CASE STUDY: Paris 2024 Summer Olympic Games

The 2024 Summer Olympic Games were held in Paris — a truly global city steeped in history. Millions of athletes and spectators descended on the 'City of Love' (as its known), creating a big environmental impact. As part of their bid to host the Games, Paris committed to a raft of environmental measures to make their Olympic Games as sustainable as ever.

The Summer Olympic Games is one of the biggest sporting events held globally. The Games create a huge financial cost and a large cost to the environment — think about all the travel (by athletes and spectators), all the food, all the cameras and all the lights. These factors create a lot of emissions.

The goal of the organisers of the Paris Olympic Games and Paralympic Games was to advance the sustainability agenda by being the first climate positive Games.

FIGURE 7 The 2024 Paris Olympics focused on being sustainable.



Resources

Weblink Paris 2024: Delivering Carbon Neutral Games

11.7 SKILL ACTIVITY: Interpreting and analysing geographical data and information

Compare FIGURE 4 with the Nearmap or Google Maps aerial image of the same place today.

1. Study the map and photo in small groups. **Identify** the changes to the environment, both built and natural, between the map and the photo.
2. **Collate** this information in a table.
3. Write one sentence to **describe** the change to the built environment.
4. Write one sentence to **describe** the change to the natural or physical environment.
5. The population of the Gold Coast is predicted to double to 1.2 million people by 2050. Is much space left in this area of the Gold Coast for housing? **Propose** where new suburbs could be established.

11.7 Exercise

learnon

11.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7	8, 9, 10

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Check your understanding

1. What features of the Gold Coast have made it grow so quickly? **Select** all possible answers from the options provided.
   - **A.** Warm weather
   - **B.** Cooler weather
   - **C.** Beaches
   - **D.** Holiday lifestyle
2. **Select** the correct answer to complete the following sentence. Most new residents of the Gold Coast have moved from **Victoria** / **New South Wales** / **South Australia** / **Tasmania** / **Western Australia** / **Northern Territory** / **Queensland** / **Australian Capital Territory.**
3. Push factors are attractions that entice people to live in a certain place. True or false?
4. **Define** push factors. Give an example.
5. Push and pull factors result in the rise or fall of the population for a place. Use examples to **explain** the differences in environment, services and facilities between a place with push factors and a place with pull factors.

Apply your understanding

Communicating

6. Imagine you are a town planner. **Identify** two new features that you can add to your suburb that would make it a more appealing place to live.
7. The Paris 2024 Summer Olympic Games aimed to be the greenest Olympic Games ever staged. **Identify** three things they did to achieve this.
8. **Describe** what was significant about the Gold Coast hosting the 2018 Commonwealth Games.

9. **Select** which question this answer relates to:
Many of Australia's towns and cities are growing so quickly because global human populations are also rapidly increasing. People are living longer than ever before and people in more developed countries, such as Australia, have access to health services.
   A. What is behind the growth of Australia's regional centres?
   B. What are some of the reasons for Australia's growing cities?
   C. Australia's population is growing, why?
10. **Consider** the push and pull factors that you've identified and discussed already. Which do you believe is the most important factor people consider when deciding where to live? **Justify** your response.

LESSON
11.8 How do places change?

LEARNING INTENTION

By the end of this lesson you should be able to explain why places change over time, describe the changes that might occur in a place over time and predict how a place might look in the future.

TUNE IN

Think of a place familiar to you (such as your neighbourhood, your school or your city) and draw an image of what it may look like in 5 years, in 10 years, and again in 20 years. Consider the current trends in transport, sustainability, employment and education.

Explain the changes you've predicted for your place and why you drew them. Do these changes improve or deteriorate your place?

11.8.1 On the move

A town will change over time if the factors influencing people's decision-making about living there also change. Change may be due to government plans, the perception of the natural environment, the economic activities that are carried out in the place, and access to resources and other places.

FIGURE 1 A Tallangatta house being moved to the new town site

The original buildings in Tallangatta, in north-east Victoria, about 40 kilometres from Albury and Wodonga, can be seen only when the water level in Lake Hume is very low. The current town was moved from its original location in 1956. Houses were lifted onto trucks (with parts of the buildings often falling off during the journey) and moved about eight kilometres (see **FIGURE 1**). The original site, in a valley beside the Mitta Mitta River, was flooded when the size of Lake Hume was increased.

11.8.2 Town closed

In 1917, it was decided that a town was needed on the dry and hot Nullarbor Plain to provide services for the Indian Pacific railway (see **FIGURE 2**). With a population of 300, the town of Cook was once big enough to have a school, hospital, shop and accommodation for train drivers. When the railways were privatised in 1997, the town was closed. Cook currently has no known residents and it has effectively become a ghost town.

FIGURE 2 The location of Cook

Source: Spatial Vision

on Resources

- **Interactivity** Country town services (int-3092)
- **Google Earth** Kellerberrin

11.8.3 Access to resources

Resource depletion

Silverton, 25 kilometres north-west of Broken Hill, was once home to 3000 people who mainly worked in mining. Most people left, often taking their homes with them, when richer mines opened at Broken Hill. According to the 2016 census, the population of Silverton is 50, although the town is now visited by many tourists.

Silverton has reinvented itself as a unique location for the filming of TV and movie productions. The town and its semi-arid surroundings have been used as the setting in many films, such as *Mad Max 2*, *Dirty Deeds*, *Strangerland*, *Mission Impossible 2* and *The Adventures of Priscilla, Queen of the Desert*. In the coming years, we may see another change in Silverton's population with the construction of the Silverton Wind Farm. After years of delays, construction of the renewable energy project commenced in 2017, with the first generation of electricity occurring in 2018. All 58 wind turbines have now been constructed, making it the seventh largest wind farm in Australia.

FIGURE 3 Silverton wind farm

FIGURE 4 Silverton has reinvented itself as a tourist destination.

Resource discovery

Karratha is a hot, dry place 1600 kilometres north of Perth. It was founded in the 1960s for workers on the growing iron ore mines in the Pilbara region. In the 1980s, the development of the natural gas industry encouraged further growth. The town currently supports about 22 000 people and is expected to support up to 40 000 by 2030.

DISCUSS

Discuss the following statement with a partner: *'Environmental factors are the main reason towns change'.* Compose a clear paragraph to express your opinion. The first sentence will clearly state your view. The rest of the paragraph should contain at least two pieces of evidence to support your view.

FIGURE 5 The planned town of Karratha

11.8.4 Sea change

Margaret River, 270 kilometres south of Perth, has become popular because it offers a rural lifestyle and is accessible to the capital city. People who move from the city to the coast are said to have made a **sea change**. Those who move to an inland location are said to have made a **tree change**.

Change over time

Many people now recognise that the Margaret River region has many attractions, such as beaches, waterways, caves, wineries, national parks and mild weather that suits farming and tourism.

However, what people have thought about the region has changed over time. Before 1830, the Noongar people, including the Wardandi Nation, valued the natural characteristics (such as flora, fauna, weather, sea and rivers) and made few changes to the natural environment. In 1830, white settlers arrived to cut down trees and sell timber. In 1950, they began using the cleared areas for dairy cattle and beef cattle.

Tourists also began to value and visit the region's natural features, such as beaches, rivers and caves. By 1970, people were moving from the city to enjoy the quiet country atmosphere and, by 1990, the area had become popular as a sea change destination.

FIGURE 6 The Bussell Highway — the main street in Margaret River — in 1991

TABLE 1 Origin of people who moved to Margaret River, 2006–2011

Previous place of residence	Number
New South Wales	83
Victoria	35
Queensland	44
South Australia	30
Western Australia	1004
Tasmania	13
Northern Territory	20
Overseas	365

11.8.5 Tourism

Port Douglas, 60 kilometres north of Cairns, was a busy port in the 1870s and had a population of more than 10 000. The mining that had attracted people to this hot, wet area did not last. By the 1960s, the population was only 100. In the 1980s, road and air access to the town improved. People were prepared to travel long distances from within Australia and from overseas to enjoy the warm weather, stunning beaches and the World Heritage areas of the nearby Great Barrier Reef and Daintree rainforest. The permanent population is now about 3500. During the peak holiday season (May to November) the population of Port Douglas can increase to more than double its regular size.

sea change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small coastal town

tree change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small country town, in the bush, or on the land as a farmer

FIGURE 7 Port Douglas in 1971, before the tourist boom

FIGURE 8 Port Douglas in 2007

DISCUSS

Many places change over time. Study the two photographs of Port Douglas in 1971 and in 2007. Discuss how the following people might respond to change that has taken place here.

- A resident whose family has lived in Port Douglas for three generations
- A shop owner
- A travel agent
- A tourism company owner
- A fisherman
- A painter or photographer

11.8.6 Change in the future

Even in a small state such as Victoria, predicted population growth varies across the state. Towns relying on big farms are predicted to lose population. The use of machinery and the closure of processing plants have reduced employment opportunities.

Towns in regions very close to Melbourne are predicted to grow. People who live in these places still have access to jobs and entertainment in Melbourne even though they live in regional Victoria. More people creates a need for more businesses and infrastructure.

The population of Perth is predicted to grow by over 34 per cent between 2020 and 2036. This is likely to place pressure on urban infrastructure such as roads and CBD transport options, but also provides opportunities for inner-city services such as cafés and restaurants.

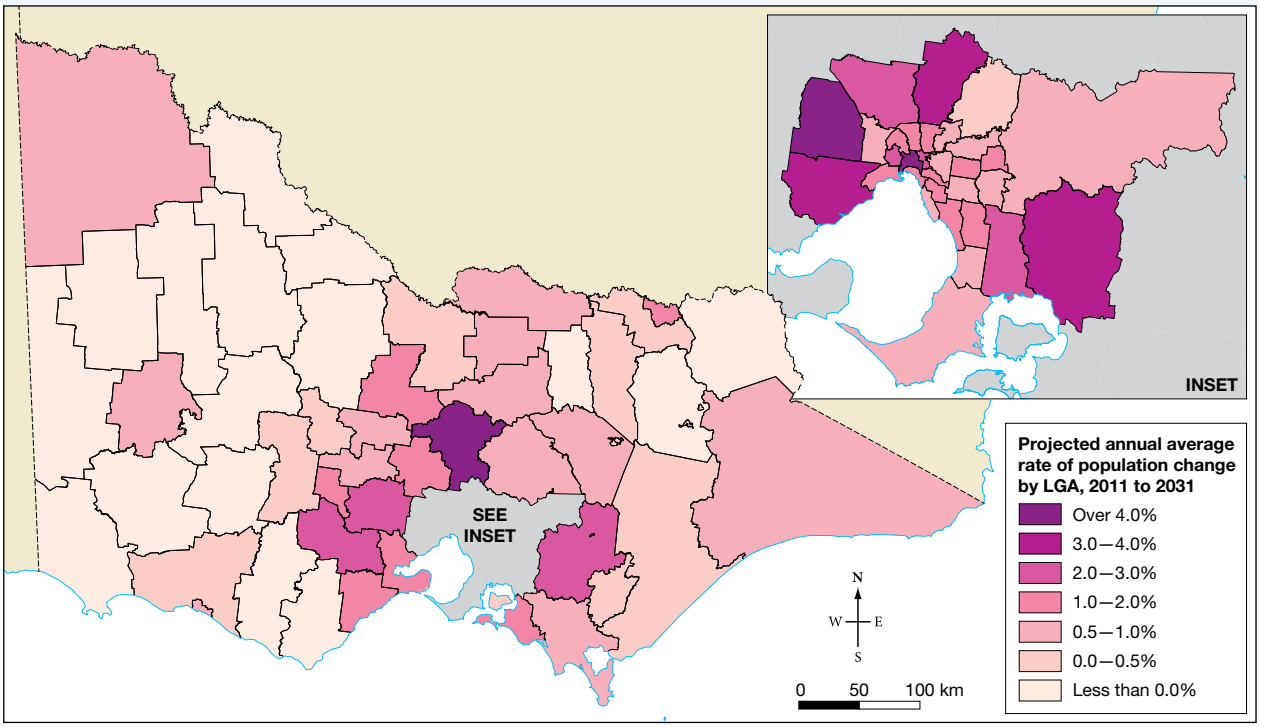
on Resources

Google Earth Tallangatta
Silverton
Karratha
Margaret River

int-8937

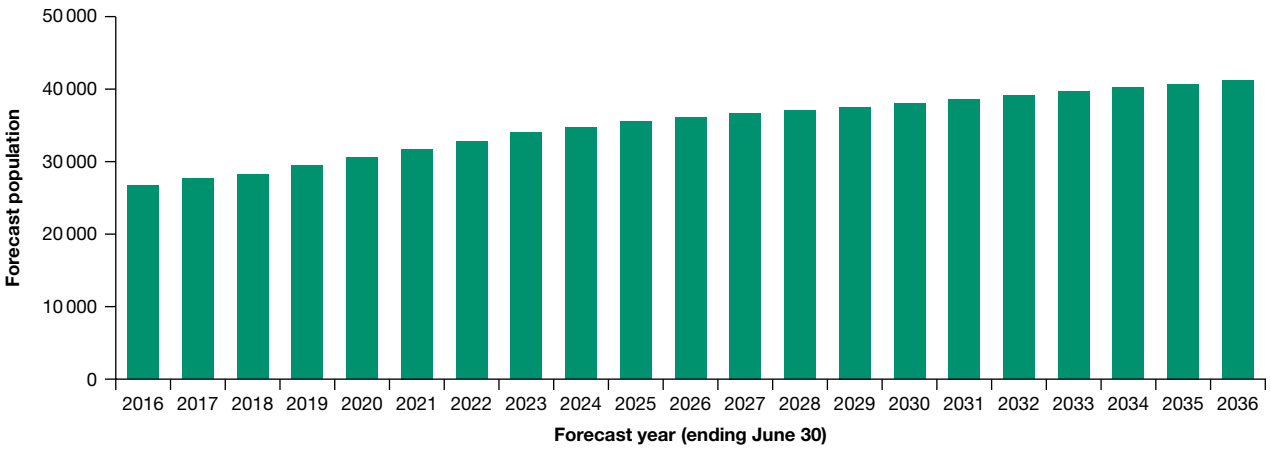
tlvd-10519

FIGURE 9 Projected population change for regional Victoria, 2011–2031



Source: The Department of Environment, Land, Water and Planning.

FIGURE 10 Forecast population growth for Perth



SkillBuilders to support skill development

- 8.5 How to read a map
- 8.6 Reading a weather map
- 8.9 Using alphanumeric grid references
- 8.11 Creating and analysing overlay maps

11.8 SKILL ACTIVITY: Interpreting and analysing geographical data and information

1. Find maps of Victoria that provide information about landform and climate. Refer to your maps and **FIGURE 9** to complete the following.
   a. Think about landform and population change. Are most areas of declining population in places that are not mountainous? Are most areas of increasing population on the coast side of the mountains?
   b. Think about climate and population change. Are most of the highest growth population areas in places where rainfall is over 600 millimetres per year? Are most areas of declining population in places where the rainfall is lower?
   c. What might be the reasons for your findings in (a) and (b)?

11.8 Exercise

learnon

11.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7	8, 9, 10

These questions are even better in jacPLUS!

- Receive immediate feedback
- Access sample responses
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Check your understanding

1. **Identify** the water storage that drowned old Tallangatta.
   A. The Ocean
   B. Lake Hume
   C. One month of heavy rain
   D. The Murray River
2. People are now drawn to Silverton to see the town in its isolated, dry setting, which is a location for many film sets. True or false?
3. **Select** the correct answer to complete the sentence. During the peak season, the population of Port Douglas is **the same as** / **double** / **triple** / **half** its permanent population.
4. Refer to **TABLE 1**. **Identify** the three main places new residents came from to settle in Margaret River between 2006 and 2011.
5. **Describe** why May to November is the peak holiday season in Port Douglas.

Apply your understanding

Communicating

6. **Explain** why population changes are expected in regional Victoria in the coming years.
7. What would be the advantages and challenges of living in a town such as Port Douglas, which relies on tourism? **Justify** your response.
8. Read the description of the change over time for Margaret River. **Create** a timeline to show the changing view of Margaret River.

Interpreting and analysing geographical data and information

9. Refer to the map in **FIGURE 9.**
   a. **Describe** the location of the areas predicted to grow by more than 3 per cent. For example, are they inland or by the coast? Are they in the north, south, east or west of the state? Are they clustered together or spread out? Are they close to Melbourne?
   b. **Predict** what will happen to towns in regional Victoria.
   c. **Identify** the proportion of Victoria that is predicted to increase its population and the proportion that is predicted to decrease its population.
10. Factors that cause change can be categorised as social (related to people), economic (related to money) or environmental (related to setting or surroundings). **Consider** all the reasons for change provided in this lesson and **list** each in its correct category.

LESSON
11.9 Why do people choose to live on Country?

First Nations Australian readers are advised that this lesson may contain images of and references to people who have died.

LEARNING INTENTION

By the end of this lesson you should be able to explain why some First Nations Australians choose to live on Country, and explain the importance of Country and place to First Nations Australians.

TUNE IN

First Nations Australians have a deep connection and responsibility to Country. Read the excerpt provided in **FIGURE 1** from *The Lost Girl* to learn more about the importance of Country.

aud-0427

FIGURE 1 Excerpt from *The Lost Girl* by Ambelin Kwaymullina (illustrated by Leanne Tobin)

The girl had lost her way. She had wandered far from the Mothers, the Aunties, and the Grandmothers, from the Fathers and the Uncles and the Grandfathers. She had hidden in the shadow of a rock and fallen asleep while she waited for her brothers and sisters to find her. Now it was night, and no one answered when she called, and she could not find her way back to camp.

The girl wandered, alone. She grew thirsty, so she stopped by a waterhole to drink, and then hungry, so she picked some berries from a bush. Then the night grew colder, so she huddled beneath an overhanging rock, pressing herself into a hollow that had trapped the warm air of the day. Finally, she saw a crow flying in the moonlight, flapping from tree to tree and calling 'Kaw! Kaw! Kaw!'. The girl followed the crow. She followed him through the trees and over the rocks and up the hills, until at last she saw the glow of her people's campfires in the distance.

The people laughed and cried at once to see the girl was safe. They growled at her for her foolishness, and cuddled her, and gave her a place by the fire. Her little brother asked if she had been afraid; but the girl said, 'How could I be frightened? I was with my Mother. When I was thirsty, she gave me water; when I was hungry, she fed me; when I was cold, she warmed me. And when I was lost, she showed me the way home'.

1. What does the story The Lost Girl highlight about the importance of the land and Country to the First Nations Peoples of Australia?
2. Highlight any phrases that indicate a spiritual connection, a cultural connection and a familial connection to Country.

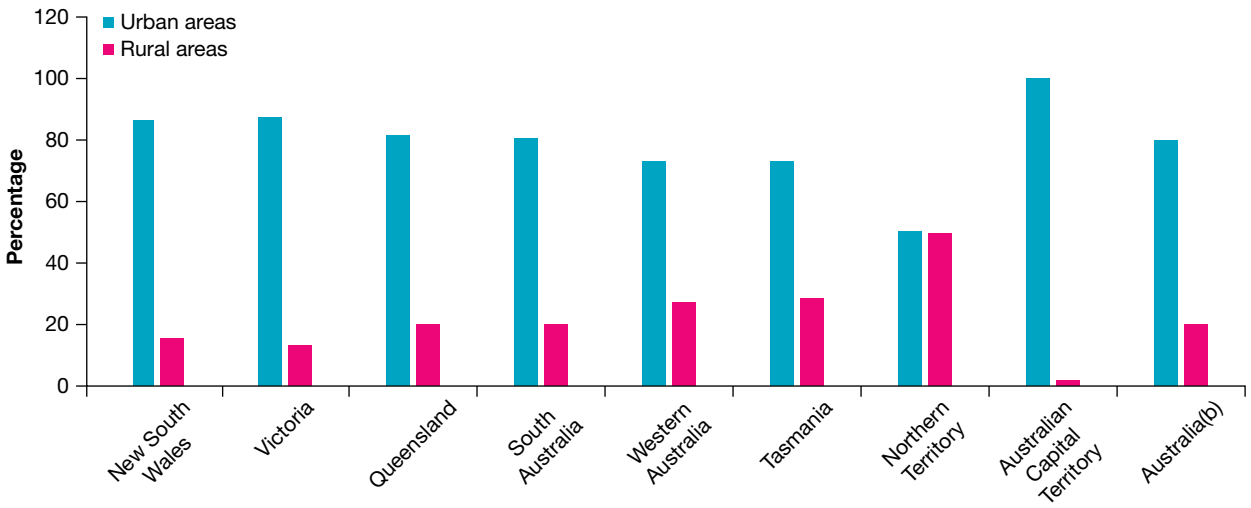
11.9.1 A connection to Country

For many First Nations Australians, land is much more than soil, rocks or minerals. It is Country. Country is home. Country is family. And just like you have responsibilities to your family, so too do First Nations Australians have deep responsibilities, developed over 65 000 years, to live on and care for their traditional Countries. Despite this, the First Nations Australian population is becoming increasingly urbanised. Since the 1996 Census, the proportion of First Nations Australians living in urban areas has increased from 73 to 79 per cent.

For First Nations Australians, Country is multi-dimensional. It consists of people, animals, plants, Dreamings, earth, soils, minerals, waters and air. First Nations Australians speak to Country, sing to Country, visit Country, worry about Country, feel sorry for Country, celebrate Country and long for Country. It is intrinsic to their very being. Because of this, understanding why some First Nations Australians would choose, or prefer, to live on Country is important.

Much like you consider your home to be special and unique, so too do First Nations Australians. The connection to Country isn't just the land in general; it's to a specific area of land. They feel a long, enduring history. Connection to Country is achieved through very specific local knowledge of a region's natural history, coupled with complex layers of past personal and family experiences. So living remotely isn't the same as living on Country. A relationship with the land must exist.

FIGURE 2 First Nations Australians living in urban and rural areas by state, 2016



Source: ABS Census of Population and Housing, 2016

on Resources

Weblink Connect to Country

11.9.2 'Healthy Country, healthy people'

The land sustains First Nations Australians in every aspect of their lives: spiritually, physically, socially and culturally. Connection to Country runs so deep for many First Nations Australians that often their mental and physical health and wellbeing are reflected in the Country. For example, First Nations Australians in the Murray River region attributed aspects of their own poor physical and mental health to the poor health of the Murray River. Due to environmental degradation and legal restrictions on access, First Nations Australians were unable to pass on traditional knowledge or pursue traditional activities that were closely connected to the river system and this impacted their wellbeing, as well as the health of the river system.

Understanding the need for First Nations Australians to go on Country is, therefore, important. As well as this, they may choose to permanently live on Country. For First Nations Australians, this choice is in part about their own health. When on Country, First Nations Australians can engage in traditional practices. One of the most common reasons for going on Country is to gather traditional foods, which involves lots of walking (see **FIGURE 3**), digging and chopping. In addition to this, the traditional methods of gathering food and resources along the beach have even larger health benefits.

As well as the health benefits derived from activities on Country, mental health and wellbeing benefits also come with being on Country. For many First Nations Australians, a sense of wellbeing comes from maintaining

or re-establishing connections with Country. By returning to Country, and serving Country, First Nations Australians can reaffirm their identity and thus improve their mental wellbeing.

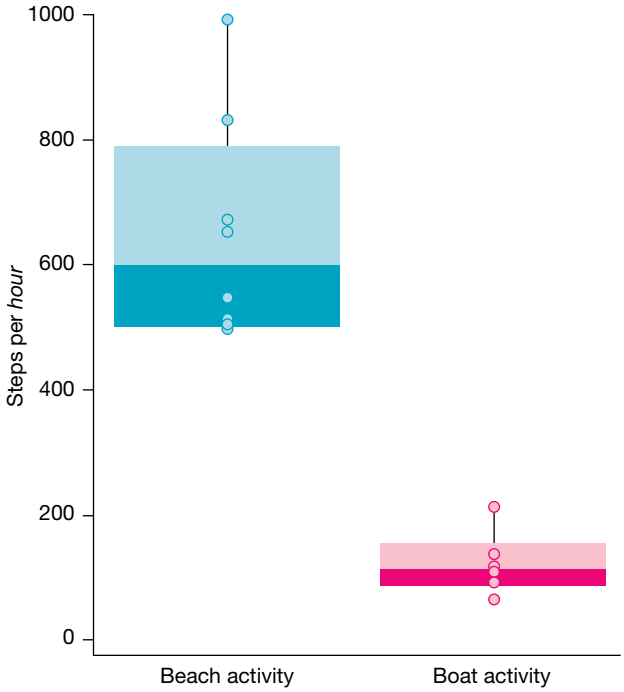
11.9.3 Sustainability

For tens of thousands of years, First Nations Australians have managed the land and its resources to ensure environmental harmony and sustainability. Maintaining a balance in the environment is central to First Nations Australian ways of thinking and being. Because of this, caring for Country, by living on Country, has substantial environmental benefits.

Through practising their traditional land management techniques on Country, First Nations Australians provide a wide range of environmental services. Some of these are outlined in **FIGURE 4**.

A well-recognised environmental benefit of caring for Country is when First Nations Australians choose to declare an Indigenous Protected Area (IPA) on their land. Through this arrangement, First Nations Australians manage their land to meet international conservation standards in exchange for funding to do so their way. Research into the effectiveness of this arrangement found IPAs were extremely cost-effective in helping Australia work towards national and international biodiversity and conservation goals.

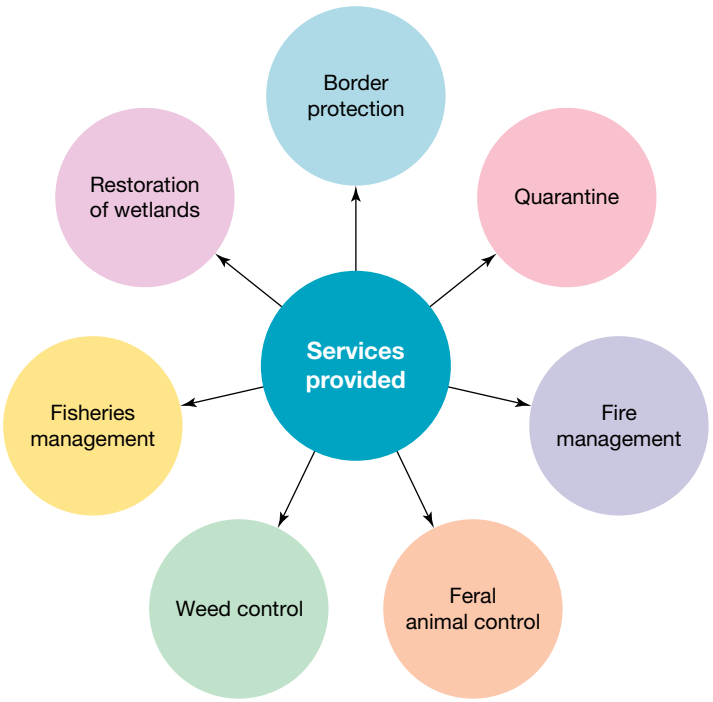
FIGURE 3 Steps taken when on Country



Overall steps taken per hour of self-initiated activity when on Country

Boxplots illustrate the average number of steps taken per hour of activity across three days (where date available) for each participant (open circles: beach, $n = 8$; boat, $n = 6$).

FIGURE 4 Environmental services provided by First Nations Australians



11.9 SKILL ACTIVITY: Investigating and Communicating

1. **Research** the local Country of First Nations Australians where you live, and find out more about their culture (including language, laws, spiritual beliefs, important places and important landmarks).
2. **Create** a poster for display in the class.
3. **Write** a letter to the local council asking for them to allow for more First Nations Australian activity on Country. Make sure you include your research into the local Country, including maps, diagrams and potential activities that First Nations Australians can conduct.

11.9 Exercise

learnon

11.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7	8, 9, 10

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Check your understanding

1. **Select** the most appropriate answer. What is Country to the First Nations Peoples of Australia?
   - A. Land, sea and sky
   - B. Animals, rocks and water
   - C. Family
   - D. Land they own
2. **Determine** if the following are true or false.
   - a. First Nations Peoples of Australia have a deep, longstanding responsibility to care for Country.
   - b. More First Nations Australians live on Country than in urban areas.
3. Study **FIGURE 3**. **Explain** what it is highlighting about beach activities versus boat activities.
4. **Select** the most appropriate words to fill in the gaps and complete the sentence.

physically	wellbeing	First Nations Australians	mental	Country

The land sustains _____ in every aspect of their lives: spiritually, _____, socially and culturally. Connection to _____ runs so deep for many First Nations Australians that often their _____ and physical health and _____ are reflected in the Country.

5. **Explain** why it is important that First Nations Australians live on the Country they have a connection to?

Apply your understanding

Interpreting and analysing

6. Using **FIGURE 2**, **determine** which state or territory has the highest percentage of First Nations Peoples living in rural areas and which state has the least.
7. **Explain** how connection to Country is established for First Nations Australians.
8. Answer the following.
   - a. Why do you think the number of First Nations Australians living in urban areas has steadily increased?
   - b. **Describe** methods that might encourage First Nations Australians to stay on Country.
9. Look at **FIGURE 3** and **create** a list of reasons that **explains** the difference between beach activity and boat activity. **Discuss** why you think this is.
10. **Evaluate** the traditional First Nations Australian way of land management. Which do you think is of greatest benefit to sustainability? **Justify** your response.

LESSON
11.10 Investigating topographic maps — Griffith, NSW

LEARNING INTENTION

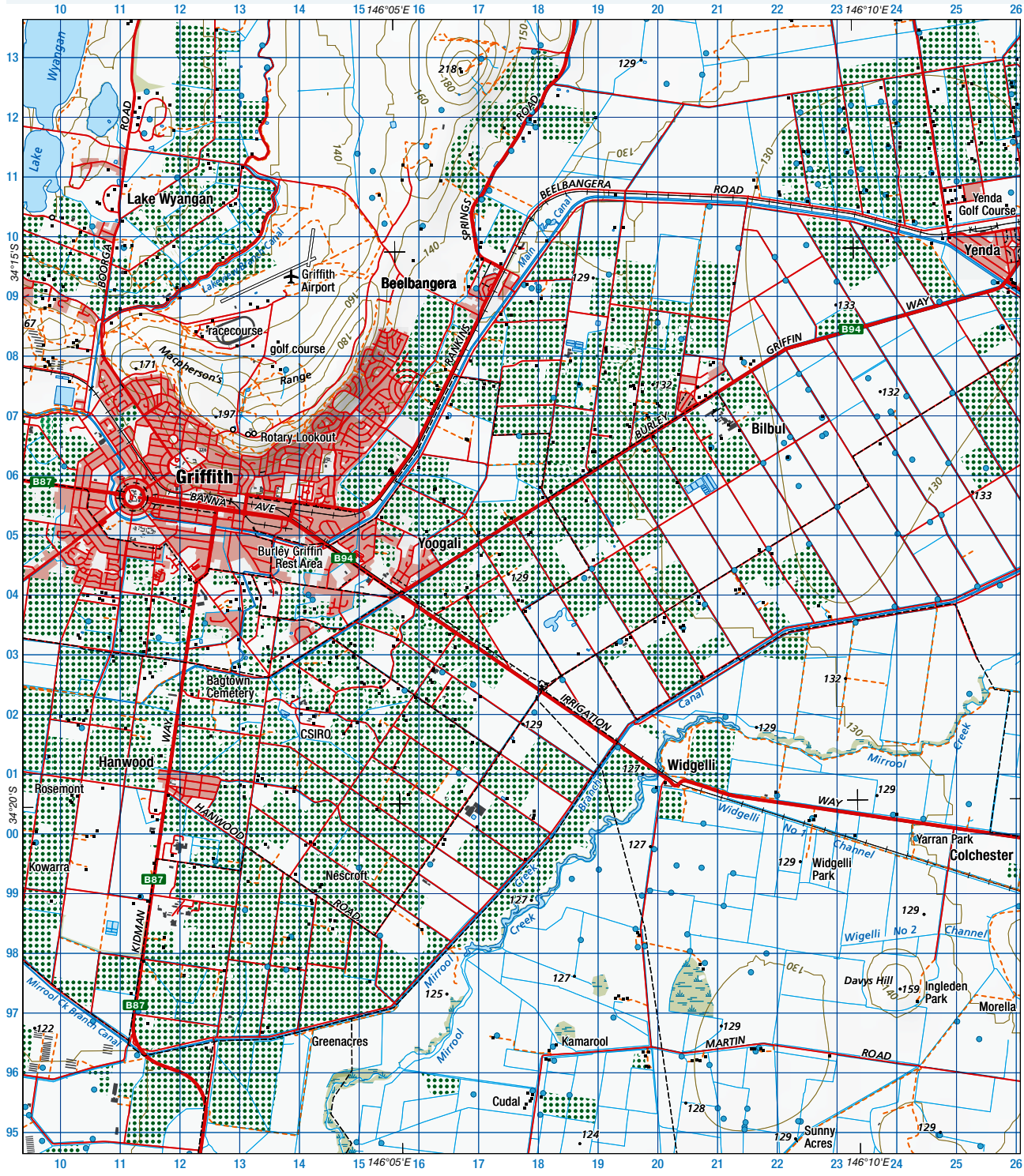
By the end of this lesson you should be able to identify key features of the Griffith area on a topographic map, and discuss how these features affect liveability.

11.10.1 Griffith and surrounding region

Griffith is located within rich farming lands of the Murrumbidgee Irrigation Area in New South Wales. The climate in this area is semi-arid (warm, with unreliable rainfall) and the area supports a variety of agricultural industries such as viticulture, fruit growing and rice production. The picking, processing and distribution of locally grown rural products provides employment and training opportunities for seasonal workers and the local population during harvesting periods.

FIGURE 1 Griffith is home to Spring Fest, featuring sculptures made from local fruit.

FIGURE 2 Topographic map extract of Griffith



Legend

- Spot height, tower
- Building
- Waterpoint, airport
- Runway
- Index contour
- Contour (interval 10 m)
- Highway (route no. B94)
- Major road
- Minor road (unsealed)
- Track
- Railway, station
- Transmission line
- River
- Stream or canal
- Water body
- Vegetation
- Wetland
- Vineyard or orchard
- Urban area

N W E S

0 1 2 km

Source: Data based on Spatial Services 2019

Resources

eWorkbook	Investigating topographic maps — Griffith, NSW (ewbk-10547)
Digital document	Topographic map of Griffith, NSW (doc-39383)
Video eLesson	Investigating topographic maps — Griffith, NSW — Key concepts (eles-6013)
Interactivity	Investigating topographic maps — Griffith, NSW (int-8960)
Google Earth	Griffith

11.10 Exercise

learnon

11.10 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 5	2, 6	3, 4

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- Access sample responses
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Check your understanding

1. What land use is found at the following?
   a. AR1297
   b. AR1105
2. **Identify** the direction of the town of Widgelli (AR2000) from Griffith Airport (AR1409).
3. Use the scale on the map to **calculate** the number of square kilometres covered by the map.
4. **Determine** the types of transport that would be available to people living in Griffith based on the features shown in this map.

Apply your understanding

Interpreting and analysing

5. Based on the features shown on this map, do you think you would find Griffith a good place to live? **Explain** your answer, with reference to the features shown on the map.
6. Based on the services shown on this map, do you think Griffith is a well-connected town? **Justify** your answer, with reference to the features shown on the map.

LESSON
11.11 INQUIRY: What is my place like?

LEARNING INTENTION

By the end of this lesson you should be able to research different demographic characteristics of your chosen place, and communicate what these characteristics indicate.

Every person has their own idea of what their local place is like. For some people, this area can be very large; for others, it can be quite small. It really depends on where you go in your everyday life — for example, homes of relatives or friends, sports clubs, shops and parks. This means that it does not matter if your map representing your place is a different size or shape from those of friends who live in the same areas. The differences simply reflect what you do and think as an individual.

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

In pairs or small groups, **create** a blog that presents the demographic characteristics of your place. This place can be your neighbourhood, your Country, your state's capital city, or anywhere in Australia you want to live. This is *your* place.

The Australian Bureau of Statistics (ABS) provides a pathway for you to find out the demographic characteristics of your place. In your team, develop inquiry questions for three different demographic characteristics that you wish to have mapped. You will then develop blog entries for these three characteristics, and produce those maps and publish them, for further discussion.

Step 1: Questioning and researching using geographical methods

For this inquiry, you will need Census data, which is available via the **Australian Bureau of Statistics** weblink in the Resources panel.

- Go to the ABS website and select the 'Census' page from the drop-down menu and then click the 'Find Census Data' button.
- Select 'Search Census data'. Enter the postcode of your place.
- In the 'Search results' window select 'All persons' under View QuickStats.
- You're taken to the QuickStats page, where you will be able to access the information needed for your blog posts.
- **Compare** the changes to your place by exploring the 'Historical Census data' page (after clicking the 'Find Census Data' button.

Step 2: Interpreting and analysing geographical data and information

For each of the three areas your team is investigating:

- **Describe** the pattern of distribution. How does your place compare with the neighbouring places?
- What do the combination of characteristics you have chosen tell you about the community in your place?
- Looking at the historical Census data for your place, what changes have you noticed?

Step 3: Concluding and decision-making

- What does this data tell you about your place that you didn't know before?
- Considering the historical Census data and the changes you noticed, what reasons can you suggest to **explain** these changes?

Step 4: Communicating

- Use an online blogging site to set up your group's blog and then enter all of the required blog entries. Be sure to **create** a headline for your article and add relevant tables, graphs, maps, images and videos. Your article should emphasise the important facts and how and why your place has changed over time.

Complete your self-assessment using the **Inquiry rubric** or access the 11.11 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39377)
Weblink Australian Bureau of Statistics

LESSON
11.12 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results | **Watch teacher-led videos** | **Practise questions with immediate feedback**

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11.12.1 Key knowledge summary

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

11.2 What creates a sense of place?

- A sense of place is personal and varies from person to person.
- Natural and human features influence a sense of place.

11.3 Why do people live in certain places?

- Push and pull factors influence where people choose to live.
- These factors include economic, spiritual, aesthetic and cultural aspects.

11.4 What are liveable places?

- Local neighbourhood can have special meaning to some people.
- First Nations Australians often identify with their local Country.
- Holiday and tourism locations often promote a positive sense of place.
- Identifying the most liveable places differs from person to person.

11.5 What is it like living in remote places?

- Mining and farming are the main activities in remote areas in Australia.
- Australians are generally moving towards cities and major towns.
- Some Australians have left the city for more space, and they can do this because of the development of high-speed internet.
- In general, many rural communities have been in population decline in Australia.

11.6 Why do people choose to live in the country?

- Country communities, though smaller in size, are crucial to Australia's economy because of the agricultural activity that take place in these areas.
- Because country communities are small, they often have an increased sense of belonging.

11.7 Why do people choose to live in the city?

- The places people choose to live are determined by push and pull factors.
- The number of people living in urban areas continues to rise.

11.8 How do places change?

- Significant changes can occur in towns over time. Often, these changes are related to external factors such as government decisions and land management issues.
- Changes in tourism patterns can also significantly affect smaller communities.

11.9 Why do people choose to live on Country?

- First Nations Australians have a significant connection to the land.
- They treat the land like a member of their family; it is a living person to First Nations Australians.
- First Nations Australians and their traditional land management skills help achieve sustainability goals.

11.10 Investigating topographic maps — Griffith, NSW

- Topographic maps can help you understand the liveability of a place.

11.11 INQUIRY: What is my place like?

- Everyone has their own ideas of place.
- Data can help you understand and describe the demographic characteristics of your place.

11.12.2 Key terms

aerial photograph a photograph taken of the ground from an aeroplane or satellite
arid lacking moisture; especially having insufficient rainfall to support trees or plants
aspect feature or quality, or the direction something is facing
built environment a place that has been constructed or created by people
community a group of people who live and work together, and generally share similar values; a group of people living in a particular region
Country the place where a First Nations Australian comes from and where their ancestors lived; it includes the living environment and the landscape
demographic describes statistical characteristics of a population
fly in, fly out (FIFO) workers who fly to work in remote places, work 4-, 8- or 12-day shifts and then fly home
horticulture the growing of garden crops such as fruit, vegetables, herbs and nuts
infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines
irrigation water provided to crops and orchards by hoses, channels, sprays or drip systems in order to supplement rainfall
liveable city a city that people want to live in, which is safe, well planned and prosperous and has a healthy environment
location a point on the surface of the Earth where something is to be found
natural resources resources (such as landforms, minerals and vegetation) that are provided by nature rather than people
neighbourhood a region in which people live together in a community
place specific area of the Earth's surface that has been given meaning by people
pull factors positive aspects of a place; reasons that attract people to come and live in a place
push factors reasons that encourage people to leave a place and go somewhere else
region any area of varying size that has one or more characteristics in common
remote a place that is distant from major population centres
sea change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small coastal town
tree change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small country town, in the bush, or on the land as a farmer
wilderness a natural place that has been almost untouched or unchanged by the actions of people

11.12.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

What do people consider when choosing a place to live?

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 you view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

Resources

eWorkbook Customisable worksheets for this topic (ewbk-10546)
Reflection (ewbk-10549)
Crossword (ewbk-10548)

Interactivity A world of people and places crossword (int-8938)

11.12 Review exercise

Students, these questions are even better in jacPLUS

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Multiple choice

1. What are push factors defined as?
   - A. The positive aspects of a place, and the reasons that attract people to live there
   - B. The reasons that encourage people to leave a place and go somewhere else
   - C. The natural and human features of a location
   - D. A combination of reasons for where somewhere lives, mainly positive
2. Which two of the following facilities would you expect to find in Monkey Mia?
   - A. High-rise apartments
   - B. A general store and service station
   - C. Theme parks
   - D. Takeaway food stores
3. What are two reasons people want to live in remote locations?
   - A. Becoming very lonely living in remote locations
   - B. Opportunities for new farming enterprises
   - C. Fewer employment opportunities
   - D. Wages are quite high in remote locations
4. What is a tree change defined as?
   - A. Leaving a fast-paced urban life for a more relaxing lifestyle in a small country town, in the bush or on the land as a farmer
   - B. Planting trees to improve the vegetation of your community
   - C. Leaving a fast-paced urban life for a more relaxing lifestyle in a small coastal town
   - D. Moving to a seaside suburb
5. Generally speaking, which three of the following 'pull factors' would university students regard as reasons to live in a country town?
   - A. A tertiary institution
   - B. High unemployment rate
   - C. Effective public transport
   - D. Inexpensive student accommodation

6. The early settlers in Australia chose to live on the coast and along rivers for a number of reasons. Which of the following would *not* have been a factor?
   - **A.** Good access to sea transport
   - **B.** Milder climate
   - **C.** More scenic landscapes than further inland
   - **D.** Bays and rivers providing safe ports for ships, their main form of transport
7. Which of the following are correct in regards to the services and facilities available in country towns?
   - **A.** There are sporting activities.
   - **B.** There are no cultural activities.
   - **C.** There are no environmental groups.
   - **D.** There are social groups.
8. What does the term 'sea change' refer to?
   - **A.** Moving from the city to the coast
   - **B.** Moving to an inland location
   - **C.** Changing the natural environment
   - **D.** Changing jobs and careers
9. What factors contributed to the growth of tourism in Port Douglas?
   - **A.** Mining and population growth
   - **B.** Decreased population and stunning beaches
   - **C.** Improved road and air access, warm weather, and nearby World Heritage areas
   - **D.** High-rise buildings and city infrastructure
10. What is 'Country' for many First Nations Australians?
    - **A.** Soil, rocks and minerals
    - **B.** Cultural traditions and practices
    - **C.** Home and family
    - **D.** Urban areas

Short answer

Communicating

11. **Construct** a detailed list of factors (reasons) that influence where people live.
12. What services allow FIFO settlements such as Tom Price to exist?
13. **Explain** how the quality of the environment might differ in the following places: Sydney, Monkey Mia, Byron Bay and Melbourne.

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12 Liveable places

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LESSON
12.1 Overview

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Engage with interactivities

Answer questions and check results

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What effect does the distribution of resources and services have on our concept of liveability over place and time?

12.1.1 Introduction

Your quality of life is influenced by many factors, such as climate, landscape, community facilities, the location of your home, the sense of community identity and links to other settlements. You probably have an idea of a street, town, city or suburb where you would like to live, and your opinion may be quite different from those of others. This is because other people see different factors as important. This topic looks at how people define and improve liveability.

FIGURE 1 Kolkata is one of the world's mega cities.

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-10550)
Video eLesson	Making places liveable for young people (eles-1621)
Google Earth	Kolkata

LESSON
12.2 What is liveability?

LEARNING INTENTION

By the end of this lesson you should be able to define the term 'liveability' and suggest reasons people's perceptions of liveability differ.

TUNE IN

How liveable a place is relates to a range of criteria. People place a different level of importance on varying factors, including access to healthcare and education.

FIGURE 1 Living in Bangladesh

1. Describe what you can see in **FIGURE 1**.
2. Do you think this is a liveable place? Give reasons for your answer.
3. What would you change to make this place more liveable?

12.2.1 What do people think about liveability?

If you were told that Vancouver or Melbourne was the world's best place to live in, or the world's most liveable city, what would you think this means? Do city councils just brag about how good their city is, or can liveability be measured? Is liveability the quality of life experienced by a city's residents?

Here are some examples of what fictional people think about the liveability of their community. They come from different places and they are all trying to explain what liveability means to them.

'I think a liveable city is a city where I can have a healthy life and where I can safely and quickly get around on foot or by bicycle or public transport, or even by car — as a last resort. A liveable city is a city for everyone, including children and old people, rich and poor, and people of different religions, races and fitness levels. A liveable city should be attractive, and have good schools, a choice of things to do and fresh air.'
John from Perth

'I think that a place is liveable if I have food every day, I do not have to walk more than ten minutes to collect water for cooking and my father has work close by, so he is home for dinner. Liveability means warm weather, enough rain and being able to go to school every day.'
Nafula from Kenya

'Liveability is all about the **natural environment**. I think a place is liveable if the air is clean, there is plenty of water in the river and there is a healthy forest nearby. Being able to grow your own food, use renewable energy and live a simple life are all a part of what is important to me and can make a place liveable.'
Joy from Huon Valley, Tasmania

natural environment elements — such as wind, soil, flowing water, plants and animals — that influence the characteristics of an area

'Liveable cities have housing that is close to jobs, services and transport, and is available for all income levels. Neighbourhoods are pedestrian-friendly with green spaces and lively retail sectors. They are mostly car-free, and have good schools and public buildings. A liveable city needs lots of different choices, including choices in ways to live, places to work, shop and eat, and locations to linger in — whether alone or with other people.'
Alex, property developer from New York

'A liveable place is somewhere I can have a computer and a television and a bed of my own in my own room. I would like a bike to get to school, three meals a day and two sisters. A liveable place would be clean, safe and modern. My grandmother and aunty would also live with us.'
Jing from a village in rural China

'Liveability means that I have a good job, good food, a nice house, a newish car, nice neighbours and a **community** that cares about my family and me.'
Oscar from western suburbs of Sydney

community a group of people who live and work together and share similar values; a group of people living in a particular region

'A liveable community offers many activities, celebrations and festivals that bring all of its residents together. Every year at Carnevale, my whole neighbourhood comes together to dance the samba. I would never wish to live anywhere else.'
Raul from Rio de Janeiro

'The place that I think would be the most liveable is Darwin. It has great footy grounds, public transport, good food, good houses, good shops and good schools. Where I live, my house is isolated and I cannot get anywhere unless I walk. I would like to live in Darwin and play football.'
Sam from near Alice Springs

'The community is what makes a place liveable. Being connected with my neighbours through the community gardens, food co-op, volunteer network at our kids' school and the car-share scheme all make me feel a valued member of my community. I like knowing people who care and that we all care for each other.'
Laura from Bristol, United Kingdom

12.2 SKILL ACTIVITY: Questioning and researching

1. Ask a much older person to describe the living conditions in the community they lived in as a teenager. Record or write down their memories.
2. Ask this older person how they would have measured liveability when they were young.
3. Ask if they would describe the place they described to you in question 1 as liveable, and why (or why not). Would they have changed anything?
4. **Reflect** on what you have learnt through your conversation with an older person.
5. Do you think the current liveability of your community is better than that described by the older person? Provide examples to support your view.

12.2 Exercise

learnon

12.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4	3, 5, 6	7, 8, 9, 10

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Check your understanding

1. Liveability means the same thing to different people. True or false?
2. Select the correct term to complete the sentence.

combine	community	complex

A _____ is a group of people who live and work together, and generally share particular values.

3. **Identify** the elements that contribute to liveability.
   - A. Community
   - B. Housing
   - C. Transport
   - D. Food and water
   - E. Education
   - F. All of the above
4. Which of the following are most likely to be important aspects of liveability for a woman in Kenya? **Select** all that apply.
   - A. Having choices in places to eat and shop
   - B. Having food every day
   - C. Being able to go to school every day
   - D. Having a good job and a nice car
   - E. Being near clean water
5. **Identify** at least three aspects of liveability that would be important for a person living in a city such as New York or Melbourne.

Apply your understanding

Communicating

6. Write a statement, similar to those in section 12.2.1, about the community that you live in that **explains** what makes it liveable.
7. Liveability means different things to different people depending on their situation. **Consider** how your liveability statement might be if you were blind, unemployed, elderly or unable to speak English. **Create** community liveability statements that reflect two of these residents.
8. Carefully read the different opinions about what makes a place liveable in this lesson.
   - a. Make a list of the common themes mentioned by these people.
   - b. **Identify** a shared common definition of what makes a place liveable.
   - c. **Consider** the location of each place mentioned in this lesson. Does the place in which each person lives appear to influence their definition of the term liveability?
9. Sometimes living conditions can change quite quickly. **Discuss** at least one example of how natural events, political events or economic events can influence living conditions.
10. Think about your community 50 years from now. **Predict** how the characteristics of your community might be different. Include your thoughts on aspects such as housing, traffic, number of people, age of the population and the types of facilities.

LESSON
12.3 Where are the most liveable cities?

LEARNING INTENTION

By the end of this lesson you should be able to identify factors that are considered when determining a city's liveability ranking and describe the location of the most liveable and least liveable cities. You should also be able to make connections between places based on liveability factors.

TUNE IN

Did you know that the Economist Intelligence Unit publishes rankings of the world's most liveable cities? **TABLE 1** shows the rankings for 2021, where Melbourne dropped to eighth on the list — down from second in 2019. But how do they decide which cities are the most liveable?

TABLE 1 Most liveable cities, 2021

City	Rank	Country	Index	Country COVID deaths
Auckland	1	New Zealand	96.0	26
Osaka	2	Japan	94.2	13 705
Adelaide	3	Australia	94.0	910
Wellington	4	New Zealand	93.7	26
Tokyo	5	Japan	93.7	13 705
Perth	6	Australia	93.3	910
Zurich	7	Switzerland	92.8	10 844
Melbourne	8	Australia	92.5	910
Geneva	9	Switzerland	92.5	10 844
Brisbane	10	Australia	92.4	910

Source: The Economist Intelligence Unit

Brainstorm seven criteria you would choose to measure liveability. For example, your first criterion for the most liveable city could be access to clean water.

12.3.1 What is liveability?

Everyone likes to be able to tell you they are the best, or in the top 10 of some category. Cities are no different. If you look at the official websites for many international cities, they will likely tell you that they are the safest, wealthiest, fastest growing or have the best events calendar. Being able to boast that a city is the world's most liveable is great publicity.

Liveability can be defined as 'the features that create a place that people want to live in and are happy to live in'. It is usually measured by factors such as safety, health, comfort, community facilities and freedom.

12.3.2 Who says which city is the most liveable?

Several international organisations have created lists of the world's most liveable cities. These organisations each compare data and produce a table that ranks the liveability of cities. This information is collected for workers considering overseas transfers or for companies that may need to compensate workers who are transferred to a low-ranked city. The rankings can also be used to attract migrants, tourists or investment. The various rankings compare a large number of cities; however, not all cities in the world are included in each survey.

The criteria used to produce the rankings include:

- stability or personal safety (crime, terror threats and civil unrest)
- healthcare
- culture and environment (religious tolerance, corruption, climate and potential natural disasters)
- education
- infrastructure (transport, housing, energy, water and communication)
- economic stability
- recreational and sporting facilities
- availability of consumer goods (food, cars and household items).

FIGURE 1 shows the top 10 and bottom 10 in the global cities liveability rankings, as released by the Economist Intelligence Unit (EIU) in 2021. These rankings are released each year, so it is possible for you to log on (use the **Economist Intelligence Unit** weblink in your online resources) to get the most recent update to the rankings. This survey ranks 140 cities; a score of 100 equates to the perfect or ideal city. In previous years, Vienna, Melbourne and Vancouver have shared the top ranking as the world's most liveable city. In 2019, Vienna took out the number one ranking, with Melbourne pushed to second and Vancouver's ranking falling to sixth. In 2021, however, Auckland took over the top ranking, with Adelaide taking out the second spot. Melbourne fell to equal eighth spot with Geneva, and both Vancouver and Vienna dropped out of the top 10.

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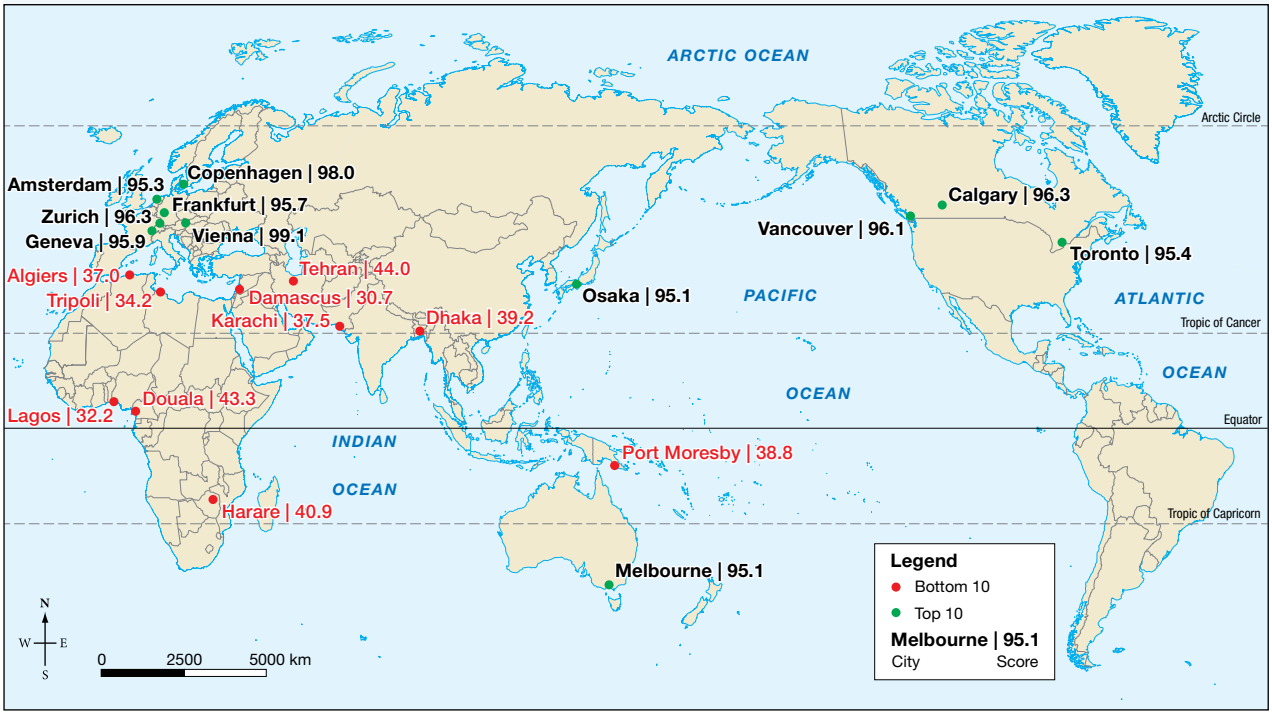
FIGURE 1 City liveability rankings



Source: Economist Intelligence Unit (EIU) 2022

The map shows that many of the world's top cities have scores that are very similar. The difference in score between the top 10 cities is only 3.6 points.

Between 2008 and 2019, the average global liveability score increased by around one percentage point. Of the 140 cities included in the liveability survey, half improved their overall status. However, between 2019 and 2021, we have seen a dramatic shift at the top of the rankings, largely due to the impact of the COVID-19 pandemic. Six cities have been forced out of the top 10 rankings between 2019 and 2021, including Vancouver, Calgary and Toronto, the only places in North America to feature in the top 10 in 2019. Over this period, the average global liveability score has fallen by seven percentage points. See **TABLE 2** for some of the changes in liveability rankings between 2019 and 2021.

TABLE 2 Changes in EIU city liveability ratings from 2019 to 2021

City	2019 ranking	2021 ranking
Vienna	1	12
Melbourne	2	8
Sydney	3	11
Adelaide	10	3
Auckland	12	1
Perth	14	6

What do these top 10 liveable cities have in common?

Looking at the locations of the most liveable cities, you can see many are found in Australia (with four cities) and New Zealand (with two); followed by Switzerland and Japan with two apiece. They are all mid-sized cities, have quite low **population density**, low crime rates and **infrastructure** that copes quite well with the needs of the local community. They are found in places with a **temperate climate**, with seasonal variations.

The top cities also tend to be modern cities, not much more than 300 years old. They have been planned so that people can travel around them by both public and private transport. They are also found in some of the world's wealthiest or most developed nations.

Australian and New Zealand cities perform better than cities in the United States due to US cities' higher crime and congestion rates. The highest ranked US city is Honolulu at 14.

How did COVID influence the rankings?

The EIU's Global Liveability Index was not published in 2020 due to the global pandemic, which made it difficult to collect comprehensive data that was fair and representative of each city. Additional data was collected in 2021 that specifically accounted for the pandemic, responsiveness of cities and their capacity to deal with COVID-19.

In the 2021 EIU rankings, the rankings of European cities fell, whereas places in Australia, Japan and New Zealand managed to remain in the top 10 or move up the rankings. Experts have noted a strong correlation between the responses of countries and individual cities to COVID-19 and their ranking in 2021.

Tough lockdowns and soaring COVID case numbers have been a defining factor in the decline of cities in the liveability rankings, particularly in Europe, where case numbers skyrocketed, and subsequent waves had a greater impact. Island nations were able to move swiftly and minimise case numbers. Lockdowns, restrictions on movement and the strain on healthcare systems have had a greater impact on the rankings than factors such as education, personal safety and infrastructure.

population density the number of people living in a square kilometre

infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines

temperate climate climate with generally warm summers and cool winters, without extremes

on Resources

Weblink Economist Intelligence Unit

12.3 SKILL ACTIVITY: Interpreting and analysing

1. Use a spreadsheet to collect at least five sets of data to compare the top and ten and bottom ten cities as shown on the map in **FIGURE 1**. Suitable focus areas for your data sets include:
   - population
   - population density
   - number of universities
   - number of hospitals
   - literacy rates
   - recent violence/war/civil unrest, and crime rates
   - traffic issues
   - public transport
   - infrastructure
   - water/sanitation.
2. **Create** a series of graphs to represent the data in your spreadsheet — remember to use geographic conventions and include the source of each data set.
3. **Interpret** your graphs. **Describe** the differences between the most liveable and least liveable cities. Include specific references to places and each set of data.

12.3 Exercise

learnon

12.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 4, 7	2, 6, 8, 9	5, 10

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Check your understanding

1. **Select** the correct option to complete the sentence. The Economist Intelligence Unit ranks **50** / **99** / **140** / **150** / **200** cities in their liveability rankings.
2. **Identify** the type of climatic region where most of the liveable cities are found.
   - A. Hot and dry climate
   - B. Cold climate
   - C. Wet climate
   - D. Mild climate
3. Refer to **FIGURE 1**. **Identify** the three lowest ranked cities in the 2021 liveability ranking.
   - A. Port Moresby
   - B. Damascus
   - C. Dhaka
   - D. Algiers
   - E. Calgary
   - F. Lagos
   - G. Adelaide
4. Analyse the information in **FIGURE 1**.
   - a. How many of the top 10 most liveable cities are found in each of the following regions?
     - i. Australia and the Pacific
     - ii. Africa
     - iii. Europe
     - iv. North America
   - b. **Identify** how many of the most liveable cities are found in the Northern Hemisphere.
   - c. **Identify** which two continents contain a majority of the 10 least liveable cities.
5. London and New York have a similarly low ranking. **Propose** why these well-known cities are ranked so low.

Apply your understanding

Interpreting and analysing

6. **Predict** why you think a city might suddenly fall down the liveability rankings.
7. **Propose** a strategy to improve a city's liveability ranking.
8. **Summarise** how COVID-19 affected the liveability rankings.
9. **Determine** at least two reasons Auckland might have moved from ranking twelfth in 2019 to first position in 2021.
10. Other than issues related to COVID-19, **identify** two reasons Australian cities outperform cities in the United States in the liveability rankings.

LESSON
12.4 Is Perth a liveable city?

LEARNING INTENTION

By the end of this lesson you should be able to explain why Perth is ranked highly on the liveability rankings and understand why a city's ranking might change over time.

TUNE IN

Into the Economist Intelligence Unit's first global liveability survey since the COVID-19 pandemic, Perth rose from fourteenth to sixth place. Meanwhile, Sydney and Melbourne dropped to lower positions than they held previously, with Sydney dropping out of the top 10.

1. Brainstorm a list of facts that you know about Perth.
2. From this list, highlight any facts that might make it a liveable city.
3. Brainstorm a list of factors that might have helped Perth move into the top 10 most liveable cities.
4. Discuss factors that might have caused Melbourne and Sydney to fall in the rankings.

FIGURE 1 Perth has cracked the top 10 for most liveable city in the world.

12.4.1 Perth — pluses and minuses

What makes Perth such a liveable city? Saying that a city of one of the 'most liveable' gives it a ranking, like those given to cars or restaurants. However, as is the case for Perth, that ranking can change. Why?

For a number of years, Perth was considered to be one of the most liveable cities in the world, according to the global liveability index developed by the Economist Intelligence Unit (EIU). It continues to be ranked in the top 20 in recent years, with a 2019 score of 95.9 out of a possible 100. In 2021, Perth once again found itself in the top 10, moving eight places from fourteenth to sixth with a score of 93.3.

What are some of Perth's positive features, and what are some of its less appealing features?

In 2021, Perth was awarded the maximum score of 100 for the categories of healthcare, education and Infrastructure, a score of 95 for stability, and a score of 78.2 for culture and environment.

FIGURE 2 The balance of good features and not-so-good features for Perth.

12.4.2 Is all of Perth the same?

All cities have some parts that are more liveable than others. In the case of Perth, people may have higher incomes, larger houses, more and better cars, a view of the sea or the Swan River, and better shops and entertainment facilities in certain suburbs. And even the highly liveable inner suburbs of Perth have pockets of poorer housing or homelessness; they just have fewer of them.

Like most large cities, Perth has distinct regions, with a clear north–south divide. The far northern suburbs offer the opportunity to experience a coastal community lifestyle on generous blocks of land, with improved road and rail infrastructure enabling access to the CBD. Places such as Joondalup have wide appeal to students, retirees, families and downsizers due to the range of **amenities** available within the area. Access to the far southern suburbs such as Rockingham has been improved via express train and bus services to the CBD, and these suburbs offer affordability for growing families. While Mandurah is still considered a separate city from Perth, the urban sprawl of Perth has grown so much that the two have formed a **conurbation**.

amenities desirable or useful features of a place that make it more pleasant or attractive

conurbation an extended urban area, usually made up of a town merging with the suburbs of a city

This is where cities have merged to form one continuous urban or industrially developed area. Inner-city suburbs along the north of the Swan River, such as Northbridge, Leederville and Mt Lawley, are popular with professionals, students and young couples who want access to a cosmopolitan lifestyle. Greater diversity of housing choices can be found in these areas, with their mix of heritage buildings, new homes and high-density apartment complexes. Those suburbs along the south banks, such as Como and Applecross, offer easy access to the CBD and contain a range of cafés and restaurants, while still feeling relaxed and close to nature.

FIGURE 3 Perth has a variety of amenities to offer that make it liveable.

Street performers at the annual multi-arts Fringe World Festival

Suburban area serviced by an excellent road network, including a multi-lane highway

Perth Arena is home to the Perth Wildcats; it also hosts netball and tennis, including the ATP Cup.

Optus Stadium is a 60 000 seat multi-purpose venue; it is the home ground of AFL teams West Coast and Fremantle, and hosts international and domestic cricket, soccer and rugby.

Perth and its suburbs are serviced by an excellent public transport system, officially branded as Transperth.

Cottesloe Beach is a favourite among locals for swimming, snorkelling and surfing.

Resources

Weblinks Best things to do in Perth
A tour around my city of Perth

12.4 SKILL ACTIVITY: Concluding and decision-making, Communicating

1. Use the weblinks in the Resources panel, and watch the two videos via the weblinks:
   - **Best things to do in Perth**
   - **A tour around my city of Perth**

   They look at Perth through the eyes of a tourist and a local.
2. While you are watching, take notes on the opinions of the people featured about the positives of Perth.
   - What comparisons can you make?
   - How are the opinions of the tourist and the local similar and how are they different?
   - Do they value different features?
3. **Communicate** your findings using a visual tool such as a Venn diagram.

12.4 Exercise

learnon

12.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4, 8	3, 6, 7	5, 9, 10

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Check your understanding

1. What are two ways of **describing** the weather in Perth?
   - **A.** Hot and dry in summer
   - **B.** Unreliable
   - **C.** Mild for most of the year
   - **D.** Mild in winter
   - **E.** Reliable and constant
2. **Identify** the organisation that ranks the liveability of cities.
   - **A.** Economist Intelligence Unit
   - **B.** United Nations Intelligence Unit
   - **C.** Global liveability awards
   - **D.** Economist Ranking Unit
3. **Describe** the difference between Perth's inner and outer suburbs.
4. **Identify** the categories in which Perth received a perfect score in the EIU 2021 global liveability index. Select all that apply.
   - **A.** Healthcare
   - **B.** Culture and environment
   - **C.** Infrastructure
   - **D.** Stability
   - **E.** Education
5. Look at the images of Perth in **FIGURE 3**. **Identify** and list ten liveability factors that these images illustrate.

Apply your understanding

Interpreting and analysing

6. **Identify** which of Perth's not-so-good features may have had an impact on its ranking within the culture and environment category.
7. **Propose** reasons that might explain why four of Australia's major cities are ranked in the top 10 liveable cities.
8. **Explain** how Perth's weather can be both a positive and a negative in terms of liveability.
9. In many parts of Perth, high-rise apartments rather than single dwellings on a large block are becoming more common. Suggest reasons for this trend.
10. **Explain** why Perth continues to have a high dependence on private cars, and how this affects liveability.

LESSON
12.5 Is there a connection between liveability and sustainable living?

LEARNING INTENTION

By the end of this lesson you should be able to define what is meant by sustainability and an ecological footprint, and make links between liveability, sustainability and ecological footprints.

TUNE IN

Did you know that sustainable living is linked to our ecological footprint?

FIGURE 1 Our ecological footprint comprises many different elements, including how we power our homes.

1. Brainstorm a definition of the terms 'sustainable living' and 'ecological footprint'.
2. Brainstorm a list of features that help determine our ecological footprint.
3. Categorise each feature as either having a positive or negative impact on ecological footprint.

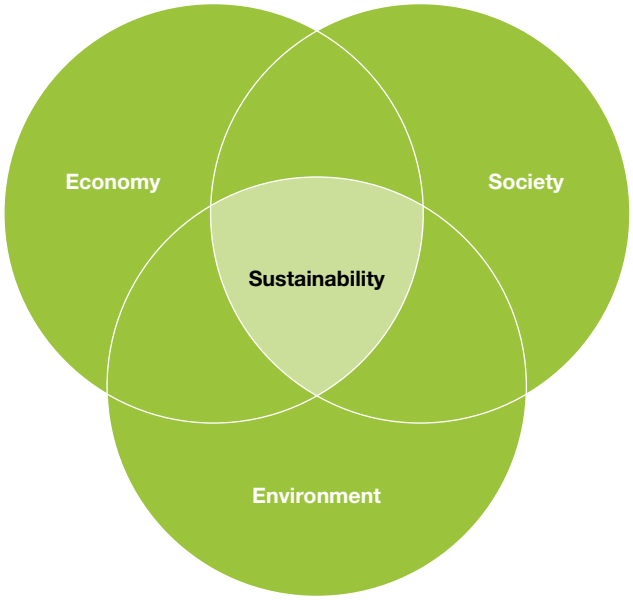
12.5.1 Sustainability

Australia's major cities consistently rate among the most liveable. Liveability, however, is not always the same as sustainability (see **FIGURE 2**). Sustainability considers how well a community is currently meeting the needs and expectations of its population, and how well it will be able to continue providing for its population in the future.

Indicators that a place is sustainable include:

- low working hours to meet basic needs
- easy access to education
- satisfactory and affordable housing
- plenty of recycling and composting
- reliable transport
- low emissions and high air quality
- **biodiversity**
- high renewable energy use and low non-renewable energy use
- good water, forests and marine health
- ability to respond to disasters.

FIGURE 2 To achieve sustainability, a city's environmental, economic and social aspects must all be considered.



Sustainable cities index

The Arcadis Sustainable Cities annual index considers 50 leading cities and ranks each against a range of indicators. These are organised under the headings of people (society), planet (environment) and profit (economy), as shown in **TABLE 1**.

TABLE 1 Top 10 sustainable cities by indicator, 2020*

Ranking	Overall SCI	Planet	People	Profit
1	Osla	Osla	Glasgow	Seattle
2	Stockholm	Paris	Zurich	Atlanta
3	Tokyo	Stockholm	Copenhagen	Boston
4	Copenhagen	Copenhagen	Seoul	San Francisco
5	Berlin	Berlin	Singapore	Pittsburgh
6	London	London	Vienna	Tampa
7	Seattle	Tokyo	Tokyo	Dallas
8	Paris	Antwerp	Rotterdam	Chicago
9	San Francisco	Zurich	Madrid	Baltimore
10	Amsterdam	Rotterdam	Amsterdam	Miami

Source: © Arcadis Sustainable Cities Index 2020, compiled in partnership with Centre for Economics and Business Research
* Most recent data available at time of printing.

Ecological footprint

Everything we do and consume has an impact on the environment. Land is cleared to grow plants and animals; fish are caught in the sea; water is diverted for homes, businesses and farms; and most transport is powered by non-renewable resources. An **ecological footprint** calculates the land area (hectares) that would be needed to

biodiversity the variety of life in the world or in a particular habitat or ecosystem

ecological footprint total area of land used to produce the goods and services consumed by an individual or country

sustain an individual (expressed as per capita). It is used to compare the amount of various resources used per capita in countries around the world.

Generally, if you live in a high-income country such as Australia, you are likely to have an ecological footprint that is much larger than a person who lives in a low-income country such as Chad in Africa. The average ecological footprint of all people on Earth is 2.7 hectares, the equivalent of 1.75 planet Earths. The average Australian footprint is about 9.3 hectares. To enjoy a sustainable way of life, the population needs to stay within the Earth's carrying capacity (meaning the maximum number of individuals of a population that the environment can support), and the average footprint should not be more than 1.7 hectares. **FIGURE 3** shows that developed countries such as Luxembourg, Aruba, Qatar, Australia, the United States and Canada far exceed this figure. In Australia, we are using resources and generating waste more than five times faster than the Earth can regenerate and absorb them. As more countries develop industries and improve their standard of living, clever responses will be needed to ensure that everyone can enjoy a high standard of liveability.

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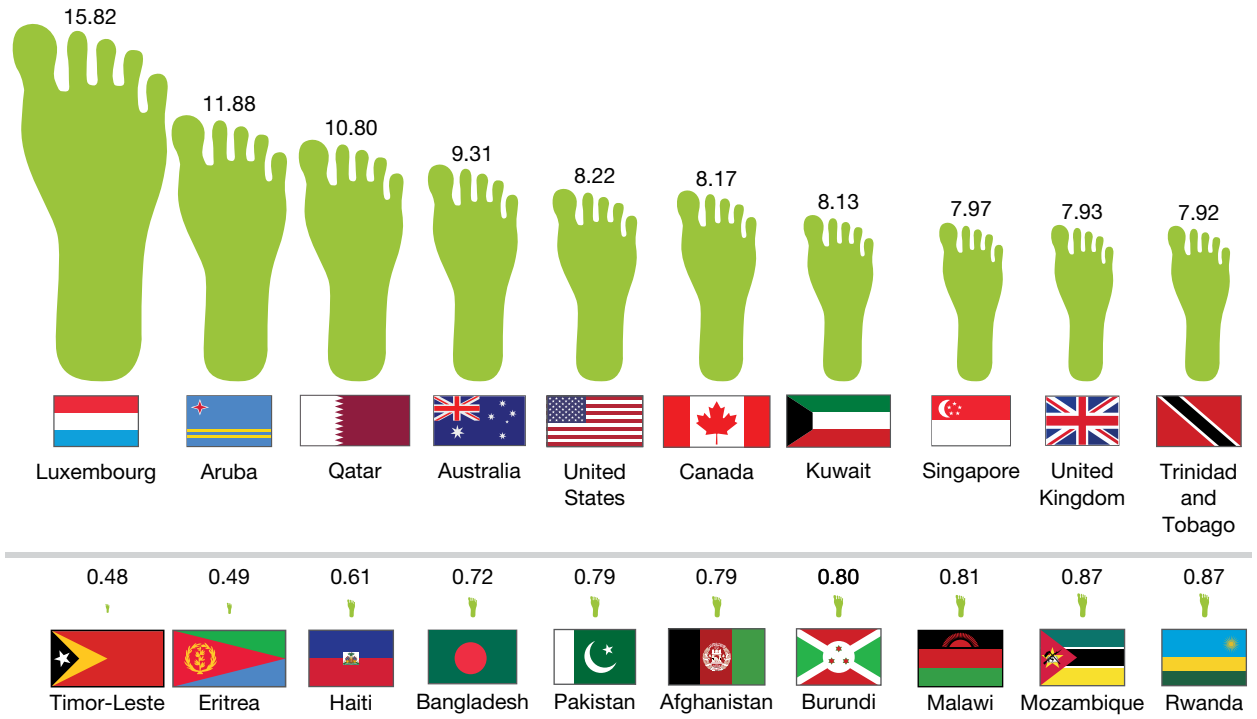
FIGURE 3 Top 10 countries with the biggest and smallest ecological footprints (hectares per capita) per person, 2022



Government policy can influence the ecological footprint through policies on power generation, transport, water, industry support, rubbish collection and building regulations. Individuals can influence the ecological footprint through what they eat and buy, how they use water and power, whether they recycle and compost, and how they build their houses and travel.

12.5 SKILL ACTIVITY: Concluding and decision-making, Communicating

1. **Conduct research** to find the following images:
   - one that shows living conditions in a country with an ecological footprint over seven hectares per capita
   - one that show living conditions in a country with an ecological footprint of less than one hectare per capita.

   Refer to **FIGURE 3** for examples of countries with large and small ecological footprints.
2. **Annotate** your images to **explain** how living conditions may have an impact on the ecological footprint.
3. Revisit the country you chose with a large ecological footprint. **Propose** a strategy that might assist in reducing the ecological footprint of this country. Make sure you fully **explain** your strategy and how it might lead to a reduction in the ecological footprint.

SkillBuilders to support skill development

- 9.12 Annotating a photograph

12.5 Exercise

learnon

12.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4, 6	3, 7, 8	5, 9, 10

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Check your understanding

1. **Identify** the key term that refers to the variety of life in the world on in a particular habitat or ecosystem.
   - A. Agriculture
   - B. Ecological footprint
   - C. Biodiversity
   - D. Livestock
2. **Identify** three indicators that a place is sustainable.
   - A. Unreliable public transport
   - B. Satisfactory and affordable housing
   - C. Low emissions and high air quality
   - D. Difficult access to education
   - E. Long working hours to meet basic needs
   - F. Good water, forests and marine health
3. **Identify** three aspects that are considered in a definition of sustainability.
   - A. Population
   - B. Society
   - C. Liveability
   - D. Economy
   - E. Environment
   - F. Waste
4. Refer to **TABLE 1** and your atlas and answer the following questions.
   - a. The table includes 23 cities. _____ of these are located in the continent of Europe.
   - b. **Identify** other continents that are represented in the table.
   - c. **Identify** any cities that are represented on all three lists of sustainability indicators.
5. Refer to **FIGURE 3**. **Describe** the distribution of countries with an ecological footprint of seven or more hectares per capita.

Apply your understanding

Interpreting and analysing

6. **Predict** what might happen to the global ecological footprint if liveability improves on every continent.
7. Refer to the list of indicators in section 12.5.1 that indicate that a place is sustainable. Categorise each indicator as applying to economy, society or environment. **Propose** one more indicator for each category.
8. **Consider** the ways in which resources have been used to improve liveability in your area. **Identify** an aspect you would be prepared to change a little so that others might improve the liveability where they live. **Justify** your answer.
9. **Explain** why high-income countries have a much larger ecological footprint than low-income countries.
10. a. **Explain** the term ‘carrying capacity’.
    b. **Compare** the Earth’s carrying capacity to its current ecological footprint.

LESSON
12.6 What makes a city less liveable?

LEARNING INTENTION

By the end of this lesson you should be able to identify factors that lead to a city being described as less liveable, and describe the impact of these factors on people and places.

TUNE IN

Humidity is one aspect of climate. **TABLES 1** and **2** show the humidity levels for Port Moresby in Papua New Guinea and Dhaka in Bangladesh.

TABLE 1 Humidity levels in Port Moresby

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug,	Sep.	Oct.	Nov.	Dec.
Humidity %	76	78	78	81	86	78	76	74	73	76	73	74

TABLE 2 Humidity levels in Dhaka

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Humidity %	54	50	45	56	72	80	80	79	79	73	67	64

Work with a partner to answer the following questions.

1. What is humidity?
2. Do you think the places show in **TABLES 1** and **2**, have high or low humidity? Justify your answer.
3. How do you think humidity affects liveability?

12.6.1 Port Moresby

The United Nations measures people's quality of life using the Human Development Index (HDI). In 2000, Papua New Guinea was ranked 133 in the world; in 2019 its ranking had dropped to 155 (out of 189). Its largest city, Port Moresby, faces many challenges to meet the needs of its people and improve the standard of living.

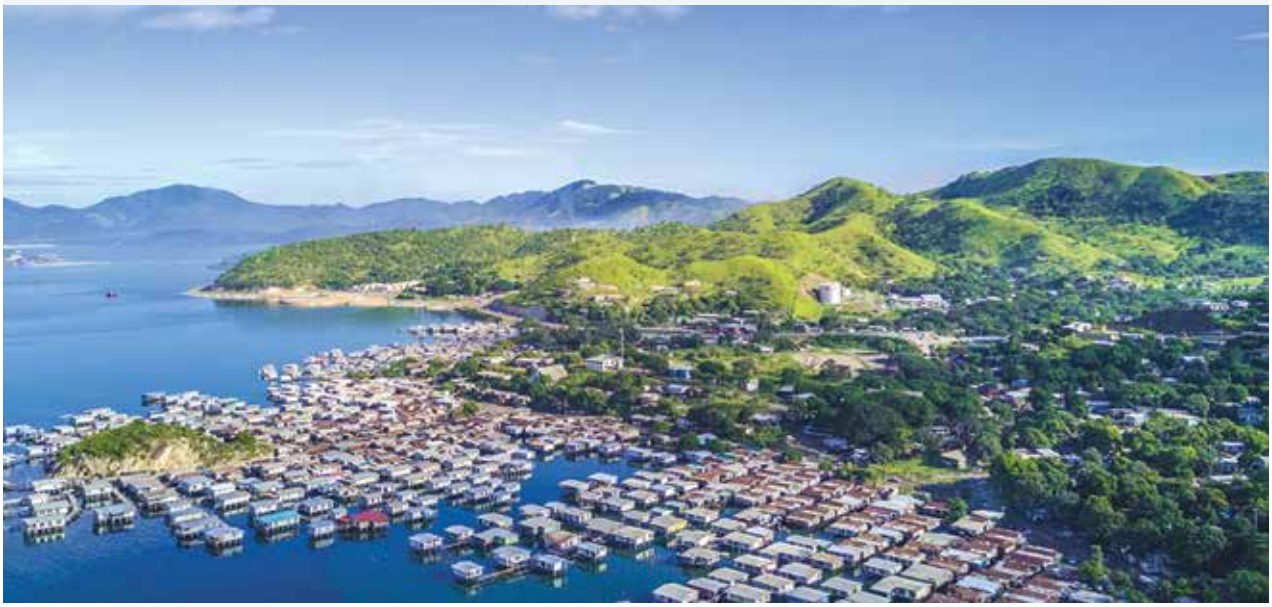
Environment

Port Moresby, the capital of Papua New Guinea (PNG) is located on the south-eastern coastline at latitude 9.44 °S. Its population is approximately 400 000 people. Covering an area of 240 square kilometres, Port Moresby has a population density of 1500 people per square kilometre.

As shown in **FIGURE 3,** Port Moresby has a hot and humid tropical climate with a distinct wet and dry season. More than 1000 millimetres of rain falls annually.

Located 35 metres above sea level, Port Moresby is vulnerable to climate change, where the impact of erosion due to rising sea-levels is evident. Low-lying areas are particularly at risk during tropical cyclone season, especially because these events are predicted to become more frequent and severe.

FIGURE 1 Aerial image of Port Moresby, Papua New Guinea



Safety

The crime rate in Port Moresby is very high, and the city has a reputation as one of the most dangerous in the world. Crimes are often very violent, and gang-based crime is common. Not enough police are available, and many crimes are never solved. Travellers are advised to be very careful, to not wear obviously expensive jewellery and to avoid travelling at night.

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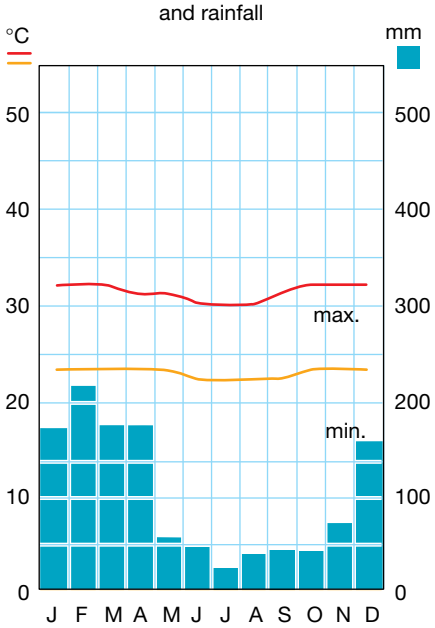
FIGURE 2 Location map of Port Moresby

Source: Spatial Vision

FIGURE 3 Climate graph for Port Moresby



Health

The government in PNG spends little on preventative measures such as clean water. It also spends little on healthcare. For instance, not all pregnant women can give birth in a hospital, which leads to many complications in childbirth.

Education

School facilities in PNG are quite poor, and attendance rates are very low, particularly for girls. Poor bus services, lack of interest and inability to pay school fees all influence the attendance rate. Only a small proportion of students complete Year 12. The **literacy rate** of 61.6 per cent is quite low by world standards.

Economy

The government in PNG applies a social security tax to both companies and employees, which is used to fund healthcare and welfare benefits. Unemployment rates are very high and most work is found in the **informal sector**. Many businesses in this sector involve selling food and other goods. About 40 per cent of the population lives on less than $1.25 a day. Fortunately, many families can take advantage of the good growing conditions to produce food to eat and sell.

Life is difficult for girls, and there is much discrimination. Not all girls get access to school; their literacy rate is lower than that of boys; child-bearing begins at a young age; and the level of violence against women is among the highest in the world.

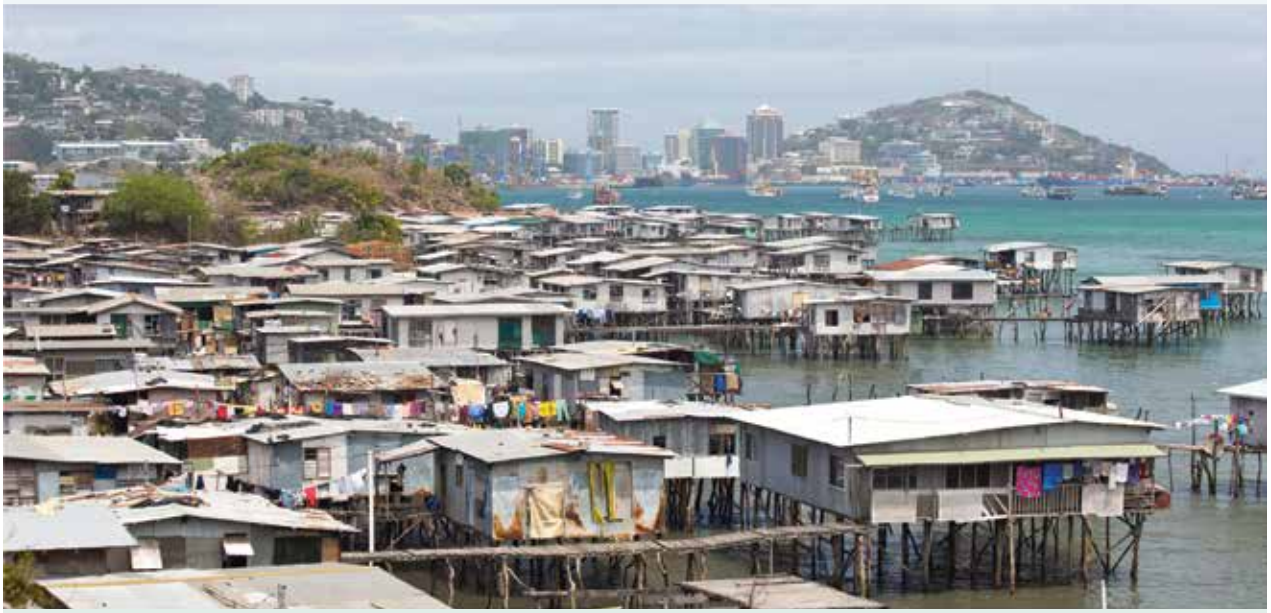
literacy rate the proportion of the population aged over 15 who can read and write

informal sector jobs that are not officially recognised by the government as official occupations and not counted in government statistics

FIGURE 4 Sick children in a ward in Port Moresby General Hospital

Infrastructure

FIGURE 5 Port Moresby is a mixture of high-rise urbanised landscapes and village landscapes.



Informal settlement

- Number growing to meet the needs of increased migration to city
- Found materials sometimes used in housing construction
- Some houses built over water to avoid disputes over land
- Streets unplanned
- Some street lighting
- Housing does not always withstand heavy rain and wind
- Poor access to power, water and sanitation
- Many households plant food crops

Formal settlement

- Street layout planned
- Rubbish collection, power, water and sanitation available
- High cost of housing and services
- Public transport
- Street lighting
- Public buildings (such as museums) and gardens
- Sealed roads

12.6.2 Dhaka — a less liveable city?

Dhaka is the capital city of Bangladesh. With a population of 22 478 116 and occupying 306.4 square kilometres, Dhaka has a population density of more than 23 000 per square kilometre. Some regions of Dhaka are similar to Australian suburban areas, with solid housing structures, shopping centres, high car ownership, and high expenditure on cars, household possessions, personal services and technology. However, the incidence of poverty and unplanned urban growth leads to the city being ranked as one of the least liveable in the world.

Environment

Dhaka is located in Asia at latitude 23.43 °N.

As you can see in **FIGURE 6**:

- there is a distinct dry season
- of total rain, 80 per cent falls in the wet season (the monsoon)
- it is often hot and humid
- approximately 2000 mm of rain falls per year
- it is warm to hot all year.

int-5297

Dhaka is only 2–13 metres above sea level. Snow-melt from the Himalayas feeds the rivers. This area is at high risk from climate change because increases in snow- and ice-melt or rainfall will add to river flow. Many rivers flow near Dhaka and the risk of flooding is high. Strong winds often occur during the monsoon, which also cause damage.

Infrastructure

The population of Dhaka is more than 22 million, and it is one of the most densely populated cities in the world. Dhaka's population has an annual growth rate of around 4.2 per cent. People migrate to the city in the hope of finding work in the growing industrial sector.

The huge influx of people has led to unplanned urban growth on vacant land, and about half the population live in slums. The government does not provide infrastructure to these slum areas.

FIGURE 6 Climate graph for Dhaka

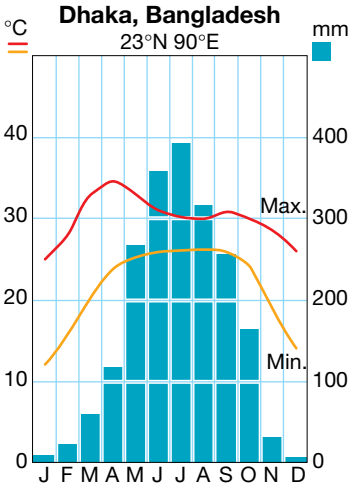


FIGURE 7 Location of Dhaka

Source: Spatial Vision

Safety

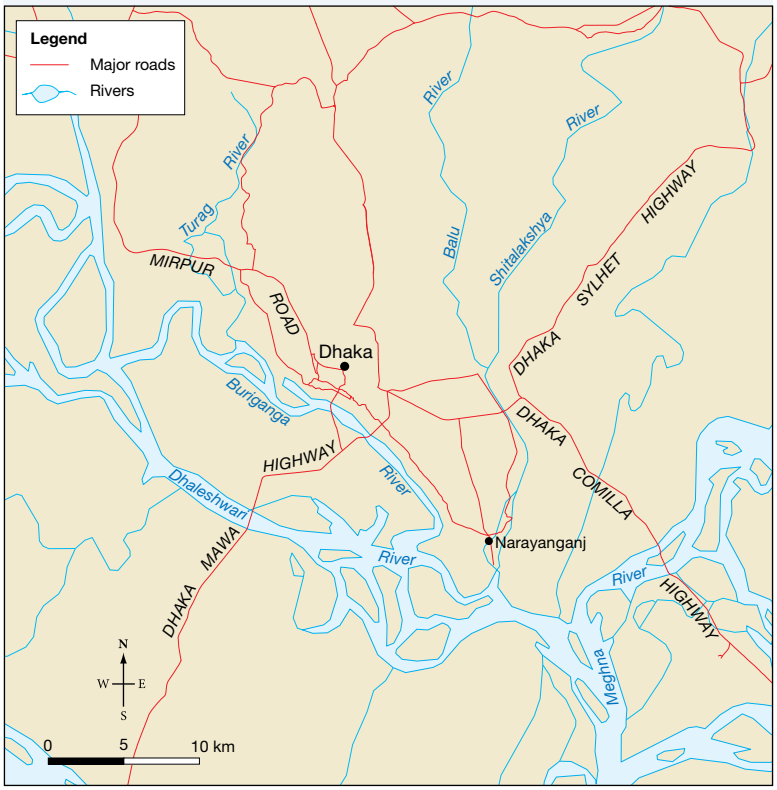
Crime rates are high in the poor areas of Dhaka. There is gangster violence; land grabbing; violence against women and children; arson; and crimes related to gambling, drugs, alcohol and illegal weapons. Not enough police officers are available, and they cannot be relied on to protect citizens.

Education

Primary education is compulsory, but the government is unable to provide enough schools and resources for the increasing population. Many students do not attend school all the time because their families need them to earn money.

In spite of the tough conditions, the education rate in the city is slightly higher than in rural areas, and the national literacy rate is about 75 per cent.

FIGURE 8 Map showing many rivers that flow through and around Dhaka



Source: © OpenStreetMap contributors

FIGURE 9 A communal water pump in a slum region

Water is not pumped to houses.

Houses are built from found materials.

Some people have to walk 900 metres to a toilet.

Gangsters control the cost and supply of electricity.

Roads are poor and congested.

There are no gutters or sewerage systems.

FIGURE 10 This woman has to walk through floodwaters to collect drinking water. Poor areas have no drainage, and floodwater quickly spreads into houses and over paths.

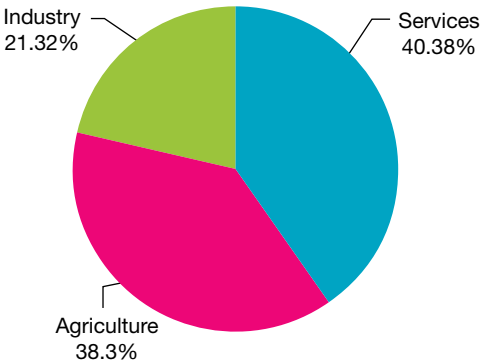
Economy

Most jobs are found in the informal sector; examples include rickshaw driver, street vendor and garment worker. Women are excluded from trades and transport, and most find work as servants or in agriculture. (Food is grown on vacant land within and around the city.) The pay in these types of jobs is low, and most or all household members need to work.

Child labour is common. It is estimated that 8 per cent of children under the age of ten are working, predominantly in the manufacturing sector. Between the ages of 8 and 14 it is estimated that almost 50 per cent of children have full-time jobs. Children as young as six have been found working instead of attending school.

In 2019 about 20.5 per cent of the population lived below the poverty line, surviving on less than $1.90 per day. This is an improvement on the 2016 rate, when 24.3 per cent of the population was classed as living below the poverty line. Even with these disadvantages, many people think the city offers a better quality of life than the rural areas do.

FIGURE 11 Employment by sector in Bangladesh



Healthcare

Healthcare is mainly provided through hospitals, which are located in the **formal** part of the city. There is a shortage of hospital beds, equipment, doctors and nurses. The slums have no medical facilities, and often families cannot afford to pay for treatment. Private charity groups do offer some programs, particularly for maternal health.

formal describes an event or venue that is organised or structured

FIGURE 12 Children as young as seven undertake exhausting work. This child is earning $1 a day.

on Resources

Interactivities	Environmental quality (int-3096) Safe as houses (int-3097)
Weblink	Slum life
Google Earth	Port Moresby Dhaka

12.6 SKILL ACTIVITY: Questioning and researching, Communicating

1. Choose one of the other least liveable cities (refer to lesson 12.3) and **investigate** how its natural environment creates challenges and provides benefits. **Consider** the city's location, climate and landscape.
2. Find an image of your chosen city that you think best reflects what you discovered during your investigation.
3. **Annotate** this image to communicate your findings.

12.6 Exercise

learnon

12.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 7	4, 8, 9	5, 6, 10

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Check your understanding

1. Refer to **FIGURE 2**. The latitude of Port Moresby is _____° south of the equator.
2. Why don't all children attend school in Port Moresby? Select all possible answers from the provided options.
   - **A.** It is often difficult to get to school.
   - **B.** There are no schools to go to.
   - **C.** Not all parents can afford the fees.
   - **D.** There can be little encouragement to attend.
   - **E.** All children do attend school because it is compulsory.
3. **Identify** the sector of the economy where most people find work in Port Moresby.
   - **A.** Formal sector
   - **B.** Service sector
   - **C.** Informal sector
   - **D.** Manufacturing sector
   - **E.** Business sector
4. Port Moresby is heavily influenced by its environment. **Explain** how environmental quality (such as climate) can influence living conditions in Port Moresby.
5. **Explain** why travellers are advised to be careful in Port Moresby.

Apply your understanding

Interpreting and analysing

6. Refer to **FIGURE 4**. **Describe** the biggest health issue facing Port Moresby.

Communicating

7. Dhaka is heavily influenced by its natural environment. **Explain** how the natural environment influences life in Dhaka.
8. Complete the following to **compare** Papua New Guinea and Australia.
   - **a.** The literacy rate in Papua New Guinea is _____ than in Australia.
   - **b.** The life expectancy in Australia is _____ than in Papua New Guinea.
   - **c.** Papua New Guinea was ranked _____ than Australia on the HDI index.
9. **Compare** the population of Dhaka with the population of Australia.

Interpreting and analysing

10. Life in the Dhaka slums is affected by a variety of factors.
    - **a.** **Explain** how the lack of resources that are normally provided by government (such as water, healthcare, education and safety) affect the people living in Dhaka.
    - **b.** **Explain** why very young children go into the workforce in Dhaka.
    - **c.** **Propose** reasons for the continued growth of Dhaka, even though it rates poorly in terms of liveability.

LESSON
12.7 How can liveability be improved?

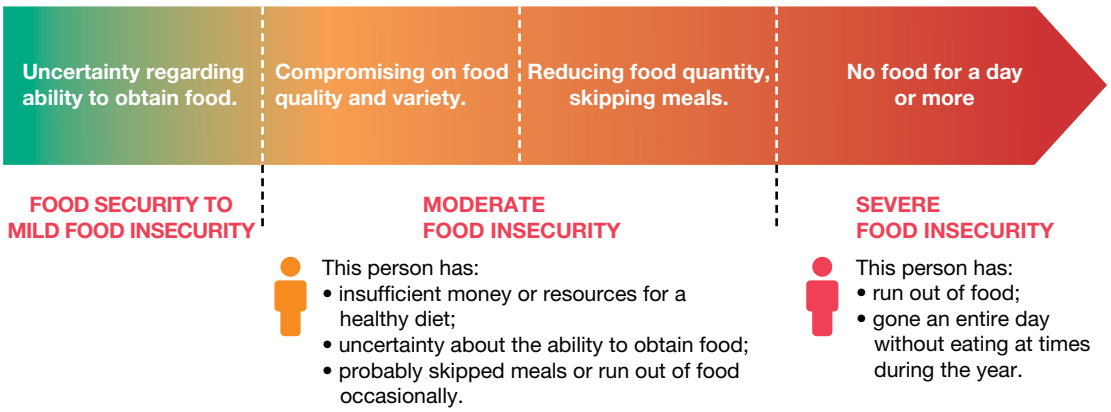
LEARNING INTENTION

By the end of this lesson you should be able to make links between hunger and liveability, identify reasons for the unequal distribution of food across the world, and explain how assistance from other countries can improve liveability.

TUNE IN

The Food and Agriculture Organization of the United Nations is the main international body driving global efforts to defeat hunger.

FIGURE 1 Defining food insecurity



Source: Food and Agriculture Organization of the United Nations.

1. What do you think is the link between hunger and food insecurity?
2. Brainstorm a list of reasons as to why people in some parts of the world have more than enough to eat, while in other regions they are starving.

12.7.1 Distribution of hunger

A basic human requirement is food, and access to enough food is a strong measure of liveability. Even in a world with plenty of food and where millions of people are overweight, about one person in nine does not have enough to eat.

Approximately 663 million **undernourished** people are in the world today. Many children in poorer countries are underweight and do not get enough food to be healthy and active. In 2000, 33 per cent of children in the world suffered from chronic malnutrition. This figure has fallen to 23 per cent today.

Three-quarters of all hungry people live in rural areas, mainly in the villages of Asia and Africa (see **FIGURE 2**). Most of these people depend on **agriculture** for their food. They rarely have other sources of income or employment. As a result, they may be forced to live on one-quarter of the recommended calorie intake and a small amount of water each day.

If enough rain does not fall at the right time of year, crops will not grow well and there will be little grass for **livestock**. However, rainfall is not the only factor contributing to hunger. **FIGURE 3** summarises causes of hunger.

undernourished not getting enough food for good health and growth

agriculture the cultivation of land, growing of crops or raising of animals

livestock animals raised for food or other products

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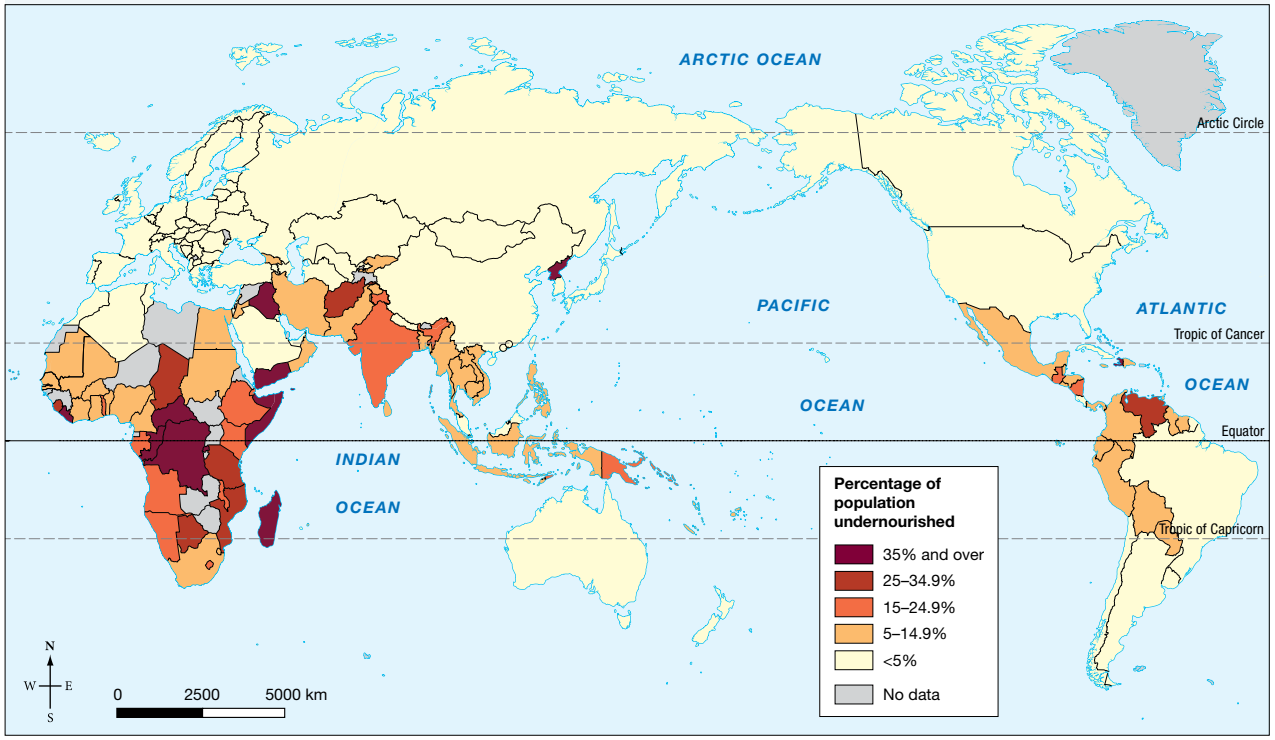
tlvd-10554

FIGURE 2 Distribution of hunger, 2019



Source: Food and Agriculture Organization

FIGURE 3 Causes of hunger

Conflict becomes more important than food production. Farmers have difficulty getting to and from markets, crops are destroyed, many are forced off the land, and fields and water may be contaminated.			There is a lack of key agricultural infrastructure, such as roads, warehouses and irrigation. The results include high transport costs, lack of storage facilities and unreliable water supply.
Growing export crops such as coffee, cocoa and sugar produces export income while decreasing basic food production. Food becomes expensive.			The poverty cycle means the poor cannot afford to buy or produce enough food. This leaves them hungry and weak and less able to produce more food.
Poor farming techniques, deforestation, overcropping and overgrazing reduce soil fertility.			Extreme weather events such as floods, tropical storms and long periods of drought ruin crops and infrastructure.

12.7.2 Impact of hunger

A lack of energy and poor health caused by a lack of food are made even worse by poor nutrition.

TABLE 1 The impact of hunger is felt by individuals, families, communities, regions and whole countries.

Social impacts	Economic impacts	Environmental impacts
People become unwell. Many people (particularly children) die. Fathers leave in search of work. Political unrest emerges.	Food production declines. The population of cities grows. Poverty increases. The government cannot afford new infrastructure.	Soil is overused. Too much land is cleared. Soil fertility and local biodiversity decline.

12.7.3 Ending hunger

A range of organisations focus on reducing hunger. Sometimes food is provided for immediate consumption and sometimes projects are undertaken to increase food production in the future. Actions can happen on a range of scales:

- Individuals in any country can join groups or donate to organisations that work to reduce hunger.
- The government of the affected country can provide assistance to the poor or improve infrastructure.
- Other countries can provide financial and food aid or consider the impact of their own policies.
- The United Nations and its various agencies can provide assistance through initiatives such as the World Food Program.

12.7.4 Sustainable Development Goals

Many countries cannot afford to provide infrastructure for their growing population. The underlying cause of very low liveability is poverty. Reducing poverty is fundamental to improving living conditions in many parts of the world.

United Nations Sustainable Development Goals

The United Nations (UN) is an organisation with members from 193 countries. In 2000, 189 countries signed a pledge to free people from extreme poverty by 2015 (as part of the Millennium Development Goals 2000–2015). In 2015, a new pledge was signed with 17 goals, each with specific targets to be reached over 15 years (known as the Sustainable Development Goals 2015–2030). The second of these Sustainable Development Goals is zero hunger, with the aim to 'end hunger, achieve food security and improved nutrition and promote sustainable agriculture'. **TABLE 2** shows the eight Millennium Development Goals and 16 of the Sustainable Development Goals.

Australian government and NGOs

The Australian government recognises that we are **global citizens**, and it supports an overseas aid program through its Department of Foreign Affairs and Trade. Overseas aid helps improve outcomes in health, education, economic growth and disaster response in many locations (see **FIGURE 4**).

The Australian government runs projects to improve living conditions, often working with other countries or with **non-government organisations** (NGOs). NGOs also run programs on their own. Well-known NGOs include World Vision, CARE Australia and Australian Red Cross.

global citizens people who are aware of the wider world, try to understand the values of others, and try to make the world a better place

non-government organisations non-profit groups run by people (often volunteers) who have a common interest and perform a variety of humanitarian tasks at a local, national or international level

tlvd-10556

TABLE 2 UN Development Goals

Millennium Development Goals 2000–2015	Examples of achievements of MDGs	Sustainable Development Goals 2015–2030	
Eradicate extreme poverty and hunger	Fewer people live in extreme poverty.	No poverty	Industry, innovation and infrastructure
Achieve universal primary education	Primary school enrolments have increased.	Zero hunger	Reduced inequalities
Promote gender equality and empower women	Many more girls are attending school.	Good health and wellbeing	Sustainable cities and communities
Reduce child mortality	More babies are surviving.	Quality education	Responsible consumption and production
Improve maternal health	More mothers have access to healthcare when giving birth.	Gender equality	Climate action
Combat HIV/AIDS, malaria and other diseases	Vaccination has reduced incidence of measles.	Clean water and sanitation	Life below water
Ensure environmental sustainability	Safe water is available to more people.	Affordable and clean energy	Life on land
Develop a global partnership for development	Huge increase in number of people with phone and internet	Decent work and economic growth	Peace, justice and strong institutions

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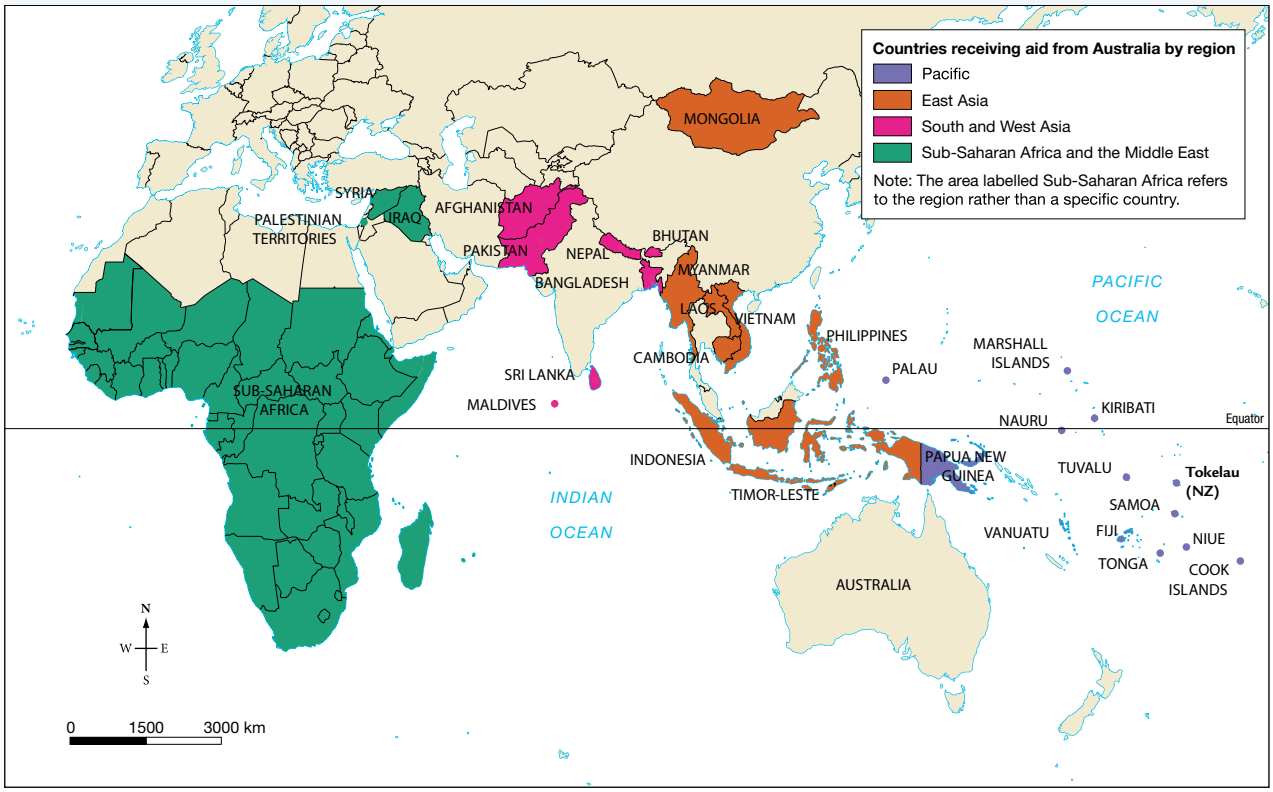
FIGURE 4 Countries receiving assistance from Australia



Source: Department of Foreign Affairs and Trade

FIGURE 5 Examples of projects to improve liveability: (a) a child immunisation clinic on the Kokoda Track (b) building schools and improving education in Indonesia (c) planting grasses in Fiji to stabilise sea banks

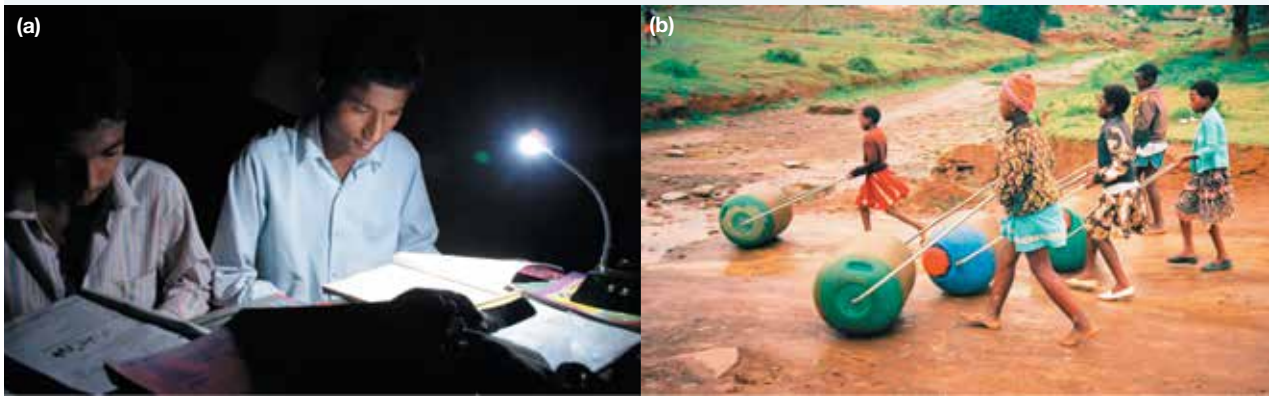
Small changes, big results

Simple and **appropriate technology** can make an enormous difference to people's lives in developing countries (see **FIGURE 6**). In addition, a small amount of money can sometimes make a big difference to an individual or community group.

Microfinance, or microcredit, is a system of lending small amounts of money, perhaps $150. The money is used to invest in something that can generate income. A person might buy an animal for milking and breeding, equipment for basket-making, stock for a store, or materials for jewellery-making. The loan must be repaid, but at a low interest rate, and further loans can be taken out.

appropriate technology
technology designed specifically for the place and the people who will use it; features include being affordable and repairable locally

FIGURE 6 Appropriate technology: (a) electricity in Nepal is not available to all houses, so a solar lamp increases the opportunities to read. (b) In South Africa, people push hippo rollers, which make it easier to collect water from distant wells and bring it home.



12.7 SKILL ACTIVITY: Concluding and decision-making and Communicating

1. Choose one of the Sustainable Development Goals shown in **FIGURE 7**. Use the **Sustainable Development Goals** weblink to find out more details.

FIGURE 7 The 17 Sustainable Development Goals

2. Use a visual organiser, such as a flowchart or diagram, to **brainstorm** how achieving this goal will improve liveability.
3. **Evaluate** your ideas by considering the flow-on effects and the impact on society, the economy and the environment. **Summarise** this in a brief paragraph or two.
4. **Communicate** your evaluation to your teacher or class.

on Resources

Weblink Sustainable Development Goals

12.7 Exercise

learnon

12.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 5, 6	1, 7, 8	4, 9, 10

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Check your understanding

1. Refer to **FIGURE 2** and select the appropriate word from the word list to complete this sentence.

Australia	Arctic Circle	Asia-Pacific	Sub-Saharan Africa	Latin America Caribbean

_____ has the largest percentage of its population undernourished and _____ has one of the lowest.

2. **Select** the correct options to complete the sentence.
Most of the world's hungry people live in **cities** / **rural villages** / **inner suburbs** / **coastal towns** in **Asia and Europe** / **Asia and Africa** / **North America and Africa**.
3. Refer to **FIGURE 2**. The map indicates that the highest number of undernourished people are in Africa. True or false?
4. Poor roads contribute to hunger. **Explain** the connection between poor roads and hunger.
5. **Identify** the organisation that developed both the Millennium Development Goals and the Sustainable Development Goals.

Apply your understanding

Interpreting and analysing

6. Consider **TABLE 1** in section 12.7.2. **Propose** one more example for each category of impact — social, economic and environmental.
7. Study the images in **FIGURES 5** and **6**. **Identify** the Sustainable Development Goals that have been addressed in these projects.
8. Refer to **FIGURE 4**. **Describe** the distribution of places that receive aid from Australia. Think in terms of region, such as Asia, East Asia, the Middle East, South Asia, West Asia, Pacific, Africa and the Caribbean.

Communicating

9. **Explain** how simple technology and microfinance are transforming lives in developing countries.
10. **Explain** why addressing issues related to hunger is an essential component of improving liveability.

LESSON
12.8 What makes our communities liveable?

LEARNING INTENTION

By the end of this lesson you should be able to identify strategies that can be employed at the local level to enhance the liveability of places for different people.

TUNE IN

In a liveable community, the needs of a broad spectrum of people are catered for.

What is on your wish list?

1. Brainstorm a list of characteristics or features that are essential in your community.
2. Compare your list with the other members of your class. Do any items appear on most people's lists? Is anything missing?
3. Work collaboratively to determine the top five or six characteristics that make your community liveable.

FIGURE 1 Improved beach access is on some people's wish list.

12.8.1 Liveability studies

A study of a region's liveability will reflect its natural characteristics and human characteristics. All communities would like a safe, healthy and pleasant place to live, a sustainable environment, the chance to earn a liveable wage, reliable infrastructure and opportunities for social interaction.

The findings of a liveability survey will be influenced by a range of factors.

- Where a person lives influences their access to services, employment and environmental features, and their address may influence their perception of the quality of the region.
- Different age groups have different views and needs.
- Current economic conditions influence a person; for example, a major employer may have closed or opened.
- Environmental conditions affect a person; for example, a region may be experiencing drought.
- Government policies influence infrastructure, housing assistance and grants to local sports clubs.

To find out about the liveability of an area, a number of themes need to be investigated. Some of these can be gained from **census** statistics, while others can be gained only through surveys and fieldwork.

census a regular survey used to determine the number of people living in Australia; also has a variety of other statistical purposes

In any community, agreement will usually exist about some things that improve liveability. All groups accept that safe water, sealed roads and a reliable power supply are important. If a community wants to obtain certain kinds of items on its liveability 'wish list', it sometimes needs help from national, state or local government.

Examples of such items include major roads, railways and desalination plants. Sometimes, though, a wish-list item is best obtained by an individual or community. This is the case when setting up sporting clubs, youth groups and local music events.

TABLE 1 Matching liveability indicators to key themes

Measure	Examples of indicators	
Social	• Population characteristics (gender, age) • Education (primary, secondary, tertiary) • Health (life expectancy, health-centre attendance, length of walking tracks, smoking rates, weight, chronic diseases) • Safety (perception, crime rates, road deaths and injuries, work safety)	• Volunteering • Voting • Aged care accommodation • Access to public transport • Membership of clubs and organisations • Diversity (ethnicity)
Environmental	• Biodiversity • Planning for the future • Water access • Waste management • Ecological footprint	• Public spaces • Household recycling • Weather • Land clearing
Economic	• Employment • Variety of businesses • Income • Financial stress • Housing types	• House ownership • Infrastructure • Internet access • Power • Car ownership

FIGURE 2 Community wish list: some aspects of liveability are common to all groups and some are desired by particular groups.

Community wish list

- Family housing
- Financial security
- Friendly community
- Health services
- Neighbourhood house
- Parks and gardens
- Paths for prams
- Paths for scooters
- Playgrounds
- Primary schools
- Public seating
- Public transport
- Recognition of those from non-English-speaking backgrounds
- Shopping nearby
- Single-person housing
- **University of the Third Age**

12.8.2 Transport strategies

People in towns and cities are always looking for strategies to improve their living conditions. A community is made up of people from a range of age groups, a number of different land uses, a range of needs and a variety of interests. Ideas and plans for improvement may be overarching or targeted.

The movement of people within and between neighbourhoods is an important issue in towns and cities. The humble bicycle is now seen as a way of increasing mobility, reducing traffic congestion, reducing air pollution and boosting health. Bicycle tracks encourage recreational riding for all ages (see **FIGURE 3**), while dedicated bicycle paths along main routes (see **FIGURE 4**) encourage people to commute by bicycle, rather than car, to work and school.

FIGURE 3 Recreational riding along a trail mainly designed for bicycles

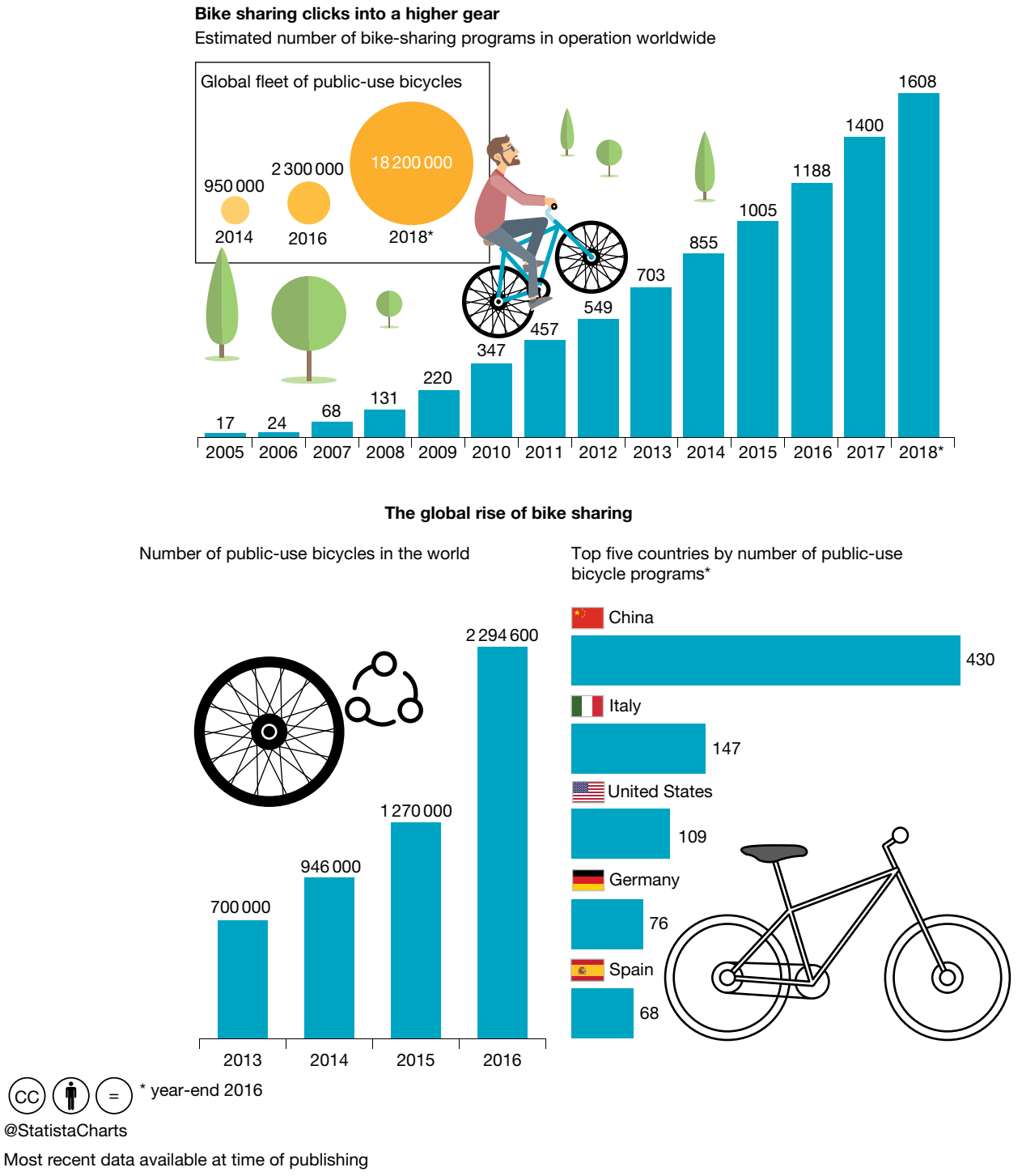
FIGURE 4 Special bicycle lanes increase the safety of bike riding.

In 1965, a group in Amsterdam, the Netherlands, introduced the idea of bike sharing — public bicycles that are hired, usually for short trips. This first attempt was not a success, but the idea persisted. Modern bike-sharing systems have overcome problems of theft and vandalism by using easily identifiable specialty bicycles, monitoring the bicycles' locations with radio frequency or GPS. Additionally, a credit-card payment or smart-card based membership is required to check out bicycles. In some places, bicycles can be located on your mobile phone, and links between bicycle lanes and existing public transport are increasing. Between 2014 and 2018, bike-sharing programs doubled in size. More than 3000 programs are now in operation, providing almost 18.2 million bikes to 20 million registered users.

University of the Third Age
an international movement that promotes lifelong learning; focuses on engaging with specific areas of interest as a person's working and parenting life scales down (referred to as the 'Third Age')

Copenhagen was rated as the world's most bike-friendly city in 2014 and has retained this position every year since. Over half the population rides a bike to work, collectively covering a distance of 1.44 million kilometres each day. Beijing is the world leader in bike-share programs, with 2.4 million share bikes and 11 million registered users. Bike-sharing programs are an example of a popular strategy that is aimed at improving liveability for a range of ages and locations within a community.

FIGURE 5 Bike sharing is on the rise globally.



An example of a successful bike-sharing scheme is in Paris. The Vélib was introduced in 2007 and quickly doubled in size. By 2012, bicycle trips in the city had grown by 41 per cent. The program continues to grow and today has more than 200 000 bikes and 1800 share stations, each around 300 metres apart. Of the total bike-share fleet, 40 per cent now have an electric motor with a range of around 50 kilometres when fully charged. These new bikes also have a basket with a carrying capacity of 50 kilograms. The program has proved popular among locals and tourists. It boasts 400 000 subscribers and millions of trips are registered each month. During peak times in summer, a single bike may clock up more than ten journeys.

It is anticipated that the new electric bikes will overcome problems associated with maintaining a share-bike program in hilly or uneven terrain, where commuters will ride a bike downhill in the morning, but then elect to return home using alternative transport — leading to a surplus of bikes in one area and a lack of them in others. Bike sharing is also part of a plan to reduce car traffic and pollution in Paris, which includes closing streets to cars on weekends, reducing speed limits, encouraging bus travel and extending bicycle lanes.

Resources

Weblink Bike sharing
Google Earth Amsterdam

12.8 SKILL ACTIVITY: Communicating

1. Some cities provide schemes to encourage people to ride bikes. **Conduct research** to find out about the success of bike incentive schemes in European cities. Include the following:
   - the name of the city
   - the date of the scheme
   - a summary of the scheme
   - evidence of success or failure of the scheme.
2. **Predict** whether a similar scheme would be viable in the area where you live.
   a. Would the scheme work as it is?
   b. What modifications might be needed? Why?

12.8 Exercise

learnon

12.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5, 10	4, 6, 7	3, 8, 9

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Check your understanding

1. **Identify** the three measures used when investigating liveability.
   A. Population
   B. Social
   C. Environmental
   D. Economic
   E. Sustainability
2. All information to determine the liveability of an area can be obtained from census statistics. True or false?
3. a. Refer to **TABLE 1** and **identify** two aspects that could be placed in a different theme. **Justify** your suggested change.
   b. **Propose** one more indicator that should be included. In which theme would it belong?

4. **Recall** three advantages of increasing bicycle riding.
5. **Identify** the problems that were faced by the first bike-sharing schemes.
   - **A.** Increased accidents
   - **B.** Reduced cars on the road
   - **C.** Theft and vandalism
   - **D.** Increased public transport use
   - **E.** None of the above

Apply your understanding

Interpreting and analysing

6. Refer to **FIGURE 2**. **Compare** and **contrast** the liveability wish lists for young families and older people. You may wish to present your answer in a visual way (for example, as a Venn diagram).
7. Liveability means different things to people of different ages.
   With the use of an example, **demonstrate** how improving liveability for one age group might help the liveability of another age group.
8. Refer to **FIGURE 5**.
   - **a.** **Propose** a reason for the rapid increase in the number of share bikes in cities around the world.
   - **b.** **Propose** a reason China is the fastest growing market for share bikes.
   - **c.** **Explain** how the introduction of electric bikes might encourage more people to use share bikes.
   - **d.** **Predict** potential problems that might be caused using electric bikes.
9. Refer to the community wish list in section 12.8.1. **Identify** three items from the community wish list that you think are most needed in the area you live in. **Justify** your answer.
10. **Discuss** whether a bike-sharing scheme would be a viable option in your area. **Justify** your answer.

LESSON
12.9 How does connection to Country make places liveable?

LEARNING INTENTION

By the end of this lesson you should be able to explain why connection to Country makes places liveable for First Nations Peoples of Australia.

TUNE IN

Did you know that smoking ceremonies by First Nations Peoples of Australia have been held for more than 60 000 years? It is believed that the smoke produced by native vegetation has cleansing properties and will keep bad spirits away. Smoking ceremonies are conducted when people arrive on Country (or to specific places on Country) as a way of cleansing them before they continue to travel about Country. Once cleansed, they are given safe passage to continue their journey.

1. What do you think the people in **FIGURE 1** are doing?
2. How do you think this type of ceremony promotes connection to Country?

FIGURE 1 First Nations Australians have held smoking ceremonies for millennia.

12.9.1 The Yolngu Peoples of Arnhem Land

The Yolngu Peoples are the traditional custodians of 55 000 hectares of land in the Northern Territory. It is a diverse landscape comprising rocky outcrops, floodplains, white-sandy beaches and rugged coastline.

Despite constant pressure to adopt the western lifestyle of non-Indigenous people, the Yolngu Peoples have maintained their close connection to **Country** and their cultural ancestry, which dates back more than 50 000 years. With more than 40 languages spoken across Eastern Arnhem Land, English is the second or third spoken language of the people who make up the First Nations population.

FIGURE 2 Arnhem Land, Northern Territory

12.9.2 The Wurundjeri Peoples of the Kulin Nation

Wurundjeri lands extend over approximately 12 500 square kilometres, taking in the areas from what is now known as the Yarra River in Melbourne and extending as far as Whittlesea, Macedon, Lancefield and Woodend. They trace their ancestry back to over 65 000 years ago, when the creator spirit formed their land, people and all living things.

The Wurundjeri connection to land and Country is governed by their cultural and spiritual values. Central to these beliefs is the notion of belonging to the land rather than owning the land. They did not build permanent settlements but rather lived a cyclical lifestyle. They set up temporary camps within defined boundaries and moved to a new area when the land needed time to regenerate, returning only when the land could sustain them again. The land catered for all their needs, such as food, water, medicine and shelter. The people in turn treated the land with respect, taking only what they needed and caring for the land.

Country the place where a First Nations Australian comes from and where their ancestors lived; it includes the living environment and the landscape

FIGURE 3 Healesville is part of the Wurundjeri lands

12.9.3 Why do First Nations Peoples of Australia choose to live on Country?

First Nations Peoples of Australia have a deep spiritual connection with the land. For tens of thousands of years, they have lived in harmony with the natural world and placed immense value on sustaining the resources of Country. The land has sustained them and provided all their needs. Rather than simply seeing the land, they regard the land as the foundation of all their people — past, present and future.

Connection to Country is seen as highly spiritual and entwined with both their sense of belonging and their identity. Country is more than the physical land; it also includes the plants, sky, animals, people, customs, seasons, language, creation spirits, cultural practices and heritage.

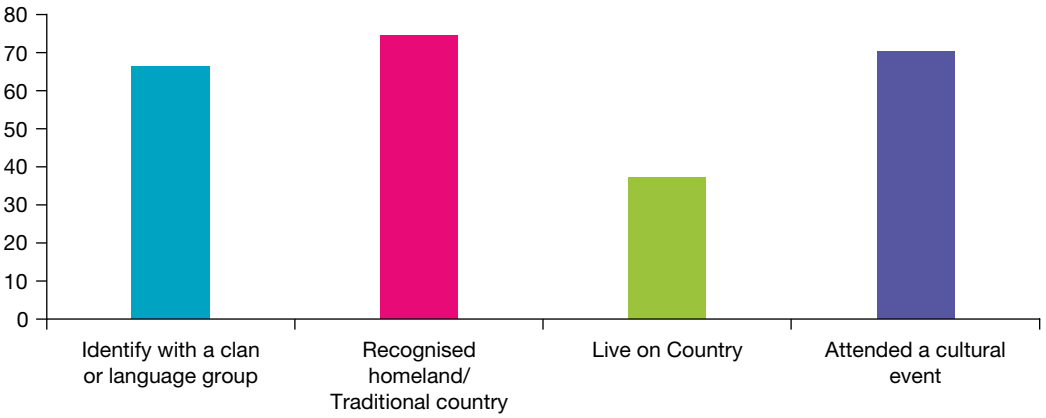
FIGURE 4 Country is a complex idea where all aspects of physical and spiritual life are connected.

The land is like a 'living museum,' for First Nations Australians; it holds their collective memory from the time of the Dreaming, reflected in ancient burial grounds, cultural sites and the watering holes that have been an essential element of their survival throughout the generations.

First Nations Peoples of Australia are connected to each other and the land through kinship groups. The elders are entrusted with the knowledge and responsibility of caring for the land and passing it down to future generations. Their intimate knowledge of the land is reflected in language, which includes words and concepts that have no equivalent in the English language. It is this deep relationship between the land and the people that is referred to as connection to Country.

This spiritual connection to the land is maintained through ceremonial practices. The land provides for the people and sustains them, while the people sustain and manage the land through their cultures, ceremonies, kinship and laws.

FIGURE 5 First Nations Peoples of Australia have a strong connection to their family, community and culture.



Data sourced from the Australian Bureau of Statistics.
Graph drawn in Excel using raw data.

Language and culture

According to the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), more than 250 different First Nations languages are spoken in Australia. In the 2016 census, one in 10 First Nations people said that they spoke a First Nations language at home.

Acknowledgement of Country

As a sign of respect, both First Nations and non-First Nations people acknowledge Aboriginal and Torres Strait Islander Peoples as the traditional custodians of the land and acknowledge their ancestors and traditions.

12.9.4 How are First Nations Australians connecting others to Country?

About 200 kilometres north of Broome lies the Kimberley region. Here, local First Nations communities have established a series of camping sites where visitors can engage in a cultural experience. Visitors can enjoy yarns around the campfire, where they can learn about the local history, and can find out more about the seasonal lifestyle, including bush foods and fishing methods. Supported by Tourism Western Australia and run by the Traditional Custodians of the land, the aim of the experience is to foster an understanding between First Nations and non-Indigenous people. Money generated through tourism remains in the local community.

FIGURE 6 In 2022, First Nations communities on the Dampier Peninsula welcomed non-Indigenous visitors to connect with the oldest living culture in the world.

12.9 SKILL ACTIVITY: Questioning and researching, Communicating

First Nations Australians have a strong connection to the land. Children are taught from an early age to respect the environment. They stay in an area for a time and then move to another as the seasons change. This ensures that they do not overhunt, overfish or overharvest the resources in any one area. They are taught to take only what they need and not to waste anything.

The mangrove regions of the north of Australia are an important source of food, timber and medicines for the First Nations communities who live in this region.

Use online resources to **investigate** how First Nations Australian communities live with and care for the mangrove environment.

1. As a class, **brainstorm** a list covering how mangroves are used as a source of food, shelter, timber and medicine.
2. Divide the list among the members of your class for further **investigation**.
3. **Create** a poster that reflects your research.
   a. **Outline** what you have investigated.
   b. How is the land cared for?
   c. What is the land providing for the people?
   d. How is connection to Country evident?
4. Use the posters to **create** a class collage.

12.9 Exercise

learnon

12.9 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5	3, 4, 6, 9	7, 8, 10

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Check your understanding

1. According to the AIATSIS, more than _____ language groups are across Australia.
   - A. 50
   - B. 110
   - C. 220
   - D. 250
2. **Identify** the term used by First Nations Peoples of Australia to describe the land, waterways and sky to which they are connected.
   - A. Clan
   - B. Country
   - C. Culture
   - D. Creation spirit
3. **Identify** the statement that best **describes** the purpose of a smoking ceremony.
   - A. A smoking ceremony is a vital component of a controlled burn that will regenerate the land.
   - B. A smoking ceremony is needed to call the creation spirits.
   - C. A smoking ceremony has cleansing properties and will keep bad spirits away.
   - D. A smoking ceremony is used to threaten strangers.
4. **Determine** whether each of the following statements is true or false.
   - a. English is the first language of First Nations Peoples living in the Northern Territory.
   - b. Connection to Country is just about land management.
   - c. For First Nations Peoples, the land holds their collective memory from the time of the Dreaming.

Apply your understanding

Interpreting and analysing

5. **Identify** the statements that indicate how First Nations Peoples of Australia are connected to each other.
   - A. Through traditional ceremonies.
   - B. Through land and kinship groups.
   - C. Through their seasonal campsites.
   - D. Through smoking ceremonies.
6. **Explain** why ceremonial activities are important to First Nations Australians.
7. **Explain** what is meant by the phrase, 'the land is a living museum'?
8. **Explain** how First Nations communities in the Kimberley region of Western Australia are working to foster an understanding between Indigenous and non-Indigenous Australians.
9. **Describe** the benefits to local communities from running a tourism venture such as that offered in the Kimberley region north of Broome.
10. Refer to **FIGURE 5**. **Explain** how the graph demonstrates a strong connection to Country.

LESSON
12.10 Investigating topographic maps: Liveability in Badu and Moa

LEARNING INTENTION

By the end of this lesson you should be able to describe what liveability is like in Badu and Moa.

12.10.1 Badu and Moa islands

Both of these islands are located 40–60 kilometres off the far north Queensland coast in the Torres Strait. Moa Island has a small population of approximately 240 people. Badu Island has a slightly larger population of around 850 people.

These small isolated communities rely on the ocean to provide food and as a pathway for trade. Their livelihood is threatened by climate change, particularly rising sea levels. Communities on the islands are heavily reliant on regular rainfall and have reservoirs to ensure a secure clean water supply. More recently, septic tanks and drainage facilities have been installed, improving the environmental health of the islands. Because of improved water security and the development of infrastructure, an increasing number of tourists are travelling to Badu and Moa Islands.

FIGURE 1 Moa Island is the second largest island in the Torres Strait.

int-8954

FIGURE 2 Topographic map extract of Badu Island and Moa Island in the Torres Strait

Source: Data based on QSpatial, State of Queensland (Department of Natural Resources, Mines and Energy, Department of Environment and Science), http://qldspatial.information.qld.gov.au/catalogue/; Geoscience Australia.

on Resources

eWorkbook	Investigating topographic maps — Liveability in Badu and Moa (ewbk-10688)
Digital document	Topographic map of Badu and Moa islands (doc-39378)
Video eLesson	Investigating topographic maps — Liveability in Badu and Moa — Key concepts (eles-6010)
Interactivity	Investigating topographic maps — Liveability in Badu and Moa (int-8954)
Google Earth	Badu and Moa

12.10 Exercise

learnon

12.10 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3	2, 4	5, 6

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Check your understanding

1. **Describe** where Badu and Moa are located. Use the terms *latitude* and *longitude* in your answer.
2. **Identify** the height and area reference of Mt Augustus.
3. Locate and give the area references for three different human features located on these islands.

Apply your understanding

Interpreting and analysing

4. Based on what you can see on the map, **explain** how liveable you think islands are. Support your answer with evidence from the map.
5. What factors might affect how liveable Badu and Moa islands are for different people? Choose one feature of the islands and **explain** the following.
   a. Why might someone born and raised on the islands think that feature increases liveability?
   b. Why might someone born and raised on the islands think that feature decreases liveability?
   c. Why might someone born and raised in a big city in Australia think that feature increases liveability?
   d. Why might someone born and raised in a big city in Australia think that feature decreases liveability?
6. **Determine** what challenges could exist if the island communities are reliant on rainfall for their water source.

LESSON
12.11 INQUIRY: Liveable cities investigation

LEARNING INTENTION

By the end of this lesson you should be able to explain what it means for a city to be liveable, and communicate what these characteristics are and how they are determined.

Background

In this inquiry, you will investigate what it means for a city to be liveable and how this is determined. You will share your findings through an oral presentation.

Every year the Economic Intelligence Unit (EIU) ranks 140 major cities based on five key indicators:

- stability
- healthcare
- culture and environment
- education
- infrastructure.

FIGURE 1 Many factors affect how liveable a city is.

FIGURE 2 Education and infrastructure are two of the five key indicators in the EIU liveability rankings.

Discuss the following:

1. The five key indicators used by the EIU to rank cities and what they mean.
2. What do you know about liveable and less liveable cities?
3. What would you like to know?
4. Find out which cities are in the EIU's top 10 and which are in the bottom 10. Which cities would you like to investigate and compare?

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Step 1: Write your inquiry question

In this inquiry, you will need to make comparisons between one of the cities in the top 10 and one in the bottom 10 ranked cities.

- **Select** your two cities and **write** your inquiry question — make sure you chose cities that have not been covered in detail in this topic.

Step 2: Questioning and researching

- **Conduct research** into your chosen cities.
- Collect relevant data in table or graph form.
- Use the key indicators to guide your research, and make notes under these indicators for each city.
- Locate appropriate images to **illustrate** each indicator; you might like to annotate these for future reference.

Step 3: Analysis, evaluation and interpretation

- **Create** a summary table for each city.
- **Identify** connections between your summary tables and your other elements such as graphs, tables and images.

Step 4: Civic participation and decision-making

- **Reflect** on what makes one place liveable and another less liveable.
- **Decide** which information you will use in your presentation and how it can be used effectively.

Step 5: Communicating

- **Create** your PowerPoint presentation.
- Remember to take care with your font size and colour. Avoid making your slides text-dense.
- Use visuals and dot points. Prepare cue cards to help guide you through your presentation.

Complete your self-assessment using the **Inquiry rubric** or access the 12.11 exercise set to complete it online.

Resources

Digital document Inquiry rubric (doc-39379)

LESSON
12.12 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results | **Watch teacher-led videos** | **Practise questions with immediate feedback**

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12.12.1 Key knowledge summary

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

12.2 What is liveability?

- Different people have different perceptions of liveability.
- Perceptions of liveability are coloured by a person's background, stage in life and expectations.

12.3 Where are the most liveable cities?

- Cities around the world are ranked against a set of criteria to create the liveable city index.
- Melbourne, Vienna and Vancouver have for several years shared the number 1 ranking; however, in 2021 Auckland took over the top ranking and Adelaide claimed second spot, with Melbourne falling to sixth place, and Vancouver and Vienna dropping out of the top 10.
- Changes to the top 10 rankings are largely the result of improvements made in cities that are pushing to move up the rankings, although COVID-19 had an effect on the 2021 rankings.
- More than one ranking index is available, but one that is widely used and relied on for this lesson is produced by the Economist Intelligence Unit.

12.4 Is Perth a liveable city?

- Perth has featured in the top 20 of most liveable cities for many years, and was took out sixth place in the 2021 rankings.
- Some factors, such as weather, work both for and against Perth as a liveable city.

12.5 Is there a connection between liveability and sustainable living?

- Liveability and sustainability are different.
- High-income countries feature strongly in the list of liveable cities; however, these cities also have a high ecological footprint.
- A high ecological footprint means we are using resources at a faster rate than they can be regenerated by the Earth.

12.6 What makes a city less liveable?

- Less liveable cities tend to be in developing countries.
- Extreme poverty is an issue in these places, with many living below the poverty line.
- Literacy levels are low, though showing some improvement.

12.7 How can liveability be improved?

- For those living below the poverty line, liveability will not improve until they have access to enough food.
- While some people do not have enough to eat, others have too much.
- Hunger has social, environmental and economic impacts.
- The United Nations has identified poverty as the underlying cause of low liveability.
- Australia provides aid to many countries around the world.

12.8 What makes our communities liveable?

- People have different perceptions of liveability and this is coloured by their stage in life and where they live.
- Bicycle-sharing schemes are increasing and are a way of reducing traffic congestion, reducing pollution and improving health.
- Beijing in China has more share bikes than any other community.
- Paris is introducing electric bikes to its bike-sharing system.

12.9 How does connection to Country make places liveable?

- First Nations Peoples are the oldest continuous culture on Earth.
- First Nations communities have more than 150 different language groups.
- Connection to Country is deeply spiritual and entwined with a sense of belonging and identity.

12.10 Investigating topographic maps: Liveability in Badu and Moa

- Because these communities rely on the ocean for food and trade, their livelihood is threatened by climate change.
- The installation of septic tanks and drainage facilities has improved the environmental health and liveability of the islands.

12.11 INQUIRY: Liveable cities investigation

- What makes one city more liveable than another can be determined by certain indicators.
- These indicators can be used to rank and compare cities.

12.12.2 Key terms

agriculture the cultivation of land, growing of crops or raising of animals

amenities desirable or useful features of a place that make it more pleasant or attractive

appropriate technology technology designed specifically for the place and the people who will use it; features include being affordable and repairable locally

biodiversity the variety of life in the world or in a particular habitat or ecosystem

census a regular survey used to determine the number of people living in Australia; also has a variety of other statistical purposes

community a group of people who live and work together and share similar values; a group of people living in a particular region

conurbation an extended urban area, usually made up of a town merging with the suburbs of a city

Country the place where a First Nations Australian comes from and where their ancestors lived; it includes the living environment and the landscape

ecological footprint total area of land used to produce the goods and services consumed by an individual or country

formal describes an event or venue that is organised or structured

global citizens people who are aware of the wider world, try to understand the values of others, and try to make the world a better place

informal sector jobs that are not officially recognised by the government as official occupations and not counted in government statistics

infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines

literacy rate the proportion of the population aged over 15 who can read and write

livestock animals raised for food or other products

natural environment elements — such as wind, soil, flowing water, plants and animals — that influence the characteristics of an area

non-government organisations non-profit groups run by people (often volunteers) who have a common interest and perform a variety of humanitarian tasks at a local, national or international level

population density the number of people living in a square kilometre

temperate climate climate with generally warm summers and cool winters, without extremes

undernourished not getting enough food for good health and growth

University of the Third Age an international movement that promotes lifelong learning; focuses on engaging with specific areas of interest as a person's working and parenting life scales down (referred to as the 'Third Age')

12.12.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

What effect does the distribution of resources and services have on our concept of liveability over place and time?

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.

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10550)
Reflection (ewbk-10689)
Crossword (ewbk-10551)

Interactivity Liveable places crossword (int-7705)

12.12 Review exercise

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Multiple choice

1. Which of the following is a way in which liveability can change? Select the best response.
   - A. Over a number of years
   - B. Over seasons
   - C. After an extreme event
   - D. All of the above
2. Why is infrastructure so important for improving liveability? Select all possible options from the provided answers.
   - A. It provides roads for transport.
   - B. It adds to the visual appeal of a city.
   - C. It provides hospitals for healthcare.
   - D. It provides clean water for drinking.
3. Identify the three aspects included in the concept of liveability.
   - A. Political
   - B. Social
   - C. Economic
   - D. Liveability
   - E. Environmental

4. The general connection between the ecological footprint and liveability is that regions that rank highly in terms of liveability have a _____ ecological footprint.
   A. Small **B.** Large **C.** Non-existent **D.** Medium
5. Identify three aspects of the typical Australian way of life that contribute to high resource use.
   A. Fossil fuel–powered transport
   B. Solar-powered houses
   C. Many possessions that require electricity
   D. Electric cars
   E. Single-use products
6. Identify the types of jobs people from the poorer regions of Port Moresby and Dhaka have access to.
   A. Jobs in the mining industry
   B. Jobs in the corporate industry
   C. Jobs in the informal sector
   D. Jobs in the formal sector
7. How many Sustainable Development Goals are there?
   A. One **B.** Three **C.** Ten **D.** Seventeen
8. Identify a small change that can make a big positive difference to living conditions.
   A. A solar light to make it possible to do homework
   B. A long walk to school
   C. Moving to a slum area
   D. Girls staying home to tend the fire
9. For most poor farmers in developing countries, growing a cash crop and selling for export does not help decrease hunger. Identify which of the following helps explain why this is so.
   A. It adds land to food production.
   B. Growing for export means locally produced food crops become less common and so more expensive.
   C. It makes more sense for poor farmers to grow cash crops.
   D. They don't want to eat what they grow.
10. Identify one of the advantages of increasing bicycle riding.
    A. Increasing traffic congestion
    B. Reducing public transport use
    C. Reducing people's health
    D. Reducing air pollution

Short answer

Communicating

11. **Explain** how the place in which you live influences your view of what makes a satisfactory standard of liveability.
12. **Propose** at least three examples that show the influence of the environment on living conditions.
13. What are the advantages and disadvantages of the informal sector of the economy?
14. What are the advantages and disadvantages of informal housing?
15. **Explain** how geography skills help in projects that aim to improve liveability.

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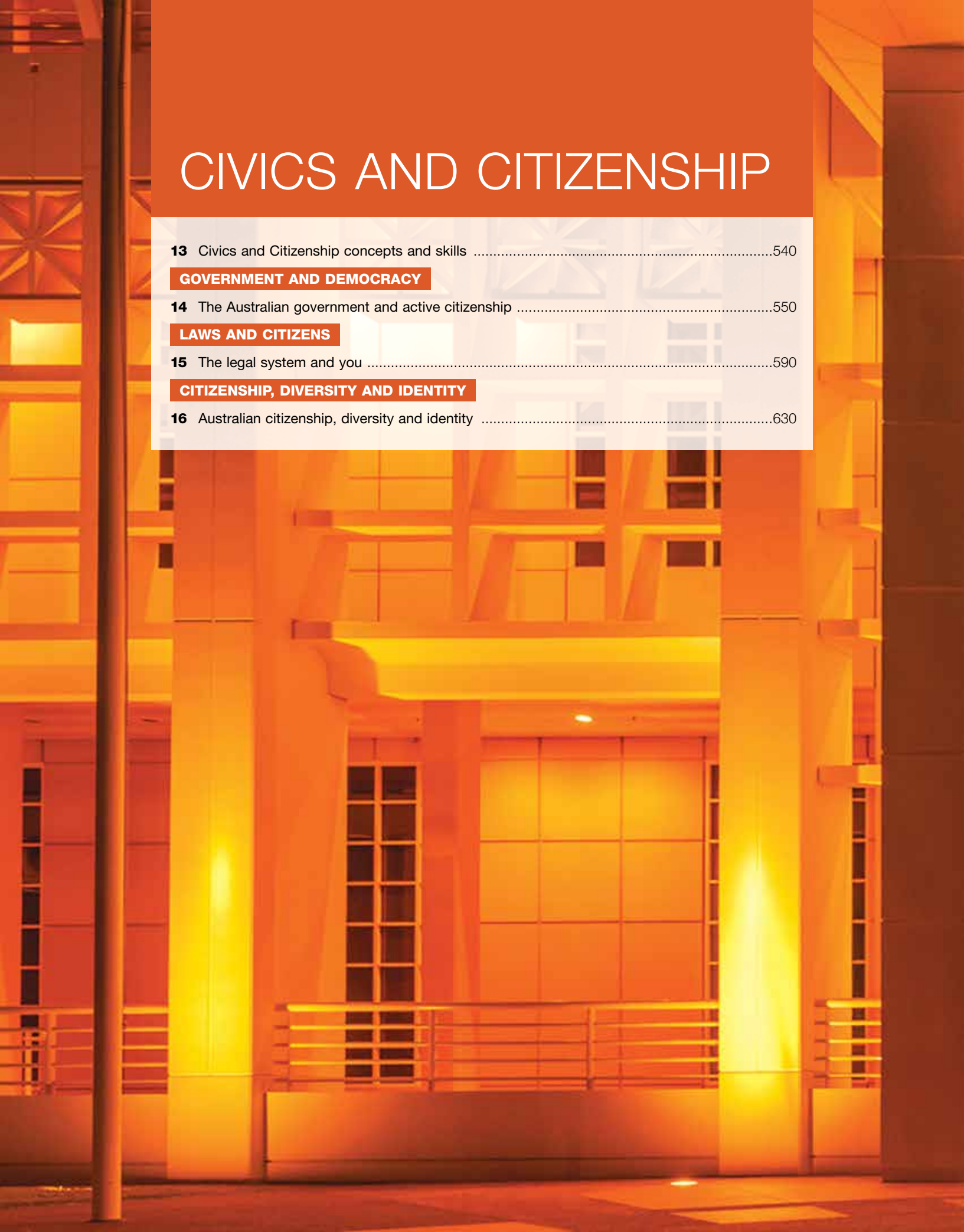

CIVICS AND CITIZENSHIP

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13 Civics and Citizenship concepts and skills

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LESSON
13.1 Overview

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Watch videos

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Answer questions and check results

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13.1.1 Introduction

As a student in Civics and Citizenship, you are developing the knowledge and skills that you will need to be an active part of our society now and into the future. In your study of Civics and Citizenship, you will cover topics around Australia's systems of government and the justice system.

This subject helps you understand how our society is run and how the legal system works. Studying Civics and Citizenship may also be necessary for your chosen future career.

FIGURE 1 Australian citizenship gives both rights and responsibilities.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10553)

Video eLesson Civics and Citizenship concepts and skills (eles-6014)

LESSON
13.2 Concepts in Civics and Citizenship

LEARNING INTENTION

By the end of this lesson you should be able to identify the five Civics and Citizenship concepts and explain why they are important.

13.2.1 Why we study Civics and Citizenship

Compared to many places in the world, Australia is generally a safe place to live. Reasons include:

- We have laws enforced by police that apply to the whole community.
- Public roads are built and maintained by local councils and state governments.
- Many essential services are provided by government, such as electricity, hospitals and the post.
- Australia has comparatively low unemployment levels compared with other countries.

Most of these factors depend on having a stable and secure government. They also depend on the people who we elect to government (parliamentarians) being accountable to the people who elected them (voters).

FIGURE 1 The Houses of Parliament in London are in an area called Westminster, home of the Westminster system of government. The Australian system of government is based on this model.

DISCUSS

Even though you may not notice it on a day-to-day basis, government decisions and laws passed by parliament affect many areas of your life. The political beliefs that influence government decisions also affect you and Australia as a whole. Being a citizen of a country means you have certain rights, but it also means you have responsibilities. It is your responsibility to care about these ideas and to engage with the society that your vote will help shape in the future. Understanding the laws of Australia can also be very important to you personally. This understanding will help you to protect your rights and keep your responsibilities.

Brainstorm as a class what your responsibilities are:

- as a member of this class
- as a member of a household or living community
- as someone who lives in a community, town or suburb
- as an Australian.

How will your rights and responsibilities change as you get older?

13.2.2 What are the main concepts in Civics and Citizenship?

Active citizenship

People enjoy certain rights and freedoms from living in a democratic society. This includes the right to vote, freedom of speech, and the right to practise their religion. However, with rights come responsibilities, such as informed voting, undertaking jury duty, and advocating for our democratic values. Active citizens are informed and participate in civic and political processes at local, state, national, regional and global levels.

Democracy

Democracy is a political system where power rests with the people. Rules govern the electoral process that is used to choose our government, and rules apply to the way our government operates. Regular elections that are free and fair enable us to remove and replace our political leaders if we believe they are no longer meeting our needs.

Global citizenship

Australia is a part of a global community, which means our civic participation is not confined to within our national borders. On the world stage, we have an obligation to ensure that at a global level we advocate for the rights and freedoms of individuals regardless of where they live. We enter into agreements to ensure that our own citizens enjoy those same rights and freedoms.

Legal systems

The presumption of innocence, the rule of law and the right to a fair trial underpin our legal system. The notion of justice means that people will be treated fairly in the eyes of the law, with equal access to what they need when they use the legal system. It does not mean that everyone who commits a crime will be punished in the same way, but rather that the punishment will be fair.

Identity and diversity

Australia is a culturally diverse society, and our sense of belonging is a blend of our differences and our shared experiences. Distinct communities are evident among First Nations Peoples of Australia, and those who have migrated to Australia in search of a new life. People are free to express their differences and culture. Shared experiences such as celebrating the ANZACS, Reconciliation Week and Mabo Day unite us and help to define our sense of community and belonging.

FIGURE 2 Parliament House in Canberra is the home of the Federal Parliament. Can you identify how the design reflects different parts of Australian society?

13.2.3 Your focus in Year 7

This year, you begin your study of these concepts with the design of our political and legal systems. In particular, you will learn about:

- the purpose and value of the Australian Constitution
- the concept of the separation of powers between the legislature, executive (the prime minister and key members of the government) and judiciary (courts and judges)
- the division of powers between state/territory and federal levels of government in Australia
- the different roles of the House of Representatives and the Senate
- how Australia's legal system aims to provide justice, and the importance of the rule of law
- how citizens participate in providing justice through their roles as witnesses and jurors
- the process for constitutional change through a referendum
- the diverse nature of the Australian community.

FIGURE 3 Extract from Abraham Lincoln's Gettysburg Address

'. . . that this nation, under God, shall have a new birth of freedom — and that government of the people, by the people, for the people, shall not perish from the earth.' Abraham Lincoln, 19 November 1863

Abraham Lincoln was President of the United States of America during the American Civil War, when a number of southern states formed the 'Confederacy' and sought to break away from the Union. Lincoln's short speech at the dedication of the Soldiers' National Cemetery in Gettysburg, Pennsylvania, has become historic for many reasons. One of these reasons was the way he described democracy, without even using the word. But what does government 'by the people' look like? Democratic systems of government are appealing for a number of reasons, including the fact that they aim to be representative. In your study of Civics and Citizenship, you will learn more about the liberal democratic system of government that Australia chose to adopt in 1901.

LESSON
13.3 Skills in Civics and Citizenship

LEARNING INTENTION

By the end of this lesson you should be able to name the five key Civics and Citizenship skills and explain why they are important.

13.3.1 What skills will you build this year?

The skills you will develop across all of your subjects fall into four main groups. While you will work on building these skills across all of your subjects this year, you will use these skills in specific ways in Civics and Citizenship in Year 7.

Questioning and researching

You will investigate the operation of Australian democracy, political and legal systems through asking questions. These questions will form the basis of your research into contemporary Australian society and its capacity to foster fairness, diversity and inclusiveness for different groups, such as First Nations Peoples of Australia and refugees.

Data will be gathered from multiple sources, such as tables and media reports (print and visual), and different perspectives will be considered and be evident in your research.

Analysis, evaluation and interpretation

Analysis involves interpreting information to identify the main features or ideas from a range of sources and perspectives. Bias and different perspectives will be considered when selecting information used to form opinions

You will draw evidence-based conclusions about the capacity of Australia's political and legal institutions to enhance and foster democratic values and civic participation. You will evaluate the effectiveness of Australian citizens in using the political and legal systems to contribute at a range of scales

FIGURE 1 People often use cartoons and memes to make points about political decisions. What point do you think this cartoonist is making?

Civic participation and decision-making

Participating in the civic process involves identifying the ways in which active and informed citizens can participate within society. You will be able to explain how our democratic political and legal systems uphold our values and where they might live up to expectations. Working within democratic processes enables us to make decisions in relation to contemporary issues and design an action plan for change in a responsible way.

Communicating

You will present and communicate ideas, perspectives and arguments based on evidence and research on contemporary civics and citizenship issues. Explanations will be clearly expressed and consider not just the issue but also the outcome of civic action, participation and engagement.

FIGURE 2 To communicate your ideas well, you need to think about who your audience is. How would you explain why it's important to vote to grandparents? Would this be different from how you would explain it to your friends?

13.3.2 SkillBuilders in this topic

In addition to these broad skills, you will learn and practise a range of essential practical skills as you study Civics and Citizenship. The SkillBuilder lessons tell you about the skill, show you the skill and let you apply the skill to the area covered.

The SkillBuilders you will use in Year 7 are:

- Notetaking
- Writing inquiry questions for research
- Writing argument paragraphs
- Writing a submission
- Debating an issue
- Creating political media

LESSON
13.4 SkillBuilder: Notetaking

online only

What is notetaking?

At year 7 level, you should be able to locate relevant and detailed information and/or data from a range of appropriate sources.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
13.5 SkillBuilder: Writing inquiry questions for research

online only

What are inquiry questions for research?

At a year 7 level, you will learn how to break a research topic or question into smaller parts that make it easier to find relevant information and/or data from a range of appropriate sources. In Civics and Citizenship, writing inquiry questions is an important part of writing detailed descriptions, explaining processes and supporting your point of view with evidence.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
13.6 SkillBuilder: Writing argument paragraphs

online only

What are argument paragraphs?

Argument paragraphs help you to present an explanation or argument in a straightforward way, and to communicate this in a written form, such as an essay. An argument paragraph discusses either a positive or a negative aspect of an issue — it presents an argument in a 'scholarly' or academic way.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
13.7 SkillBuilder: Writing a submission

online only

What is a formal submission?

Being able to communicate ideas through a variety of methods, including structured writing such as essays, is an important skill. A formal submission is a letter or email to an organisation or government body asking for a specific action to take place, or expressing an opinion on an issue.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
13.8 SkillBuilder: Debating an issue

online only

What is a debate?

A debate is a discussion about an issue. Debating an issue requires you to present an argument from a particular point of view based on well-researched evidence, and some basic rules and structures need to be followed.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
13.9 SkillBuilder: Creating political media

online only

What are political media?

Political media often present information about a person or issue from a particular point of view. This is done deliberately to highlight an issue, provide support for people or to criticise a decision or action. At a Year 7 level, students should be able to represent information and use appropriate formats to suit a particular audience and purpose.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
13.10 Review

13.10.1 Key knowledge summary

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

13.2 Concepts in Civics and Citizenship

- Active citizenship means that people participate in the political and legal systems to influence a change in their society.
- Democracy is a political system in which citizens choose the way in which they are governed.
- Global citizenship involves an understanding of Australia's place and obligations on an international level, and our preparedness to take action to influence change.
- Legal systems in Australia are underpinned by the rule of law. Justice should be fair and equitable.
- Identity and diversity in our multicultural society allow for freedom of expression and help shape our shared beliefs and sense of belonging.

13.3 Skills in Civics and Citizenship

- The skills you will develop by studying Civics and Citizenship fall into five main groups.
- Asking questions about civics and citizenship provides an insight our contemporary society and drives us to ask different questions to learn more.
- Investigating contemporary civics and citizenship issues involves locating relevant information and data from different sources to develop an understanding of political and legal issues. Different perspectives are found through analysis of research.
- Participating in civic processes identifies ways to participate actively and responsibly in our democratic society.
- Evaluating political and legal institutions involves drawing evidence-based conclusions about the capacity of Australia's political and legal institutions to foster democratic values and civic participation in a culturally diverse population.
- Communicating means selecting appropriate methods to share your ideas, perspective and arguments on contemporary civics and citizenship issues.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10553)
Reflection (ewbk-10554)

Hey teachers! Create custom assignments for this topic

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LESSON
13.4 SkillBuilder: Notetaking

LEARNING INTENTION

By the end of this SkillBuilder you should be able to create organised notes.

At a year 7 level, you should be able to locate relevant and detailed information and/or data from a range of appropriate sources.

13.4.1 Tell me

Different methods are available for taking notes during class, organising these notes, and reviewing them later. In this lesson, we use a simplified version of Cornell Notetaking to help you remember the material that has been covered in class, and revise material that you have learned previously. The same method can be used to take notes from your textbook or an online source.

Do you remember what you had for breakfast on Monday five weeks ago? It is unlikely that you would unless there was a specific reason to, such as it having been your birthday, or you burnt the toast and set smoke alarms off!

Our brain usually remembers information if it is significant for some reason (that's why significant events are described as memorable), or if the brain has gone over the information multiple times. Quoting lines from a movie is difficult if you have seen it only once. But if you see the same movie multiple times, tell friends about your favourite part, and repeat quotes from the movie, you will probably remember some quotable lines!

Taking notes is similar — in that we need to USE and go over information for our brain to RETAIN the information. In this way, the information can be 'transferred' from the short-term to long-term memory. Taking notes by hand helps you retain information, whether you are listening to a teacher, watching a documentary, reading a textbook or doing research on a website. The Cornell Notetaking method was developed at Cornell University by Professor Walter Pauk in the 1950s. Pauk's notetaking method provides a structure for notetaking that means the notes can also be used for revision or research purposes. Pauk devised an approach to notetaking called the '5 Rs' — record, reduce, recite, reflect, review. This is shown in **FIGURE 1**.

13.4.2 Show me

Page layout

The blank lined page is divided into four sections:

- top
- left column
- right column
- bottom section.

Top

Allow enough space to record the title of the book/name of website/textbook chapter, date, topic heading etc.

Right-hand column (approximately 70 per cent of the page width)

Most information is recorded in this column in dot-point form. This means you can record information quicker than writing full sentences.

FIGURE 1 The 5 Rs of notetaking

Original content → Notetaking → Your words	**Record**	During the lesson, write down the key facts legibly.	
	Reduce	Make a summary of the key facts and ideas using cue words and short bullet points.	
	Recite	Without looking at your notes of the text, write the information in your own words.	
	Reflect	Develop your own opinions and ideas. Make links to other topics you have learned. Raise questions and record original ideas.	
	Review	Before studying new material, take ten minutes to review your old notes. Skim over the main ideas and details.	

Left-hand column (approximately 30 per cent of the page width)

This column is used for the key ideas that are in the notes. To use the system for revision, key questions about the material in the notes should be written in this column.

Bottom section (approximately eight lines from the bottom, full width of the page)

The bottom section of the page is used for writing a *summary* of the information in the right-hand column above. Generally, this is done a short while after the session (such as in the evening after your class that day).

The Cornell Notetaking format can also be used for research notetaking. Record the details of the information source at the top of the page. Record relevant information in dot-point form in the right column. In the left column, note key ideas, people or dates that help link information from different sources (and therefore different pages of notes).

FIGURE 2 How to set up your page for the Cornell Notetaking method

Cornell notes

Class: _____

Date: _____

Cue column	**Note-taking column**
-Key words	-Key ideas
	-Important dates, people, places
-Key questions	-Diagrams and pictures
	-Formulas
	-Repeated (stressed) information

Summary

-Summary of your notes in your own words

13.4.3 Let me do it

13.4 ACTIVITY

Use the information and tips in this SkillBuilder to practise writing notes using the Cornell method.

Be sure to rule up your page correctly, so that you can follow the structure. Choose any section of this textbook and write out Cornell notes for that chapter, following the steps above.

LESSON
13.5 SkillBuilder: Writing inquiry questions for research

LEARNING INTENTION

By the end of this SkillBuilder you should be able to write inquiry questions for your research in Civics and Citizenship.

At a year 7 level, you will learn how to break a research topic or question into smaller parts that make it easier to find relevant information and/or data from a range of appropriate sources. In Civics and Citizenship, writing inquiry questions is an important part of writing detailed descriptions, explaining processes and supporting your point of view with evidence.

13.5.1 Tell me

Research is investigating a particular topic or event, and collecting information to help you understand it in detail. To do this investigation well, it is important to have some questions to guide your investigation (inquiry). Simply searching key terms online will return a lot of information, and not all of it will be related to what you have been asked to research, so inquiry questions help you to narrow this information down to things that are directly relevant.

In Civics and Citizenship this year, you will use this skill to start investigating topics from sources such as this textbook and websites. Use the format you used in the notetaking SkillBuilder (lesson 13.4). Rule up a page for each of your subheadings.

In later years, you will learn how to create inquiry questions for broader research tasks.

13.5.2 Show me

Imagine you have been asked to investigate how the Australian Constitution was written. You need to plan your investigation and break it into some clear steps. The steps can be summarised like this:

Step 1

Your first step is to clearly identify the essential *key question*. This could be expressed as:

'What steps were taken to develop and pass the Australian Constitution?'

Step 2

Once you understand the key question you are being asked to answer, break this question down into its parts.

- Look for the main topic idea.
- Look for the information you are being asked to discuss about that topic.

'What steps were taken to create and pass the Australian Constitution?'

- **Main topic idea:** Australian Constitution
- **Information to find:**
  Steps to create
  - Where did the idea come from?
  - What were the different views expressed?
  - How did they negotiate?
  - How did they come to an agreement?

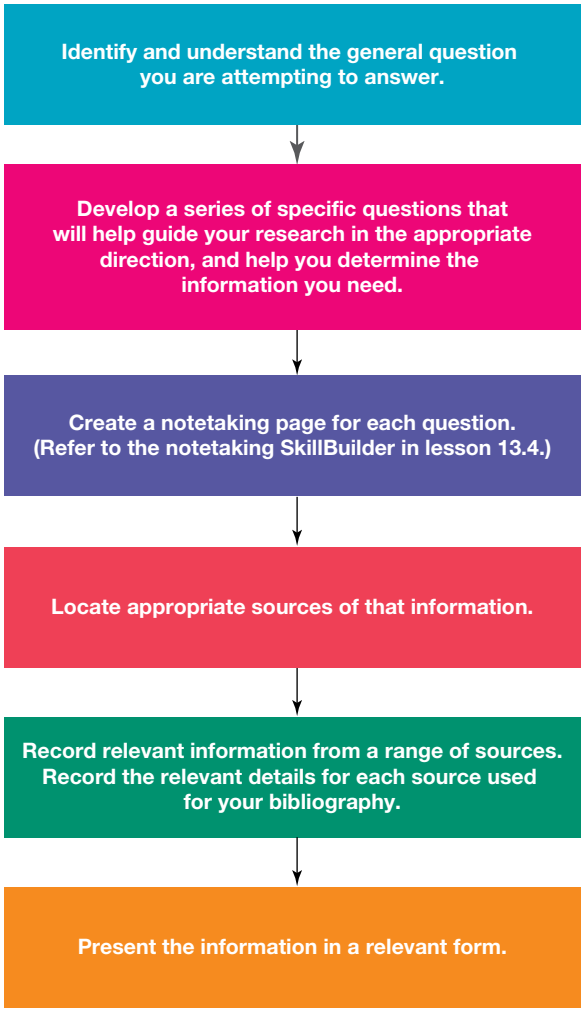
  Steps to pass
  - Who wrote the document?
  - How did they make it official?

Step 3

It is now necessary to break this down into a series of more specific *inquiry* questions. Brainstorming using the 5-W, 1 H format will also help with this. These inquiry questions could include:

1. What were some reasons for the Australian colonies wanting to unite?
2. Who or what started the process? (Was there an individual, a group of people or a significant event that began the process?)
3. How or why did each of the colonial governments become interested in pursuing the idea of federation?
4. What organisations were set up to support the idea?
5. Who were the founding fathers? (What were their names? Which colonies did they represent?)
6. What specific steps did the founding fathers use to develop a constitution?
7. When and where did they meet to carry out these processes?
8. Which other countries did the founding fathers look at for ideas?
9. What important principles did they include in the Constitution?
10. Did they have the complete support of all colonies? Were some colonies harder to convince than others? How were they convinced?
11. What were the final legal processes that were necessary for the Constitution to come into effect?

FIGURE 1 The general process of researching a topic



Step 4

Road-test your inquiry questions.

- Can you find some information about each question in your textbook or class notes? They may not answer every question in detail but if there is some mention, you are likely on the right track.
- Type your questions, one at a time, into a search engine. Are there plenty of results? Do they look like they are from reliable, accurate sources?
- As you research each question, record your notes on the appropriate notetaking page. Include the information you will need to create your bibliography at the same time.

13.5.3 Let me do it

13.5 ACTIVITY

Practise the skill of using inquiry questions for **research** by selecting one of the following research topics and working through steps 1, 2 and 3.

Research topics:
- **Investigate** the 1999 Referendum
- How do Australian citizens participate in the justice process?

To do this complete a step-by-step **Worksheet** from your online Resources.

LESSON
13.6 SkillBuilder: Writing argument paragraphs

LEARNING INTENTION

By the end of this SkillBuilder you should be able to write argument paragraphs.

Year 7 students are expected to be able to present an explanation or argument, in a straightforward way, and to communicate this in a written form, such as an essay.

13.6.1 Tell me

Many times in your academic career at school and beyond, you will be asked to write essays. An effective essay has several characteristics:
- it clearly explains the background of an issue
- it contains evidence and examples of the issue
- it discusses the positives and negatives of an issue.

This last feature is best demonstrated through argument paragraphs. An argument paragraph is not what we might typically think of as an argument, like you might have with a friend. An argument paragraph discusses either a positive or a negative aspect of an issue — it presents an argument in a 'scholarly' or academic way.

WHAT IF I HAVEN'T PLANNED MY PARAGRAPHS?

This stage of writing can begin only after you have planned your whole essay or discussion. If you don't have a plan for the main point in each paragraph, and how your writing will be structured overall, you are not ready to write your paragraphs yet!

13.6.2 Show me

Step 1

The first step in creating a strong argument paragraph is understanding the structure that is expected of this kind of argument.

An argument paragraph is a section of an essay that presents a point of view. It begins with a topic sentence. The paragraph will then explain the point of view and support it with evidence. Finally, a linking sentence will draw the reader's attention back to the key questions being discussed. In this way, an argument paragraph follows the TEEL structure.

Step 2

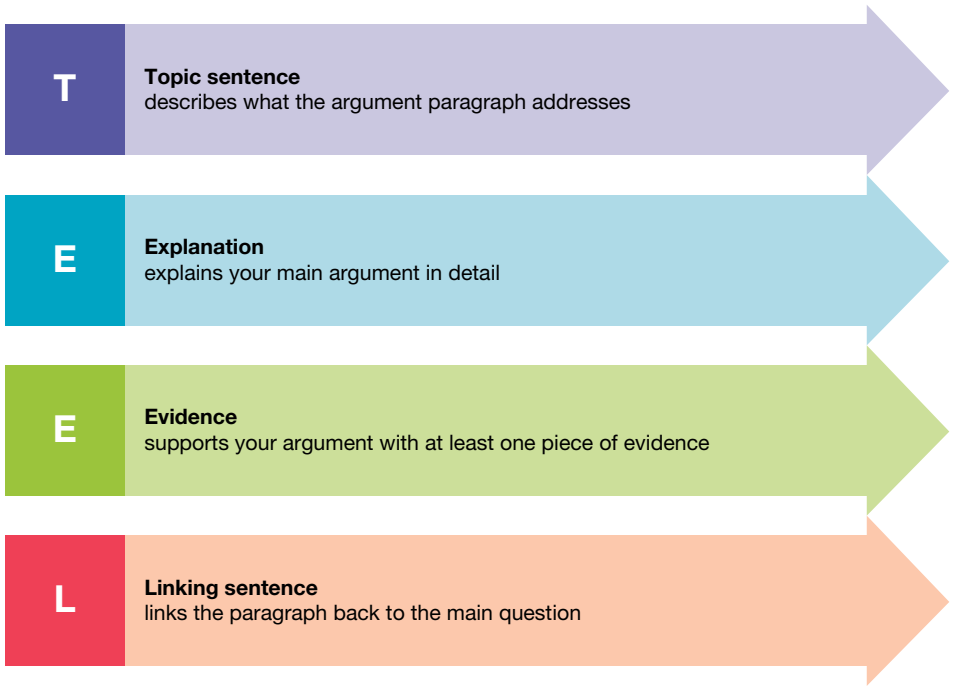
Writing argument paragraphs in an essay is straightforward if you think about and use the TEEL structure. Let's see how to do it with the following example.

After studying justice, the presumption of innocence, and the importance of a fair trial, imagine your teacher has given you the following news article 'Juries need to be told how they're allowed to use the internet to make sure fair trials'.

Your teacher then asks you to write an essay focusing on the following statement:

'*It is important that court cases in Australia are open and transparent to the public; therefore, social media should be allowed in courts.*'

FIGURE 1 Using the TEEL structure will help you organise your argument paragraph.



JURIES NEED TO BE TOLD HOW THEY'RE ALLOWED TO USE THE INTERNET TO ENSURE FAIR TRIALS

Juries are supposed to consider evidence without influence or bias from the outside world. However, the widespread access to and use of the internet and social media threatens to undermine this, with significant consequences for our criminal justice system and those within it.

Given courts cannot effectively police smartphone use they must adapt to it. This week the Tasmania Law Reform Institute completed its year long inquiry into courts and the information age, and has recommendations as to how they can adapt.

The right to a fair and unbiased trial by your peers

An accused person's right to a fair trial is the most fundamental principle of our criminal justice system. It is a phrase that describes a system that affords an accused person many protections. That system relies on jurors being impartial and returning a verdict that is based solely on the evidence that is presented within the courtroom.

FIRURE 2 What jurors see online could affect their choice in the courtroom.

In the past this was readily easy to achieve. Juror communications during trial hours and even after them could be controlled.

…

The shift in the way people access news, information and communications in the modern age has changed this reality.

Almost every Australian has access to the internet via their smartphone or other devices, social media use is habitual among much of our population, and the internet is a ubiquitous source of information for most people.

Jurors are no different — in fact, they represent the wider Australian community these statistics describe. While jurors' smartphones are removed from them during trial, they cannot be before or after the trial period, nor at the beginning or end of the day. As a result jurors may intentionally, or simply by habit, seek out or communicate information about the trial.

Use and misuse of social media

Between 2018 and 2020, the Tasmanian Law Reform Institute conducted an inquiry into juror misuse of the internet and social media during trials. The institute concluded there is likely to be a high, but unquantifiable and undetectable, level of misuse.

However, there is evidence across Australian jurisdictions that jurors have used their internet-connected devices to:

- research legal terms or concepts or other information relevant to the trial. A West Australian juror in a drug-related trial obtained information online about methylamphetamine production
- research the accused, witnesses, victims, lawyers or the judge. Two South Australian jurors sitting in a blackmail trial against multiple defendants conducted online searches about the accused which disclosed past outlaw motorcycle gang affiliations
- communicate with people involved in the trial. Multiple New South Wales jurors on a long-running fraud trial became Facebook friends, sharing posts such as a digitally altered photo of one of the jurors wearing a judge's wig

…

Misuse is under-reported. In those few instances where reports are made, fellow jurors, rather than court officers, tend to be the ones who raise the issue. Indeed, it is an important part of their role.

…

Educate, inform and encourage self-regulation

The law reform institute ultimately concluded it is impossible for, and beyond the capacity of courts to completely police juror internet use. It has thus recommended not reforming the law, but rather strengthening and standardising juror education and directions. These recommendations are divided across two stages of jury selection, as part of an overall strategy:

- pre-selection: prospective jurors should receive improved training and information about the role of the juror and the risks of internet use
- post-selection: once a jury has been selected, judges need to explain to jurors what dangers arise from using the internet to access and publish on social media, seeking information about the case, parties, court officers, lawyers, and self-conducted research into legal concepts or sentences. The report has recommended the court adopt minimum standard directions, but also have the flexibility to make specific directions relevant to any particular trial.

The report recommended certain current practices and laws should remain unchanged, including:

- removing phones from jurors while they are in court (even though the effect is limited it avoids juror distraction)
- leaving contempt (punishment) laws in place for those jurors who intentionally ignore court training and directions. That might include monetary fines and, in severe cases, imprisonment.

This process is aimed at encouraging self-regulation among jurors, by educating them how to curtail their internet use and why it's so important.

Source: The Conversation Media Group Ltd. Jemma Holt and Brendan Gogarty. 'Juries need to be told how they're allowed to use the internet to ensure fair trials'. 22 January 2020. Retrieved from https://theconversation.com/juries-need-to-be-told-how-theyre-allowed-to-use-the-internet-to-ensure-fair-trials-130127 [Online Resources].

Step 3

Plan your paragraph, using the TEEL structure.

T	What is the argument I am making in this paragraph?	Rules of court cases have to be followed.
E	What is the reason I believe this argument is true or important?	The rules are important for a trial to be fair: the current rules are to give everyone a fair chance to present their evidence. Jurors seeing information on social media might change their view of what they see and hear in court.
E	What evidence can I use to back up my argument?	Rules: each side presents their case and evidence to jurors BUT: when there is extra information they may not be able to weigh up the cases fairly (e.g. researching previous convictions that are not related)
L	How does this link to the main topic?	Social media use in courts should be controlled.

The following paragraph is an example of the kind of paragraph that you would find in this essay. The paragraph was written using the TEEL structure. The different parts of the paragraph have been colour-coded to make it easier to see TEEL in action (**T**opic**, E**xplanation**, E**vidence**, L**ink).

FIGURE 3 Example of an argument paragraph written using the TEEL structure

13.6.3 Let me do it

13.6 ACTIVITY

Use the information and tips in this SkillBuilder to practise writing your own argument paragraphs. Be sure to use the TEEL structure as it will help you logically organise your thoughts and arguments.

Here are some essay topics you can use to form the basis of your argument topics. To do this, complete a step-by-step **Worksheet** from your online Resources.

You will need to do some **research** before writing your practice paragraphs.

1. Witnesses should be allowed to provide written, instead of oral, testimony.
2. Juries are unqualified to make judgements of law.
3. 'Presumption of innocence' protects guilty people more than those wrongly accused.
4. Criminal trials should be held as soon as there is enough evidence to prosecute someone.

LESSON
13.7 SkillBuilder: Writing a submission

LEARNING INTENTION

By the end of this SkillBuilder you should be able to write a simple submission.

Year 7 students are expected to be able to communicate ideas through a variety of methods, including structured writing, such as essays. Another application of this skill is in the form of a formal submission to an organisation or government body.

13.7.1 Tell me

A formal submission is a letter or email to an organisation or government body asking for a specific action to take place, or expressing an opinion on an issue. Submissions from the public are often called for by parliamentary committees investigating community issues, or current bills going through parliament. Any Australian citizen or resident may write a formal submission to government. Formal submissions are also used to request permission from government agencies (for example, permission to hold a community event).

A submission is similar to an essay in that it should have a clear structure and developed ideas, but it is different because it often asks for the recipient to take action, and may be more personal (often written in the first person, 'I…').

The purpose of learning how to write a submission is to apply written communication skills in 'real-world' scenarios, and to enable you to be an active participant within our democratic society.

13.7.2 Show me

Your submission may be one of hundreds of letters sent to that government department or parliamentary committee; therefore, it is important that is it clear and concise (short).

Follow this process:

1. Research or investigate the issue to clearly identify specific problems that need addressing, and possible solutions that may solve those problems.
2. Research and identify the people or organisations that have responsibility for the issue (or may have influence in addressing the issue). Monitor public information channels to find out if there are opportunities for public submissions, such as Parliamentary Committees and Inquiries.

3. Write your submission. You may wish to include relevant evidence to support your position, such as research, photographs, results of a survey, or a signed petition.
4. Send your submission.

Step 1

Identify the specific issue/s you wish to have addressed.

> Max lives near an intersection with a new roundabout. Max has seen several cars and trucks hit the roundabout in recent weeks.
>
> Specific issue: Traffic safety with the new roundabout

Step 2

Research or investigate the issue to clearly identify specific problems that need addressing, and possible solutions that may solve those problems.

> Max was wondering what was causing the vehicles to hit the roundabout, so he had a few questions: Were people driving dangerously? Was the roundabout clearly visible? Was the road surface slippery? Max drove through the intersection himself, and walked on the footpath around the roundabout. Max noticed that it was not easy to see the roundabout from one direction (driving from the north), and it was not lit at night.
>
> Specific problems: The roundabout can't be seen easily from the north, and it is not lit at night.

Step 3

Research and identify the people or organisations that have responsibility for the issue (or may have influence in addressing the issue). Monitor public information channels to find out if there are opportunities for public submissions, such as Parliamentary Committees and Inquiries.

> Max wasn't sure which level of government was responsible for the road, so he first rang the government department responsible for roads at the state level. The person he spoke to was able to tell Max that the road was maintained by his local government (council).
>
> Responsible organisation: Local council

Step 4

Write your submission.

The following tips are a useful guide to writing your submission.

- Clearly address the issue (or terms of reference for a parliamentary committee).
- Make sure your points are relevant and highlight your own perspective.
- Begin with a short introduction about yourself or the organisation you represent.
- Emphasise the key points so that they are clear.
- Outline how problems can be addressed.
- Include only documents that directly relate to your key points.
- Include only information you would be happy to see published on the internet (if writing to a parliamentary committee).

WHAT IF I CAN'T FIND A SPECIFIC PERSON TO WRITE TO?

In this example, if Max couldn't find out who in his local government the most appropriate person was, he could address the submission to 'whom it may concern'. In this case, include a very brief summary of the issue at the start of a submission letter. If you are emailing, you should state the issue in the 'subject' line of the email.

Max could write the following submission:

Dear Mr Jones,

I write to express concern with the safety of the new roundabout at the intersection of Tom Road and Jones Street in the suburb of Highwater.

I live on Tom Road in Highwater, close to the intersection of concern. I do acknowledge that roundabouts are generally safer than other forms of controlled intersection and I congratulate Council for selecting this method of traffic control.

However, the design of the roundabout, and lack of visual markers for traffic approaching the intersection from the north on Jones Street, are concerning. Although the roundabout is new, there are already considerable tyre and scrape marks from vehicles going over the island kerbing, suggesting that many drivers have not seen the roundabout until it was too late to stop.

Specific problems with the roundabout are:
1. the roundabout is around a bend, so drivers don't see it until they are at the roundabout
2. there is no street lighting
3. there is only one sign from the north on Jones Street.

I believe that the roundabout could be made much safer with the following suggestions:
1. Additional street signs warning of the roundabout on all roads, but especially on Jones Street to the north of the intersection.
2. That the street lighting on Tom Road be extended so that the roundabout at Jones Street is lit at night.
3. Reflective markers on the road kerbing.

I have included photographs of the roundabout and the approach from the north on Jones Street as evidence of these issues.

I look forward to hearing from you with regards to this manner.

Kind regards,

Max Safety

Step 5

Send your submission.

Members of parliament and local councils generally have websites and social media accounts that provide contact details. These details usually include email and postal addresses.

13.7.3 Let me do it

13.7 ACTIVITY

Practise the skill of writing a formal submission by **selecting** one of the following examples and working through the steps. If it is an issue that genuinely concerns you, then you may choose to send the submission to the relevant organisation.

Examples follow for different levels of issue.

That your school:
- establishes an eSports competition
- modifies the school uniform
- implements a free breakfast program for students
- has the library open after hours for students.

That your local government:

- builds a skate park in public open space
- has regular street-sweeping, especially in bike lanes
- provides bins for 'Green Waste' as well as general rubbish.

To do this, complete a step-by-step **Worksheet** from your online Resources.

on Resources

Weblinks Making a submission (Parliament of NSW)
Making a submission to a Senate Committee (Australian Parliament House)

LESSON
13.8 SkillBuilder: Debating an issue

LEARNING INTENTION

By the end of this SkillBuilder you should be able to follow the basic rules and structures of debating an issue.

Debating an issue requires students to present an argument from a particular point of view based on well-researched evidence.

FIGURE 1 Being a confident speaker can help you to persuade your audience. What signs are there in this image that the student presenting is a confident speaker?

13.8.1 Tell me

A debate is a discussion about an issue. The issue is presented as a statement — for example, 'Using a jury is the best way to make sure a trial is fair'. Participants in the debate take it in turns to put forward arguments for and against the statement.

Unlike an argument you might have at home, a debate follows strict rules of conduct.

Why is debating useful in Civics and Citizenship?

A debate requires the participants to carefully investigate an issue and critically analyse both sides of the question. Participating in a debate can develop research skills. It can also help individuals gain confidence in public speaking. The skills used in debating, including researching and analysing information, are considered especially useful in the legal profession. As such, debating is used by lawyers, and by people involved in politics, such as members of parliament.

Conduct of a debate

The members of each team take it in turn to present their arguments in three to four minutes. The affirmative team's first speaker starts the debate. **FIGURE 2** illustrates how a formal debate is conducted.

FIGURE 2 How to conduct a debate

THE RULES AND STRUCTURE OF A DEBATE

Affirmative team

The first speaker should:
1. greet the audience
2. state which team he or she is representing and the issue
3. introduce the other team members, describe their roles and the team's view
4. argue the team's case and state how the second speaker will build on this case.

The second speaker should:
1. explain how his or her speech will build on the affirmative team's view
2. argue against (rebut) the first speaker from the negative team
3. add new examples to support the affirmative team's view.

The third speaker should:
1. argue against (rebut) the negative team's case
2. summarise the main arguments of the debate
3. restate the affirmative view, explaining why it is the stronger case
4. avoid introducing new arguments.

Negative team

The first speaker should:
1. introduce the team members, describe their roles and the team's view
2. state why the negative team does not accept the affirmative team's view of the topic
3. argue against (rebut) the points made by the first speaker of the affirmative team
4. state how the second negative speaker will build on the team's case.

The second speaker should:
1. explain how his or her speech will build on the negative team's view
2. argue against (rebut) the two previous speakers from the affirmative team
3. add new examples to support the negative team's view.

The third speaker should:
1. argue against (rebut) the affirmative team's case
2. summarise the main arguments of the debate
3. restate the negative view, explaining why it is the stronger case
4. avoid introducing any new material.

Elements of a good debate

A good debate:
- has members from each team taking turns to present their cases
- starts with the first speakers from each team introducing their teams and their team's view
- continues with the second speakers rebutting the previous speakers and adding new examples to support their team's view
- finishes with both third speakers rebutting the other team's case, summarising the main arguments and restating their team's view
- has arguments that take only three to four minutes.

FIGURE 3 Political debates are often shown on television before an election. Would you be more likely to vote for a party with a leader who sounds impressive in a debate?

13.8.2 Show me

A formal debate follows a set of rules. In a debating contest there are two teams of three speakers, each of whom plays a defined role. One team argues in favour of the topic (the affirmative team) and the other team argues against the topic (the negative team). You can prepare for a debate by following the steps below.

Step 1

Form a team of three people. Find out whether your team is to debate in favour of or against the topic. As a team, examine the topic carefully and discuss what you think it is about. You may need to use a dictionary to find a definition of key words contained in the topic statement.

Step 2

Work out what arguments support your team's case. List them in order of importance.

Step 3

Work out what arguments do not support your team's case. This will help you to anticipate what your opponents will say.

Step 4

Carry out research to help fully develop your arguments. As part of your research, consider interviewing other students and the adults you know to learn their attitudes to the issue.

Step 5

1. Divide the arguments you have collected among the members of the team.
2. Decide which team members will be the first, second and third speakers. Agree on what each member will say.

Step 6

Many people find public speaking very uncomfortable. Even if you don't get nervous when you speak in front of other people, you can always learn how to improve your performance by evaluating the debate when it is over. You can also learn from evaluating performances other teams.

Use the following to evaluate a debating performance:

1. Was the team's viewpoint clearly outlined?
2. Were the speakers' statements well researched?
3. Did the speakers give clear reasons to support their view?
4. Were examples used to support arguments?
5. Were responses to arguments made by the other team given effectively?
6. Were the concluding statements convincing?
7. Did speakers speak loud enough to be heard?
8. Did speakers make good eye contact with the audience?
9. Did speakers speak at a good pace (not too fast or too slow)?
10. Was the overall performance of the team effective?

13.8.3 Let me do it

13.8 ACTIVITY

Work with a partner to complete the following activity and practise this skill.

Step 1	**Select** one of the following topics: **a.** 'Our legal system should not presume that an accused person is innocent.' **b.** 'Judges should participate in finding evidence and questioning witnesses in criminal trials.' **c.** 'Legal aid should be provided to all people accused of a crime.'
Step 2	Work on your own to compile a list of as many arguments as you can for each side of the topic.
Step 3	Convince your partner in two minutes that you support the topic.
Step 4	Your partner has two minutes to question you about the topic.
Step 5	Reverse the roles in steps 3 and 4 above.

Class debate

As a class, decide on the topic to be debated. Follow the steps given above to prepare for and conduct the debate.

LESSON
13.9 SkillBuilder: Creating political media

LEARNING INTENTION

By the end of this SkillBuilder you should be able to create a cartoon, meme or advertisement to express a point of view about a political issue.

At a Year 7 level, students should be able to represent information and use appropriate formats to suit a particular audience and purpose. This involves an understanding of the audience, and modifying the presentation of information to suit that audience.

13.9.1 Tell me

Political media can take many forms.

- Political cartoons use pictures, words and humour to represent ideas about a person or issue from a point of view.
- Political parties use advertisements to highlight the positive aspects of one party, or the negative aspects of another.
- Political memes are like cartoons — they use humour to highlight an aspect of a person or issue, using a reference that the intended audience understands.

Political media often present information about a person or issue from a particular point of view. This is done deliberately to highlight an issue, provide support for people or to criticise a decision or action.

Part of identifying and using bias relates to **objective** and **subjective** information.

- Objective information is where data or events are presented without **emotive words** or opinion. For example, describing a car accident as a 'traffic collision' is objective.
- Subjective information is where information is presented based on opinion or bias. For example, describing the same car accident as 'a horror smash' is subjective. This is because 'horror smash' is a very emotive phrase that has been used to get a strong reaction from the reader.

13.9.2 Show me

Step 1

The first step is to understand how this form of communication works. Creating political media can be tricky — it requires understanding of the person or issues, and the intended audience, as well as being creative. As stated above, cartoons and political advertisements will generally present one viewpoint of an issue rather than a broad discussion of all points of view. Presenting only one viewpoint is not necessarily a problem, and that is often the purpose of political media.

When creating political media cartoons, start by understanding the issues and people involved. If you want to create a meme, you need to make sure that the intended audience is familiar with the reference image, or that it speaks for itself.

objective objective information is where data or events are presented without emotive words or opinion

subjective subjective information is where information is presented based on opinion or bias

emotive words words that create a strong emotional reaction

Step 2

Work out the perspective and angle you want to present. Is the issue something you feel should be celebrated or criticised? Do you want to make the reader angry or sad, or to take a certain viewpoint?

Think about how the perspective can be presented, both visually and in words. Think about the colours, facial expressions of the people, symbols and style that will give clues to the audience about the message and perspective. The language used by you

as the author can be direct or subtle, because some terminology is not as obvious or emotive as others.

Case study: COVIDSafe

Many examples exist of political cartoons, advertisements and memes. This case study shows how an issue can become the focus of a political cartoon.

In early 2020, Australia was dealing with the pandemic of a new Coronavirus, first identified in 2019. As such, the shortened name for this virus was 'COVID-19'. One method of identifying people who may have had the virus was called 'contact tracing'. If someone was confirmed to have the virus, a team of people would try to work out who that infected person had had significant contact with in the previous 14 days. This usually involved a lot of phone calls. To simplify this process, and identify potential new infections sooner, some countries (such as Singapore) developed phone apps to help determine if someone had come into contact with someone else who was COVID-19 positive.

In April 2020, the Australian government introduced its version of such an app — called COVIDSafe. Prior to this, there had been concerns raised by different sections of the Australian community about the safety of data held by the Australian government. Australian data retention laws require phone companies and internet service providers to retain specific user data for two years. Because of these concerns, some people were worried that the COVIDSafe app could send private data to the government.

FIGURE 1 The COVIDSafe app

What COVIDSafe is for

The COVIDSafe app helps find close contacts of COVID-19 cases. The app helps state and territory health officials to quickly contact people who may have been exposed to COVID-19.

The COVIDSafe app speeds up the current manual process of finding people who have been in close contact with someone with COVID-19. This means you'll be contacted more quickly if you are at risk. This reduces the chances of you passing on the virus to your family, friends and other people in the community.

State and territory health officials can only access app information if someone tests positive and agrees to the information in their phone being uploaded. The health officials can only use the app information to help alert those who may need to quarantine or get tested.

The COVIDSafe app is the only contact trace app approved by the Australian Government.

How COVIDSafe works

When you download the app you provide your name, mobile number, and postcode and select your age range (see Privacy). You will receive a confirmation text message to complete installation. The system then creates a unique encrypted reference code just for you.

COVIDSafe recognises other devices with the COVIDSafe app installed and Bluetooth® enabled. When the app recognises another user, it notes the date, time, distance and duration of the contact and the other user's reference code. The COVIDSafe app does not collect your location.

To be effective, you should have the COVIDSafe app running as you go about your daily business and come into contact with people. Users will receive daily notifications to ensure the COVIDSafe app is running.

The information is encrypted and that encrypted identifier is stored securely on your phone. Not even you can access it. The contact information stored in people's mobiles is deleted on a 21-day rolling cycle. This period takes into account the COVID-19 incubation period and the time it takes to get tested. For more, see Privacy.

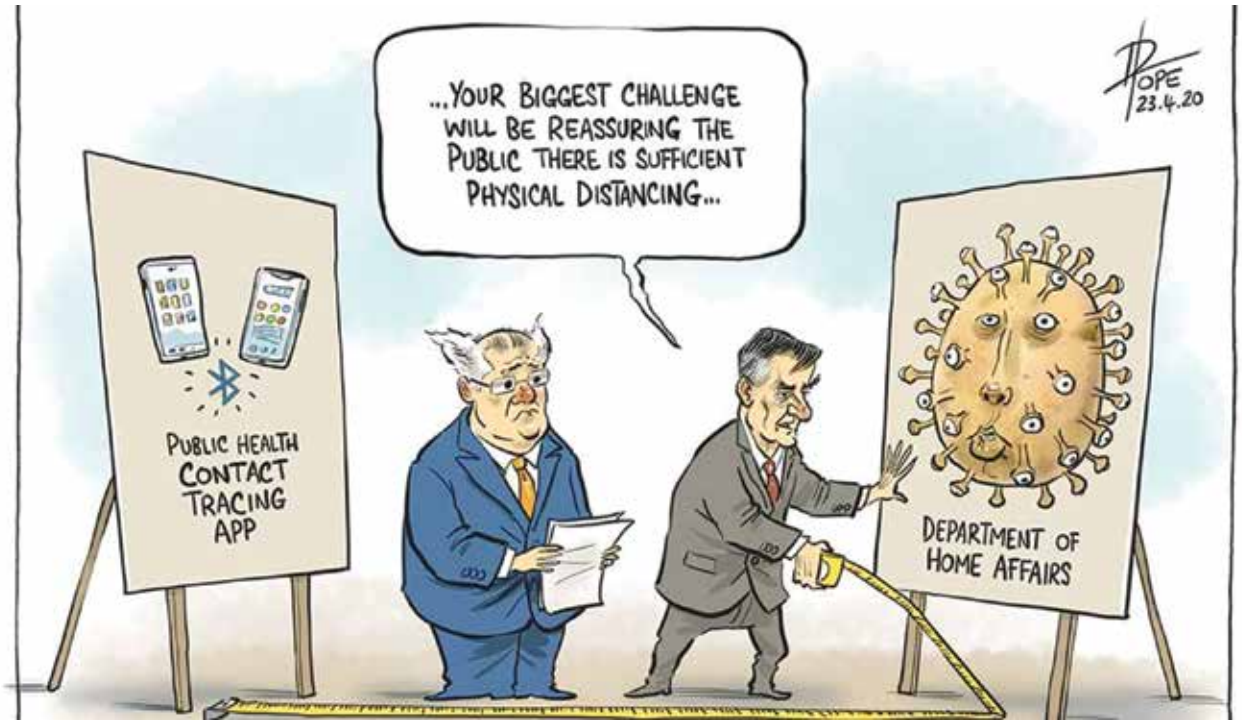
These concerns meant the federal government took great steps to reassure the Australian public that user data could only be accessed by those people who needed to conduct 'contact tracing' for potential COVID-19 infections, and that the data would be deleted in a short period of time.

FIGURE 1 is a screenshot of the COVIDSafe app. You can see that there is information to explain to the user what the app is for and how the app works. This aims to reassure users that the app is safe.

Some cartoonists addressed this issue of people being cautious about giving the government more information, and one of these cartoons was created by cartoonist David Pope (**FIGURE 2**). Here the cartoon refers to public concern about the Department of Home Affairs having access to information about people that might be used for other purposes.

The cartoon shows a likeness of Home Affairs Minister Peter Dutton, who has been drawn as the coronavirus. The Chief Medical Officer for the Australian Government, Brendan Murphy, is shown with the measuring tape, explaining to the Prime Minister, Scott Morrison. The measuring tape and the text in the speech bubble are a play on the concept of social distancing. You should note that the depictions of the three people are a recognisable likeness of each person.

FIGURE 2 Cartoonist David Pope's take on COVIDSafe privacy issues



Step 3

Draw drafts of your advertisement, cartoon or meme. (Political cartoonists and advertising companies create many amazing drafts that never get published!) When you have finished a draft, test it with friends or family members (or someone from the audience you want to appreciate your work) to see if they can identify:

- the issue
- the people or situation
- the main message.

The purpose of creating this media is to get your point across, so keep on drafting until your test audience understands. Then, create the final version.

13.9.3 Let me do it

13.9 ACTIVITY

Create a political advertisement, cartoon or meme about an issue that is current in state or federal politics. This means that you need to start by watching or reading the news to be aware of current issues. You should note the language and bias that are used to make the audience feel a certain way about the issue.

Key terms

emotive words words that create a strong emotional reaction
objective objective information is where data or events are presented without emotive words or opinion
subjective subjective information is where information is presented based on opinion or bias

14 The Australian government and active citizenship

LESSON SEQUENCE

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LESSON
14.1 Overview

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How does Australia's democracy function for all citizens, and how can citizens get involved?

14.1.1 Democratic Australia

Parliament is the main law-making body in Australia. Parliaments are elected to create laws that represent the wishes and values of their citizens. We describe our system of government as a **democracy** because the people vote to decide who sits in the parliament to make our laws for us. State parliaments in Australia were mostly established in the six former colonies from the 1850s onwards, while the federal parliament came into being with federation in 1901.

Many features of our parliamentary democracy have been adapted from the British system of government, known as the **Westminster system**. As a group of former British colonies, we adopted many features of the Westminster system, including having two houses of parliament at both the federal level and in most of the states.

democracy a political system according to which citizens choose the way in which they are governed, and elect representatives to make laws on their behalf

Westminster system the parliamentary system of Great Britain, which has been copied and adapted by many other countries including Australia; called that because the British Parliament meets in a building called the Palace of Westminster

FIGURE 1 Australian Parliament House in Canberra

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10555)

Video eLesson What is parliament? (eles-2077)

LESSON
14.2 What is the role and structure of the Commonwealth Parliament?

LEARNING INTENTION

By the end of this lesson you should be able to describe the different parts of the Commonwealth Parliament and explain the different roles of the Commonwealth government.

TUNE IN

Australia is a constitutional monarchy. This means that the monarch in Britain, currently King Charles III, is also Australia's head of state.

1. What is your opinion on the British monarch also serving as Australia's head of state?
2. In 1975, the monarchy's representative dismissed the elected government of Australia. Is this fair? Why or why not?
3. In America, the president doesn't work in the parliament; in Australia, the prime minister does. Is this a good thing or a bad thing?

FIGURE 1 King Charles III

14.2.1 The three parts of Parliament

Our Commonwealth Parliament consists of three parts:

- the lower house, known as the House of Representatives
- the upper house, known as the Senate
- the British monarch, represented by the Governor-General.

Our Commonwealth Parliament is **bicameral**. The major role of this body is to make laws in those areas defined by the Constitution.

bicameral a parliament with two houses

14.2.2 The House of Representatives

As the lower house in the federal parliament, the House of Representatives has the following features:

- It 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, currently about 110 000 each, with a 10 per cent variation allowed from this figure. States with larger populations, such as New South Wales and Victoria, elect the largest number of members. States with smaller populations, such as Western Australia and South Australia, elect much smaller numbers.

FIGURE 2 The House of Representatives Chamber in Parliament House

- Meetings of the House of Representatives are chaired (or run) by the Speaker of the House. The Speaker is usually elected by all the members of the House. The Speaker has an important role in chairing the House, maintaining order in debates and ensuring all members observe the rules of the House, known as the 'standing orders'.
- Most legislation is introduced in the House of Representatives because this is where the government sits. The party that wins the most seats in the lower house forms government and the leader of this party is the Prime Minister. For it to actually become a law of the land, a majority of the members of parliament have to vote in favour of it.
- Most members of the House of Representatives (MHRs) are members of political parties. A party is a group of people who have similar opinions and values, and who will usually all vote together for laws that reflect those views and values.

14.2.3 The Senate

The Senate is the upper house of the federal parliament, and has the following features:

- It acts as a house of review. This means that it can have a second look at all legislation that has passed through the House of Representatives. Senators also have to vote on any new proposals before they can become law. They can reject or change any legislation that they do not believe is appropriate.
- Apart from a brief period from 2005 to 2008, governments have not had a majority of members in the Senate since 1981. This has meant that the Senate has often sought to change or improve government legislation.
- 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 so many representatives come 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. Senators are elected for six years with half elected every three years.
- Meetings of the Senate are chaired by the President of the Senate. He or she has a similar role in relation to the Senate as the Speaker has in relation to the House of Representatives.

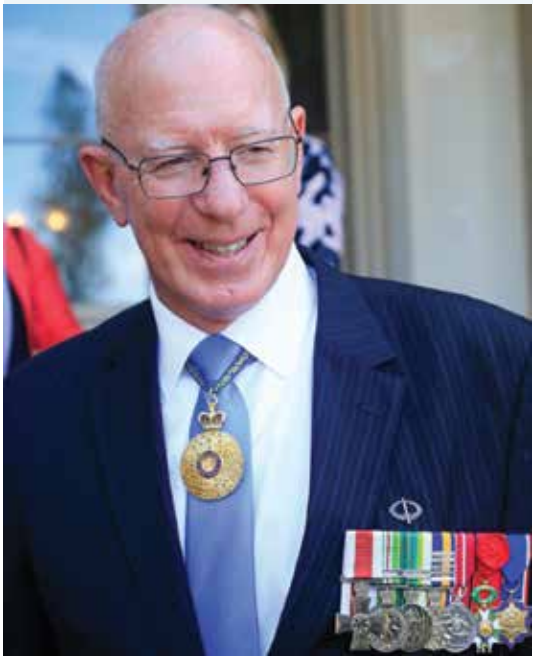
FIGURE 3 The Senate Chamber in Parliament House

14.2.4 The Governor-General

The third element in the Commonwealth Parliament is the British monarch, represented in Australia by the Governor-General. He or she performs the following roles and functions in the parliamentary system:

- The Governor-General gives the **royal assent** to legislation that has been passed by both houses of parliament. This is the final stage that must occur before the law comes into force. Under Section 58 of the Constitution, the Governor-General also has the power to withhold the royal assent and return a Bill to parliament with recommended changes.
- The Governor-General also has a number of special powers, known as 'reserve powers'. These include the power to summon parliament (calling for a new parliament to assemble after a federal election), open and dissolve parliament (ending parliament before a federal election takes place). These powers are usually exercised on the advice of the government of the day, although the Constitution gives the Governor-General the power to ignore that advice. In 1975, the Governor-General at the time dissolved parliament and called an election, effectively dismissing an elected government.

FIGURE 4 General David Hurley, Australia's 27th Governor-General



14.2.5 Executive government

Under s. 61 of the Constitution, executive power of the Commonwealth government is held by the Governor-General, on behalf of the British monarch. The Governor-General chairs a body called the Executive Council, which exists to advise him or her. In reality, executive power is exercised by the Prime Minister and **Cabinet**, and all ministers are automatically appointed members of the Executive Council.

An Executive Council meeting can consist of the Governor-General and as few as two Cabinet ministers, and these meetings usually occur fortnightly. Such meetings are required to formally approve decisions already made by the Cabinet, so the Executive Council has no separate executive power. Much of executive government is based on '**conventions**' that existed in the Westminster system before Australian federation, but were not specifically included in the Constitution.

royal assent the formal approval by the monarch's representative, and the final step necessary before a law comes into force

Cabinet the top-level decision-making group within the Australian Government made up of most or all ministers

convention an unwritten rule, not a law; an accepted way of doing something

Examples include the following:

- The Governor-General is generally required to act on the advice of ministers, following accepted practice in the Westminster system as it operates in Britain.
- The Constitution makes no mention of the position of 'Prime Minister' or 'Cabinet'. Those drawing up the Constitution assumed that the Commonwealth Parliament would follow accepted Westminster tradition and create these roles.
- The Prime Minister and Cabinet, as the centre of executive power, actually do more than put laws into action. As the leaders of the majority party in the House of Representatives, they generally decide which Bills will be put before the Parliament, and so can determine which laws will be created. The Cabinet also decides how government money will be spent, usually through the development of an annual budget.

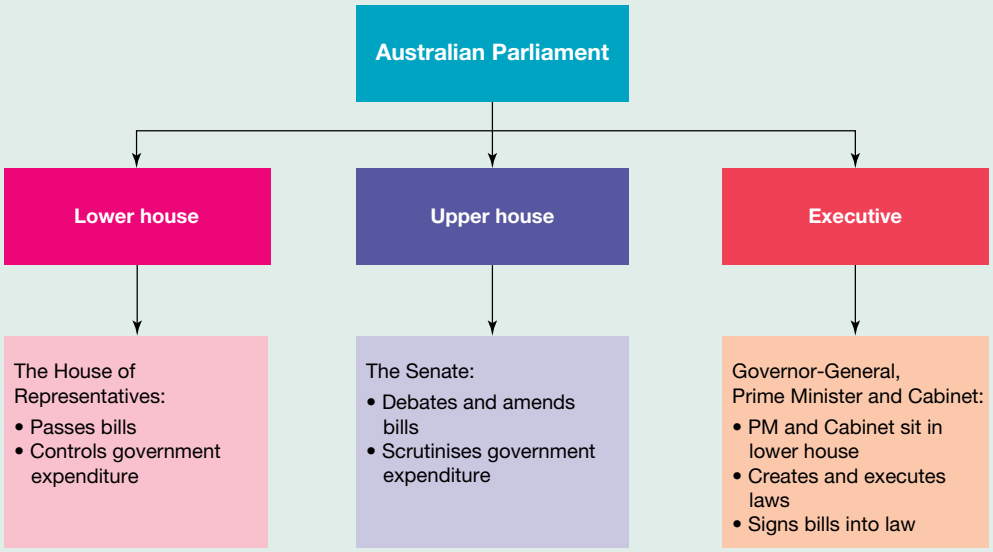
SkillBuilders to support skill development

- 14.4 Notetaking
- 14.5 Writing inquiry questions for research

14.2 SKILL ACTIVITY: Questioning and researching, Communicating

1. **Research** the parliamentary system of the United States of America or the United Kingdom.
2. **Present** your findings using a diagram similar to the one provided in **FIGURE 5**, including all the names of the current leaders and the names of the 'houses'.

FIGURE 5 Australian parliamentary system



14.2 Exercise

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14.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3	2, 4, 5	6, 7, 8

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Check your understanding

1. **Determine** if the following statements are true or false.
   a. A bicameral parliament has three houses to make laws in those areas defined by the Constitution.
   b. The Governor-General gives the royal assent to legislation that has been passed by both houses of parliament.
2. Imagine that the Governor-General rejects a proposed law and sends it back to the parliament with recommended changes. **Describe** what has to happen in both houses before the Bill returns to the Governor-General.
3. In federal parliament, what is the name of the lower house?
   A. The Senate
   B. The House of Representatives
   C. The Legislative Assembly
   D. The Legislative Council
4. **Outline** the two main functions of the Senate.

Apply your understanding

Communicating

5. **Describe** the difference between the way in which members of the House of Representatives are elected and the way in which Senators are elected.
6. **Identify** two possible consequences if either or both Houses of Parliament refuse to accept the Governor-General's recommended changes.
7. **Identify** and explain two conventions that relate to Commonwealth executive government but are not include in the Constitution.

Analysis, evaluation and interpretation

8. The Senate was established to preserve the rights of the smaller states so all states have an equal number of senators. Given that almost all senators are now elected as representatives of political parties, does the Senate still perform its original purpose? **Justify** your response.

LESSON
14.3 What are the roles and structures of the state and territory parliaments?

LEARNING INTENTION

By the end of this lesson you should be able to explain the role and the responsibilities of state and territory parliaments.

TUNE IN

Australian states and territories have a similar bicameral parliamentary set-up (that is, most have an upper and lower house) but they can have different names. A few are unicameral, meaning they only have one house.

TABLE 1 lists the names of each lower house and (if relevant) upper house in each state and territory.

TABLE 1 The lower and upper house in each state and territory

State or territory	Lower house	Upper house
New South Wales	Legislative Assembly	Legislative Council
South Australia	House of Assembly	Legislative Council
Victoria	Legislative Assembly	Legislative Council
Northern Territory	Legislative Assembly	No upper house
Queensland	Legislative Assembly	No upper house
Tasmania	House of Assembly	Legislative Council
Western Australia	Legislative Assembly	Legislative Council
Australian Capital Territory	Legislative Assembly	No upper house

1. As a group, discuss the similarities and differences between the lower and upper houses for the states and territories. Why do you think they were given the names they have?
2. Suggest reasons some states have two houses and one state and the territories only have one.

14.3.1 Eight separate parliaments

Although considerable powers were handed over to the federal parliament at the time of federation, the newly established states retained the parliamentary structures that had been established during the colonial period. They still perform an important function in our system of government.

In addition to the federal parliament, Australia has eight state and territory parliaments. This includes the original six state parliaments created at federation, plus two parliaments that have been established to make laws for the two mainland territories — the Northern Territory and the Australian Capital Territory (ACT). The two territories were governed directly by the federal parliament for most of the twentieth century, with the Northern Territory gaining its own parliament in 1974 and the ACT in 1989. The federal parliament retains the power to change or overrule any laws passed in the territory parliaments. It does not have this power over the six state parliaments.

int-8958

FIGURE 1 Each state and territory's parliament house

14.3.2 Features of the state and territory parliaments

State and territory parliaments have many similar features, although some have unique characteristics:

- All of the state parliaments were originally established as bicameral parliaments, with an upper and a lower house. In 1922, the Queensland Parliament abolished its upper house, so it is now a **unicameral** parliament.
- In each of the bicameral parliaments, the upper house is known as the Legislative Council. In Western Australia, New South Wales and Victoria, the lower house is called the Legislative Assembly. This is also the name given to the only house in Queensland. The lower house in South Australia and Tasmania is known as the House of Assembly.

unicameral a parliament with only one house

- The territory parliaments are also unicameral, with the one house in each territory known as the Legislative Assembly.
- The leader of the government in each of the states is called the premier, while the leader of the government in the two territories is called the chief minister.
- Each of the states and territories mirrors the separation of powers that applies at the federal level: legislative, executive and judiciary. Each parliament has legislative powers, allowing it to pass laws that apply within the boundaries of the state or territory. Each has an executive arm, in the form of a group of ministers with particular responsibilities for different government functions. Each also has a judiciary to enforce laws and settle disputes. The highest court in each state and territory is known as the Supreme Court; however, the High Court is the highest court in Australia and, as such, is at the top of all state court hierarchies.
- Each of the states has a Governor, representing the British monarch. He or she has a similiar role within each state as the Governor-General has at the federal level.

14.3.3 Role of the state and territory governments

State and territory governments provide many of the essential services we rely on in everyday life.

Criminal law

State and territory governments have the power to make laws to prohibit most types of criminal activity. They also have the power to decide the appropriate punishments for people who break the law. Laws relating to crimes such as murder, assault and theft are all made at the state level. State governments also control the road laws, including speed limits, driver's licences, car registration and drink-driving laws.

Transport

State and territory governments are responsible for building and maintaining most of the roads and freeways within their own borders. Sometimes they arrange for private companies to build these roads. Such companies are usually given the right to charge tolls on the roads they have built. Public transport is also a state government responsibility. In some states, the government owns and operates the public transport system. In others, all or part of the public transport system is operated by private operators. In either case, state and territory governments make the laws that govern how the system operates.

FIGURE 2 State governments make laws to prohibit criminal activity.

FIGURE 3 Public transport is one of the responsibilities of state governments.

Police and emergency services

Each state and territory has its own police force, fire brigade, ambulance service and other emergency services. Police from one state generally cannot enter another state to arrest someone without special permission. However, the different police and emergency services from each state and territory usually cooperate with each other. We regularly see this when there is a major bushfire in one state and firefighters from other states come in to assist.

Health and hospitals

Public hospitals are built and operated by state and territory governments. These days, state governments rely on money from the federal government to help fund their health systems because hospitals are extremely expensive to run.

FIGURE 4 State governments are responsible for emergency services.

FIGURE 5 Public hospitals are built and managed by state governments.

Education

Each state and territory has its own primary and secondary education systems. The states often have different starting ages for school students, and each state has its own type of certificate for students completing Year 12; for example, the Queensland Certificate of Education (QCE) in Queensland. In recent years, the state and federal governments have jointly set up a national curriculum. The aim is to make sure that each education system covers the same subject matter at each year level. This means that students will do similar classwork wherever they live, even if they move from one state to another.

FIGURE 6 Each state and territory has its own primary and secondary education systems.

14.3 SKILL ACTIVITY: Questioning and researching

Use internet resources to answer the following.

a. **State** which states and territories commence secondary school at Year 7 and which ones do so at Year 8.
b. **State** the minimum age at which you can get your provisional (P-plate) driver's licence in each of the states and territories.
c. **State** the name of the Year 12 certificate in each state and territory.
d. **Identify** the current premier of the state you live in. How long has his or her government been in power?

14.3 Exercise

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14.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4	1, 5, 6	7, 8, 9, 10

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Check your understanding

1. **Define** the term 'unicameral parliament'.
2. **Determine** if the following statements are true or false.
   a. Queensland and the Northern Territory have unicameral parliaments.
   b. The federal parliament retains the power to change or overrule any laws passed in the six state parliaments.
3. **Select** the title given to the British monarch's representative in each of the states.
   A. Governor
   B. Governor-General
   C. President
   D. Speaker of the House
4. **Select** the title given to the leader of the government in each of the states.
   A. Prime Minister
   B. Chief Minister
   C. Premier
   D. Chief
5. **Explain** how the separation of powers applies in all of the states and territories.

Apply your understanding

Communicating

6. Using an example, **explain** how emergency services from the different states can cooperate with each other.
7. Should all states have the same rules and ages for young people gaining a driver's licence, or should it be left to individual states to make different laws as is currently the case? **Justify** your response.
8. **Determine** the advantages of having all states following a national school curriculum, rather than each state going its own way.

Analysis, evaluation and interpretation

9. In 1995, the Northern Territory passed a law allowing terminally ill people to voluntarily end their own lives. This law was overruled by the federal parliament in 1997. In 2017, the Victorian parliament passed a similar law, but the federal parliament has not overruled it. **Explain** the difference in these two cases.

Communicating

10. Many people have argued recently that we no longer need state governments in Australia, and that all their powers could be handed over to the federal parliament. **Propose** one argument in favour of retaining state governments and one argument in favour of abolishing (removing) state governments.

LESSON
14.4 Why do we have different levels of government?

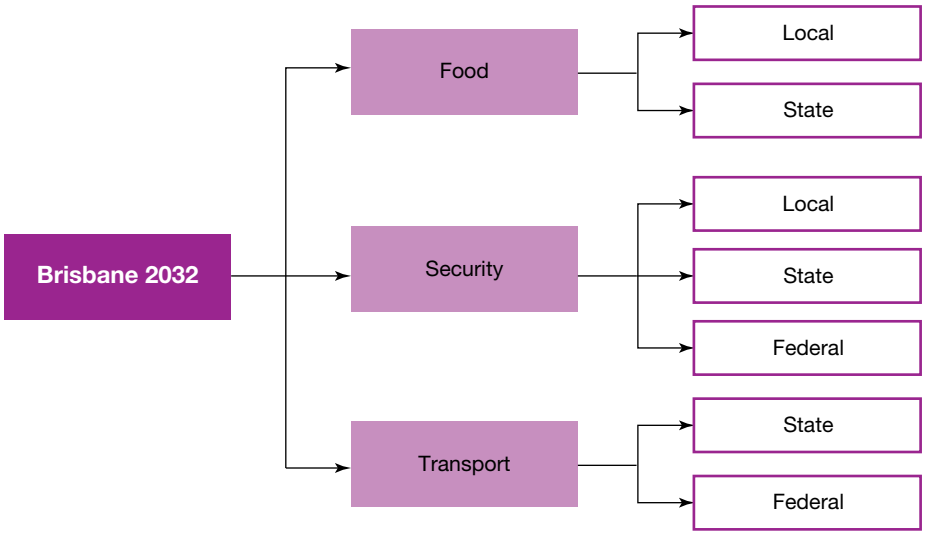
LEARNING INTENTION

By the end of this lesson you should be able to explain how power is shared between state and federal governments, and explain which level of government is responsible for which services.

TUNE IN

Brisbane has won the right to host the 2032 Summer Olympic Games. Create a concept map and brainstorm the services that will be required to host the games and which level of government is responsible for the delivery of those services. An example has been provided in **FIGURE 1**.

FIGURE 1 Level of government responsible for delivery of services



14.4.1 The separation of powers

The Australian continent had been colonised by the British, and the vast majority of white colonisers were of British origin, so the founding fathers looked to the British Westminster system of government as a model for the new Australian Commonwealth government.

The Westminster system had a long history, dating back to the Middle Ages, and had a number of safeguards designed to protect its citizens. One such safeguard is known as the 'separation of powers'. Under the separation of powers, government functions are shared across three 'arms' of government: the legislative, the executive and the judicial. This means that the power to make laws (legislative) is separate from the power to put those laws into action (executive), and that both of these arms are separate from the power to enforce the law and settle legal disputes (judicial).

This also means we have a court system that is presided over by independent judges who are sworn to uphold principles of justice and fairness. The concept of the separation of powers can be traced back to the signing of the Magna Carta in England in 1215.

FIGURE 2 Our parliamentary system is based on the Westminster system. Westminster is a district of London in which the British Parliament is located.

The separation of powers in the Australian Constitution

The Australian Constitution supports the idea of the separation of powers to allow for three arms of government:

1. legislative arm
2. executive arm
3. judicial arm.

repeal to remove a law so that it no longer applies

14.4.2 The legislative arm

The legislative arm is the parliament, which has the power to make new laws and to change or **repeal** existing laws. It consists of two separate 'houses' — the House of Representatives and the Senate — together with the Governor-General as the representative of the British monarch (currently King Charles III).

A proposed law is known as a Bill. To become law, a Bill must be debated and voted on by both houses of parliament, and then approved by the Governor-General. It then becomes known as an Act or a statute, which are the formal names of laws that have been passed by parliament.

FIGURE 3 When all government ministers meet together, they are known as the Cabinet. Such meetings usually take place in the Cabinet Room in Parliament House.

14.4.3 The executive arm

The executive is the arm of government with the responsibility of putting the laws into action. Executive power officially lies with the Governor-General, but it is usually exercised by government ministers. These are members of parliament who have special responsibility for particular areas of government.

For example, the minister for defence is responsible for administering all laws that relate to the defence forces; the minister for immigration is responsible for laws dealing with migrants wishing to come to Australia; and the minister for the environment is responsible for those laws that are designed to protect the environment. Public servants and other government employees are part of the executive arm of government.

14.4.4 The judicial arm

The judicial arm includes the **judiciary** and the courts, which are responsible for enforcing the law and settling disputes that might arise under the law. The courts can also ensure that the law is applied fairly and equally to everyone, so they are a safeguard for our rights and freedoms.

The High Court of Australia has the power to interpret and enforce the Constitution. It can make sure that neither the legislative arm nor the executive arm acts in a way that is outside the constitutional powers of that arm.

Once a judge has been appointed, he or she cannot be easily removed by the executive arm. This means that judges can be independent and make decisions without being influenced by others.

judiciary a collective name given to the judges who preside over law courts

FIGURE 4 The High Court of Australia has the power to interpret and enforce the Constitution.

Why do we have the separation of powers?

The separation of powers provides a system of checks and balances on the power of government. This works in the following ways:

- Members of parliament can make laws but have to face elections on a regular basis. If laws prove to be unpopular or unfair, the people can vote for new and different members to replace them.
- An independent judiciary has the power to ensure that parliament and the executive are acting within the limits of the Constitution. This is a way of protecting individual freedoms. The High Court can declare any law invalid if it is contrary to the Constitution.
- Government ministers have to gain the approval of a majority of both houses of parliament if they want to bring in any new laws. If they cannot convince enough members, the law will not be passed.
- Government ministers are all members of parliament, and are individually accountable (or answerable) to parliament. They are required to answer questions in parliament about actions they take as part of their executive role.

DISCUSS

'The separation of powers exists to protect us from the abuse of power.'

1. Discuss what this statement means.
2. List arguments to support the statement.
3. List arguments to counter the statement.
4. Which do you support? Explain why.
5. Use your responses to hold a class debate or discussion.
6. Use your responses to write an extended response. (This can be as well as or instead of the class discussion.)

14.4.5 The division of powers

One of the key reasons for having a constitution is to reinforce the rights of citizens in a democracy such as Australia. Our Constitution does this by ensuring that no one person or organisation within our structure of government has all the power. Instead, power is shared in a number of ways, and the Constitution reinforces this arrangement.

FIGURE 5 The federal government controls the issuing of currency to ensure the same money is used throughout Australia.

Most of the colonial parliaments that were to become state parliaments after federation had been in existence since the 1850s. State parliaments were accustomed to passing laws and governing their areas of Australia, and everyone expected them to continue doing this after 1901.

For this reason, the Constitution supports the idea of a division of powers between the state parliaments and the federal parliament. Law-making powers are divided in such a way that national issues can be handled by the central government, while state governments can concentrate on providing essential services for their citizens.

Section 51 of the Constitution is the part of the Constitution that outlines the specific role and power of the federal government. It lists all the areas of government that are the responsibility of the federal parliament. These are usually referred to as the 'specific powers', and they include:

- trade and commerce with other countries
- postal and telephone services
- the defence forces
- quarantine regulations
- immigration and emigration issues
- weights and measures used in Australia
- the banking and currency systems
- relationships with other countries (through our embassies and diplomats).

Any area of government not included in Section 51 remains the responsibility of state parliaments. Examples include:

- health and hospitals
- police and emergency services
- primary and secondary education
- transport, including public transport, road rules and road construction.

The powers that remain with state parliaments are known as the 'residual powers'.

FIGURE 6 The provision of essential services such as firefighting is the responsibility of state governments.

Local government

Although not mentioned in the Constitution, another level of government — local government — operates in Australia. Local government is carried out by city and municipal councils. These councils usually have responsibility for:

- parks and recreational facilities, such as swimming pools and sports grounds
- town planning
- rubbish removal
- maintenance of local streets
- libraries and kindergartens.

FIGURE 7 Public swimming pools are valuable facilities provided by local councils.

on Resources

Interactivity Time out: Responsibilities (int-1207)

SkillBuilders to support skill development

- 13.6 Writing argument paragraphs
- 13.8 Debating an issue

tlvd-10557

FIGURE 8 The division of powers and the separation of powers

Local government

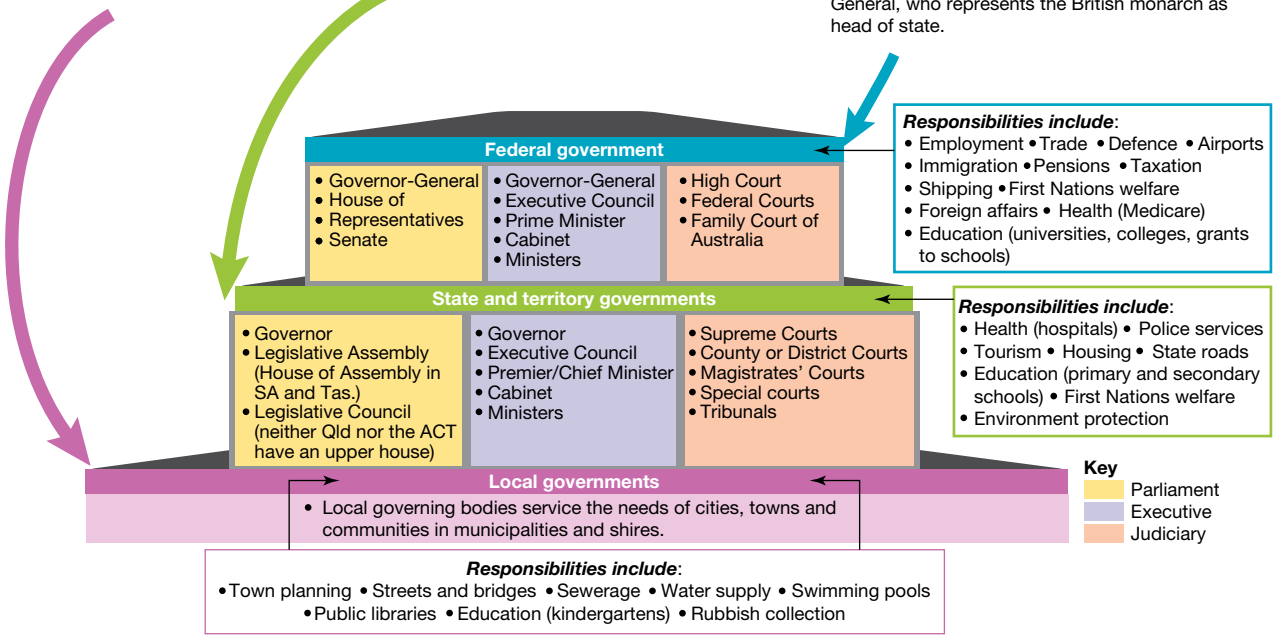
- There are around 900 local government bodies in Australia (usually called councils).
- Council members are called aldermen or councillors. The head of the council is called a mayor or a shire president.
- Councils operate under state laws. They make rules, called by-laws, on local issues.

State government

- Each of Australia's six states and two territories has its own parliament.
- All parliaments have lower houses.
- All but Queensland and the two territories have upper houses (legislative councils).
- The process of government is similar to that of the federal government. However, the head of government is the Premier (or Chief Minister in the territories) and the head of state (who represents the British monarch) is the Governor.

Federal government

- There are two houses of federal parliament — an upper house (the Senate) and a lower house (the House of Representatives).
- The Prime Minister is the head of government. Ministers are appointed to look after particular government portfolios or departments.
- The Cabinet, which includes the Prime Minister and a group of senior ministers, makes the key government decisions.
- The Executive Council is chaired by the Governor-General, who represents the British monarch as head of state.



14.4 SKILL ACTIVITY: Questioning and researching

Using internet resources, find out who currently performs the following roles in our system of government. For each one, **indicate** in a table whether their role is legislative, executive or judicial.

a. The minister for defence
b. Your local member of the House of Representatives
c. The Chief Justice of the High Court
d. The minister for education in your state

14.4 Exercise

learnon

14.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
3, 4, 5	1, 2, 6	7, 8, 9, 10

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Check your understanding

1. **Outline** the role of each of the following arms of government, and provide an example of each.
   a. Legislative arm
   b. Executive arm
   c. Judicial arm
2. **Identify** three examples of the responsibilities of each of the following levels of government.
   a. Federal government
   b. State government
   c. Local government
3. **Select** which of the following is not an example of a specific power.
   A. Postal services
   B. Internet services
   C. Weights and measures
   D. Quarantine regulations
4. **Determine** whether the following statements are true or false.
   a. The Constitution supports the idea of a division of powers between the state parliaments and the federal parliament.
   b. The Governor-General has the power to change or repeal existing laws.
5. **Select** the correct options to complete the sentence. The separation of powers is a safeguard designed to **allow** / **encourage** / **prevent** one particular group **to hold** / **from holding** all of the **members** / **power** /**seats**.

Apply your understanding

Communicating

6. For each of the following, **state** whether the role is legislative, executive or judicial.
   a. Members of parliament
   b. Government minister
   c. High Court judge
   d. The Cabinet
7. Of the three levels of government, federal, state and local, which has most influence on ordinary people? Give reasons or examples to support your opinion.
8. **Describe** the ways in which the executive arm is not completely separate from the legislative arm of government.
9. **Explain** why it is significant that the High Court has the power to interpret the Australian Constitution.
10. 'The separation of powers is an important safeguard of our rights and freedoms in Australia.' Do you agree or disagree with this statement? **Justify** your answer.

LESSON
14.5 What does ‘equality for all’ mean?

First Nations Australian readers are advised that this topic may contain images of and references to people who have died.

LEARNING INTENTION

By the end of this lesson you should be able to explain the multicultural make-up of Australian society, and discuss the Uluru Statement and the campaign for a First Nations Voice in the Australian parliament.

TUNE IN

After being sworn in as Australia’s 31st Prime Minister, Anthony Albanese changed the flags behind the lectern he gives press conferences at to include the Aboriginal and the Torres Strait Islander flags.

FIGURE 1 The Australian flag, Aboriginal flag and Torres Strait Islander flag

Discuss why you think this is important when considering the notion of ‘equality for all’.

14.5.1 Our differences define us

You wear a school uniform to help identify you as being part of your school. Without this uniform, there would be no way to tell which school you belong to. But what if your school was known for not having a uniform, instead allowing its students to wear their casual clothes to school? This freedom of choice and diversity of dress would then become a way in which your school could be identified. Australian society is exactly like this kind of school. Our identity is characterised by its diversity, and our differences bring us together.

14.5.2 What is national identity?

National identity is much more than a national cuisine, costume or anthem. It is a way for people to identify with others and feel a sense of community. When a country is made up of people from only one cultural group, it is easier to see examples of their national identity. Such is the case with many of the smaller eastern European nations such as Slovakia, Serbia and Croatia. However, when countries have a more multicultural population, like Australia, defining a singular national identity can be harder.

FIGURE 2 Serbian men demonstrating traditional dress and dance

14.5.3 To integrate or to congregate?

Upon arrival in Australia, new migrants may face a range of difficulties. They need to find somewhere to live and somewhere to work, and often need to learn English as well. Migrants are also faced with a cultural challenge — they must find a balance between their existing national identities and their new Australian identity.

FIGURE 3 Brisbane's Chinatown reflects the diversity of Australian society.

With close to 200 nationalities already represented in Australian society, new migrants can usually find existing communities of people sharing the same background. But should they **congregate** in these communities and follow their existing traditions and customs, or should they **integrate** into multicultural communities?

This question is fiercely debated by both politicians and members of the general public. Without displays of migrant culture, we would not have the diverse society we see today. However, if new migrants only associate with their own communities, they will not gain exposure to Australian culture and values. Therefore, a balance between these two choices is needed to ensure the protection of traditional identities and the development of new ones.

congregate to come together in a smaller crowd or group within a larger community

integrate to merge with a larger community

DISCUSS

Instead of being concerned with identifying one single Australian cultural identity when we live in such a multicultural society, would it be simpler to accept that an Australian cultural identity doesn't actually exist? Discuss as a class.

14.5.4 First Nations Australians and identities

At the 1994 Commonwealth Games, athlete Cathy Freeman, a Kuku Yalanji and Birri Gubba woman, controversially draped herself in both the Australian and Aboriginal flags upon winning the 200-metre sprint. Freeman's celebration caused much debate because the Aboriginal flag was not considered an official flag of Australia. Freeman chose her victory as an opportunity to demonstrate and celebrate her identity. For her, the recognition as being First Nations Australian as well as Australian was an important symbol of reconciliation and pride.

FIGURE 4 Cathy Freeman's controversial celebration at the 1994 Commonwealth Games

At the beginning of many school assemblies around Australia, we read the 'Acknowledgement of Country' — an acknowledgement of the traditional land owners and custodians. At state and federal government events a 'Welcome to Country' may be performed and First Nations Australian Elders and community leaders are often in attendance and appropriate customs, such as smoking ceremonies, are conducted. These acts recognise First Nations Australian cultures and their place in Australian identity. However, it is important for us to remember why we do these things. If we do not, these actions lose their meaning and become only tokens of First Nations Australian cultures and identities. The impact of **tokenistic** cultural performances is serious. If the meaning behind these and other customs is lost, then so too is a part of this identity.

tokenistic describes an act that is completed only as a gesture rather than being sincerely meant

FIGURE 5 A smoking ceremony

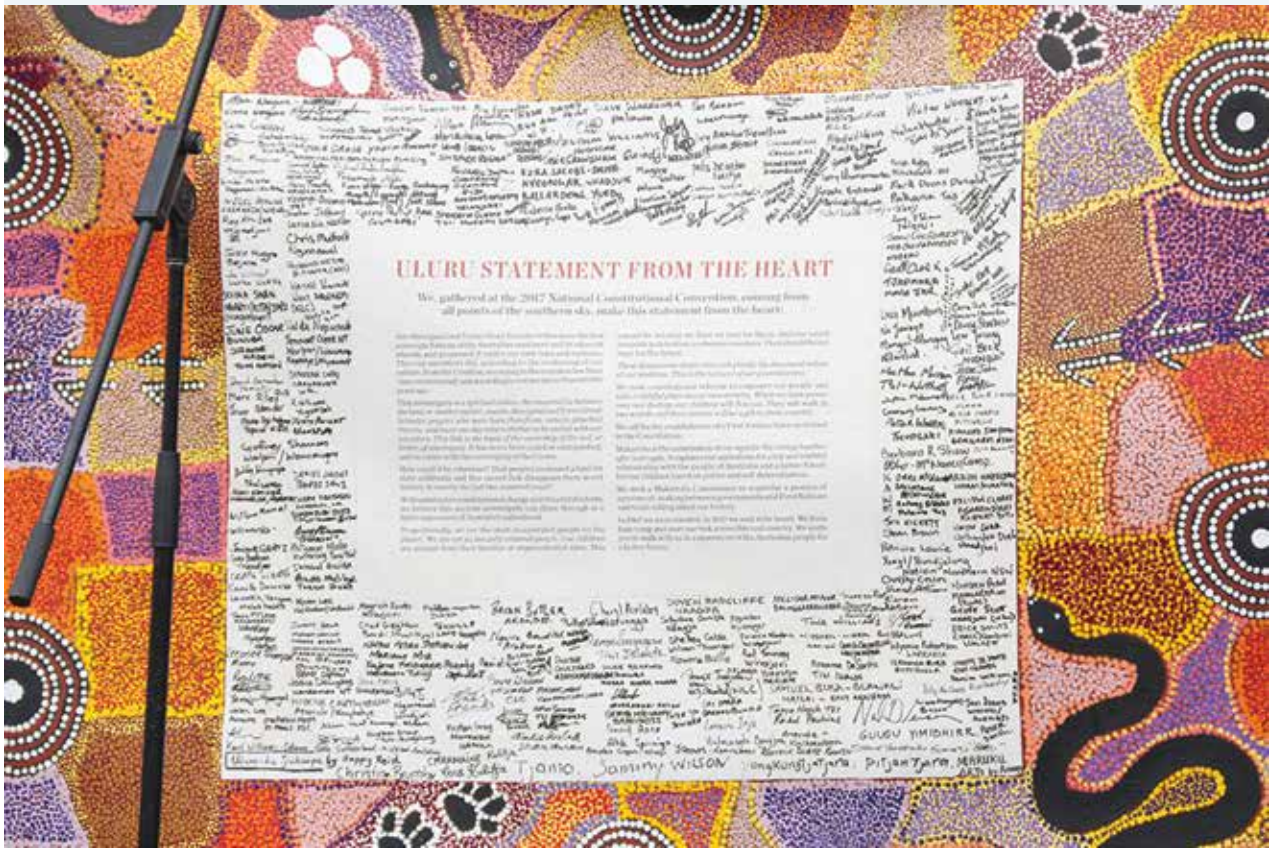
14.5.5 The Uluru Statement from the Heart

The Uluru Statement from the Heart was presented to the Australian people in May 2017. It was delivered on the fiftieth anniversary of the 1967 Referendum acknowledging First Nations Peoples and allowing them to be counted in the national census. The Statement took two years of work and collaboration between First Nations leaders and communities.

The Uluru Statement is the first time that the matter of constitutional recognition has reached an agreement after years of heated debate from both First Nations and non-Indigenous Australians.

The Uluru Statement is an invitation from First Nations Australians to 'walk with us in a movement of the Australian people for a better future'. It was decided at the National Convention on the Constitution on 26 and 27 May 2017.

FIGURE 6 The Uluru Statement from the Heart



Three key elements of reform are set out in the Uluru Statement:

- *Voice:* enshrining a First Nations Voice in the Australian Constitution.
- *Treaty:* the establishment of the Makarrata Commission to supervise the process of agreement-making with Australian governments.
- *Truth:* establishing processes for the truth-telling about Australia's history.

on Resources

Weblink The Uluru Statement

DID YOU KNOW?

Makarrata is a word that does not translate completely into English. It's a Yolngu (northwest Arnhem land) word that describes a process of conflict resolution and peacemaking. A Makarrata is used to move forward in solidarity. It not only is an agreement but also shows ongoing respect. Makarrata is a philosophy that helps develop and maintain a lasting peace among First Nations Peoples of Australia.

The Referendum Council included as part of its demands to Australian governments that a Makarrata Commission be created to allow First Nations Australians and non-Indigenous Australians to move forward. The purpose of the commission will be to begin the discussions around treaties and a truth-telling commission that will explore, openly and honestly, Australia's history.

14.5.6 A Voice to Parliament

A Voice to Parliament is a body that would be written into Australia's Constitution that would give First Nations Australians a platform to provide advice to the Parliament on policies that affect the First Nations Peoples of Australia. A Voice to Parliament gives the federal government the opportunity to create legislation *with* First Nations Australians rather than *for* First Nations Australians.

In 2021, the Australian Government released its report into how a consultative body might fit into the national parliament. The Indigenous Voice Co-Design Process outlines an Indigenous Voice made up of two parts that work together: Local and Regional Voices and a National Voice.

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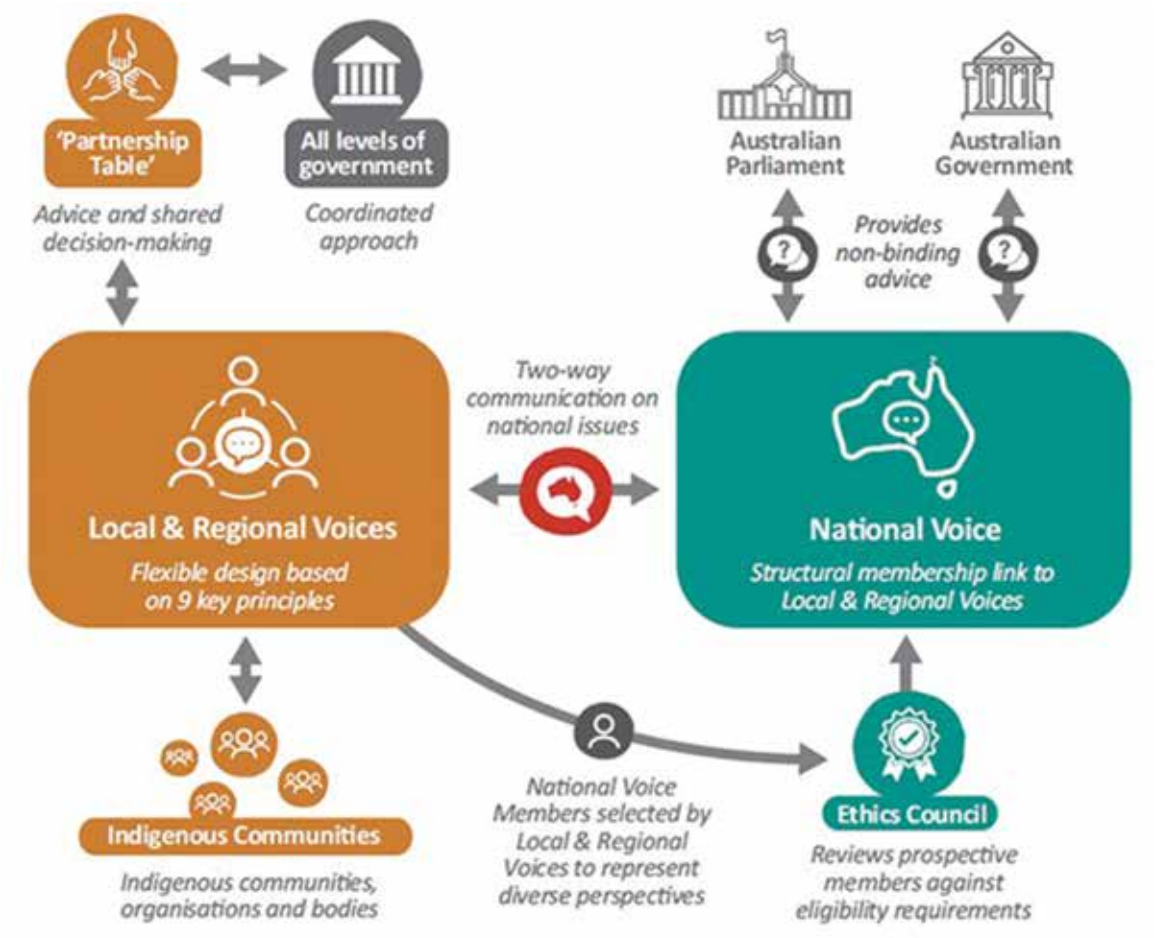
FIGURE 7 The two-part Indigenous Voice model



The Indigenous Voice would provide a way for First Nations Australians to have a greater say on the design, development and implementation of legislation that affects them. It will also foster a greater partnership between the government and First Nations Australians, and allow Australian parliament and government opportunities to seek advice on policies and programs.

As with all proposals, vigorous debate continues around how this works on a day-to-day basis. That's one of the strengths of Australia's democracy: people can argue about what and how things might work without fear of violence or attack.

The prime minister at the time of the proposal, Scott Morrison, argued that the inclusion of a First Nations Australian national body might lead to the creation of a third house of parliament, effectively slowing down the business of government and preventing legislation from being created and enacted. Advocates for the Voice to Parliament argue that it will not become a third house of parliament, but it would be a body that is designed to sit outside the parliament, to give frank input on policies, and to ensure First Nations people have a say in laws that impact them.

FIGURE 8 Many Australians believe that a Voice to Parliament is a welcome change.

on Resources

Weblink Indigenous Voice

SkillBuilders to support skill development

- 13.8 Debating an issue
- 13.9 Creating political media

14.5 SKILL ACTIVITY: Questioning and researching, Communicating

Modern political campaigns try to reach a broad audience and sell their message. The days of posters on power poles are fast disappearing. Political parties use a range of platforms to get their message across, including social media, staged interviews, debates and town hall meetings.

Your task is to **respond** to one of the following statements in the form of a modern political campaign.

1. Australian identity: no such thing exists.
2. It is not important for a country to have a national identity.
3. The Australian, Aboriginal and Torres Strait Islander flags are important historical symbols of our complex national identity.

4. Religion and government should remain separated.
5. It is impossible for people from different backgrounds to share common values.
6. New migrants should be encouraged to maintain their traditions and customs after they arrive in Australia.
7. New migrants should be encouraged to speak their native language after they arrive in Australia.

Your campaign can be a social media campaign, a recorded debate between two people from opposing sides, or a town hall-like question-and-answer session. You may like to complete this in small groups.

1. **Conduct research** into your chosen topic and **record** the latest thinking and debates to make sure your campaign is across the issues.
2. **Decide** what form your campaign will take and assign roles to each team member.
3. **Plan** how you will deliver your main arguments and write them in a style to match your campaign delivery.
4. **Share** your campaign with the class and ask for feedback on how convincing your messages are.

14.5 Exercise

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14.5 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
4, 5, 6	1, 2, 8	3, 7, 9, 10

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Check your understanding

1. **Describe** the ways in which a national identity is important to a country.
2. **Describe** your idea of a typical Australian.
3. **Explain** the difference between the terms 'congregate' and 'integrate' in relation to migration.
4. **Determine** if the following statements are true or false.
   a. It's not necessary to believe in the importance of the Acknowledgement of Country when conducting one, it's just necessary to include it.
   b. A Voice to Parliament is a body that would be written into Australia's Constitution.
5. In what year did the Reconciliation Council deliver the Uluru Statement of the Heart to the Australian government?
   A. 1997
   B. 2006
   C. 2017
   D. 2016
6. The Uluru Statement of the Heart has three elements. **Identify** them from the following list.
   A. *Treaty:* between First Nations Australians and non-Indigenous Australians that reflects the loss of First Nations land due to colonisation.
   B. *Voice:* enshrining a First Nations Australian voice into Australia's Constitution.
   C. *Truth:* establishing a commission to explore Australia's history truthfully.
   D. *Makarrata:* a process of peacemaking and conflict resolution.

Apply your understanding

Communicating

7. In a short paragraph, **describe** which of the Uluru Statement of the Heart's three elements you think is the most important and why.
8. **Discuss** why Cathy Freeman's celebration at the Commonwealth Games caused such controversy.
9. **Consider** why it's important that a First Nations Australian Voice is in the nation's parliament.
10. **Outline** the steps the government will need to take to alter Australia's Constitution and include the recommendations from the Uluru Statement of the Heart.

LESSON
14.6 What is 'active citizenship'?

LEARNING INTENTION

By the end of this lesson you should be able to describe the difference between active and passive citizenship, and explain ways that citizens can get involved in the political process.

TUNE IN

Young people can be a powerful force for making change in the world, and have the right to a voice in any issues that affect them as citizens.

1. What is a change that you'd like to see in your school or local community?
2. Do you feel like you can do anything about it? Why or why not?
3. If the problem is bigger than you first thought, who else can you involve in solving the problem?

FIGURE 1 Student activists voice their opinions.

14.6.1 Active versus passive citizenship

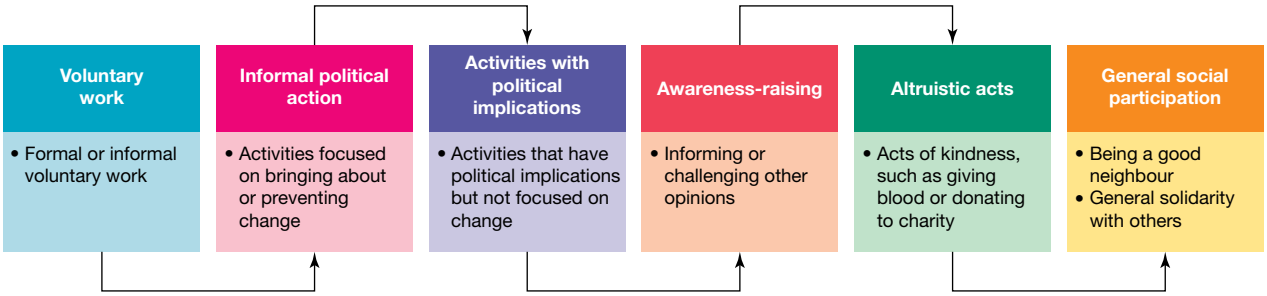
Citizenship is more than just a legal status. It also relates to the way you engage with your community. All Australian citizens engage with the community around them in some capacity. Some might carry out their traditional roles in the community, such as paying taxes. These are called **duties**. Others might do more, such as voice their opinions and organise petitions. These are called **rights**.

duties obligations placed on citizens to ensure society runs smoothly

rights guarantees of equal social opportunities and protection under the law

Active citizenship means getting involved with your local community. Active citizenship can be as small as organising a clean-up of your local street, park or even your school. Or it can be as big as educating people about Australia's democratic values, skills and participation. Active citizenship involves six broad categories of political participation, shown in **FIGURE 2**.

FIGURE 2 The six categories of political participation



So, while active citizenship is all about engaging with your local community, passive citizenship is doing the minimum activities needed to ensure the functioning of Australia's democracy. Two things come to mind when thinking of passive citizenship: paying taxes and voting.

In Australia, everyone who earns an income must pay tax on the money they earn. This money is then used to fund roads, hospitals, schools and various other government services. People don't *actively* pay more tax; the tax is just taken out of their income every payday.

Likewise, voting in Australia is compulsory. Every person over 18 must vote in their local, state and federal election. Again, this isn't something that people do more than they need to. When the election is called, they mark it in their calendars and make time to cast their ballot. Citizens don't *actively* vote more than they need to — actually, that's illegal!

14.6.2 Active digital citizenship

A myth exists in the community that young people (like you, and those in your school) are disengaged from the political process and just don't care. Well, this isn't the case. Young people are getting more involved in the political processes of the country than ever before. Thanks to the internet and the advent of social media, young people can share their views and values to a wide audience.

Social media has increased the space for civic engagement. It's changing the ways we communicate with each other and share ideas, and how political parties and government institutions connect with us. The internet is an open space that is allowing young people the chance to get involved in society. You don't have to wait until you're 18 to have your say about what's happening in your local community, your state or your country. So next time you're on your social media — if you have accounts — consider ways that you can use it to get more involved in your school, local community or city.

Remember, though, that while social media has increased the number of young people engaging in the political process at home and abroad, it's also leading to an increase in information and targeted content. This includes the spread of fake or misleading news, and opens the possibility of antagonistic countries interfering in elections in another country. And always protect yourself and others — if you wouldn't say or do it in real life, then don't do it online.

FIGURE 3 The 2012 US Presidential Election was called 'the social media election' because of the way President Obama used it so successfully to win the race.

14.6.3 Protecting democracy

Australia is a lucky country. Our democracy is strong and stable. We hold regular elections that are free and fair. It's vital for the protection of democracy that people engage with the political processes. Active citizens actively protect Australia's democratic way of life.

The more people are engaged in the political processes of a country, the more enriched those processes become. By actively involving yourself in the debates around the country, you're ensuring that not only your voice is being heard, but also all voices are being heard.

Democratic processes risk disappearing if people don't engage with them. Fortunately, Australia has compulsory voting, which means that people will always have their say. In some countries, such as the United States and the United Kingdom, voting isn't compulsory, and people are choosing to not engage in their country's national debates. Consider the map shown in **FIGURE 4**, outlining the 2021 Democracy Rankings.

TABLE 1 Types of political systems

Political system	Characteristics
Full democracies	Nations where civil liberties and fundamental political freedoms are reinforced by a political culture. These nations have a valid system of governmental checks and balance, an Independent Judiciary, and a diverse, independent media.
Flawed democracies	Nations where elections are free and fair and basic civil liberties are honoured, but there may be issues. These nations have minor suppression of political opposition, infringement on media freedom, low levels of political participation, and issues in the function of government.
Hybrid regimes	Hybrid regimes are found in most developing countries. They are called hybrid regimes because they combine some democratic principles — frequent elections — with autocratic principles. Namely, political repression.
Authoritarian regimes	Authoritarian regimes are characterised by strong central power, reductions in the rule of law, and limited or no democratic voting. The governments of China and Russia operate in an authoritarian manner.

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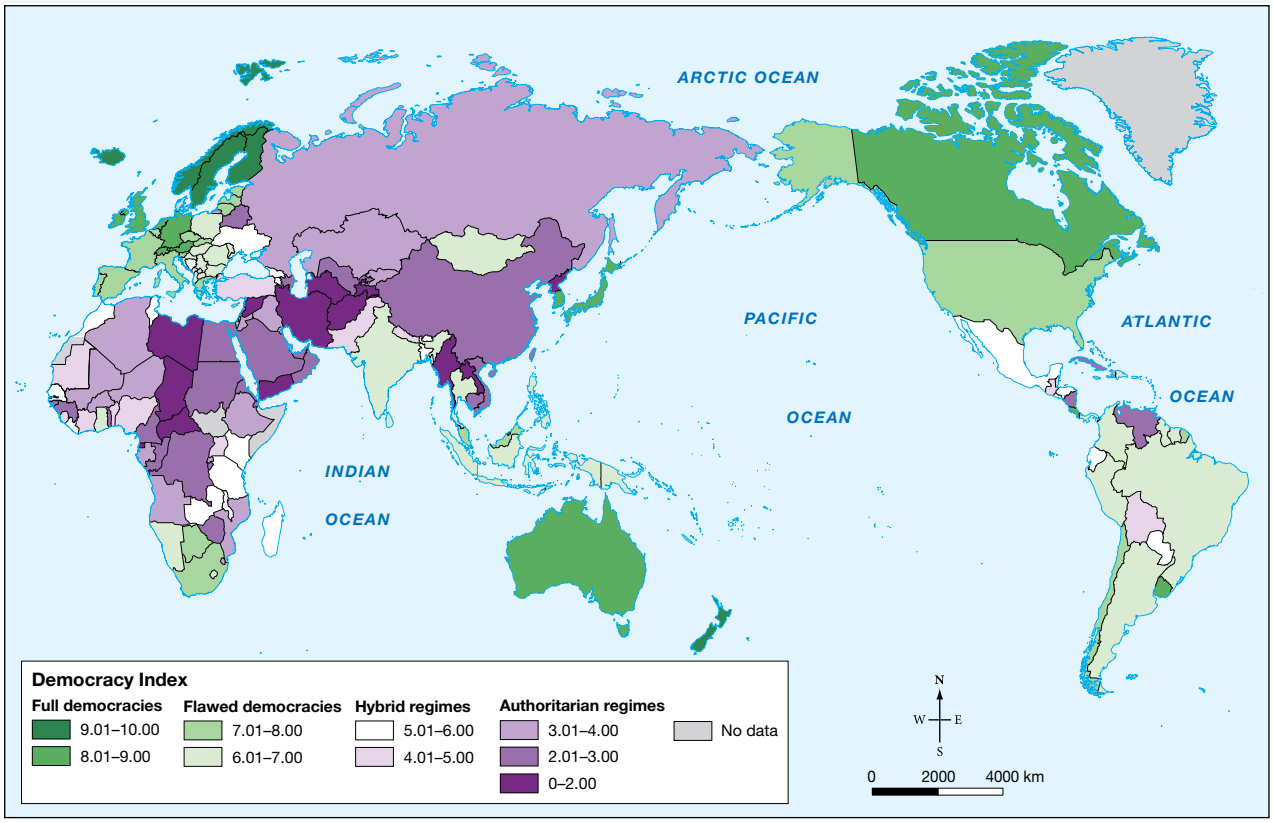
tlvd-10559

FIGURE 4 2021 global Democracy Rankings



Source: Map redrawn by Spatial Vision based on data from © The 2021 Economist Intelligence Unit Democracy Index map.

Note: Based on 60 indicators, countries are given a rating on a zero to ten scale, and the overall index is the average of the five total category scores.

on Resources

Weblinks Freedom House
Democracy Matrix

14.6 SKILL ACTIVITY: Analysis, evaluation and interpretation

Consider **FIGURE 4** and visit the **Freedom House** and **Democracy Matrix** weblinks in the Resources panel that quantify how democracies around the world are faring. You may need to conduct your own research for this task as well.

1. **Research** Australia's democracy score and give reasons for this score. What type of democracy is Australia classified as?
2. **Select** two other countries to **compare** to Australia.
   a. What are their scores?
   b. What type of democracy, if any, are they both classified as?
3. **Propose** reasons you think these countries got the score they did.
4. **Propose** ways that you think these scores can be lifted.
5. **Identify** if avenues exist for citizens to get more involved in these countries. **Determine** what they are.
6. **Present** your findings as a report.

14.6 Exercise

learnon

14.6 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 3	4, 6	5, 7, 8

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Check your understanding

1. **Determine** if the following statements are true or false.
   a. Compulsory voting in Australia's elections is an example of active citizenship.
   b. Organising a working bee to clean up your local creek or river is active citizenship.
   c. Young people are becoming more and more disengaged from the political processes of their country.
2. **Select** which of the following are examples of active citizenship.
   A. Informal political action
   B. Awareness-raising
   C. General social participation
   D. All of the above
3. **Identify** the year in which the US Presidential Election was called 'the social media election'.
   A. 2008
   B. 2020
   C. 2022
   D. 2012

Apply your understanding

Civic participation and decision-making

4. **Describe** two ways that you can become an active citizen today.
5. **Outline** one reason social media can lead to more political engagement.
6. **Explain** how being an active citizen will safeguard democracy.

Analysis, evaluation and interpretation

7. Refer to **FIGURE 4** and **describe** the spread of the four types of political systems across the world.
8. **Analyse** why social media can also be bad for engaging in the political processes of one's country.

LESSON
14.7 How are our democratic freedoms protected?

LEARNING INTENTION

By the end of this lesson you should be able to explain the reasons we have a constitution, discuss the advantages and disadvantages of having a constitution and discuss if Australia needs a Bill of Rights written into the Constitution.

TUNE IN

Democratic freedoms are important and apply to all Australians — even students in a Year 7 class.

1. What rights do you have in the classroom?
2. What rights do you think your teacher has in the classroom?
3. If you had to draw up a set of rules for your classroom, to make sure both the teacher and the students were both represented equally, what would be your top three rules?
4. Who has the responsibility to ensure these rules are maintained and followed?

FIGURE 1 What rules and rights exist in a typical Year 7 classroom?

14.7.1 The creation of our Constitution

During the 1890s, the idea of joining the six colonies on the Australian continent to create one united country had a lot of support. This united country of Australia would need a new national government, while still retaining the existing parliaments to make laws for their respective states. Representatives of the different colonies met on several occasions to create a set of rules that would allow for a division of powers between these parliaments.

After the gold rush era of the 1850s, the population of all six Australian colonies grew rapidly. During the 1880s, the population rose from just over 2 million to around 3 million. By 1890, over 60 per cent of the population had been born locally (that is, in the Australian colonies rather than overseas). Large numbers of these people felt a greater loyalty to the colonies of their birth than to the countries of their parents' birth. It was not surprising that many saw the unification of the colonies into one country — the Commonwealth of Australia — as a desirable idea.

FIGURE 2 Representatives of the colonies met on a number of occasions to draft a constitution for the proposed federation of Australia.

During the 1890s, representatives of the different colonies held meetings to develop a **constitution**. These men are often referred to as the 'founding fathers' of our Constitution. (No women were allowed to take part in the process!) None of the colonial governments wanted to hand over all their law-making powers to a central government, so they had to adopt a structure that would allow these powers to be shared.

When a group of states decide to join together and hand over some of their powers to a central government, this arrangement is known as a **federation**. In this arrangement, it is important that everyone understands which powers are retained by the states and which powers will be taken over by the central government. This was a major reason for the development of the Australian Constitution. It allowed the state parliaments to keep some law-making powers for issues that could be managed at the state level. At the same time, it gave the central parliament the power to make laws of national importance. Before Federation, for example, each colony had its own currency, army and navy. With Federation, it made sense to have one consistent currency and a national defence force.

FIGURE 3 *Opening of First Federal Parliament by HRH the Duke of Cornwall & York* by Charles Nuttall, 1901

By 1898 the main principles of the new Constitution had been agreed to, and each of the colonies held a **referendum** to allow their citizens to vote on whether they wished to join this new federated Australia. By 1900, a majority in all six colonies had voted in favour, and the new Constitution was passed into law by the British Parliament.

The newly created Commonwealth of Australia came into being on 1 January 1901. Elections for the national parliament were held in March of that year, and the newly elected parliament was opened in Melbourne's Exhibition Building on 9 May 1901. Federal parliament then met in Victoria's Parliament House until 1927, when it was transferred to the new national capital of Canberra.

constitution a set of rules that determines the structure of government and its law-making powers

federation the formation of a united country from a number of separate states or colonies, with law-making power shared between the national government and the governments of each of the states

referendum a process of allowing the people to vote on an important issue

on Resources

Weblink Federation

14.7.2 Why have a constitution?

Not all countries in the world have a written constitution such as Australia's. The United States of America is one country that, like Australia, is a federation guided by a written constitution. However, some countries that are similar to Australia in many ways have no single constitutional document. Australia, Canada and New Zealand all recognise the British monarch as their head of state and have similar systems of government, but neither Canada nor New Zealand has a written constitution. Their rules of government are contained in a number of different pieces of **legislation**.

legislation a term used to describe laws passed by parliament

Advantages of having a constitution

1. A constitution provides a system of rules that a government is required to follow. In Australia, it means that laws have to be made by a democratically elected parliament, not by any individual.
2. A written constitution can include some rights and freedoms to be enjoyed by all citizens of the country. For example, the Australian Constitution guarantees freedom of religion.
3. In Australia, the Constitution aims for a clear distinction between the powers of the federal parliament and the powers of the state parliaments.

Disadvantages of having a constitution

1. A written constitution can be difficult to change as society changes. Australia today is not the same as the colonies of the 1890s when the Constitution was written, and yet we are still bound by a document that is over 100 years old. Back then, it was illegal for anyone to bathe on public beaches between 6 am and 8 pm. Imagine if such a law still existed today!
2. Any written document can be open to interpretation. Some words have a number of different meanings. People could argue over those meanings, making a constitution less clear than we would want.
3. Enforcing a constitution depends on the willingness of everyone to obey it. In some countries, **dictators** have seized power by force and refused to follow the constitution of that country. In 1933, for example, Adolf Hitler seized complete power in Germany. Although Germany had a constitution at the time, Hitler used his majority support in the German Parliament to pass laws suspending many of the safeguards (protections) in that constitution, including passing the Enabling Act, which gave him the power to introduce any law. These suspended safeguards included rights such as free expression of opinion and freedom of the press, as well as constitutional protections that made sure executive government did not have excessive power. The new laws made it easier for Hitler to persecute his political opponents and minority groups such as the Jewish people. Once he gained complete control of Germany, Hitler was responsible for the murder of more than six million Jewish people.

FIGURE 4 Adolf Hitler became a dictator in Germany in 1933 by suspending the protections in Germany's constitution.

dictator a person who has absolute power within a country, and who usually cannot be voted out of power by democratic elections; a government headed by a dictator is usually referred to as a dictatorship

14.7.3 An Australian Bill of Rights?

The United States of America has written into its Constitution a Bill of Rights. The Bill of Rights document is the first ten amendments to the US Constitution. The amendments spell out Americans' rights in relation to their government. It guarantees civil rights and liberties to the individuals and sets out the rules for due process of law.

In Australia, some protections for human rights can be found in the Constitution. These include protection against acquisition of property on unjust terms, freedom of interstate trade, the right to a trial by jury, freedom of religion, and prohibition of discrimination based on state residency.

Outside of the areas listed in the Constitution, the High Court of Australia decided that other human rights are implied in the language of the document. The right to political communication, for example, was found to be a right necessitated by the fact that the Constitution established how the government would function and how Australia's representative democracy would operate. Namely, the statute that declares that Australians would go to the polls every three years wouldn't be very valid if people weren't able to communicate their political ideas and philosophies, and thus make informed decisions.

In terms of voting, however, the Constitution doesn't declare the explicit right to vote. The High Court fell short of declaring this an explicit right and thus it remains implied. Voting rights can be curtailed with just reason — for example, for people serving longer than three-year prison terms, or people who are not of sound mind.

While the Constitution may imply certain rights, some areas need explicit protection. The Australian parliament plays an important role in protecting human rights by passing laws that shield vulnerable groups from persecution. These include:

- *Racial Discrimination Act, 1975*
- *Sex Discrimination Act, 1984*
- *Disability Discrimination Act, 1992*
- *Age Discrimination Act, 2004*

Debate is ongoing about whether Australia should adopt a statutory Bill of Rights, similar to that found in the United States. Advocates for this movement argue that including explicit protections in the Constitution would clarify the rights held by individuals in Australia, and thus positively affect the day-to-day lives of Australians.

on Resources

Weblink The federal parliament and the protection of human rights

14.7 SKILL ACTIVITY: Questioning and researching, Communicating

The Australian Government has decided, after a long debate in both the House of Representatives and the Senate, that they want to include a Bill of Rights in the Australian Constitution. You have been given the task of designing the Bill of Rights and the Referendum question.

1. **Research** other Bills that are present in other countries (such as the European Union, the United States, the United Kingdom).
   a. What rights are listed in these Bills?
   b. Are they all the same? What's different?
2. Using **The federal parliament and the protection of human rights** weblink in your Resources panel, **research** what rights are already present in Australian law and the Constitution.
   a. What can be improved on?
   b. What can be added?

3. The government only wants to include seven rights in the proposed Bill of Rights. **Decide** which ones are most important and reflective of the Australian people.
4. **Create** a question that can be asked in a Referendum.
5. **Communicate** your Bill of Rights and your referendum question on a poster or presentation.

14.7 Exercise

learnon

14.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7	8, 9, 10

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Check your understanding

1. When a group of states decide to join together and hand over some of their powers to a central government, what is this arrangement known as?
   - A. Federation
   - B. Constitution
   - C. Referendum
   - D. Legislation
2. **Identify** which section of the Constitution outlines the specific role and power of the federal government.
   - A. 42
   - B. 67
   - C. 19
   - D. 51
3. **Identify** the country on which Australia's parliamentary system is based.
   - A. Japan
   - B. Spain
   - C. Britain
   - D. America
4. **Identify** how many amendments were made to the US Constitution to make up the Bill of Rights.
   - A. 4
   - B. 7
   - C. 10
   - D. 9
5. **Explain** the process by which the Australian Constitution came into existence.

Apply your understanding

Communicating

6. Under the new federation model proposed by the colonies, powers needed to be shared between state and federal governments. **Identify** at least two reasons for this.
7. **Identify** which freedoms or groups in Australia could possibly be threatened if a dictator seized power.
8. In your own words, **explain** the meaning of the term 'federation'.
9. **Identify** the ways in which a written constitution may not be clear to everyone.
10. After reading about the advantages and disadvantages of having a written constitution, do you believe it is a positive or negative feature of our system of government? **Outline** your opinion in writing and **compare** it with the opinions of your classmates.

LESSON
14.8 INQUIRY: Sharing the power

LEARNING INTENTION

By the end of this lesson you should be able to explain what division of powers means, and communicate how the needs of different states and groups might be balanced.

Background

The Australian Constitution outlines the rules for how Australia is governed. It outlines how the federal and state governments share the power to make laws. This is known as the division of powers.

At Federation, the states handed over some areas to be managed by the federal government, such as immigration and defence, which they believed would be best managed by a central authority. These powers are outlined in Section 51 of the Constitution, and are known as **specific powers**.

However, the states chose to retain much of their power in areas such as health, education and public housing. These powers are not listed in the constitution and are known as **residual powers**. The federal and state parliaments share some law-making power in some areas such as marriage and taxation. Powers which are shared are known as **concurrent powers**.

Each level of government is responsible for their resources and the provision of services to their people. Often they can govern independently, but in some circumstances they are required to collaborate with other governments where resources are shared.

FIGURE 1 The river system that feeds the Murray–Darling Basin stretches across four states and the ACT.

One resource that is shared between governments is water. The Murray–Darling Basin is Australia's largest river system. On average, the Basin receives about 530 000 gigalitres of inflow per year. The river system that feeds the Basin stretches across four states (Queensland, New South Wales, Victoria and South Australia) as well as the Australian Capital Territory.

Each of these governments must work together to ensure a fair distribution of water and the river system remains healthy into the future. The Murray–Darling Basin is also on the land of several First Nations Peoples. First Nations Australians share a deep connection to Country, and with the new Indigenous Voice in the federal parliament, they too will have a say on this issue.

Discuss the following:

1. What does the term 'division of powers' mean?
2. How do you balance the different needs of different states and groups?

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Working in groups of five, you will experience the division of powers at work through the creation of a plan for the allocation of the Murray–Darling Basin's water. Each group member will take on the role of water minister for their state or territory.

Step 1: Questioning and researching

Each member will be required to **research** the water needs of their state or territory and negotiate with the other ministers to devise a water management plan. You are to **present** this plan, as well as any difficulties you had in reaching a solution, to the class.

Research the volume of water your state or territory requires from the Murray–Darling Basin. **Determine** what volume you deem essential and what would be ideal for the additional needs of your state. This will allow you to know which areas you can compromise on, if necessary.

Step 2: Analysis, evaluation and interpretation

Analyse your research to consider the following:

- how much water originates in your state
- drinking water needed for towns in the Basin
- water needed for the health of the Basin's ecosystem
- water needed for irrigation for food production
- water needed for tourism, fishing and social activities
- how the management of the Basin will impact the Traditional Owners.

Step 3: Civic participation and decision-making

Conduct a negotiation with the other ministers over the water in the Murray–Darling Basin. Aim to secure the water you need for your state, while also protecting the needs of the other states and territory, and the rivers' ecosystem.

Step 4: Communicating

Once you have come to an agreement, **write** up your plan for the Murray–Darling Basin.

- **Present** your plan in a PowerPoint presentation. Include the strengths and weaknesses of the division of power system based on your experience in this activity.
- Your PowerPoint presentation should have one idea per slide. It will usually represent a single sentence summary of a larger amount of information. In presenting information in a PowerPoint format, you should be prepared to provide extra information and explanation relating to each slide, not merely read from the slide.
- Once you have completed your presentation, submit it to you teacher for assessment and feedback, or present it to your class.

Note: if you are working in a group with fewer than five members, you may choose to omit the roles of the ACT and/or Queensland water ministers, because they have a smaller role in the Basin and water allocation than New South Wales, Victoria and South Australia.

Complete your self-assessment using the **Inquiry rubric** or access the 14.8 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39381)

LESSON
14.9 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

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Practise questions with immediate feedback

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14.9.1 Key knowledge summary

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

14.2 What is the role and structure of the Commonwealth Parliament?

- Parliament is the main law-making body in Australia.
- Parliaments are elected to create laws that represent the wishes and values of citizens. Our system of government is known as a democracy because the people vote to decide who sits in the parliament.
- State parliaments were mostly established in the six former colonies from the 1850s, while the federal parliament came into being with federation in 1901.
- Many features of our parliamentary democracy have been adapted from the British system of government, known as the Westminster system.
- As a group of former British colonies, we adopted many features of the Westminster system, such as having two houses of parliament at both the federal level and in most of the states.

14.3 What are the roles and structures of the state and territory parliaments?

- Each of the six states and two territories has its own parliament to make laws for its citizens on those matters over which the state or territory has constitutional power.

14.4 Why do we have different levels of government?

- Under the Australian Constitution, we have a separation of powers. This means that power is separated between the legislative arm of government, which makes laws, the executive arm, which implements (or carries out) the laws, and the judicial arm, which resolves disputes that may arise under those laws.
- The Constitution also provides for a division of powers between the state parliaments and the federal parliament. Law-making powers are divided in such a way that national issues can be handled by the central government, while state governments can concentrate on providing essential services for their citizens.

14.5 What does 'equality for all' mean?

- Representations of Australian identity are diverse.
- Australia is a multicultural and secular society in which cultural differences are celebrated.
- While Aboriginal and Torres Strait Islander Australians remain strongly connected to their culture and traditions, other parts of Australian society are characterised by their cultural diversity.
- The Uluru Statement from the Heart is an invitation from the First Nations Peoples of Australia to non-Indigenous Australians to walk with them into a better future, where all voices are heard.

14.6 What is 'active citizenship'?

- There are two types of citizenship: active and passive.
- Active citizenship is all about getting involved in your community; passive citizenship is carrying out the duties associated with being an Australian citizen (such as voting and paying taxes).
- Social media presents young people with new ways to engage in the political debates and to become active citizens.
- By becoming active citizens, we can protect the democratic foundations of Australia.

14.7 How are our democratic freedoms protected?

- The way we are governed in Australia is determined by a set of rules outlined in our Constitution.
- The Constitution outlines the powers of those governing us, and what they are and are not permitted to do in exercising those powers. Commonwealth and state parliaments are all expected to operate within the rules laid out in this Constitution.
- The law courts are also expected to uphold the rules contained in the Constitution, and to ensure that all individuals and organisations act within these rules.
- A Constitution was necessary because Australia already consisted of six self-governing colonies. Because a national parliament would be introduced to govern the new nation, it was important to have clear statements about how power would be shared between the national parliament and the six existing parliaments.
- Australia's human rights are protected by five explicit rules in the Constitution. Other rights are protected by the implied language of the Constitution and the laws executed by the parliament.

14.8 INQUIRY: Sharing the power

- The allocation of water in the Murray–Darling basin is an example of the division of powers at work.

14.9.2 Key terms

bicameral a parliament with two houses
Cabinet the top-level decision-making group within the Australian Government made up of most or all ministers
congregate to come together in a smaller crowd or group within a larger community
constitution a set of rules that determines the structure of government and its law-making powers
convention an unwritten rule, not a law; an accepted way of doing something
democracy a political system according to which citizens choose the way in which they are governed, and elect representatives to make laws on their behalf
dictator a person who has absolute power within a country, and who usually cannot be voted out of power by democratic elections; a government headed by a dictator is usually referred to as a dictatorship
duties obligations placed on citizens to ensure society runs smoothly
federation the formation of a united country from a number of separate states or colonies, with law-making power shared between the national government and the governments of each of the states
integrate to merge with a larger community
judiciary a collective name given to the judges who preside over law courts
legislation a term used to describe laws passed by parliament
referendum a process of allowing the people to vote on an important issue
repeal to remove a law so that it no longer applies
rights guarantees of equal social opportunities and protection under the law
royal assent the formal approval by the monarch's representative, and the final step necessary before a law comes into force
tokenistic describes an act that is completed only as a gesture rather than being sincerely meant
unicameral a parliament with only one house
Westminster system the parliamentary system of Great Britain, which has been copied and adapted by many other countries including Australia; called that because the British Parliament meets in a building called the Palace of Westminster

14.9.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How does Australia's democracy function for all citizens, and how can citizens get involved?

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

eWorkbooks
- Customisable worksheets for this topic (ewbk-10555)
- Reflection (ewbk-10691)
- Crossword (ewbk-10556)

Interactivities
- Parliament and government crossword (int-5312)
- The Australian Constitution crossword (int-8250)

14.9 Review exercise

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Multiple choice

1. When a group of states decide to join together and hand over some of their powers to a central government, what is this arrangement known as?
   - **A.** Federation
   - **B.** Constitution
   - **C.** Referendum
   - **D.** Legislation
2. Which section of the Constitution outlines the specific role and power of the federal government?
   - **A.** 42
   - **B.** 67
   - **C.** 19
   - **D.** 51
3. Australia's parliamentary system is based on the Westminster system from which country?
   - **A.** Japan
   - **B.** Spain
   - **C.** Britain
   - **D.** America
4. How many amendments were made to the US Constitution to make up the Bill of Rights?
   - **A.** 4 **B.** 7 **C.** 10 **D.** 9
5. Which of the following is *not* a disadvantage of having a constitution?
   - **A.** A constitution protects the rights and freedoms of citizens.
   - **B.** A constitution can be difficult to alter.
   - **C.** A constitution can be open to interpretation.
   - **D.** A constitution relies on citizens to follow its principles.
6. Out of the 44 proposals to change the Constitution, how many have been successful?
   - **A.** 8 **B.** 6 **C.** 4 **D.** 2
7. What was the goal of the Australian Republican Movement?
   - **A.** To elect a president instead of prime minister
   - **B.** To allow state governments to have more control
   - **C.** To remove Australia from the Commonwealth
   - **D.** To strengthen ties with the British Monarchy

8. What is the separation of responsibilities across local, state and federal governments known as?
   - **A.** The separation of responsibilities
   - **B.** The division of responsibilities
   - **C.** The separation of powers
   - **D.** The division of powers
9. What is the separation of the government's responsibilities into legislative, executive and judicial arms known as?
   - **A.** The separation of responsibilities
   - **B.** The division of responsibilities
   - **C.** The separation of powers
   - **D.** The division of powers
10. Which court of Australia has the power to interpret and enforce the Constitution?
   - **A.** Magistrates Court
   - **B.** Supreme Court
   - **C.** Court of Appeals
   - **D.** High Court

Short answer

Analysis, evaluation and interpretation

11. Australia's Constitution would never have been agreed to if it had not guaranteed a role for state governments. It was state politicians who met to develop the Constitution, believing that they would continue to have considerable powers. Over the last 100 years, many Australians have argued that we no longer need state governments. They argue that countries with much larger populations than Australia manage without both levels of parliament. They also argue that local councils could be enlarged to become elected regional authorities, so that we would have only two levels of government instead of three. Those who support retaining state governments argue that the federal parliament is too distant from ordinary people, and that state governments are best placed to deliver essential services. Removing state parliaments would require several changes to the Constitution.

    Consider the following, and give reasons for your responses.
    - **a.** Modern communications did not exist when the Constitution was drafted, so the federal government would have seemed very distant. State governments, however, were based in every capital city and so were closer to the people. Have changes in our forms of communication made state governments unnecessary?
    - **b.** **Identify** three changes that would have to happen for a referendum to abolish the states to be successful.
    - **c.** Can you think of some powers that are currently held by one level of government that could be transferred to a different level of government? For example, the state governments could transfer their responsibility for health and hospitals to the federal government.
12. People wishing to be elected to parliament often make promises and develop policies that they hope will appeal to the majority of voters. Justify in detail why you would vote for or against someone who proposed each of the following policies.
    - **a.** Lowering the voting age to 16
    - **b.** Raising the licensed driving age to 21
    - **c.** Introducing compulsory military service for all 18 year olds
    - **d.** Introducing tolls on all roads to help pay for improved public transport

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15 The legal system and you

LESSON SEQUENCE

15.1 Overview 591
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LESSON
15.1 Overview

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How do features of the Australian legal system protect the rights of individuals and uphold the principles of justice?

15.1.1 Our legal system

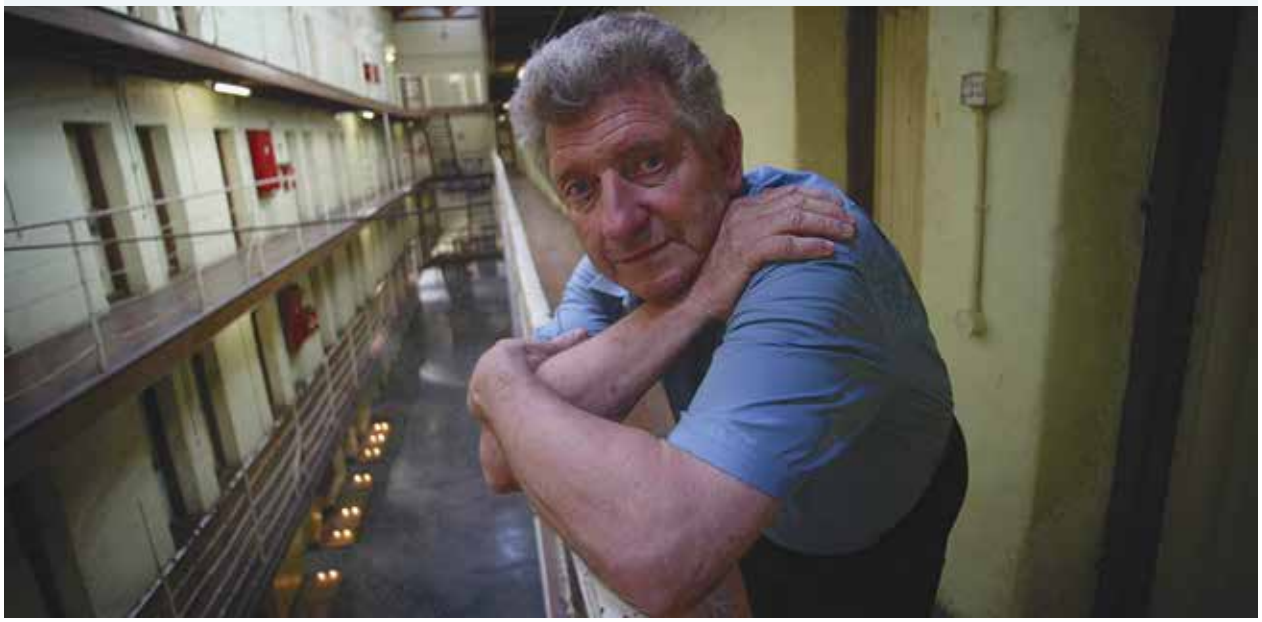
Picture yourself standing in court, accused of a crime you did not commit, facing a trial and then being found guilty of the crime. **FIGURE 1** shows John Button at Fremantle Prison, where he served five years of his sentence. Why do you think he returned to the prison for the photo? How would you feel if you were found guilty of a crime that you did not commit and sent to prison?

Australia's **rule of law** and our **legal system** should protect you from this happening. But how much do you know about Australia's legal system? Would you know where to find a lawyer? Would you know what would make your trial fair? All Australian citizens should have the opportunity to access justice no matter who they are.

rule of law the legal principle that all citizens are subject to the law, and equal before the law, as it is upheld by independent courts

legal system a system for interpreting and enforcing the laws of a country

FIGURE 1 John Button was wrongfully convicted of the manslaughter of his girlfriend in 1963. He was acquitted 39 years later (found not guilty of committing the crime) after serving his sentence in prison.



on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10558)

Video eLesson The courtroom (eles-2078)

LESSON
15.2 What are the principles of justice?

LEARNING INTENTION

By the end of this lesson you should be able to explain what is meant by the rule of law and explain the principles of justice.

TUNE IN

Did you know that the concepts of justice can be found in ancient Greek, Roman and Egyptian societies? Lady Justice has her origins in the time of Emperor Augustus during the early first century CE, although the blindfold first appeared in the sixteenth century.

Work with a partner and complete the following.

1. What message is being conveyed in **FIGURE 1**?
2. Formulate a shared understanding or definition of justice.
3. Brainstorm other elements we might need to ensure justice.

FIGURE 1 Lady Justice is commonly used to represent the idea of justice.

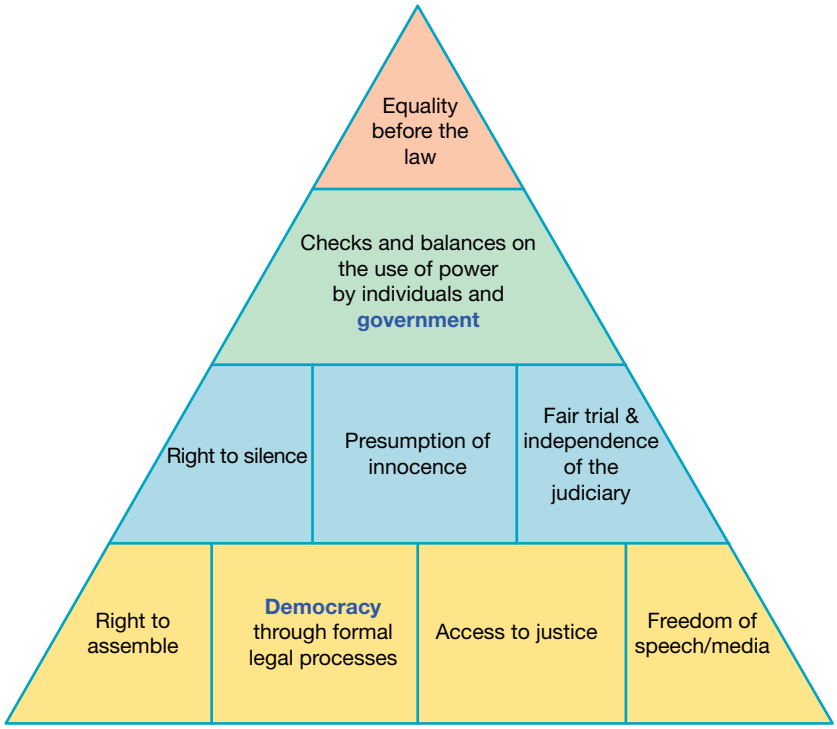
The symbols of justice

15.2.1 Introducing justice

Our legal system is built on several key principles that are designed to protect the rights of all Australian citizens. The rule of law is one of these principles and helps promote the three principles of justice: fairness, equality and access.

tlvd-10560

FIGURE 2 The rule of law brings together key aspects of our legal system to protect the rights of citizens.



15.2.2 The principles of justice

The legal system recognises three broad principles of justice: fairness, equality and access.

Fairness

Within the legal system, fairness means that everyone has the same opportunities and receives impartial treatment. This is achieved by having an independent decision-maker, in the form of a judge and/or jury.

Within this context:

- each party (the **prosecution** and the **accused**) can present evidence and question the case and evidence presented by the other side
- strict rules of evidence and procedure are applied, ensuring **procedural fairness** so that neither side is disadvantaged. For example, a court has strict rules of evidence and procedure, such as the jury not hearing evidence about prior criminal history, so that a decision is based on the facts of the case.

But is this fair (see **FIGURE 3**)? Does treating everyone the same lead to a fair result?

Fairness may also mean that we need to make adjustments to cater for the needs of individuals.

government a group of people with the power to rule over a country or state and make decisions and laws on behalf of the people

democracy a political system according to which citizens choose the way in which they are governed, and elect representatives to make laws on their behalf

prosecution the person who presents a criminal case on behalf of the state

accused a person who has been charged with a criminal offence

procedural fairness refers to having fair procedures in place to protect the rights of all parties

FIGURE 3 In the legal system, equality suggests we treat everyone the same — but is this fair?

Equality

Equality means that all people are treated the same and we do not discriminate between individuals because of their personal characteristics or attributes — such as race, gender, sexual orientation, marital or family status.

Some overlap exists between the principles of fairness and equality. This is because many of the features of the legal system that uphold the idea of fairness are also relevant to the idea of equality. For example:

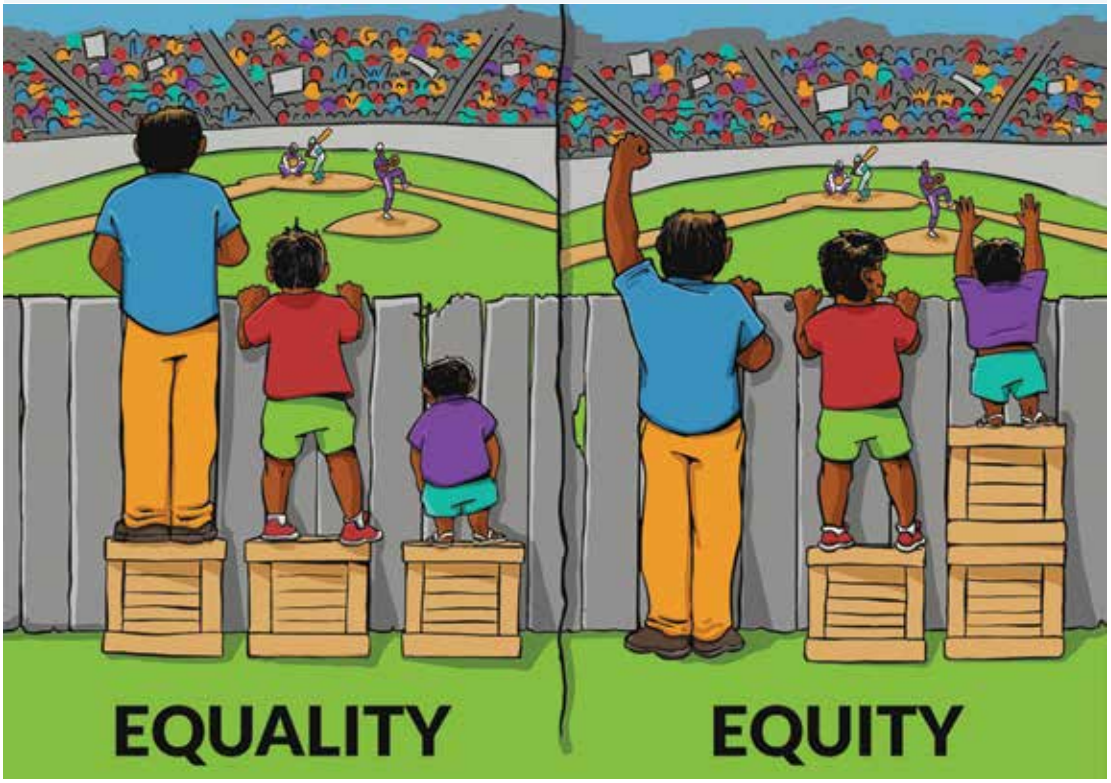
- the presence of an independent decision-maker
- the rules related to evidence and procedure.

For example, think about equality and fairness in school rules in relation to school uniform:

- *Equality* — students who are not in the correct uniform are given a detention (the same rule for all).
- *Fairness* — students who have a valid note will be given a uniform pass and will not receive a detention (making an adjustment).

Sometimes the legal system needs to treat people differently to ensure justice is served (see **FIGURE 4**). For example, the legal system sometimes provides legal aid for people who cannot afford a lawyer.

FIGURE 4 Fairness means we must make sure that we 'level the playing field' because simply treating everyone equally might lead to an injustice.



Access

Having access to the legal system means that individuals are aware of their legal rights and can obtain information and advice about the legal system — for example, advice on what happens when they go to court. Legal aid services can provide this advice (see **FIGURE 5**). Additionally, access means that individuals can pursue their case within the legal system, which may mean using the court system or resolving a dispute without the need to go to court.

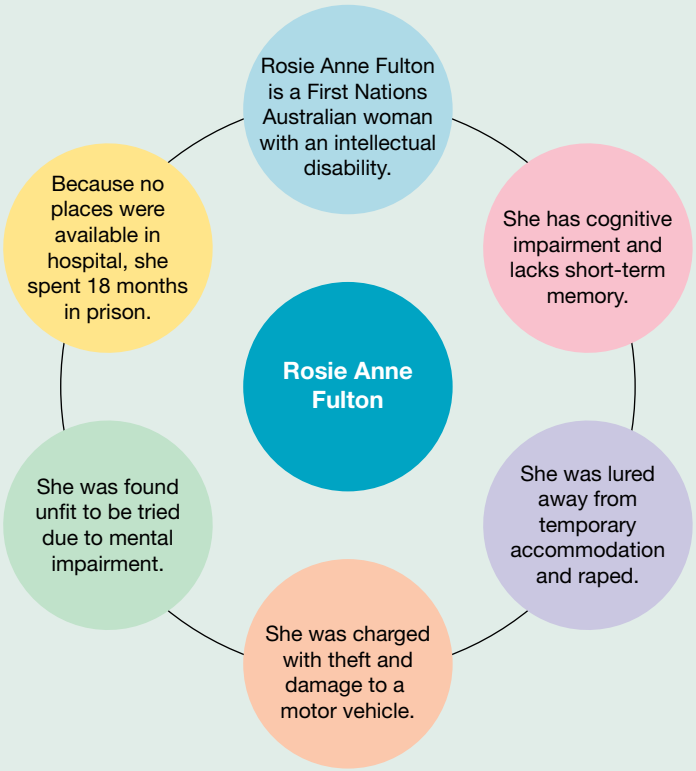
FIGURE 5 Legal aid provides information about the legal system in different languages. In 2021, legal aid services provided some form of advice or assistance to more than 130 000 people Australia-wide. This figure does not include people who found what they needed on legal aid websites.

15.2 SKILL ACTIVITY: Analysis, evaluation and interpretation, Communicating

Case study: When the system is not just

Read the information on Rosie Anne Fulton provided in **FIGURE 6**. You can also read more about inequality in the legal system in relation to this case using the **Rosie Anne Fulton** weblinks in the Resources panel.

FIGURE 6 Which of the principles of justice are relevant to this case?



1. **Create** two tables similar to those provided and work with a partner to fill them in.
   a. In the first table, **provide** evidence of the rule of law protecting and not protecting rights in the Rosie Anne Fulton case.

Applying the rule of law

Rights protected	Rights not protected

   b. In the second table, apply the principles of justice and **provide** evidence of how the principles were met and not met in the Rosie Anne Fulton case.

Meeting the principles of justice

Principles met	Principles not met

2. Using the information in your tables, write two paragraphs that **summarise** your findings.
3. With your partner, **propose** a solution to help ensure the legal system achieves the principles of justice.

on Resources

Weblinks Rosie Ann Fulton 1
Rosie Ann Fulton 2

15.2 Exercise

learnon

15.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 3, 4	2, 5, 8	6, 7, 9, 10

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Check your understanding

1. **Identify** the three principles of justice.
   - A. Fairness, equity, access
   - B. Fairness, equality, access
   - C. Rule of law, fairness, access
   - D. Rule of law, equality, access
2. **Identify** the three symbols of justice.
   - A. Legal Aid, scales, courtroom
   - B. Fairness, equality, access
   - C. Sword, blindfold, scales
   - D. Police, lawyers, judges
3. Rules that prevent a jury from hearing evidence related to the prior criminal history of the accused during the trial are an example of what?
   - A. The rule of law
   - B. Procedural fairness
   - C. The principles of justice
   - D. A symbol of justice
4. In 2021, the Victorian premier Daniel Andrews was fined $400 for failing to wear a mask as required during the COVID-19 pandemic. This is an example of the application of what?
   - A. The rule of law
   - B. Procedural fairness
   - C. The principles of justice
   - D. A symbol of justice
5. Sarah has been charged with driving without a licence. She has been in contact with Legal Aid Queensland and is now aware of what to expect when she goes to court.
   This is an example of what principle of justice?
   - A. Fairness
   - B. Equality
   - C. Access
   - D. All the above

Apply your understanding

Communicating

6. **Explain** how the cartoon shown in **FIGURE 3** is linked to both fairness and equality.
7. a. Which principles of justice overlap?
   - A. Fairness and access
   - B. Equality and access
   - C. Fairness and equality
   - D. They all overlap

   b. **Justify** your answer to part a.
8. **Distinguish** between the prosecution and the accused in a criminal case.
9. **Define** the term 'procedural fairness'.
10. Using an example, **distinguish** between fairness and equality.

LESSON
15.3 Where did our justice system come from?

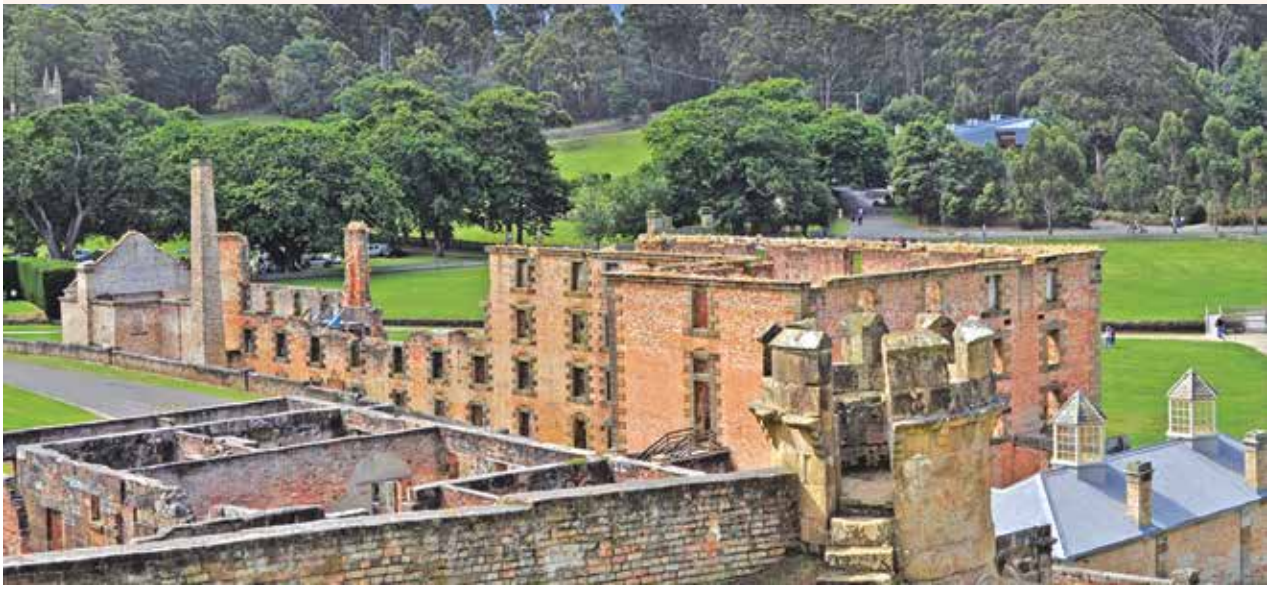
LEARNING INTENTION

By the end of this lesson you should be able to explain the origins of the Australian legal system and make connections between the Australian legal system today and past events.

TUNE IN

A penal colony is a settlement that was used to exile prisoners, often in a remote location. The historic penal colony of Port Arthur is a reminder of our early **colonial** history.

FIGURE 1 Penal colony of Port Arthur in Tasmania



1. Brainstorm the reasons the British founded a colony in Australia.
2. Suggest a link between the establishment of a colony in Australia and our legal system.

15.3.1 A legal system before European settlement

Before the arrival of European settlers, First Nations Peoples of Australia had their own system of customary law. Different laws applied in different regions, according to the belief system of the clan in a particular region. These laws had developed over time and were accepted as the norm within each Indigenous society.

The laws of First Nations Peoples of Australia had become entwined with the customs, stories and practices of the people, and had been passed on through the generations. Much like the laws we have today, these laws and intricate systems regulated human behaviour and relationships and strengthened the connections people had with the land and each other. **Sanctions** were imposed for offences.

When the first colonists arrived, they set about establishing their own legal system and ignored the systems that were in place and had evolved over 60 000 years.

colonial relating to the time when Australia was a British colony, under the control of the British government

sanction a penalty that is applied for breaking the law

15.3.2 Our British roots

Topic 14 covers the way the Australian system of government is based on the Westminster system. This is the system of government used in England. The early colonisers were of British origin, and it made sense to them that they would adopt a system of government they were familiar with.

The same principles from the Westminster system were applied to the development of the Australian legal system (see **FIGURE 2**). The early settlers brought the British legal system with them and said that all the laws that existed in England also applied to their new colony.

FIGURE 2 The Australian legal system is based on the British legal system, including the operation and structure of our courts.

15.3.3 The independence of the courts

Most of our laws are made by an elected parliament; however, courts sometimes make laws when they are hearing cases. This occurs because parliament has not made a law in a particular area or the law that parliament made is not clear.

In lesson 15.2 you learned about the rule of law, which protects the rights and freedoms of all citizens regardless of their status or position. The rule of law is protected by the courts; anyone can challenge the actions of the government through the courts if they think the law is not just. Independent courts that are free from the influence of government is a key element of the rule of law.

The Magna Carta

The judiciary has not always been independent. Before the signing of the Magna Carta in the thirteenth century CE, the monarch was the most powerful person in England — responsible for making laws and enforcing them.

FIGURE 3 An artist's impression of King John signing the Magna Carta in 1215

During the years 1199 to 1216, England was ruled by King John, who believed he had absolute power to do as he wished. As king, he could make any laws he wanted to, and he also had the power to act as a judge to decide on the fate of any of his subjects who might come before a court. This meant that he could find anyone he didn't like guilty of a crime, whether they were actually guilty or not. He sometimes used this power to heavily tax the people, and to confiscate the lands of some of the powerful barons in the kingdom. In 1215, these barons rebelled against King John, and demanded that he guarantee them certain rights. They presented these rights to the king in a 'Magna Carta' (Latin for 'Great Charter') and demanded that he sign it as a promise that he would respect these rights.

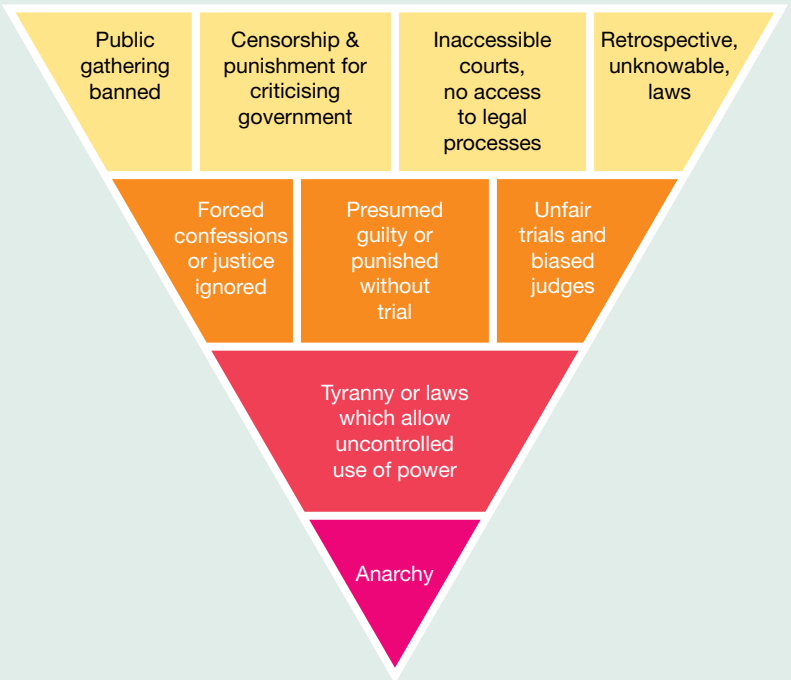
These rights included freedom from excessive taxes, and the right to own and inherit property. It also established a council of 25 barons to act as an advisory group for the king, and to ensure he did not abuse his powers. This is seen by many as the beginnings of a body, such as a parliament, to limit the powers of the king. Another significant clause in the Charter related to legal entitlements before the courts. Clause 39 read:

> No free man shall be arrested or imprisoned . . . or outlawed or exiled or in any way victimised, neither will we attack him or send anyone to attack him, except by the lawful judgement of his peers or by the law of the land.

This effectively reduced the power of the king to imprison anyone without a proper legal process. It is the beginning of the idea of an independent judicial arm of government, free of the influence of the king or ruling body, and also reinforces the principle of trial by jury. This is stated in the words 'lawful judgement by (one's) peers'. A person's peers are those considered to be their 'equals' in society.

15.3 SKILL ACTIVITY: Questioning and researching, Communicating

FIGURE 4 When the rule of law is absent, our rights and freedoms are no longer protected.



Refer to **FIGURE 2** in lesson 15.2 and **FIGURE 4** in this lesson.

1. **Explain** the difference between the two pyramids.
2. a. Match two elements in the two pyramids to **investigate** in more detail.
   b. **Explain** what the element means under the rule of law and what would change if the rule of law did not exist.
3. **Create** a cartoon to illustrate the importance of the rule of law.

15.3 Exercise

learnon

15.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5, 7	3, 4, 8	6, 9, 10

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Check your understanding

1. **Identify** which of the following features is not an aspect of the rule of law.
   A. Unfair trials and biased judges
   B. Freedom of speech
   C. Right to assemble
   D. Independence of the judiciary
2. **Identify** the correct statements in relation to King John.
   A. King John was a fair and democratic leader.
   B. King John was a British king.
   C. King John signed the Magna Carta.
   D. King John was a popular king.
3. **Recall** what a sanction is.
   A. An element of the rule of law
   B. A system of rules and laws that exist within a society
   C. A penalty imposed on a person who breaks the law
   D. A custom or usual practice
4. What is the Australian legal system based on?
   A. The British legal system
   B. The American legal system
   C. Customary law
   D. None of the above
5. **Determine** if the following statements are true or false.
   a. The first European colonists adopted the laws that had been established by First Nations Peoples of Australia.
   b. Peasants rebelled against King John and demanded he sign the Magna Carta.
   c. Our laws can only be made by the elected parliament.
   d. The rule of law is protected by the courts.

Apply your understanding

Communicating

6. **Explain** the connection between the rule of law and the independence of the courts.
7. **Identify** the year in which King John signed the Magna Carta.
8. **Explain** why courts can make laws.
9. **Explain** the system of laws that existed prior to the arrival of European settlers.
10. King John signed the Magna Carta in the thirteenth century CE. **Justify** the celebration of the signing of the Magna Carta 800 years after the event.

LESSON
15.4 How do Australian courts work?

LEARNING INTENTION

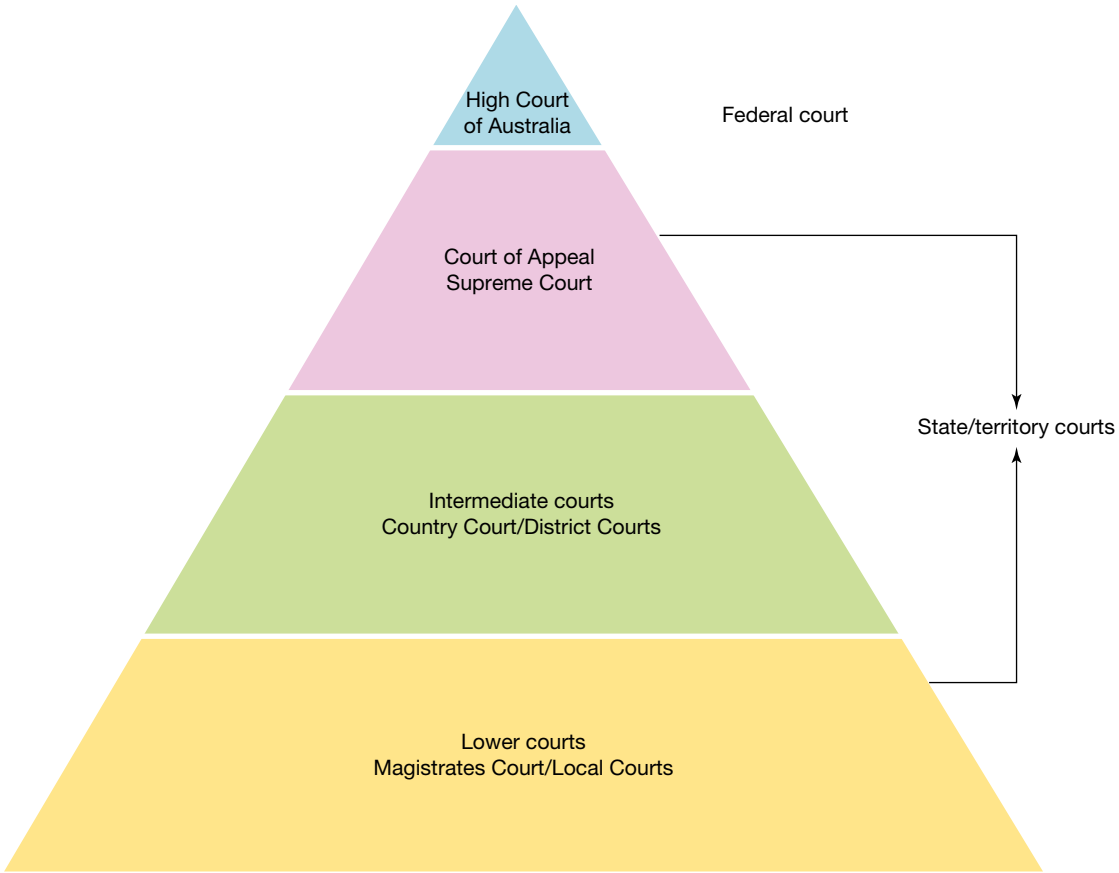
By the end of this lesson you should be able to arrange the courts into a hierarchy. You should also be able to distinguish between state and federal courts and explain the role of the courts.

TUNE IN

Did you know that Australian courts are arranged in a hierarchy? Some courts operate at state level and others within the states and territories. The states and territories have different names for the courts in the different levels.

tlvd-10561

FIGURE 1 The hierarchy of Australia's court system



1. Why do you think we have state and federal courts?
2. Brainstorm a list of reasons for arranging the courts in a hierarchy.

15.4.1 Guilty or not guilty?

Courts interpret laws and settle disputes. A person who has been charged with a criminal offence may have his or her case heard by a court. It is up to the court to decide if the accused is guilty or not guilty. Let us look at what happens when a criminal matter goes to **trial** before a court.

trial the court process to determine whether someone committed a criminal act

Courts can be tense places. The decisions made in court can have an enormous impact on people's lives. Courts and the officials who work in them deal with real-life dramas. The main courtroom officials include a **magistrate** or **judge**, **jurors**, a **prosecutor** and **counsel for the accused**. Australia has an independent system of courts, with different courts at different levels. Courts are often referred to as higher or lower courts.

magistrate a court official who hears cases in a Magistrates Court

judge a court official who hears cases in the higher courts, such as the District or County Court, or the Supreme Court

juror a person selected to hear and assess the evidence in a court case

prosecutor the party bringing a criminal action against the accused

counsel for the accused a lawyer who represents the accused person

jury a group of ordinary people randomly selected to hear and assess the evidence in a court case

15.4.2 Lower courts

Most people charged with a criminal offence will have their cases heard in the Magistrates Court (also known as the Magistrates' Court in Victoria and the Local Court in New South Wales). Lower courts such as the Magistrates Court are more informal than the higher courts. There is no **jury**, and magistrates do not wear a wig or a robe in court. However, people still need to address the magistrate as 'Your Honour', as they do in the higher courts.

The Magistrates Court hears minor criminal cases, such as minor assault and drink-driving. After hearing the cases presented by both sides, the magistrate decides whether a person is guilty or not guilty. If a person is found guilty, the magistrate decides the consequence. This is known as the sentence. For more serious criminal offences, the magistrate will listen to the evidence and decide whether enough evidence exists to send the case to trial before a jury in a higher court.

15.4.3 Higher courts

Each Australian state and territory has a Supreme Court, which hears the most serious criminal cases. These very serious criminal cases include murder and treason. Below the Supreme Court is an intermediate court. In some states, this court is referred to as the County Court and in others as the District Court. Tasmania and the two territories do not have an intermediate court.

This intermediate court hears criminal cases such as armed robbery, drug trafficking and serious assaults.

FIGURE 2 Brisbane Magistrates Court

At the beginning of a criminal trial in a higher court, the accused is asked, 'How do you plead?' A jury of 12 people may be selected to hear the trial if the accused responds with 'Not guilty'. The jury's role is to listen to the evidence and decide whether the accused is guilty or not guilty. If the verdict is not guilty, the accused is free to leave the court. If the verdict is guilty, the judge decides the sentence.

int-7803

FIGURE 3 Inside a serious criminal trial

1. The judge's associate is a trained lawyer who manages much of the paperwork.
2. Anyone whose name is on the electoral roll can be called as a juror. In a criminal case, the jury consists of 12 people. The jury must decide beyond reasonable doubt whether a person is guilty. For murder or manslaughter cases, all the jurors have to agree.
3. The prosecutor has to convince the jury that the accused person is guilty. This is done by asking questions of witnesses to draw out relevant information.
4. The judge is addressed as 'Your Honour'. He or she listens to arguments presented by the prosecutor and the counsel for the defence, and is not allowed to ask a witness questions (except to clarify a point). The judge has to make sure jury members understand the proceedings and evidence presented. If a jury announces a guilty verdict, the judge decides the sentence.
5. The counsel for the defence represents the accused. If the accused pleads guilty, the counsel for the defence presents arguments to try to lessen the punishment. If the client pleads not guilty, defence counsel must convince the judge or jury that the client is innocent.
6. The tipstaff helps the judge keep order in the court.
7. Witness box, from which people give evidence
8. Members of the public, who listen to and observe the court proceedings
9. A prison officer from the prison where the accused has been held
10. The accused
11. Members of the media, who observe proceedings so they can report what happens

15.4.4 High Court of Australia

The High Court is a federal court and is the highest court in Australia. Under criminal law it has the power to:

- hear appeals from state Supreme Courts
- hear crimes committed under federal law, such as tax fraud, illegal immigration and the importation of drugs into Australia.

FIGURE 4 The High Court of Australia in Canberra

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- 13.4 Notetaking

15.4 SKILL ACTIVITY: Questioning and researching, Communicating

Find a news article from the last 12 months that reports on a criminal case in an Australian state or territory court and complete the following table.

Note:

- First complete rows 1 to 6.
- Complete rows 7 and 8 if the information is available in your article.
- If you cannot complete rows 7 and 8, complete row 9.

1	Title of article	
2	Date and source (including the URL)	
3	Name of the court	
4	Name of the accused	
5	**Identify** the charge or charges	
6	The names of other court officials named and their role (including lawyers)	
7	The decision — what was the outcome of the case? Guilty or not guilty?	
8	The sentence imposed	
9	If you were the judge or magistrate, what do you think would be an appropriate penalty? **Justify** your decision.	

15.4 Exercise

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15.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 5	1, 4, 6	7, 8, 9, 10

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Check your understanding

1. **Identify** the four main courtroom officials in a serious criminal case.
2. **Match** the key terms with the correct definitions in the following table by placing the corresponding letter in the answer column.

A court official who hears cases in the Magistrates Court		**a.** Prosecutor
A court official who hears cases in the higher courts, such as the District or County Court, or the Supreme Court		**b.** Counsel
A lawyer who represents the accused person		**c.** Juror
A person selected to hear and assess the evidence in a court case		**d.** Magistrate
The party bringing a criminal action against the accused		**e.** Judge

3. **Select** the correct option to complete the sentence. Magistrates and judges are addressed in court as **Your Highness** / **Your Honour** / **Sir or Madam** / **Professor**.
4. **State** how many jurors are assigned for criminal cases.
5. **Identify** the phrase that best explains the responsibility of a jury in a criminal trial.
   - **A.** To determine a defendant's guilt beyond any reasonable doubt
   - **B.** To determine a defendant's guilt on the balance of probabilities
   - **C.** To determine a defendant's guilt to any standard they deem appropriate
   - **D.** To determine a defendant's guilt and decide on an appropriate punishment

Apply your understanding

Communicating

6. The system of courts for each state or territory is referred to as a hierarchy. **Arrange** the courts in their correct position in the hierarchy.
   - District Court
   - High Court
   - Magistrates Court
   - Supreme Court
   - County Court
7. In most court hierarchies, for all but the most serious offences (such as murder), a person can be found guilty by a jury if 11 of the 12 jurors (a majority verdict) or all 12 (a unanimous verdict) conclude that the accused is guilty.
   Explain why this might be hard to achieve.
8. **Justify** the procedural rule that prevents judges from asking a witness a question except where this is required to clarify a point.
9. **Justify** the need for courts in our legal system.
10. **Explain** why you think our legal system has a hierarchy that classifies courts as higher and lower.

LESSON
15.5 What is the presumption of innocence?

LEARNING INTENTION

By the end of this lesson you should be able to explain the presumption of innocence and why it is important. You should also be able to identify key elements of reasonable doubt and the burden of proof and how they support the presumption of innocence.

TUNE IN

People can find themselves in unexpected and dangerous situations.

Sometimes they have put themselves in these situations and sometimes it is through no fault of their own.

1. What do you think is meant by the term 'presumption of innocence'?
2. Do you think a person can be found guilty of a crime if no-one witnessed the crime?
   Give reasons for your answer.
3. Brainstorm a list of ways this principle is upheld in the Australian criminal justice system.

FIGURE 1 Was it the dog, or did someone else make a mess?

15.5.1 Innocent until proven guilty

If you were in trouble at school for something you hadn't done, you would hope that your teacher or principal would believe your claim that you had done nothing wrong. You would expect to be deemed innocent unless it was proved you had done the wrong thing.

In the same way, most Australians expect that when they go to court, they will be presumed to be innocent until proven guilty. But does this actually happen?

The **presumption of innocence** is a belief that we have inherited from English law. It means that all accused people who appear before an Australian court are presumed to be innocent until, and should be treated as such, the prosecution proves that they are guilty.

Not only are they presumed to be innocent, but they can also only be found guilty if the court is reasonably certain that the accused person committed the crime. This means that the magistrate, judge or jury must believe that the accused is guilty **beyond reasonable doubt**. The prosecution has the **burden of proof** in a criminal trial.

presumption of innocence the principle that all accused people who appear before a court are presumed to be innocent until the prosecution proves that they are guilty

beyond reasonable doubt the standard of proof required in a criminal trial where the prosecution must prove that the accused is guilty to such a high degree that a reasonable person would have little doubt that the accused committed the crime

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

tlvd-10562

FIGURE 2 Defining beyond reasonable doubt

15.5.2 Presumption of innocence around the world

The presumption of innocence is contained in article 11 of the Universal Declaration of Human Rights, and in article 14 of the International Covenant on Civil and Political Rights (ICCPR). This means that it is seen as very important across the world. Many nations — including the United Kingdom, the United States of America, France, Italy and New Zealand — recognise this principle.

15.5.3 Presumption of innocence and bail

Observing the presumption of innocence means that if a person is charged with a criminal offence, they may be granted **bail** by a magistrate or judge. Bail is the promise that an accused person makes to appear in court at a later date. It allows the accused to go home to wait for their trial, rather than stay in custody until he or she must go to court. Sometimes bail will have conditions attached, including the payment of money, surrendering a passport, remaining at the same address or reporting to police. Bail usually applies only to serious cases.

bail the promise that an accused person makes to appear in court at a later date

FIGURE 3 Unlike in this image, the presumption of innocence suggests the accused should not be handcuffed when appearing in court unless he or she presents a risk to other people.

FIGURE 4 Arguments for the presumption of innocence

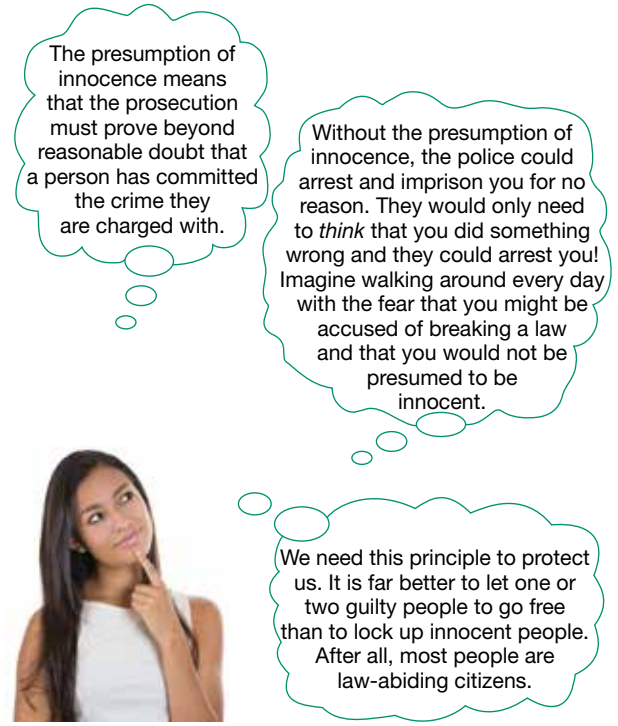
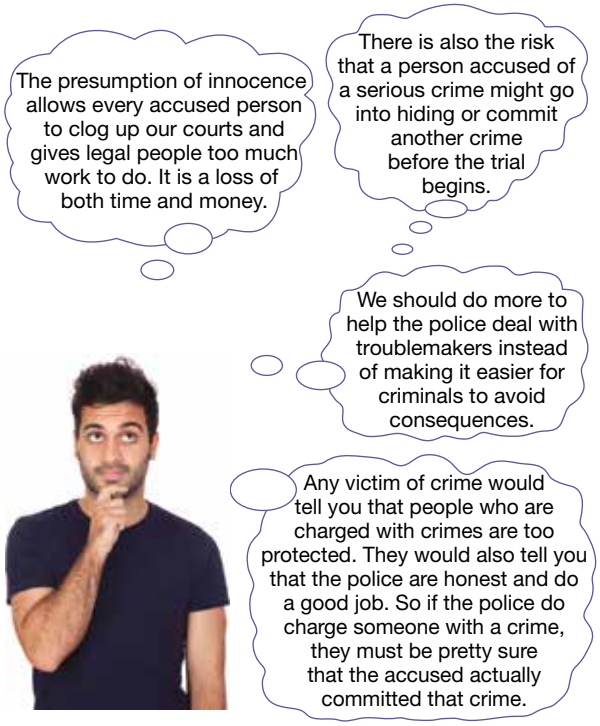


FIGURE 5 Arguments against the presumption of innocence



In some cases, the court may suspect that an accused person who is charged with a serious crime might not turn up for their court appearance, or might be at risk of causing danger to the public. In this case, bail is refused and the accused is detained (held in custody) until the trial. In 2017, while high on drugs, George Gargasoulas stabbed his brother and then drove his car dangerously and erratically down Bourke Street in Melbourne. Through his actions, six people were killed and 27 people were injured. At the time of the offence, Gargasoulas was on bail.

15.5.4 The presumption of innocence and the right to silence

In Australia, the right to silence is a common law principle, which means it was developed through the courts. It protects an accused person from self-incrimination during the police investigation and during the trial. Criminal suspects in Australia have the right to refuse to answer questions posed to them by the police before trial and to refuse to give evidence at trial.

FIGURE 6 An accused person must be informed of their right to silence. The judge and jury are not allowed to draw any conclusions when an accused person does not give evidence in court.

The presumption of innocence is upheld through the right to silence. It reflects and is linked to the burden of proof, which requires the prosecution to prove the accused is guilty, rather than the accused having to prove their innocence.

CASE STUDY

Presumption of innocence — on your bike

Queensland introduced new laws in 2013 to target the illegal activities of gangs, including criminal motorcycle (bikie) gangs. The laws are commonly referred to as 'bikie laws'. The government prepared a list of declared criminal organisations and created new offences for them. These included bans on members of a criminal gang gathering in groups of three or more, visiting locations such as clubhouses or gang events, and recruiting for their organisations. The laws have been criticised for going against the principle of the presumption of innocence.

FIGURE 7 Joshua Carew and other men were arrested due to alleged association with the Rebels motorcycle club in Queensland. They were held in custody for an extended period without trial.

Steven Smith, Scott Conley, Joshua Carew, Paul Lansdowne and Dan Whale were arrested and detained in custody in December 2013, following a meeting at the Yandina Hotel. They were alleged by police to have links to the Rebels motorcycle club. Joshua's wife, Tracy Carew, said her husband had been locked up for delivering a pizza to the other men. 'These boys aren't guilty of this crime, they haven't been proven guilty. They haven't been put in front of a jury and deemed guilty yet,' she said. Mrs Carew told the media that the men were placed in solitary confinement awaiting their court hearings. Joshua Carew, and some of the other men, were released from custody under bail conditions in mid-January 2014.

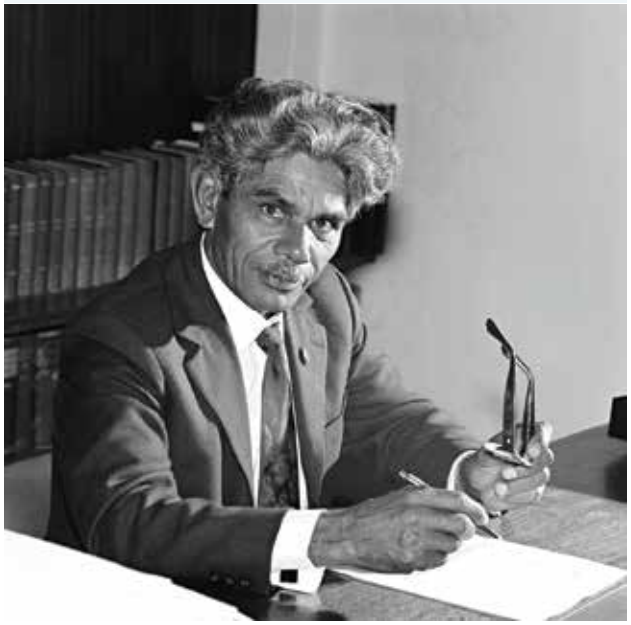
15.5.5 First Nations Pioneers

Cathy Freeman's victory at the 2000 Sydney Olympic Games was a proud moment for First Nations Peoples in Australia. Cathy Freeman is one of many First Nations Australians who have crusaded for reconciliation and equality, and continue to do so.

Neville Bonner

Neville Bonner was born on Ukerebagh Island on the Tweed River in New South Wales in 1922. Like many First Nations children of his time in Australia, he had little formal schooling. Following the 1967 referendum that gave the Commonwealth Government the power to make laws in relation to First Nations Australians, Bonner joined the Liberal Party. In 1971, following his selection to fill a vacant Senate seat, he became the first First Nations Australian to sit in the Commonwealth parliament. He went on to win his seat back at the 1972, 1974, 1975, and 1980 elections.

FIGURE 8 Neville Bonner, the first First Nations Australian to sit in the Commonwealth parliament



Using his seat in the Senate, Bonner continued to advocate for Indigenous issues in Australia. Bonner believed that the interests of First Nations Australians would be best served by working within the system and the existing political institutions of Australia. Bonner said he had 'an all-consuming burning desire to help my own people'. A cause he dedicated himself to until his death in 1999.

Adam Goodes

Adam Roy Goodes is an Adnyamathanha man, born in 1980. Goodes is a champion AFL player and a fierce advocate for First Nations issues in Australia. Extremely proud of his Indigenous heritage, Goodes is actively involved with several First Nations sporting and community programs, with a focus on helping troubled youths.

In 2014, Goodes was named Australian of the Year. Using this platform, Goodes has continued to advocate for greater education, employment and healthy lifestyles for Australia's First Nations Australians. Together with his cousin and teammate Michael O'Loughlin, Goodes established the Go Foundation to advance these causes.

FIGURE 9 Adam Goodes advocates for greater education, employment and healthy lifestyles for Australia's First Nations Australians.

Goodes is a passionate sportsperson and continues to fight against stigmas and racism both on and off the field. In 2022, he was awarded a place on the advisory council of Indigenous Football Australia, a body charged with overseeing the development and expansion of First Nations football in Australia.

SkillBuilders to support skill development

- 13.4 Notetaking
- 13.6 Writing argument paragraphs
- 13.7 Writing a submission

15.5 SKILL ACTIVITY: Communicating

Read the following case study.

> In 2021, Jason Ruscoe allegedly struck and killed a traffic controller in Carrum Downs when he travelled at speed through a 40 kph zone. He then allegedly escaped on foot and called his friend Ashley Luke Powell, informing him of the accident and asking him to pick him up, which Mr Powell allegedly did.
>
> In a public park, the two men later allegedly burned the clothes they had been wearing.
>
> It is alleged that at the time, Mr Powell was driving while disqualified, driving at police officers, and forcing a police pursuit that endangered the lives of others. He is further alleged to have impeded the police investigation. Mr Powell has a long criminal record and, at the time of the offence, was on bail for other driving offences, including driving while disqualified, and had previously breached a community corrections order.

With the support of his grandfather, Mr Powell applied for bail. His grandfather described his grandson as having a good heart and deserving of a second chance, despite making bad choices in this case and in relation to using cars.

The police have opposed bail. The police believe that Mr Powell's actions demonstrate a significant risk to the community; he did not have a licence at the time of the offence and placed others, including the police, at risk so that both he and Mr Ruscoe could escape.

You be the judge

In your opinion, should Mr Powell be granted bail? **Justify** your point of view.

In your answer, refer to different perspectives such as the accused, his grandfather, the police and the family of the person who was killed. Refer to the presumption of innocence and the rule of law.

15.5 Exercise

learnon

15.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3	4, 5, 6, 7	8, 9, 10

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- Receive immediate feedback
- Access sample responses
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Check your understanding

1. **Determine** if the following statements are true or false.
   a. All countries believe in the presumption of innocence.
   b. The prosecution has the burden of proof in a criminal trial.
   c. The right to silence only applies in serious criminal cases.
2. **Select** the phrase that best defines the term 'beyond reasonable doubt'.
   A. To be sure that no other logical explanation can be concluded from the evidence presented in court
   B. To be sure that it is more likely that the defendant is guilty than not guilty
   C. To suspect the defendant is guilty based on your first impression of them
   D. To doubt that the suspect is telling the truth
3. **Select** the correct option to complete the following sentence.
   Arrest / **Remand** / **Bail** / **Compensation** describes the situation in which a person charged with a criminal offence may return to their normal life, instead of remaining in custody.
4. **Explain** two circumstances that would lead to bail being refused.
5. a. **Explain** what the burden of proof is.
   b. **Recall** who has the burden of proof in a criminal trial.

Apply your understanding

Analysis, evaluation and interpretation

6. **Explain** how **FIGURE 3** undermines the presumption of innocence.
7. Read the case study 'Presumption of innocence — on your bike'. Joshua Carew was held in solitary confinement for approximately six weeks before being released on bail. Briefly **describe** what this suggests about the attitude of the Queensland government towards the presumption of innocence principle.
8. **Explain** what might happen if an accused person went to court and was put on trial without the presumption that they were innocent.
9. Using **FIGURES 4** and **5**, **discuss** the advantages and disadvantages of the principle of presumption of innocence.
10. **Explain** the connection between the presumption of innocence, the right to silence and the burden of proof.

LESSON
15.6 What is a fair trial?

LEARNING INTENTION

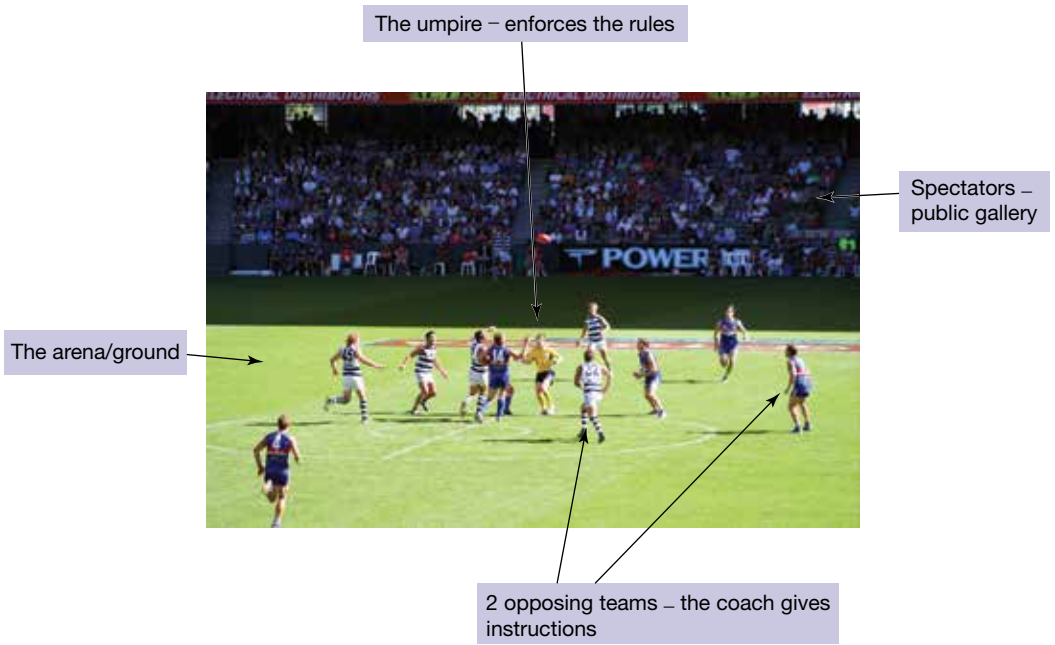
By the end of this lesson you should be able to identify and discuss the elements of a fair trial, and make connections between a fair and just legal system and the principles of democracy.

TUNE IN

The Australian trial system has sometimes been compared to a football match.

1. What comparisons can you make between what happens in a courtroom and what happens on a football field? Brainstorm a list of similarities and differences between a football match and a trial.
2. Refer to your two lists. Do you think trials and sporting matches are similar? Justify your opinion.

FIGURE 1 The courtroom and the concept of a fair trial can be compared to a sporting competition such as a game of football.



15.6.1 Equal treatment for all

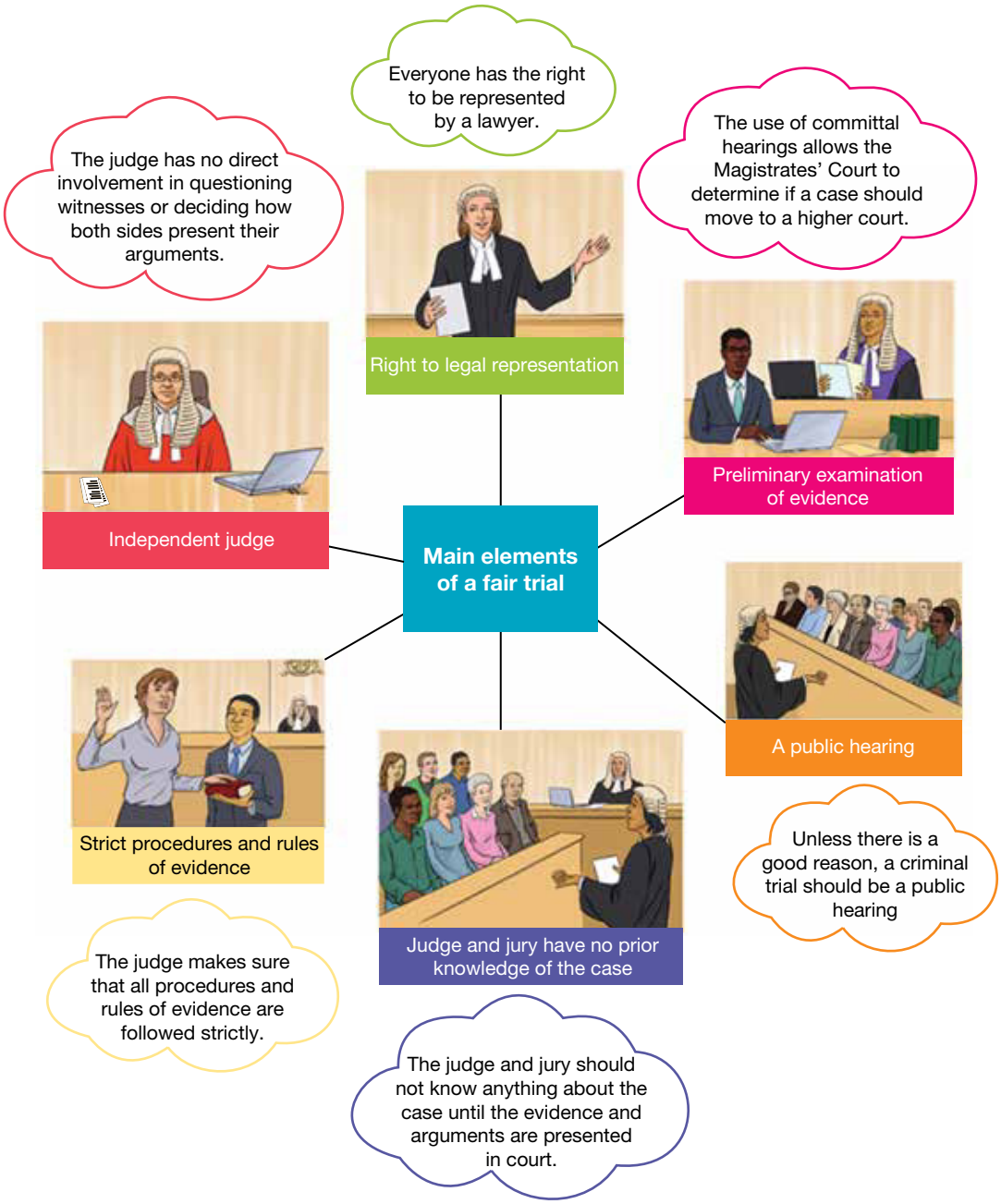
In Australia, we believe that our legal processes protect the right of every accused person to receive a fair trial — a trial held before a competent, independent and unbiased court recognised by the law. If you were accused of a crime, you would expect that you would be provided with the opportunity to contest any charges made against you. You would presume that your side of the story would be listened to. You would think that the person listening to both sides would not favour either of those sides.

15.6.2 Main elements of a fair trial

The main elements of a fair trial are summarised in **FIGURE 2**. Let us now look at each element in more detail.

int-8961

FIGURE 2 Main elements of a fair trial



Preliminary examination of evidence

When a person is charged with a criminal offence, they will be told to attend a Magistrates Court. The Magistrates Court hears minor offences and some serious cases. This court also examines very serious cases to decide whether the accused person should be put on trial in a higher court. This is called a **committal hearing**. If the magistrate decides enough evidence exists and the case is serious enough, the case will be heard in an intermediate court such as the County Court or District Court, or in the Supreme Court.

committal hearing in very serious cases, the procedure held in a lower court to determine if enough evidence exists for the case to move to a higher court

Committal hearings guarantee a fair trial because the prosecution must disclose all the evidence and witnesses related to the case. Because the accused is fully aware of the case against them, they can better prepare for trial. An accused will be able to gather evidence to support a defence and test the evidence of the prosecution.

Right to legal representation

The right to a fair trial means everyone is entitled to be treated equally by the court. Both sides have the right to present their case. The two opposing sides will gather evidence and present their case to an independent judge or magistrate. The side with the strongest argument is likely to win the trial.

For a trial to be fair, each side should have **legal representation**. This means a lawyer will present their case. In certain cases, legal aid can be provided for people who cannot afford the cost of hiring a lawyer (see lesson 15.7)

A public hearing

Unless a good reason exists, an accused person will have their case heard at a public hearing. This means members of the public can observe the trial and information about the trial will be freely available in the media. This promotes fairness because the community can see that the rules of evidence and procedure are being followed.

A trial will only be closed when it is in the interests of justice; for example, because a witness is very young. Where the offence is committed by a person under the age of 18, the case will be heard in the Children's Court, and will not be open to the public.

Independent judge

The judge is very much like the umpire in a game of football. Their job is to make sure that both sides follow the rules. Judges are independent, which means that they have no direct involvement in questioning witnesses or deciding how either side will present its arguments. The judge makes sure that all the rules of evidence and procedure are followed and that both sides are treated equally.

FIGURE 3 Any citizen who is listed on the electoral roll can be randomly summoned for jury service.

Judge and jury have no prior knowledge of the case

Neither the judge nor the jury should know anything about the case until the evidence and arguments are presented in court. They cannot use the internet or any other source to learn more about any aspect of the case.

During the trial, the judge will clarify any legal issues for the jury and, at the end of the trial, explain the relevant law to them.

Jurors must listen very carefully to the evidence given in the trial and make a decision based only on that evidence and the law as explained by the judge.

Jurors are not allowed to discuss the case with anyone else, even after the trial has finished. They are not allowed to post information about the case on social media or give media interviews.

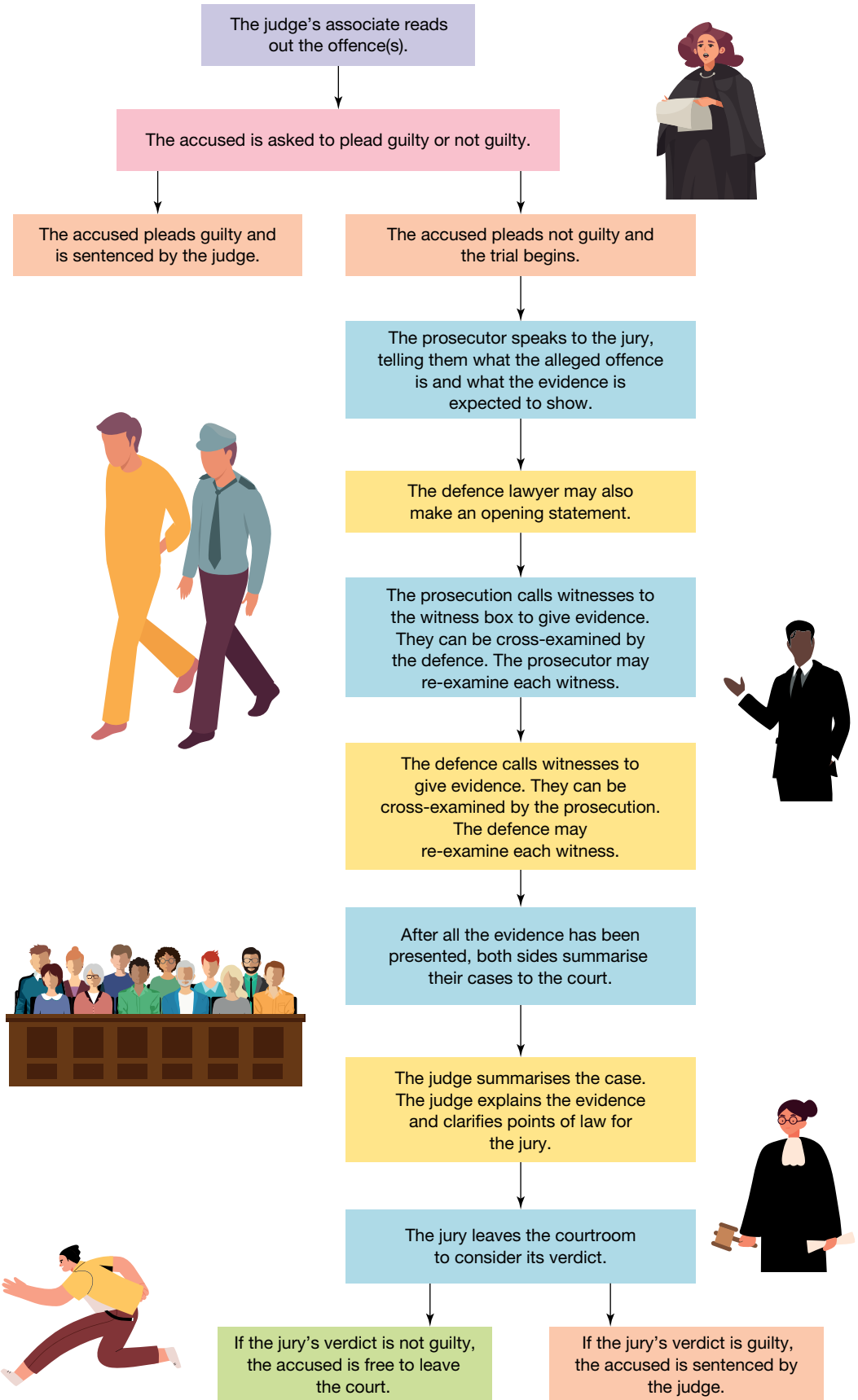
Strict procedures and rules of evidence

A fair trial follows strict procedures. These procedures are designed to ensure that each side has an equal opportunity to present its own case as well as challenge the evidence introduced by the other side. A fair trial will also observe strict rules for the type of evidence that can be looked at in court. For example, a witness who is not a doctor cannot give medical evidence. The procedure for a trial in a higher court with a jury is shown in **FIGURE 4**.

legal representation services performed by a qualified legal practitioner, such as a lawyer, who deals with legal matters on behalf of the person who has hired them

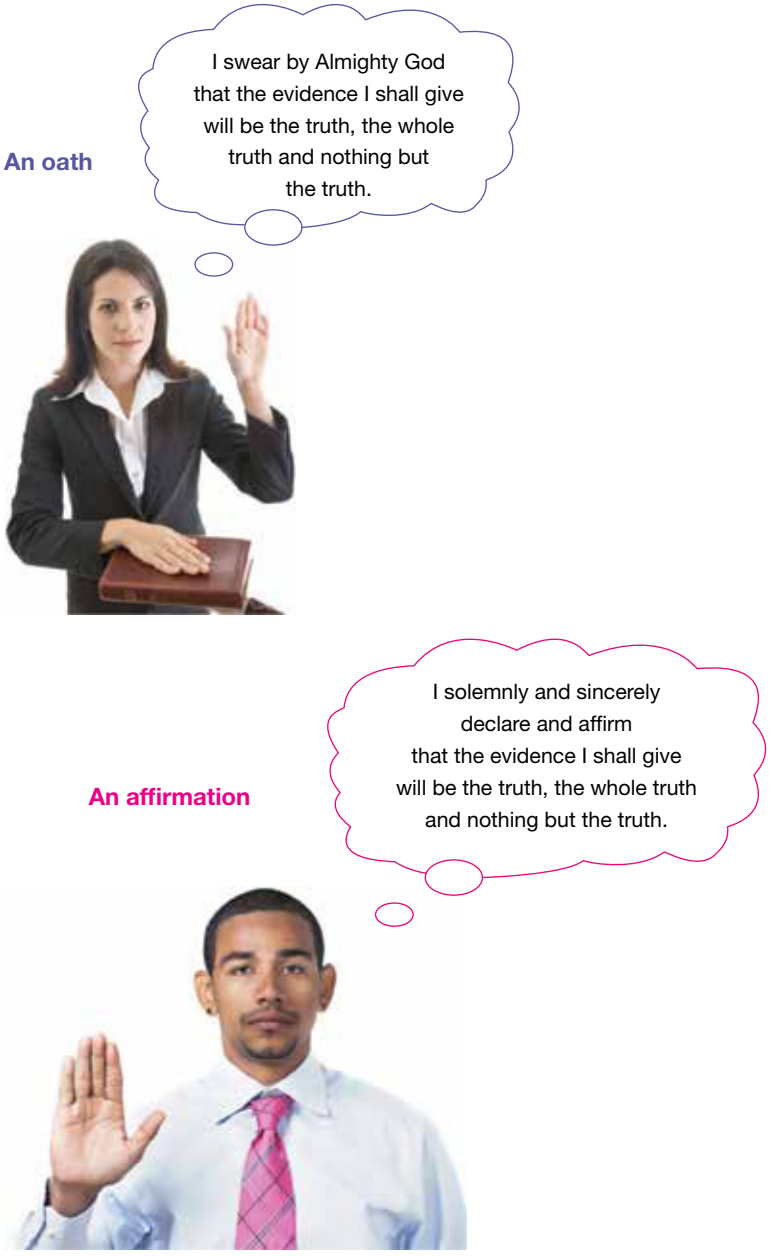
int-8962

FIGURE 4 Procedure for a trial in a higher court with a jury



Witnesses can be asked to give evidence at a criminal trial if they are the victim of the crime, if they have direct information about the crime or if they are an expert providing specialist opinion. Expert witnesses might give evidence on topics such as whether a written document matches the handwriting of the accused, or whether the accused person's actions might have been influenced by things such as mental illness or prescription drugs. Each witness must promise to tell the truth.

FIGURE 5 Before witnesses in court can give their testimony, they have to take either an oath or an affirmation promising to tell the truth.



SkillBuilders to support skill development

- 13.4 Notetaking
- 13.5 Writing inquiry questions for research
- 13.9 Creating political media

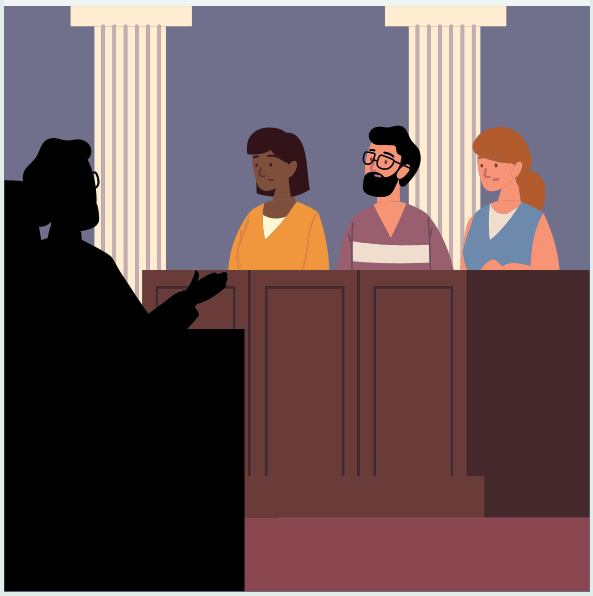
Resources

Interactivities The courtroom (int-1206)
Criminal trials (int-5313)

15.6 SKILL ACTIVITY: Analysis, evaluation and interpretation, Communicating

Evidence plays an important role in a criminal trial. In a fair trial, the jury can only find the accused guilty if this decision is supported by the evidence presented in court.

FIGURE 6 Due process relates to procedural fairness during the trial.



Procedural fairness means that strict rules are in place about the type of evidence that can be used during the trial.

1. **Investigate** the different types of evidence that can be used in court. Draw up a table similar to the one provided to **classify** each type of evidence as either admissible or inadmissible in court. The first row has been provided for you.

Admissible evidence (allowed)	Inadmissible evidence (not allowed)
Video recordings	Hearsay evidence

2. **Select** at least three examples that interest you from each column of your table to investigate in more detail.
3. **Create** a visual presentation of your findings. This might be a PowerPoint presentation or a short documentary or commercial.
   a. Begin by introducing your topic.
   b. **Explain** what is meant by due process and the difference between admissible and inadmissible evidence.
   c. Include your chosen evidence types — remember to make your presentation engaging.
   d. Include a bibliography.

15.6 Exercise

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15.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 5, 6	4, 7, 8	3, 9, 10

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Check your understanding

1. After a person is charged with a serious criminal offence, they must appear in the Magistrates Court where they are told whether they will face a trial in a higher court. **Identify** this process.
   - **A.** Committal hearing
   - **B.** Pre-trials
   - **C.** Sentence hearing
   - **D.** Civil hearing
2. What is legal representation best **defined** as?
   - **A.** A lawyer will act for the person in court.
   - **B.** A family member will act for the person in court.
   - **C.** A judge will act for the person in court.
   - **D.** A jury will act for the person in court.
3. **Define** the elements of a fair trial by matching each element to its corresponding description.

a. Preliminary examination of evidence	**b.** Right to legal representation	**c.** A public hearing
d. Independent judge	**e.** Judge and jury have no prior knowledge of the case	**f.** Strict rules of evidence and procedure

The prosecution must present the evidence it wishes to use in the court. This information must be provided to the accused's lawyers before the trial begins.	
The case for the accused will be presented by their lawyer.	
Unless a good reason exists not to, the trial will be open to the public.	
The judge must have no direct involvement in questioning witnesses or determining how either side presents its arguments and evidence.	
Both the judge and the jury learn about the case as each side presents their evidence during the trial.	
Due process means the judge will make sure established rules and procedures are followed.	

4. **Explain** the role of a juror and a witness in a fair trial.
5. **Identify** a situation in which a judge might be permitted to ask a witness questions during a trial.

Apply your understanding

Communicating

6. Any citizen who is on the electoral role can be randomly selected to sit on a jury. True or false?
7. **Create** your own diagram showing the steps involved in a trial with a jury. Use an appropriate illustration for each step to show that you understand it.

Analysis, evaluation and interpretation

8. Select two elements that contribute to a fair trial. **Explain** how each element might contribute to a fair trial.
9. Examine **FIGURE 4**. **Explain** the possible impact on procedural fairness and the concept of a 'fair trial' if one of the procedures were removed.
10. **Identify** what you consider to be the most important element contributing to a fair trial. **Justify** your response.

LESSON
15.7 Can everyone access justice?

LEARNING INTENTION

By the end of this lesson you should be able to explain how Australians can access justice and legal representation.

TUNE IN

Did you know that robot lawyers operate in 85 countries, and across 80 languages? Computers are providing new avenues for people to access the legal system when they have been charged with a criminal offence and need to go to court.

1. Brainstorm a list of reasons people might have difficulty accessing the criminal justice system.
2. How do you think robot lawyers work?
3. Compare your ideas with those of other members of your class.

FIGURE 1 Computers may improve accessibility to the legal system.

15.7.1 Difficulties in gaining access to the legal system

All Australians must have the opportunity to access **justice**. We all have the right to legal representation but, for various reasons, not all Australians can gain access to the law.

Some people may have little to no understanding of the law. People with limited English may find it difficult to communicate their problem. They may not be aware of their rights or where they can find the information and help they need. Some people may feel intimidated by lawyers or may be unable to pay for legal representation.

Our legal system has devised ways of providing access to justice and legal representation for everyone.

justice the use of laws to treat people fairly and in a way that is morally right

legal aid the provision of legal assistance to those involved in a dispute or criminal matter who are unable to pay for legal representation

15.7.2 Legal aid

In Australia, we believe that **legal aid** is important in providing access to justice. Without legal aid, some people would not have legal representation. They would lose their right to be treated equally by the law and, therefore, to receive a fair trial.

Legal aid is provided for people who cannot afford to hire a lawyer. It is offered by several organisations, including legal aid commissions, community legal centres, and First Nations legal services.

FIGURE 2 Everyone has the right to legal representation under our legal system, but not everyone can afford it.

Legal aid commissions

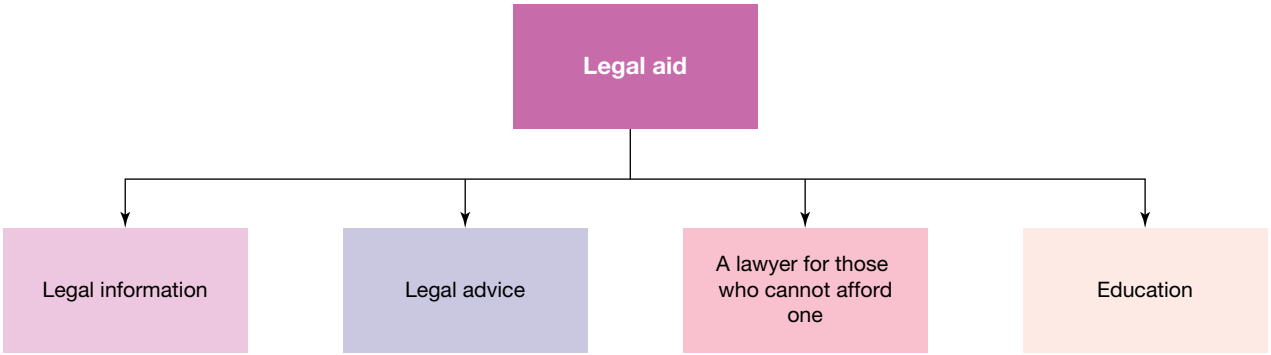
Each state and territory has its own legal aid commission. Legal aid commissions are funded by state and federal governments, and provide legal assistance, legal information and advice, lawyers to represent people attending court, and grants of money to help people to obtain legal representation.

Its services are free, unless the legal assistance required is ongoing. In this case, a small financial contribution may be required. The name of the service differs slightly depending on which state or territory you live in; examples include the Legal Service Commission South Australia, Legal Aid Victoria and Tasmania Legal Aid.

Legal information is freely available on legal aid websites in 25 languages other than English. Strict eligibility requirements apply for people needing a lawyer to represent them in court.

Additionally, legal aid services have entered into arrangements with private law firms to increase the number of people they can assist. Lawyers in private practice donate their time and work as duty lawyers and support people who do not have a lawyer when they attend the court.

FIGURE 3 What legal aid provides



Community legal centres

Community legal centres provide free legal advice and assistance as well as related services to the public. They focus on the disadvantaged and people with special needs.

The centres may receive funds from state and federal governments and from donations, but some centres receive no or very little money and are largely or entirely staffed by volunteers. These volunteers can be lawyers or non-lawyers.

Community legal centres are often specialised to meet the needs of the local community in which they operate. It is rare for them to provide legal representation in court.

FIGURE 4 Community legal centres are funded by state and federal governments and by donations from the public. These centres provide legal advice and assistance, and focus on helping the disadvantaged and people with special needs.

15.7.3 First Nations Australians and access to the law

First Nations Australians are at considerable disadvantage when they meet the legal system for a variety of reasons; for example, language, culture and a lack understanding by people within the criminal justice system. Indigenous people are overrepresented in the criminal justice system; while they make up around 3.3 per cent of the Australian population, they make up 30 per cent of the prison population.

Aboriginal and Torres Strait Islander legal services

To address the specific needs of First Nations Peoples of Australia, each state has an Aboriginal and Torres Strait Islander legal service, funded by the federal government and through donations. It was established to provide free legal advice and information, and representation for First Nations Peoples regardless of where they live in within Australia. Additionally, these legal services play a vital role in community education and advising the government in areas of law reform.

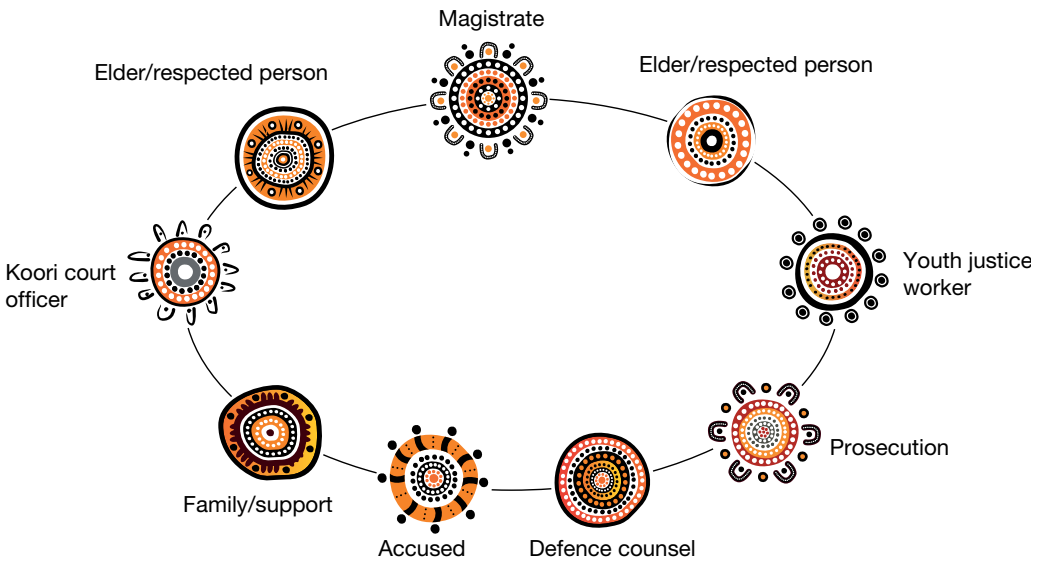
First Nations Australians sentencing courts

Except for Tasmania, all states and territories in Australia have an Indigenous sentencing court. The aim of this court is to provide culturally appropriate justice to First Nations Peoples of Australia. The name of the court varies from state to state; for example, in New South Wales it is referred to as the Circle Court, in Queensland as the Murri Court, in South Australia as the Nunga Court and in Victoria as the Koori Court.

Indigenous courts such as the Koori Court are sentencing courts. The accused person must plead guilty to the offence as a sign they are taking responsibility for their offending.

FIGURE 5 reflects the layout of a typical Koori Court. Having everyone at an oval table and at the same level reduces the overall formality of the court and encourages an offender to be involved in the process.

FIGURE 5 In the Koori Court, everyone sits at the same level, around an oval table



First Nations elders or respected persons are present to advise the magistrate about cultural issues, the background of the accused and possible reasons for the offending. Additionally, they provide the court with an insight into how the crimes have affected the First Nations community and kinship connections. They provide the court with guidance in relation to cultural practices and their perspective in sentencing.

Elders or respected persons are recognised within their community as the custodians of knowledge and **lore**. As such, their voices are highly regarded and send a clear message to the accused that their actions are not condoned by Koori or non-Koori people.

lore the accumulated traditional knowledge, beliefs and customs passed down from generation to generation in a society; it is passed on orally, not in written form

The Victorian Koori Court and, in particular, the Youth Koori Court have been effective in addressing the underlying factors related to offending. The recognition of Indigenous culture has also played an important role in reducing the rates of reoffending. The program has been expanded into the County Court, and more courts around Victoria are adopting the Koori Court for dealing with Indigenous offenders. You can find out more by using the **County Koori Court** weblink in your Resources panel.

FIGURE 6 A traditional welcome to country and smoking ceremony were held as a sign of respect in the Dandenong Koori Court.

15.7.4 Legal awareness

The law touches the lives of everyone, so people need to be aware of their legal rights and responsibilities. Awareness of the law can be improved through education, information and the media. Schools teach civics and citizenship so that students have some awareness of the law. Reliable information can be found on the websites for organisations such as the Law Society of New South Wales and Legal Aid Queensland. The website of the Attorney-General's department provides information on access to justice. Advertising is used to promote understanding of new laws so that people are aware of them.

15.7 SKILL ACTIVITY Analysis, evaluation and interpretation, Communicating

Work in groups of three or four.

1. **Identify** one factor that can improve access to justice and legal representation (for example, robot lawyers).
2. **Create** a storyboard that:
   - **explains** this factor
   - **outlines** how it can improve access to justice and legal representation.
3. **Produce** a video presentation that will engage your audience (other Year 7 students).
4. **Share** your video with the rest of your class.

on Resources

Weblink County Koori Court

15.7 Exercise

learnon

15.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 6	5, 7, 8	4, 9, 10

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- Receive immediate feedback
- Access sample responses
- Track results and progress

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Check your understanding

1. **Identify** the statement that best **describes** what is meant by the term 'justice'.
   - **A.** The treatment of people that is fair, honest and genuine
   - **B.** A person who represents a defendant in court
   - **C.** The branch of criminal law
   - **D.** The word that is used when a 'not guilty' verdict is handed over
2. **Identify** the statement that best **describes** the role of legal aid.
   - **A.** Legal assistance to people who could not otherwise afford the cost of hiring a lawyer
   - **B.** Legal representation for all defendants on trial
   - **C.** Tutoring for people who are studying to be a lawyer
   - **D.** The assistant of the court when a trial is in progress
3. **Match** the legal assistance body with the statement that best **describes** the services it provides by placing the correct number in the relevant place in the table.
   - **a.** Legal aid commissions
   - **b.** First Nations legal services
   - **c.** Community legal centres

Services provided	Correct option
Provide legal assistance, information and advice. These bodies can also assign lawyers to people or help fund legal representation.	
Provide free legal advice and assistance, focusing on the disadvantaged and people with unique needs. These centres often receive very little funding and can be staffed by both lawyers and those with no formal legal training.	
Funded by the federal government, these bodies provide general and specialist legal advice to people from First Nations backgrounds.	

4. **Explain** how legal awareness can improve access to justice and legal representation.
5. **Explain** what is meant by the term 'legal representation'.

Apply your understanding

Analysis, evaluation and interpretation

6. **Analyse** the following scenarios. Advise each person of the most appropriate body that could provide them with legal advice.
   - **a.** Janet is an elderly pensioner who has been charged with growing cannabis for commercial use.
   - **b.** Tahni is a First Nations Australian who has been charged with assault.
   - **c.** Yousif has recently arrived in Australia from Africa and has been charged with driving without a licence.
7. **Explain** the consequences of not providing options for everyone to access the law.
8. **Explain** why you think our legal system provides the means for allowing everyone to receive access to justice and legal representation.
9. Megan is interested in finding out more about how Australians can receive access to justice and legal representation. **Communicate** appropriate advice to Megan.
10. **Identify** what you believe is the most appropriate means for providing access to justice and legal representation for everyone. **Explain** your response.

LESSON
15.8 INQUIRY: Access for First Nations Australian women — #Freeher

LEARNING INTENTION

By the end of this lesson you should be able to discuss issues related to the campaign to stop imprisoning First Nations Australian women for the non-payment of fines, and communicate your findings on whether community action can make a difference.

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Step 1: Questioning and researching

Formulate your inquiry question. Use the below as inspiration.

- Why are people sent to prison for not paying fines? What are the reasons that fines are not paid?
- Are there any alternatives to sending people to prison?
- What are the rates of imprisonment for First Nations men and women and non-Indigenous men and women in Australia? Why does this matter? Does it seem fair? Why has this become an issue?
- How can 'people power' lead to a change in the legal system?
- What other questions do you have in relation to this topic?

Conduct research to find out more about this topic so that you can answer your inquiry question. Use the **#Freeher** weblinks in the Resources panel to get you started.

Step 2: Civic participation and decision-making

Identify strategies that individuals can use to bring issues related to the law to the attention of lawmakers.

What would you do if you thought an aspect of the law needed to change?

Step 3: Analysis, evaluation and interpretation

Identify individuals and groups who have campaigned to change the law.

- What strategies did they use?
- How effective were these strategies?

Step 4: Communicating

Select a format to present your point of view. For example, this could be a short video, a mock TV interview or a PowerPoint presentation.

Complete your self-assessment using the **Inquiry rubric** or access the 15.8 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39384)

Weblinks
#Freeher 1: Women in jails
#Freeher 2: Women and children in prison
#Freeher 3: Woman jailed over unpaid fines
#Freeher 4: Campaign to free jailed women

LESSON
15.9 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

Watch teacher-led videos

Practise questions with immediate feedback

Find all this and MORE in jacPLUS

15.9.1 Key knowledge summary

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

15.2 What are the principles of justice?

- The Australian legal system is based on several key principles such as the rule of law, which means the law applies equally to everyone and everyone must obey the law.
- The Australian legal system recognises three key principles of justice: fairness, equality and access.
- Fairness and equality overlap and must be carefully balanced. Sometimes, in the interests of fairness, we need to treat people differently.

15.3 Where did our justice system come from?

- Before the arrival of European settlers, First Nations Peoples of Australia had a system of laws. These were ignored by British colonisers, in favour of their own system.
- The legal system we have today is based on the British legal system.
- Our legal system can be traced back to the signing of the Magna Carta, which established that those who make the law should not be responsible for enforcing the law.

15.4 How do Australian courts work?

- Every individual has the right to access justice in Australia. Our legal system exists to make sure that any person accused of a crime receives a fair trial.
- Both the prosecution and defence will have the opportunity to present evidence and question witnesses before a judge who is competent, independent and unbiased.
- Everyone has the right to be represented by a lawyer in court, regardless of whether or not they can afford it or even understand the law.

15.5 What is the presumption of innocence?

- Presumption of innocence means that any accused person who appears before a court is presumed to be innocent until the prosecution proves that he or she is guilty beyond reasonable doubt.
- The right to bail and the right to silence uphold the presumption of innocence.

15.6 What is a fair trial?

- A fair trial occurs when evidence is examined at a committal hearing before proceeding to a trial, when both sides present their case, when the judge is independent, and when strict procedures and rules of evidence are followed.
- Ordinary citizens can play a part in a fair trial in their roles as witnesses (providing evidence to the court) and jurors (making decisions about the guilt of the accused based on the law and the evidence presented to the court).

15.7 Can everyone access justice?

- Legal aid can be provided to people involved in a dispute or criminal matter who would otherwise be unable to afford legal representation or access to the law.
- People can be made aware of the law through education, information and the media.
- Indigenous sentencing courts have been introduced to provide access to culturally appropriate justice for First Nations Peoples of Australia.

15.8 INQUIRY: Access for First Nations Australian women — #Freeher

- First Nations Peoples are overrepresented in the criminal justice system, and one reason for this is imprisonment for non-payment of fines.
- What be done to address this issue and how individuals can influence law-makers can be explored.

15.9.2 Key terms

accused a person who has been charged with a criminal offence
bail the promise that an accused person makes to appear in court at a later date
beyond reasonable doubt the standard of proof required in a criminal trial where the prosecution must prove that the accused is guilty to such a high degree that a reasonable person would have little doubt that the accused committed the crime
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
colonial relating to the time when Australia was a British colony, under the control of the British government
committal hearing in very serious cases, the procedure held in a lower court to determine if enough evidence exists for the case to move to a higher court
counsel for the accused a lawyer who represents the accused person
democracy a political system according to which citizens choose the way in which they are governed, and elect representatives to make laws on their behalf
government a group of people with the power to rule over a country or state and make decisions and laws on behalf of the people
judge a court official who hears cases in the higher courts, such as the District or County Court, or the Supreme Court
juror a person selected to hear and assess the evidence in a court case
jury a group of ordinary people randomly selected to hear and assess the evidence in a court case
justice the use of laws to treat people fairly and in a way that is morally right
legal aid the provision of legal assistance to those involved in a dispute or criminal matter who are unable to pay for legal representation
legal representation services performed by a qualified legal practitioner, such as a lawyer, who deals with legal matters on behalf of the person who has hired them
legal system a system for interpreting and enforcing the laws of a country
lore the accumulated traditional knowledge, beliefs and customs passed down from generation to generation in a society; it is passed on orally, not in written form
magistrate a court official who hears cases in a Magistrates Court
presumption of innocence the principle that all accused people who appear before a court are presumed to be innocent until the prosecution proves that they are guilty
procedural fairness refers to having fair procedures in place to protect the rights of all parties
prosecution the person who presents a criminal case on behalf of the state
prosecutor the party bringing a criminal action against the accused
rule of law the legal principle that all citizens are subject to the law, and equal before the law, as it is upheld by independent courts
sanction a penalty that is applied for breaking the law
trial the court process to determine whether someone committed a criminal act

15.9.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How do features of the Australian legal system protect the rights of individuals and uphold the principles of justice?

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

eWorkbooks Customisable worksheets for this topic (ewbk-10558)
Reflection (ewbk-10561)
Crossword (ewbk-10560)

Interactivity The legal system and you crossword (int-5314)

15.9 Review exercise

Students, these questions are even better in jacPLUS

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Multiple choice

1. Identify the statement that best describes the meaning of the term 'legal system'.
   - **A.** A way of breaking the law of a country
   - **B.** A system for interpreting and enforcing the laws of a country
   - **C.** A system for making the jails of a country
   - **D.** A way of going through law school
2. Identify the main role of courts.
   - **A.** To deal with people who have done bad things
   - **B.** To only hear serious crimes, such as murder
   - **C.** To apply the law and settle disputes
   - **D.** To decide if accused people will go to jail or not
3. Where will most criminal cases be heard?
   - **A.** The District Court/County Court
   - **B.** The Supreme Court
   - **C.** The High Court
   - **D.** The Magistrates Court/Local Court
4. Define the term 'presumption of innocence'.
   - **A.** All accused people who appear before a court are presumed to be guilty until the courts find them innocent.
   - **B.** All accused people who appear before a court are presumed to be innocent until the prosecution proves that they are guilty.
   - **C.** All accused people who appear before a court must prove their innocence.
   - **D.** All accused people who appear before a court are presumed to be innocent until they are found guilty on the balance of probabilities.
5. Identify a purpose of committal hearings.
   - **A.** To commit to both sides being available to present their cases
   - **B.** To guarantee that evidence will be presented using court procedures
   - **C.** To ensure that the judge is independent
   - **D.** To determine if enough evidence exists for a case to move to a higher court

6. Explain what we mean when we refer to a judge as being 'independent'.
   - **A.** They sit by themselves in court.
   - **B.** They have no direct involvement in how either side will present its case.
   - **C.** They can enter and leave the court when they please.
   - **D.** They always decide if an accused is guilty or not guilty.
7. Identify one reason for calling an expert witness.
   - **A.** To give evidence on whether or not the accused's actions are the result of a mental illness
   - **B.** To tell the court what someone told them they saw the accused do
   - **C.** To give instructions to the jury
   - **D.** To present their version of events to the court
8. Which of the following statements best describes a jury?
   - **A.** A group of people who present evidence in court
   - **B.** The party bringing a criminal action against the accused
   - **C.** A group of ordinary people randomly selected to hear and assess the evidence in a court case
   - **D.** The person who represents the accused
9. Which statement best describes the reason for strict procedures and rules of evidence in a court?
   - **A.** To make sure that a case can move on to a higher court
   - **B.** To interpret and enforce the laws of the country
   - **C.** To guarantee that a verdict is reached by the jury
   - **D.** To ensure that each side has an equal opportunity to present its own case
10. Identify which group of people can access legal aid.
    - **A.** People who would otherwise be unable to afford a lawyer
    - **B.** People who wish to change the law
    - **C.** People who have been selected to be on a jury
    - **D.** People who need to learn about the law

Short answer

Evaluating, concluding and decision-making

11. a. **Identify** and explain one factor that can improve access to justice and legal representation.
    b. **Outline** how this factor improves access to justice and to legal representation.
12. **Distinguish** between the principles of justice, fairness and equality.
13. Using an example, **explain** why the legal system may need to treat people differently.
14. **Explain** the similarity between British law and the customary law of First Nations Peoples of Australia.
15. **Explain** how a sentencing court, such as the Koori Court, can lead to improved outcomes for First Nations offenders.

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16 Australian citizenship, diversity and identity

LESSON SEQUENCE

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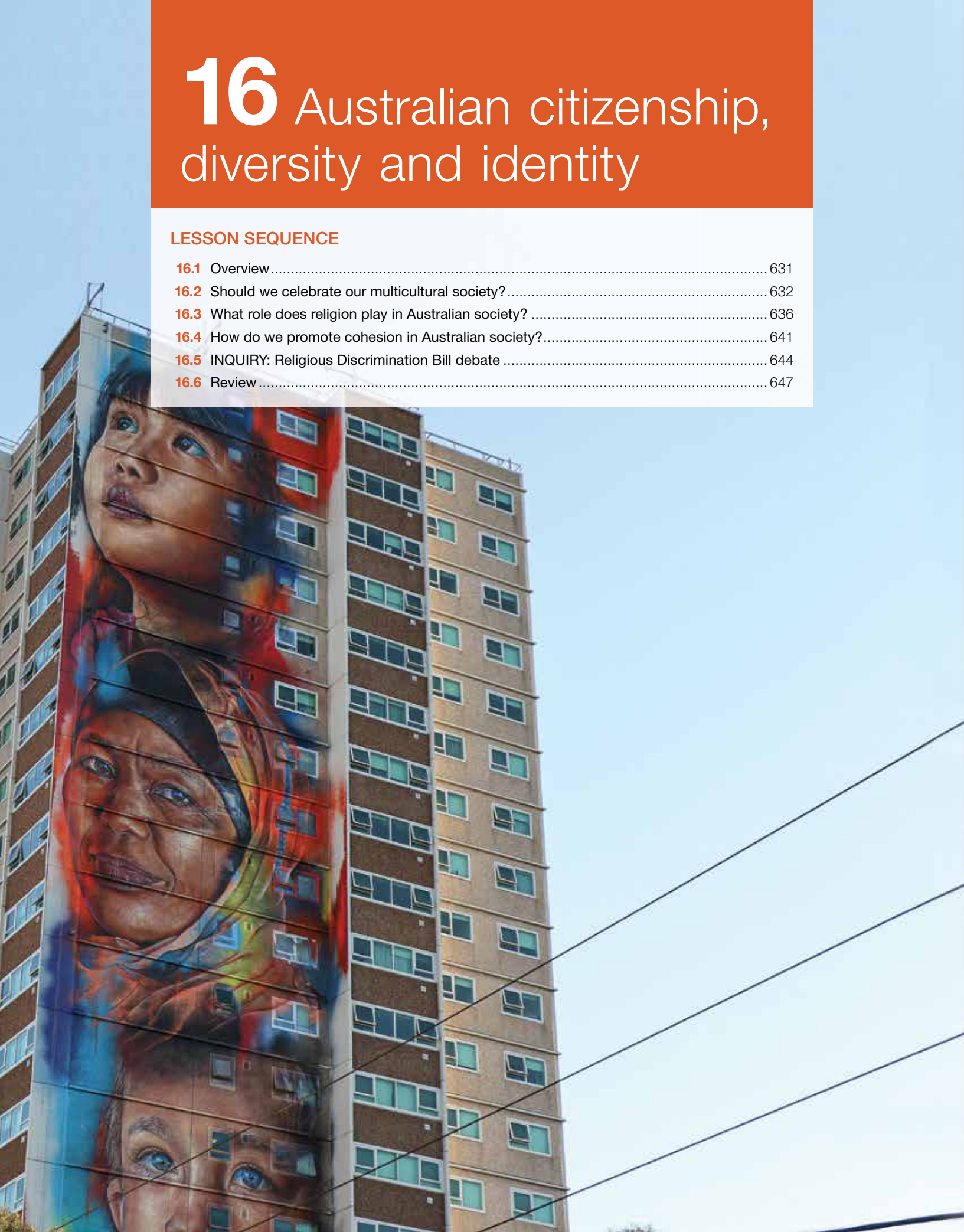

LESSON
16.1 Overview

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Watch videos

Engage with interactivities

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How is Australia a diverse society and what factors contribute to a cohesive society?

16.1.1 Diverse backgrounds, diverse stories

This topic is about **active citizenship** and all the questions this raises. What gives us a sense of belonging? What makes us feel apart, and what can we all do to contribute to our **diverse**, **pluralistic** and multicultural society?

In this topic, you will learn how values contribute to Australian identity, and explore how shared values can promote **social cohesion** and connectedness. You will also learn about the diverse belief systems in our country. How can we celebrate our differences and still feel a sense of togetherness as one nation?

Learn more about active citizenship by visiting the Australian government's **What does an active citizen look like?** weblink in the Resources panel.

tlvd-10563

FIGURE 1 Is Australia's multicultural society fair and equal for all?

active citizenship relates to getting involved in your local community and displaying values such as respect, inclusion and helping others

diverse showing a great deal of variety

pluralistic a society in which members of individual cultural, ethnic or religious groups can maintain their distinctive cultural identities while remaining part of the overall community

social cohesion the degree to which communities are united by shared values, traditions and experiences

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-10562)
Video eLesson	Our national identity (eles-2079)
Weblink	What does an active citizen look like?

LESSON
16.2 Should we celebrate our multicultural society?

LEARNING INTENTION

By the end of this lesson you should be able to describe how diversity is expressed in our Australian communities.

TUNE IN

Australian artist Peter Drew created and pasted the posters shown in **FIGURE 1** on walls around Australian cities and suburbs.

FIGURE 1 AUSSIE posters by Peter Drew

1. What do you think is the message of these posters, and how do you feel about them?
2. What is an 'Aussie'?
3. How many different cultures are represented in your class?
4. Does everyone in your class feel 'Aussie'?

16.2.1 Multiculturalism

Imagine your classroom is a mini-version of Australian society. At least six of your classmates are likely to have been born overseas and ten people in your class will likely have at least one parent who was born outside Australia. This is an example of **multiculturalism**. Australia is an excellent example of a multicultural society, with people from almost 200 nations represented in our country. Look around your classroom. Only those people with First Nations heritage can truly call themselves Australians. All other people have, at some stage of their family's history, migrated to Australia from another country.

multiculturalism a society in which the cultures and traditions of many different groups coexist and are encouraged

FIGURE 2 Australian school children

16.2.2 Cultural diversity

Celebrating and embracing cultural diversity is important for several reasons. Unless you have been lucky enough to travel to (or live in) another country, it is difficult to truly understand what life is like in other countries. We tend to think that everyone lives in the same way that we do, but this is simply not the case. By learning about other cultures, values and traditions, we not only learn about these countries, but we also learn more about ourselves. For example, you might think that your parents expect you to do too much around the house. Yet what you may not realise is that some children your age are already working real jobs, just to help their families earn more money. In this way, considering someone else's experiences can also help you appreciate the life that you have.

Knowledge is also said to be the key to tolerance. Sometimes people fear what they do not know and we can see this in the history of Australian immigration. Some groups of immigrants were initially treated with unease and distrust before an understanding of their culture and tradition was gained. It may seem like a silly example but when the children of Italian and Greek migrants brought soccer balls to school in Australia, they were teased by their classmates. Fast-forward to today and soccer is one of the most popular sports in Australia! If we extend this example to people, values and traditions, you can clearly see how knowledge leads to tolerance and then to acceptance.

FIGURE 3 A citizenship ceremony. Australia Day is a popular day for migrants to formally become Australian citizens.

16.2.3 Conflict and division

With so many different cultures and traditions present, multicultural societies like Australia are often very friendly and understanding. However, at times in Australian history these differences have led to conflict and division, including

- the treatment of First Nations Australians by European colonisers (1778 onwards)
- the White Australia Policy (1901–1973)
- the race riots in Cronulla, New South Wales (2005).

These are all examples of **cultural intolerance**. It is important for us to learn from these events and ensure that cultural differences are understood, celebrated and embraced, instead of used as a wedge to push our communities apart.

cultural intolerance when individual differences are not accepted by others

tribalism behaviour and attitudes that stem from strong loyalty to one's own social group, sometimes in opposition to other groups

SkillBuilders to support skill development

- 13.6 Writing argument paragraphs

tlvd-10564

16.2 SKILL ACTIVITY: Questioning and researching

Different perspectives: the Cronulla Race Riots

Being Australian can unite us, but does that mean we all have to be the same? As the song goes, '*We are one, but we are many*.'

Maybe you support a sports team. You go to a match wearing the colours of your team. You stand in the crowd of supporters barracking for your side, and maybe also booing when the other team wins a goal. It feels good to be part of the group. Being part of a cultural group such as this can give us a sense of belonging, identity and pride. However, what happens if we go home and keep our 'colours' on? What if we start to think that the other group is a *threat* to our own group and identity? What happens if this becomes 'us' vs 'them'? This is known as **tribalism**. An extreme example of this occurred in Cronulla, a Sydney suburb, in 2005.

The Cronulla race riots of 2005 were one of the darkest days of Australia's multicultural history. On 11 December 2005, thousands of mostly Anglo-Australians assembled to protest what they saw as the violent and threatening behaviour of a group of young men of Middle-Eastern origin. Tensions between the two groups had been simmering for weeks after an attack on local surf lifesavers. Fueled by incendiary text messages, a huge crowd gathered in the morning and began chanting racist slogans and physically threatening anyone of Middle-Eastern appearance. Violence soon escalated with 26 recorded injuries and 104 people arrested.

The following statements capture the reactions of then-Prime Minister John Howard and then-Coordinator of the Lebanese Muslim Asssociation's welfare centre, Eman Dandan. John Howard said:

I do not accept that there is underlying racism in this country. I have always taken a more optimistic view of the character of the Australian people. I do not believe Australians are racist.

While Eman Dandan said,

There has always been invisible racism in Australia, unsaid feelings towards certain communities but never expressed publicly.

FIGURE 4 Police and protestors clash in Cronulla.

1. Use the **The Cronulla Riots** weblink in the Resources panel to **investigate** the following:
   a. the short-term and long-term causes of the riot
   b. the role of the media, including social media, before, during and after the riot
   c. efforts to build bridges between communities such as the On the Same Wave project.

2. We are born into certain groups, and these influence our **values** and **perspectives**. Our cultural upbringing can influence us to think in a certain way. What influences our perspective?
   a. Look at John Howard's comment. Why do you think he had this perspective?
   b. Look at Eman Dandan's comment. Why do you think she had this perspective?
   c. Which of these two perspectives is closest to your own? **Justify** your answer and **consider** why you hold that perspective.
3. **Discuss:** How can we work together to prevent another situation like the Cronulla race riots in the future?

values principles that help you to decide what is right and wrong, and how to act in various situations

perspective a particular attitude toward or way of regarding something

16.2 Exercise

learnon

16.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4, 5	6, 7, 8	9, 10

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Check your understanding

1. **Examine** the infographic in **FIGURE 1** in lesson 16.1. What percentage of Australians speak a language other than English at home?
   A. 10%
   B. 20%
   C. 25%
   D. 50%
2. How many different nationalities are represented in Australia?
   A. 50
   B. 100
   C. 150
   D. 200
3. **Discuss** who you think can truly call themselves Australians.
4. **Identify** one reason given in the lesson that might explain why some people could be intolerant of other cultures.
5. **Identify** one event in Australia's history in which cultural intolerance has led to conflict.

Apply your understanding

Analysis, evaluation and interpretation

6. Look at **FIGURE 2**. **Infer** what this photo suggests about being Australian.
7. **Reflect on** what the example of soccer given in this lesson can teach us.
8. **Describe** the benefits of multiculturalism in Australian communities.
9. Do you think the phrase 'knowledge is the key to tolerance' is correct? **Explain** your reasoning.
10. **Infer** why cultural differences might sometimes be used as 'a wedge to push our communities apart' and **consider** who could benefit from dividing us.

LESSON
16.3 What role does religion play in Australian society?

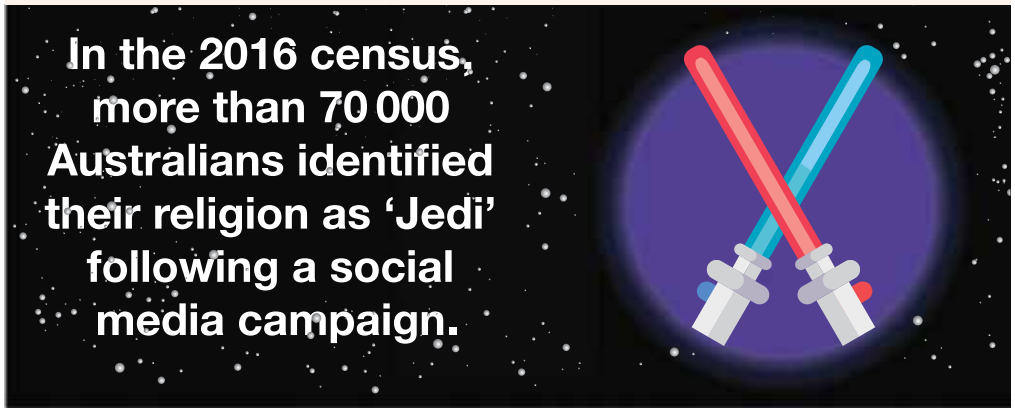
LEARNING INTENTION

By the end of this lesson you should have an understanding of how religion plays a role in Australian society and politics.

TUNE IN

The Jedi 2016 census social media campaign referred to in **FIGURE 1** was meant as a joke. Yet, a large number of Australians listed 'Jedi' as their religion.

FIGURE 1 The Jedi are a fictional ancient order of protectors from the Star Wars movies.



1. Why do you think some people found the campaign offensive?
2. The data collected in the census is very useful. Do you believe it matters that some people did not take this survey seriously? Explain your reasoning.
3. Make a list of the ways in which governments may use census data to plan for the future.

16.3.1 Secularism and the separation of Church and State

Throughout history, religion and governments have been closely linked. In ancient Egypt, pharaohs promoted themselves as 'god kings' and in medieval Europe, kings claimed they had been chosen by God to rule their lands — a concept known as 'divine right'. Yet as society developed, people began to question the role of religion in politics, especially when religious laws and customs resulted in the **persecution** or **discrimination** of other faiths.

Increasingly, governments began to adopt a more secular approach to religion, clearly separating religion and state. In a **secular** society, religion is not allowed to influence the laws of a country. All citizens are considered equal, regardless of what religion they follow or whether they follow a religion at all. Without a government or leader telling its people what religion they should follow, people are allowed to choose their own religious beliefs. This is what occurs in Australia today. Australia is a secular nation, with secularism even written into our Constitution:

> *the Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion* (section 116, Australian Constitution).

persecution hostility, violence or ill-will directed at a person or group of people on the basis of their personal characteristics

discrimination unfair or prejudicial treatment of people and groups based on race, gender, age or sexual orientation

secular not having a connection to religion

By using these words, the authors of the Australian Constitution allowed for all religions and cultures to safely and actively participate in Australian society. This laid the foundation for the religious freedom that we now experience. However, despite Australia's secular status, at times religion and politics have collided, creating fierce debate in society and in our parliament. Before we investigate the most recent of these debates, it is important to consider the historical foundations of religion in Australian society.

16.3.2 The historical foundations of religion in Australian society

Christianity

Since European settlement of Australia, Christianity has been the dominant religion of our country. As the European influence over Australia spread, so too did the influence of Christianity. 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. The popularity of Catholicism increased as transportation to the colonies continued. Accoding to the 2021 census, 43.9 per cent of the population identify as Christian.

FIGURE 2 Over 120 different faiths are practised in Australia.

Judaism

Together with Christianity, Judaism was one of the first religions practised in colonial Australia. Between eight and 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. As with many migrant groups, the Jewish population in Australia increased during the gold rush in the 1850s. However, the biggest period of Jewish immigration occurred during 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 gold rush, some remained in Australia. 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 100 years later that the popularity of Buddhism began to explode. From the 1970s, Australia witnessed huge increases in Asian immigration and many of these new immigrants practised Buddhism. In contemporary Australia, 2.4 per cent of Australians practise this religion.

Islam

Australia has likely been known to the Islamic world for hundreds of years. Evidence suggests that Islamic scholars knew about Australia as early as 820 CE! We know that First Nations Australians traded with the Macassans (from what is now Indonesia), who had converted to Islam in the seventeenth century. While records exist 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 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 3.2 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. However, Hinduism only came to Australia in the mid-nineteenth century. Hindu immigrants undertook several roles in early Australian society — as labourers, camel drivers, domestic staff and merchants. By 1911, more than 1000 people in Australia 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 2021 Australian census, Hindu practitioners account for 2.7 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. According to the 2021 census, approximately 38.9 per cent of Australians describe themselves as being atheists or as having no religion. Interestingly, this figure has nearly doubled since the Australian census of 2011. This suggests that for many Australians, the importance of religion in everyday life is changing.

White Australia Policy
informal name for the *Immigration Restriction Act 1901*, which effectively prevented non-European immigration to Australia

TABLE 1 Religious affiliation in Australia, 2016 and 2021

Religion	2016	2021
Buddhism	563 070	615 823
Christianity	12 201 600	11 148 814
Hinduism	440 300	684 002
Islam	604 200	813 392
Judaism	91 000	99 956
Other religion	221 590	325 421
No religion	7 040 700	9 886 957

Source: Data derived from Census of Population and Housing: Census article — Religious affiliation in Australia, 2021, Table 4: Religious affiliation (religious groups) — 2016 and 2021.

To find out more about how Australians celebrate their religion, go to the **Religious celebrations** weblink in the Resources tab.

on Resources

Weblink Religious celebrations

16.3.3 The influence of religion on Australian politics and legal systems

Religion and Australian law have always been closely linked. Former High Court Judge Michael Kirby argues that 'our law . . . was influenced by notions which were shared by Christian churches and belief' (interview on ABC Radio, 16 May 2012). Although Australian law has no direct references to Christianity, 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 of Christianity.

FIGURE 3 Minister Bob Katter signs his Bible at Parliament House.

More recently — and controversially — religion has influenced the debate surrounding the rights of the Australian LGBTQIA+ community. Although there is no official reference to Christianity in the documentation of the Australian Liberal Party, the party remained opposed to marriage equality until it was finally legalised in 2018, due to a perceived belief that same-sex marriage is forbidden in the Christian Bible. More controversy was caused in 2022 when the Morrison Government attempted to introduce the Religious Discrimination Bill. We will return to this issue for the Inquiry activity later in this topic.

16.3.4 First Nations Australians' spirituality

For much of European Australia's history, First Nations Australians' spirituality has been misunderstood. As a result, First Nations Australians' spirituality is poorly reflected in contemporary Australian culture and identity. This is problematic because spirituality is seen as being at the core of First Nations cultures. First Nations Australians see the world as animistic. This means all living and non-living things are alive and connected to each other. As such, humans are not seen as above nature but instead are part of a system much bigger than ourselves. Totemism is a significant part of the spirituality of First Nations Australians. A totem is a natural object that is seen as a symbol of each clan or family group. Totems are passed on from one generation to the next and the clan is responsible for the protection of their totem.

FIGURE 4 A traditional First Nations Australian smoking ceremony

Nowadays, at the beginning of school assemblies and other events around Australia, an Acknowledgement of Country or a Welcome to Country is practised. The practice performed depends on whether it is performed by a First Nations Australian on their own Country, or whether it is performed by someone else acknowledging the traditional custodians of the land. At state and federal government events, First Nations leaders are often in attendance and appropriate customs, such as smoking ceremonies, are conducted. These acts recognise First Nations Australians' cultures and foster First Nations Australian identity.

16.3 SKILL ACTIVITY: Questioning and researching

Use the data in **TABLE 1** to answer the following questions.

1. Which religions have experienced growth between 2016 and 2021?
2. The number of Australians who do not identify with any religion has dramatically increased since 2016. **Suggest** why you think this has happened.
3. **Predict** what will happen to these statistics over the next four years. Do you think the percentage of religious observance in Australia will increase or decrease? **Justify** your response.

16.3 Exercise

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16.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4, 5	6, 7, 8	9, 10

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Check your understanding

1. **Identify** the correct definition of the term 'multiculturalism'.
   - **A.** A society in which the cultures and traditions of many different groups coexist and are encouraged
   - **B.** Which individual differences are not accepted by others
   - **C.** The movement of people from one country to another usually for political, cultural or economic reasons
   - **D.** When a smaller community merges with a larger community
2. What concept did some European kings use to claim the throne?
   - **A.** Royal right
   - **B.** Birth right
   - **C.** Divine right
   - **D.** Legal right
3. Immigration refers to the movement of _____ from one _____ to another, usually for political, cultural, environmental or _____ reasons.
4. **Identify** two benefits of a secular nation.
5. **Explain** how animism and totemism are part of the spirituality of First Nations Australians.

Apply your understanding

Analysis, evaluation and interpretation

6. **Identify** and explain one positive influence that religion can have on society.
7. **Identify** and explain one negative influence that religion can have on society.
8. Do you believe the government should have any influence on religious observance in Australia? **Justify** your response.
9. **Suggest** some ways in which First Nations Australians' spirituality could be better represented in Australian society.
10. **Use** the latest census data to **create** a pie chart showing the breakdown of religions in Australia.

LESSON
16.4 How do we promote cohesion in Australian society?

LEARNING INTENTION

By the end of this lesson you should be able to explain how our values promote cohesion in Australian society.

TUNE IN

The Sikh Volunteers Australia organisation is an excellent example of a group of people using their community's values to help society as a whole.

FIGURE 1 Sikh volunteers march during an Australia Day parade in Melbourne.

Watch the **Volunteers to the rescue** weblink in the Resources panel.

1. After watching the video, brainstorm reasons the Sikhs decided to help people in need.
2. If the food the Sikhs distributed was free, what benefits did they gain from giving it out?
3. Why do you believe this example was chosen to start a lesson about Australian values?

on Resources

Weblink Volunteers to the rescue

16.4.1 What are values?

We are all guided by our values. These help us answer the question, 'How should we live our lives?' By demonstrating the value of compassion, you will feel a closer connection to the person whom you are helping. If you demonstrate the value of honesty, you will develop a sense of trust with your confidant. In this way, your identity, and indeed the shared identity of an entire community, can be heavily influenced by the values that are followed.

Differences in values can sometimes drive individuals, and even entire communities, apart. We see this frequently in society. When politicians from opposing parties debate issues, they are doing so because their parties often stand for differing sets of values. However, *shared* values can be a source of unification. You likely chose your friends because you share things in common. What you share may be a football team or a favourite band, but it can also be a value. In the same way that shared values can bring friends together, they can also unite entire countries.

16.4.2 Do unique Australian values exist?

Defining a singular set of values for such a culturally diverse country such as Australia is challenging. Yet if you ask someone to do just that — to define a shared set of Australian values — they would likely mention phrases like 'a fair go' and 'mateship', and values such as freedom and equality. It may surprise you to learn that all people who apply for an Australian visa are required to sign the Australian Values Statement (see **FIGURE 2**).

FIGURE 2 All new visa applicants are required to sign the Australian Values Statement.

Australian Values Statement

You must sign this statement if you are aged 18 years or over.

I confirm that I have read, or had explained to me, information provided by the Australian Government on Australian society and values.

I understand:

- Australian society values respect for the freedom and dignity of the individual, freedom of religion, commitment to the rule of law, Parlimentary democracy, equality of men and women and a spirit of egalitarianism that embraces mutual respect, tolerance, fair play and compassion for those in need and pursuit of the public good
- Australian society values equality of opportunity for individuals, regardless of their race, religion or ethnic background
- the English language, as the national language, is an important unifying element of Australian society.

I undertake to respect these values of Australian society during my stay in Australia and to obey the laws of Australia.

I understand that, if I should seek to become an Australian citizen:

- Australian citizenship is a shared identity, a common bond which unites all Australians while respecting their diversity
- Australian citizenship involves reciprocal rights and responsibilities. The responsibilities of Australian Citizenship include obeying Australian laws, including those relating to voting at elections and serving on a jury.

If I meet the legal qualifications for becoming an Australian citizen and my application is approved I understand that I would have to pledge my loyalty to Australia and its people.

Signature of Applicant

16.4.3 How well are values and traditions reflected in Australian society?

Most Australians would like to believe that we are a society of tolerant, compassionate and inclusive people. But is that really the case? Two recent research projects have sought to answer that question.

Global study the Social Progress Index combines 53 social and environmental indicators to calculate an overall ranking for each country. Australia was the 11th highest ranked country, receiving excellent results in perceptions of **inclusiveness** (18th), personal freedom and choice (14th) and personal rights (10th).

The *Face Up to Racism (2016)* report was supported by a study run by Western Sydney University. The project surveyed over 6000 culturally diverse Australians about their experiences with racism. This survey revealed some disturbing trends — for example, 34.8 per cent of respondents had experienced racism in public, and 32.8 per cent of respondents had experienced racism in educational settings.
Perhaps most concerning is that 80 per cent of respondents believed that racism was a problem in Australia.

The conflicting results of these two reports suggests that Australia is not yet a truly cohesive society.

inclusiveness providing equal access to opportunities and resources for everyone

16.4 SKILL ACTIVITY: Civic participation and decision-making

Can you create a sense of cohesion and inclusion in your classroom community so that you have a common set of shared values, while also ensuring that diversity is respected?

1. Work collaboratively in a group to **create** a values statement for your class.
2. Prepare a brief presentation or speech **explaining** the new statement, making sure everyone is involved in some way.
3. At the end of each presentation, the rest of the class should ask questions about one or two of the values you presented, so be prepared to **defend** or alter your values in response to feedback.
4. When all groups have finished presenting, try to reach a consensus on one shared set of values that everyone in your class can agree to.
5. **Discuss:** Are the set of values you have created uniquely 'Australian'? **Justify** your responses.

FIGURE 3 Does your classroom community have a common set of shared values?

16.4 Exercise

learnon

16.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4, 5	6, 7, 8	9, 10

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Check your understanding

1. What are 'values'?
   - A. Proposals to parliament made to change laws
   - B. Principles or standards of behaviour
   - C. The fair treatment of all citizens
   - D. The uniting of a community
2. Who is required to sign the Australian Values Statement?
   - A. All Australians
   - B. All Australian politicians
   - C. All Australian visa applicants
   - D. All Australian job applicants
3. **Identify** two values the Sikh community demonstrate by volunteering to help other Australians.
4. **Name** two so called Australian values. Are these values other countries don't have? **Explain** your answer.
5. **Explain** how values both divide and separate us.

Apply your understanding

6. **Explain** why you think visa applicants must sign an Australian Values Statement if they want to enter the country.
7. Do you disagree with any values in the Australian Values Statement? **Justify** your opinion.
8. In your opinion, are any values missing from the Australian Values Statement? **Justify** your opinion.

Analysis, evaluation and interpretation

9. **Compare** findings from the Social Progress Index and the *Face Up to Racism (2016)* report in your own words.

Communicating

10. **Create** a meme to be displayed on social media that celebrates diversity at your school.

LESSON
16.5 INQUIRY: Religious Discrimination Bill debate

LEARNING INTENTION

By the end of this lesson you should be able to understand whether Religious Discrimination Bill will protect us all, and communicate either your support for or opposition to it.

Background

When Scott Morrison became prime minister in 2018, he set out to make changes to protect people from discrimination on the basis of their religious beliefs. Morrison also wanted to amend laws surrounding the exclusion of LGBTIQA+ staff and students on religious grounds.

On the surface, these two goals *appear* to be a positive change because everyone's rights appear to be protected. However, the changes Morrison proposed in his Religious Discrimination Bill do not provide the same level of protection to all.

FIGURE 1 Some members of Australia's LGBTIQA+ community opposed Prime Minister Scott Morrison's proposed Religious Discrimination Bill

In fact, they would make it easier for religious institutions (such as schools) to discriminate against someone on the basis of their identity.

Let's use an example to make this issue easier to understand. David attends a local religious high school. David uses she/her pronouns, prefers to be known as Skye and has asked the school if she can wear the school uniform dress. Despite continued attempts, the school has refused these requests.

So let's now ask the question: whose rights are protected under the government's proposed changes — Skye's or the school's? If you said the school's, then you would be correct. The school is free to argue that Skye's requests are opposed to the religious values of its community. This leaves Skye with the dilemma of whether to display her true identity or to follow the school's direction.

Perhaps now you can see why this debate has sparked such controversy. Many parliamentarians, on both sides of parliament, voiced their concerns about the changes.

One such individual was Stephen Jones MP. An excerpt of Jones' impassioned plea to parliament is provided in **FIGURE 2**. After much debate, the government decided to recall the proposed legislative changes and launch an investigation of their impacts on individual rights. This is one clear example of when Christian values and traditions are incompatible with the diverse nature of Australian society.

aud-0428

FIGURE 2 Stephen Jones' speech to parliament during debate on the Religious Discrimination Bill

But the fact is Australia is a much more diverse place than we project from our pulpit in this place. Being an Aussie is much more complex than punting on the Melbourne Cup or shouting 'go Sharkies'. It is the high responsibility of us called to this place to reflect and shape the sort of Australia we want to have. It's a bloody diverse place. It is black and white and brown. It prays in a church, in a mosque, at a shrine, in a hall, or on a surfboard just behind the breaking waves. It's men and women, it's straight and gay and trans and intersex . . . the whole bloody lot.

(This is an edited transcript of a speech given to parliament during the debate on the government's Religious Discrimination Bill on Thursday 9 February 2022.)

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task you can use this rubric to self-assess.

Inquiry steps

Your task is to **create** a campaign either in support of or opposed to the proposed Religious Discrimination Bill. Create a poster or a 40- to 60-second audio or visual clip. The purpose of the campaign is to convince the public to agree with your point of view.

Step 1: Questioning and researching

Inquiry question: Will the Religious Discrimination Bill protect us all?

- **Refine** the inquiry question so that it focuses on one aspect of the debate.
- **Investigate** different perspectives and campaigns that already exist by watching the **Ian Thorpe's campaign** and **Scott Morrison's speech** weblinks located in the Resources panel.

Step 2: Analysis, evaluation and interpretation

- **Evaluate** the arguments for and against the Religious Discrimination Bill. What are its strengths and weaknesses?
- Does the Bill uphold our values, show respect for universal human rights, and promote the principle of justice?

Step 3: Civic participation and decision-making

- Participate as a group to **create** your campaign. **Decide** together what your central message will be and the most effective way to convey it. Plan and organise the task. Make sure everyone in your group plays a part in the process.

Step 4: Communicating

- **Communicate** your point of view to the whole class by presenting your campaign. The class should ask questions and give feedback.
- Use the **Inquiry rubric** to complete a self-assessment.

Complete your self-assessment using the **Inquiry rubric** or access the 16.5 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39385)

Weblinks Ian Thorpe's campaign
Scott Morrison's speech

LESSON
16.6 Review

Hey students! Now that it's time to revise this topic, go online to:

- **Review your results**
- **Watch teacher-led videos**
- **Practise questions with immediate feedback**

Find all this and MORE in jacPLUS

16.6.1 Key knowledge summary

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

16.2 Should we celebrate our multicultural society?

- Modern Australia is characterised by its cultural diversity and a multicultural identity.
- Embracing cultural diversity improves social cohesion, with knowledge being a key to cultural tolerance.

16.3 What role does religion play in Australian society?

- Australia is a secular society that encourages the freedom of religious expression.
- Migrants to Australia have brought with them religious beliefs and cultural traditions.
- Despite recent improvements, the spirituality of First Nations Australians is still poorly reflected in Australian culture.

16.4 How do we promote cohesion in Australian society?

- Values are like a set of instructions that tell people how to live a good life.
- Differing values can be divisive, whereas shared values increase social cohesion.
- Australian values have evolved from the diverse backgrounds of the people who call our country home.

16.5 INQUIRY: Religious Discrimination Bill debate

- The rights of all Australians need to be protected by legislation.
- Religious views and values can influence the decision-making of politicians.

16.6.2 Key terms

active citizenship relates to getting involved in your local community and displaying values such as respect, inclusion and helping others

cultural intolerance when individual differences are not accepted by others

discrimination unfair or prejudicial treatment of people and groups based on race, gender, age or sexual orientation

diverse showing a great deal of variety

inclusiveness providing equal access to opportunities and resources for everyone

multiculturalism a society in which the cultures and traditions of many different groups coexist and are encouraged

persecution hostility, violence or ill-will directed at a person or group of people on the basis of their personal characteristics

perspective a particular attitude toward or way of regarding something

pluralistic a society in which members of individual cultural, ethnic or religious groups can maintain their distinctive cultural identities while remaining part of the overall community

secular not having a connection to religion

social cohesion the degree to which communities are united by shared values, traditions and experiences

tribalism behaviour and attitudes that stem from strong loyalty to one's own social group, sometimes in opposition to other groups

values principles that help you to decide what is right and wrong, and how to act in various situations

White Australia Policy informal name for the *Immigration Restriction Act 1901*, which effectively prevented non-European immigration to Australia

16.6.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How is Australia a diverse society and what factors contribute to a cohesive society?

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

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10562)
Reflection (ewbk-10564)
Crossword (ewbk-10563)

Interactivity Australian identity and diversity crossword (int-5315)

16.6 Review exercise

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Multiple choice

1. What is Australian society characterised by?
   - A. Age
   - B. Gender
   - C. Diversity
   - D. Size
2. In a tolerant society, cultural differences
   - A. are hard to identify.
   - B. are easy to identify.
   - C. pull people together.
   - D. push people apart.
3. Which of the following is a benefit of cultural diversity?
   - A. You can learn about other cultures.
   - B. You can learn about yourself.
   - C. You gain an appreciation for your living conditions.
   - D. All of the above

4. A secular country is one in which
   - **A.** religion is part of life.
   - **B.** religion is part of the government.
   - **C.** religion is separate from the government.
   - **D.** religion is not allowed.
5. Religious freedom is allowed by what part of the Australian legal system?
   - **A.** The Constitution
   - **B.** The Bill of Rights
   - **C.** The Royal Assent
   - **D.** The Parliament
6. According to the most recent census data, what is the most practised religion in Australia?
   - **A.** Christianity
   - **B.** Islam
   - **C.** Hinduism
   - **D.** Judaism
7. _____ are like a set of instructions that helps you know how to act and live your life.
   - **A.** Traditions
   - **B.** Values
   - **C.** Customs
   - **D.** Beliefs
8. Which of the following is *not* a value from the official Australian Values Statement?
   - **A.** Freedom of religion
   - **B.** Tolerance
   - **C.** Gender equality
   - **D.** Mateship
9. What happens if migrants only associate with members of their own communities?
   - **A.** They will be bored.
   - **B.** They won't gain exposure to the culture and values of other communities.
   - **C.** They won't make any new friends.
   - **D.** They will forget about their own culture and traditions.
10. What was the outcome of the Religious Discrimination Bill debate in February 2022?
    - **A.** The bill was passed by parliament.
    - **B.** The bill was voted down by parliament.
    - **C.** The bill was withdrawn from parliament.
    - **D.** The bill is still being debated by parliament.

Short answer

Analysis, evaluation and interpretation

11. **Evaluate** the presence of First Nations Australians cultures in Australian identity. Provide two examples.
12. From your own experiences, do you believe that cultural tolerance exists in Australian society?
13. Australia is a secular nation. **Explain** how secularism is protected in Australian society.
14. Shared values can increase social cohesion. To what extent to you agree with this statement?

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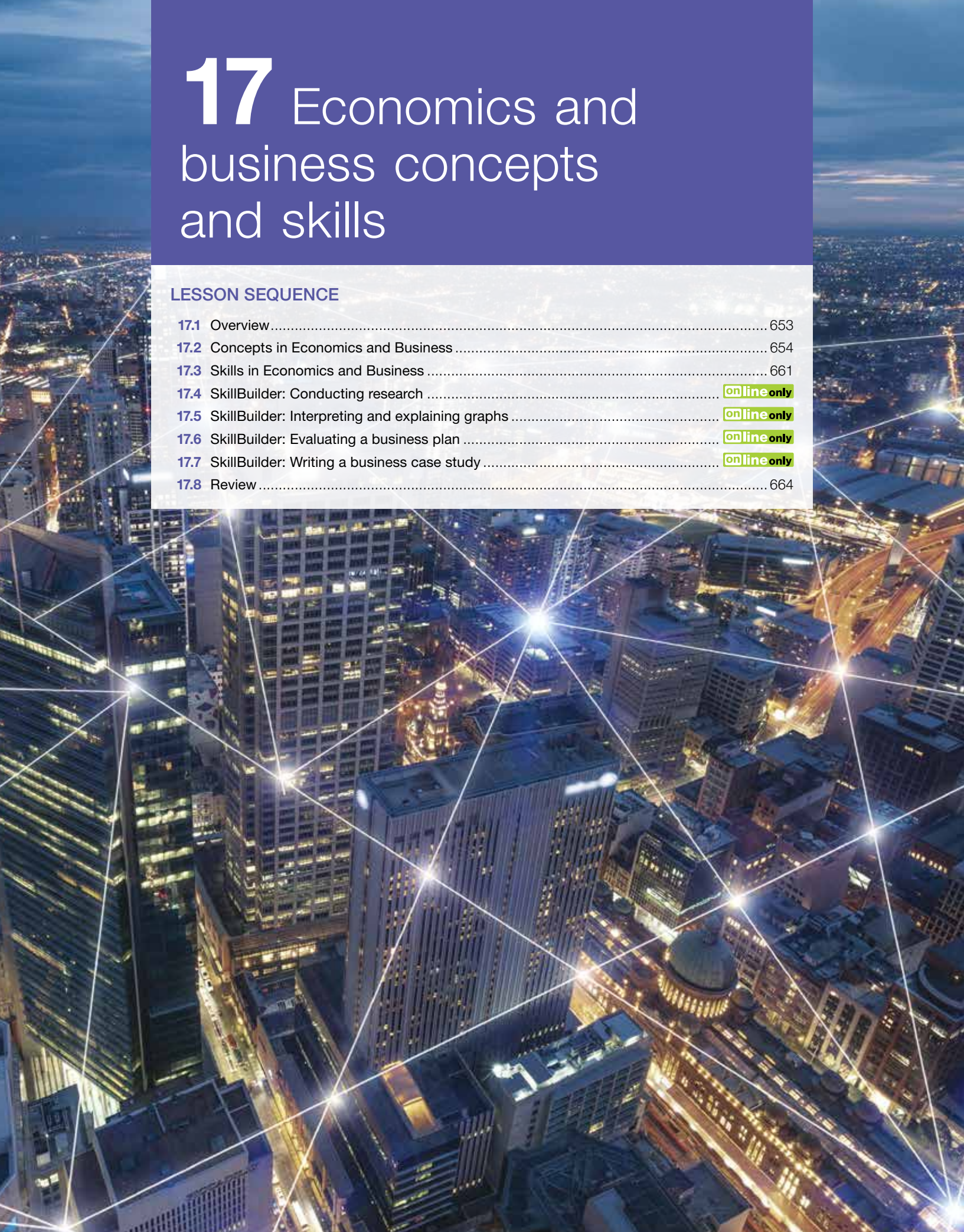
ECONOMICS AND BUSINESS

17 Economics and Business concepts and skills 652
18 Our economy — consumers, producers and government 666
19 Work and entrepreneurship 706

17 Economics and business concepts and skills



LESSON SEQUENCE

17.1 Overview 653
17.2 Concepts in Economics and Business 654
17.3 Skills in Economics and Business 661
17.4 SkillBuilder: Conducting research ..... online only
17.5 SkillBuilder: Interpreting and explaining graphs ..... online only
17.6 SkillBuilder: Evaluating a business plan ..... online only
17.7 SkillBuilder: Writing a business case study ..... online only
17.8 Review 664

LESSON
17.1 Overview

Hey students! Bring these pages to life online

Watch videos

Engage with interactivities

Answer questions and check results

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17.1.1 Introduction to the world of economics and business

Have you purchased food today? Have you used electricity, caught public transport or been driven in a car? Do you have a bank account, or have you sent a text to a friend? If you answered yes to just one of these questions, you have been involved in the world of economics and business.

When we buy goods and services, deposit money in a bank account or obtain a casual (or, in the future, a more permanent) job, we are contributing to the economy.

The focus of learning in Year 7 is the topic **individuals, businesses and entrepreneurs** within a personal, community and national context.

This topic looks at economics and business concepts, including the nature and purpose of informed and responsible decision-making by individuals and businesses, with attention to the allocation of limited resources to meet unlimited needs and wants. This topic also outlines types of businesses, how entrepreneurial characteristics contribute to business success, and the ways work is undertaken.

Studying economics and business allows us to look at why businesses exist, and to recognise the different types of business that exist. We all have an important role in the world of economics and business — as entrepreneurs, workers and consumers, with our own rights and responsibilities. In this topic, you will develop the skills of questioning and research, interpreting and analysing, evaluating, concluding and decision-making, and communicating.

FIGURE 1 The world of economics and business affects many everyday decisions we make.

Resources

eWorkbook Customisable worksheets for this topic (ewbk-10565)

Video eLesson Economics and business concepts and skills (eles-6015)

LESSON
17.2 Concepts in Economics and Business

LEARNING INTENTION

By the end of this lesson you should be able to explain the five Economics and Business key concepts: resource allocation and decision-making, the business environment, entrepreneurship, work and work futures, consumer and financial literacy.

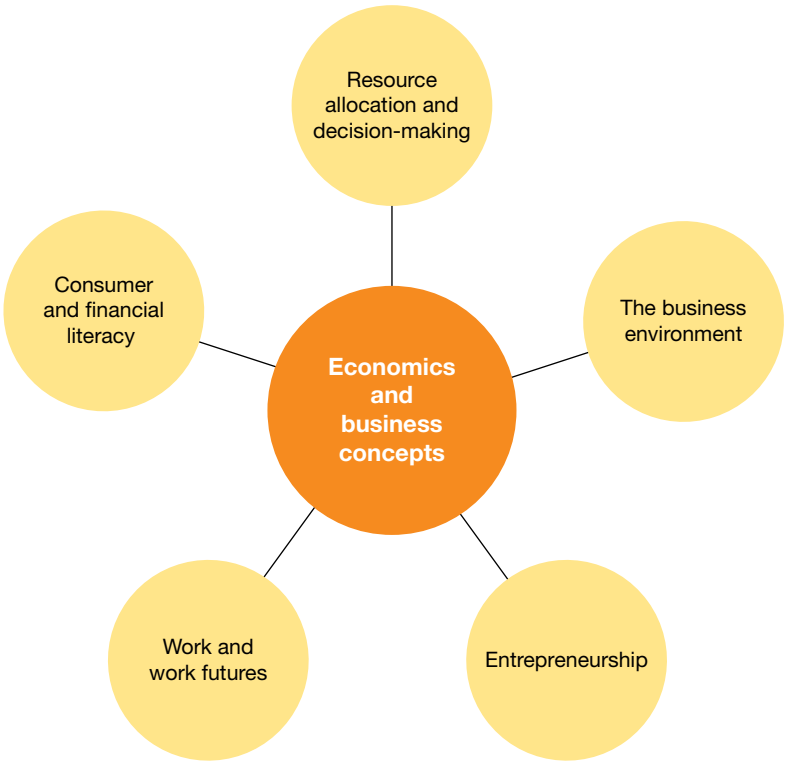
17.2.1 The world of economics and business

Our economy is a complicated thing. It consists of businesses and consumers — people — just like you and me. Economists study these people and the choices that they make to satisfy their wants and needs. Economic scarcity is a big concept in **economics**. Economic scarcity focuses on the problem of a growing population, with growing wants and needs, but with a limited amount of resources on Earth to meet these needs. Because of this, economists concern themselves with the big questions about what to produce, how to produce and who to produce for.

The world of **business** is something that you already know something about. You buy from different types of businesses every day, and interact with business entrepreneurs or people who are employed by a business. You may have your own idea for a business venture or perhaps you have operated your own 'business' mowing lawns, baby sitting or running a market stall.

The Economics and Business concepts can help us to make sense of the world. By using these concepts, you can identify questions, guide your investigations or assist decision-making about the world you live in, and you can use them to try to imagine a different world. The five key concepts are resource allocation and decision-making, the business environment, entrepreneurship, work and work futures, and consumer and financial literacy.

FIGURE 1 The five key economics and business concepts



economics a social science (study of human behaviour) that analyses the decisions made by individuals, businesses and governments about how limited resources are used to satisfy unlimited needs and wants

business any activity conducted by an individual or individuals to produce and sell goods and services to make a profit

17.2.2 Resource allocation and decision-making

In economics, **economic scarcity** is known as the 'basic economic problem'. Economic scarcity is the concept of people having unlimited **needs** and **wants**, but only having limited **resources** available to satisfy them. It means that we have to make choices as to which wants we satisfy first. The basic economic problem always exists, and it exists in all economies. This economic scarcity forces nations and businesses to consider exactly what to produce, how to produce it and whom to produce it for. This is what resource allocation is — a 'who gets what?' situation!

economic scarcity the economic problem of having unlimited needs and wants, but limited resources to satisfy them

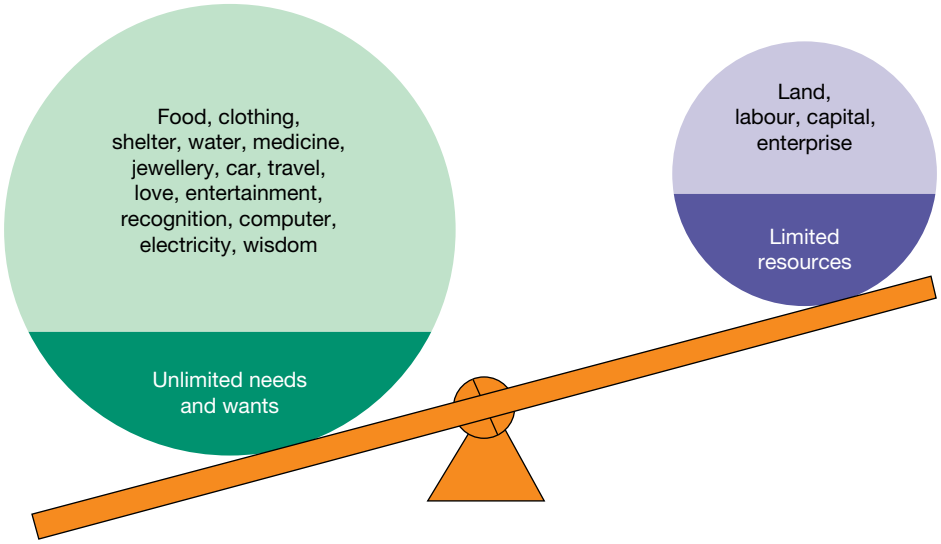
needs goods or services that consumers consider necessary to maintain their standard of living

wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community

resources items of value that we use to produce goods and services to satisfy needs and wants, which include land, labour, capital and enterprise

Local communities have different wants and needs. Wants are a wish or desire for something that will make life more enjoyable for a person. Wants are not necessary for survival. Sometimes, the difference between a need and a want is not clear. For example, you need to eat food but you might want to eat cake. In this situation, food can be both a need and a want. Generally, most of us would say that needs include the basic things for survival such as clothing, food and shelter. You might say that a car, computer, internet and mobile phone are wants. However, many people would suggest that these are needs.

FIGURE 2 Economic scarcity creates an unbalance between what we want and the actual resources we have available.



To satisfy our needs and wants, businesses use resources to produce goods and services. The four main types of economic resources are land, labour, capital and enterprise. These types of resources can be seen in **FIGURE 4**.

Economic scarcity means that we need to make choices. We cannot produce an unlimited or infinite number of goods and services because we do not have an infinite amount of resources. We cannot buy an unlimited number of goods and services because we do not have unlimited amounts of money either. We need to make choices about how scarce resources are used. Making choices about alternatives is an important part of economics, as is explaining how economic resources might be used more sustainably.

FIGURE 3 Unlimited wants combined with limited resources creates scarcity.

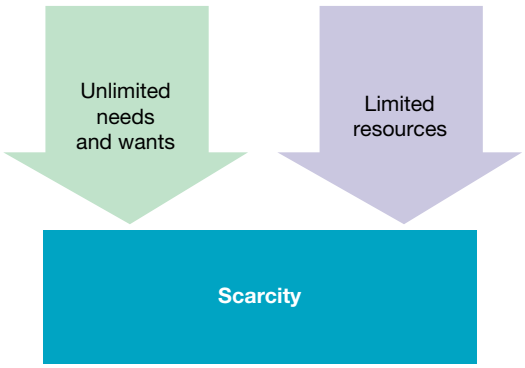


FIGURE 4 The four main types of economic resources are land, labour, capital and enterprise.

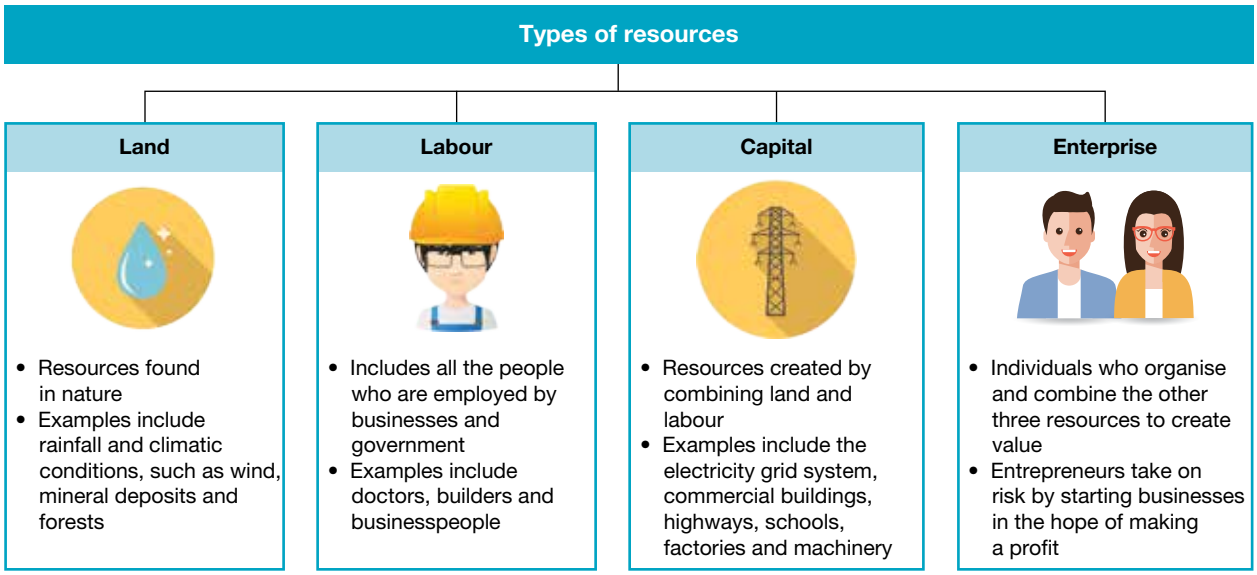


FIGURE 5 Businesses use economic resources (land, labour, capital and enterprise) to produce the goods and services that society wants and needs.

Every choice we make involves an **opportunity cost**. When we buy something or do something we are always giving up the next best thing.

An opportunity cost in relation to a choice can be seen when we look at something simple such as a student choosing to spend their money on lunch. Money is the limited resource; it can only be used once. If the money is spent on sushi, it cannot be spent on a sandwich. This is the trade off — the missed opportunity of a sandwich if you get the sushi!

Note that there can only be one opportunity cost. Opportunity cost is the alternative given up. Consumers, business and the government all need to consider opportunity cost when they make choices. Consumers constantly have to make choices when they purchase goods and services. They must also make choices about how they will use their time and how they will earn a living. Businesses need to make choices about what goods to produce and how and who they will provide them to. Governments must also make choices about how to intervene in the economy.

FIGURE 6 We need to make choices about how scarce resources are used.

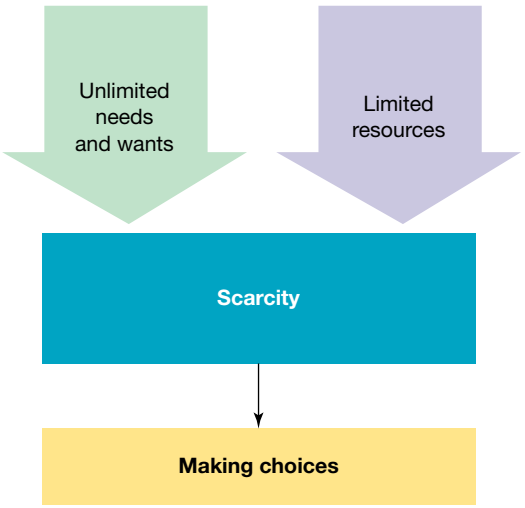


FIGURE 7 The cost of purchasing a video game includes the opportunity cost of the alternative decision given up. For example, the money could have been spent on a new t-shirt.

All individuals, business and economies must decide how they will use their scarce resources to satisfy their unlimited needs and wants. Making decisions about how we will use resources is known as **resource allocation**. Our society has developed an **economic system** to make choices that will solve the basic economic problem. Remember, that basic economic problem is scarcity.

An economic system is simply the way we organise the production and distribution of our goods and services. All economic systems must answer three basic economic questions: what to produce? how to produce? for whom to produce? These questions are summarised in **FIGURE 9**.

opportunity cost the next best alternative given up whenever a choice is made

resource allocation decisions about how scarce resources are distributed among producers, and which types of goods and services will be produced to satisfy wants and needs

economic system a way of organising the production and distribution of the nation's goods, services and incomes

FIGURE 8 All economic systems must answer three basic economic questions.

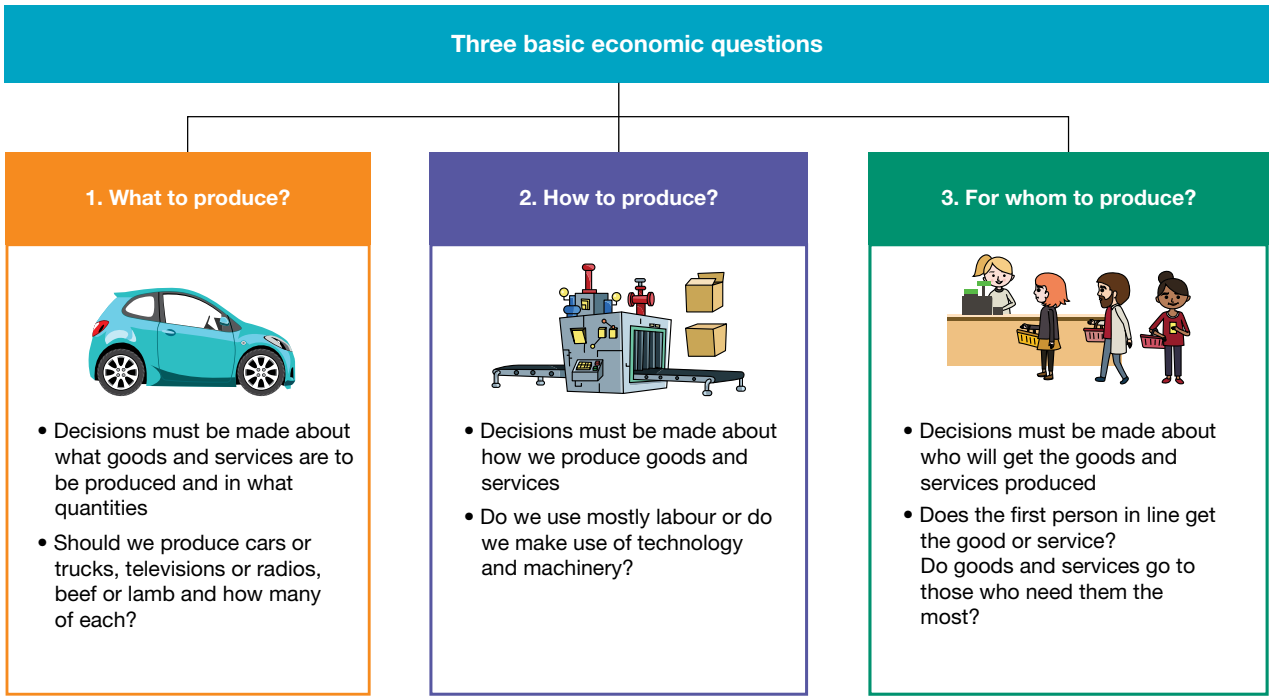
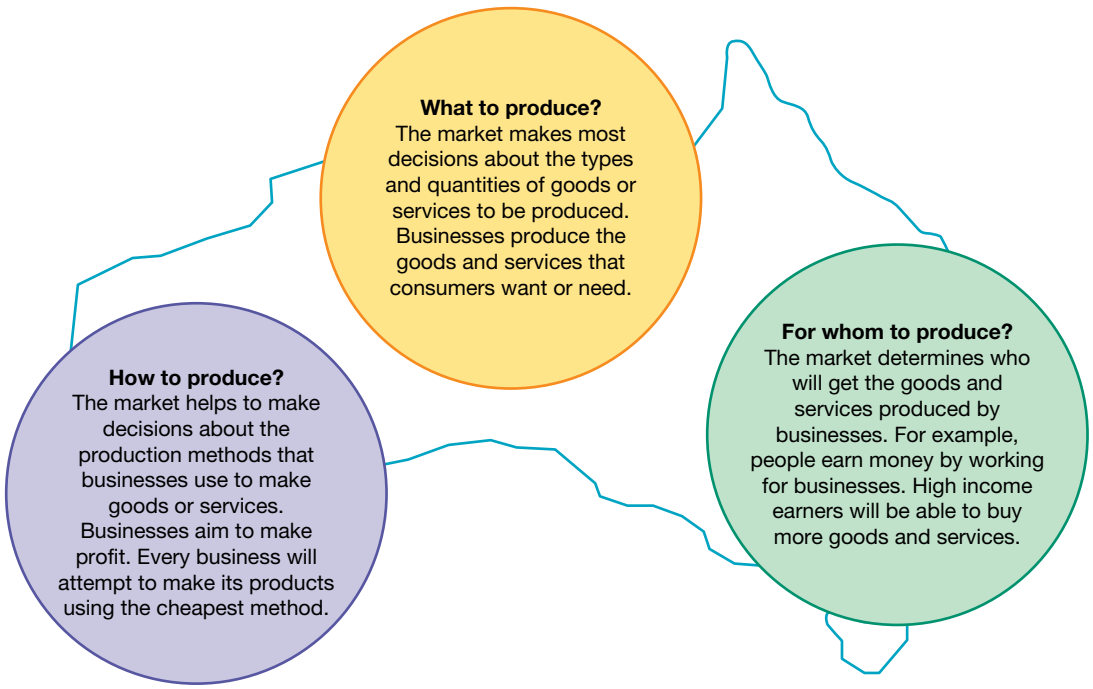


FIGURE 9 Australia's economic system answers the three economic questions through the market.



17.2.3 The business environment

Australia's economic system is called a **market capitalist economy**. Buyers and sellers come together in a **market** situation, and sometimes negotiate prices. The sellers are the businesses and we are the buyers.

FIGURE 10 A local fruit and vegetable market allows buyers and sellers to negotiate prices.

Different types of businesses exist within different markets and they exist for many different reasons. Mostly, businesses exist to produce goods and services but the reasons connected to this might be to make a **profit**, to provide employment, or to serve a community need (or a combination of these).

Just as businesses exist for many different reasons, businesses can also be categorised into different types. The different types of business that exist relate to how the business is set up. This will include whether the business has been established as a **sole proprietorship**, **partnership**, **cooperative**, **corporation**, **franchise**, or **not-for-profit organisation**.

market capitalist economy economic system that relies on the market to allocate resources based on the actions of consumers and producers, and where resources are generally owned by private individuals and businesses

market where goods, services or resources are exchanged between buyers and sellers

profit what is left from sales revenue after a business has paid all costs

sole proprietorship a business that is owned and controlled by one person

partnership a business that has two or more owners

cooperative a farm, business or other organisation owned and run jointly by its members, who share the profits or benefits

corporation a legal entity that is separate and distinct from its owners

franchise a business that gives the right to another person or business to sell goods or services using its name

not-for-profit organisation a business that aims to do something other than to make profit for the owners, such as providing a community service or helping people

entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise

17.2.4 Entrepreneurship

We often refer to the people who start up their own business, with a new idea, as **entrepreneurs**. Entrepreneurs bring a special kind of knowledge and skill to their business, and they have their own defining characteristics. These characteristics include being able to spot opportunities, negotiate with stakeholders and stay within the law and regulations.

When considering entrepreneurs, we should pay particular attention to First Nations Australian entrepreneurs, who often share a distinct set of values around entrepreneurial decision-making and community.

FIGURE 11 A business selling fresh baguettes will be meeting a consumer need or want.

FIGURE 12 Entrepreneurs often have the ability to spot opportunities within a marketplace.

17.2.5 Work and work futures

While some people set themselves up as entrepreneurs and establish a business, most people will work for someone else to earn an income. We can identify different types of work; for example, some people will work full-time (five days of the week), while others will be employed on a part-time or casual basis. Work is also carried out in different locations, including at home, and varies from the paid, unpaid, unrecognised and voluntary. Understanding why individuals work in these different ways is important. Work is, of course, essential so that people can maintain a certain **standard of living**, but it is also very important for an individual's identity, feelings of happiness and continuing cultural practices and tradition.

FIGURE 13 A swimming instructor may work on a part-time basis.

Of course, we must not forget that people can earn income in other ways, such as being a shareholder, providing a rental service or receiving a social security benefit from the government.

17.2.6 Consumer and financial literacy

As we found out earlier in this topic, we all have a role as consumers within the economy as we all buy goods and services. As consumers, and each time we do buy something, we need to be aware of the rights and responsibilities that we have and those of the business. This includes knowing when we can return a faulty item or knowing when we can make use of a cooling-off period.

Consumer and financial literacy is also about practising responsible buying and spending habits. From a young age, it is important that we learn to develop budgets or savings plans to make sure that we do not go into debt.

standard of living the degree of wealth and material comfort available to a person or community; this is often reflected in how much money a person earns and how many goods and services they can purchase

LESSON
17.3 Skills in Economics and Business

LEARNING INTENTION

By the end of this lesson you should be able to explain each of the four categories of skills in Economics and Business, and how to apply these skills.

17.3.1 What skills will you build this year?

This year, you will continue to build your ability to use the four broad categories of skills in the Humanities and Social Sciences. The following summaries are to remind you of these four key skills.

1. **Questioning and researching** involves developing questions to form the basis of an investigation; for example, in Year 7 Economics and Business, this may include asking, 'What are the attributes of an entrepreneur?' In order to answer questions, you will be required to locate and select relevant information.
2. **Interpreting and analysing** involves identifying the main features or ideas of a topic or concept. In Year 7 Economics and Business, it may include interpreting multi-variable data and using interactive digital tools to identify trends and to answer questions such as, 'For a ten-year period, to what extent has the number of people in casual work changed?'
3. **Evaluating, concluding and decision-making** means developing a response to an issue by combining known knowledge with new ideas. You may be able to identify and describe the costs and benefits associated with an issue. For example, in Year 7 Economics and Business, you may be able to make judgements about the *suitability of one type of work over an other*.
4. **Communicating** your ideas means presenting information in a range of formats to suit the intended audience and purpose. This includes essays, oral presentations, debates, tables and cartoons. Reflecting on your skills is also an important part of the process. In Year 7 Economics and Business, this includes creating and communicating an original business idea.

FIGURE 1 In Year 7 Economics and Business, you will learn about work. Do you consider playing tennis for a living as work?

17.3.2 SkillBuilders in the topic

In addition to these broad skills, you will learn a range of essential practical skills as you study Economics and Business. The SkillBuilder lessons in this topic tell you about the skill, show you how to apply the skill and let you practise the skill with tasks related to the topics covered in this subject.

The SkillBuilders you will use in Year 7 are as follows.

- Conducting research
- Interpreting and explaining graphs
- Evaluating a business plan
- Writing a business case study

LESSON
17.4 SkillBuilder: Conducting research

online only

Why is research important?

When you are asked to 'do research' you need to ask questions about a particular topic or event. Asking questions will help you to complete research (through discovering or verifying knowledge about something). The purpose of this skill is to help you understand how to approach a research task.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
17.5 SkillBuilder: Interpreting and explaining graphs

online only

How do you read and explain graphs?

Interpreting and analysing graphs is another skill that you will develop while studying Economics and Business. Line graphs are very useful for showing trends (patterns of change over time) and comparing data. The purpose of this skill is to show you how to interpret and explain a graph.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
17.6 SkillBuilder: Evaluating a business plan

online only

What is a business plan?

A business plan provides the details about how a business will operate and the business owner's plan for success. It can include details about operations, finance and marketing. This SkillBuilder shows you how to accurately and appropriately evaluate a business plan.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
17.7 SkillBuilder: Writing a business case study

online only

What makes a successful business case study?

A business case study is a description of a real-life business, requiring you to explore the main issues affecting the business and how the business owner has responded. These issues and responses need to be analysed and related to your economic and business knowledge.

Select your learnON format to access:

- an overview of the skill and its application (Tell me)
- a step-by-step process to explain the skill (Show me)
- an activity for you to practise the skill (Let me do it).

LESSON
17.8 Review

Hey students! Now that it's time to revise this topic, go online to:

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17.8.1 Summary

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

17.2 Concepts in Economics and Business

- Resource allocation and decision-making involves the idea of 'scarcity'. Scarcity is the 'basic economic problem', and this involves society having limited resources available to satisfy unlimited needs and wants.
- The four main types of economic resources are land, labour, capital and enterprise.
- Every choice made involves an opportunity cost, which is the next best alternative given up whenever a choice is made.
- All economies must make decisions about how resources will be allocated among producers and what types of goods and services will be produced. This means economies must answer the three economic questions: what to produce?, how to produce? and for whom to produce?
- Australia is a market capitalist economy, which means that most answers to the three economic questions are made by the market (where buyers and sellers negotiate prices for goods and services).
- Businesses exist for different reasons; for example, to produce goods and services, to make a profit, and to provide employment. They also exist in a variety of locations.
- The different types of businesses include sole proprietorship, partnership, cooperative, corporation, franchise and not-for-profit organisations.
- Entrepreneurs play a key role in establishing businesses in Australia. They combine knowledge, skills and attitudes that contribute to success, such as seeing and taking advantage of an opportunity or demonstrating initiative and innovation.
- Work is an activity that the vast majority of individuals do, and the reasons individuals work, and the types of work they are involved in, are varied.
- Consumers need to be aware of the rights and responsibilities of individuals and businesses in relation to consumer and financial products and services.

17.3 Skills in Economics and Business

- Questioning and researching involves posing statements that require answers, particularly in regard to what is known and what is not known, in order to improve your knowledge. Research is important because it allows you to find out what is unknown and contributes to filling in gaps in your knowledge.
- Interpreting and analysing involves interpreting information to identify the main features or ideas, and then examining the information closely to determine how the parts relate to the whole.
- Evaluating, concluding and decision-making involves proposing explanations for events or issues and making overall judgements based on the evidence.
- Communicating involves presenting findings or representing information using an appropriate format to suit a particular audience. The appropriate use of economics terminology and business terminology is very important in this.

17.8.2 Key terms

business any activity conducted by an individual or individuals to produce and sell goods and services to make a profit

cooperative a farm, business or other organisation owned and run jointly by its members, who share the profits or benefits

corporation a legal entity that is separate and distinct from its owners

economic scarcity the economic problem of having unlimited needs and wants, but limited resources to satisfy them

economic system a way of organising the production and distribution of the nation's goods, services and incomes

economics a social science (study of human behaviour) that analyses the decisions made by individuals, businesses and governments about how limited resources are used to satisfy unlimited needs and wants

entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise

franchise a business that gives the right to another person or business to sell goods or services using its name

market capitalist economy economic system that relies on the market to allocate resources based on the actions of consumers and producers, and where resources are generally owned by private individuals and businesses

market where goods, services or resources are exchanged between buyers and sellers

needs goods or services that consumers consider necessary to maintain their standard of living

not-for-profit organisation a business that aims to do something other than to make profit for the owners, such as providing a community service or helping people

opportunity cost the next best alternative given up whenever a choice is made

partnership a business that has two or more owners

profit what is left from sales revenue after a business has paid all costs

resource allocation decisions about how scarce resources are distributed among producers, and which types of goods and services will be produced to satisfy wants and needs

resources items of value that we use to produce goods and services to satisfy needs and wants, which include land, labour, capital and enterprise

sole proprietorship a business that is owned and controlled by one person

standard of living the degree of wealth and material comfort available to a person or community; this is often reflected in how much money a person earns and how many goods and services they can purchase

wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10565)
Reflection (ewbk-10566)

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LESSON
17.4 Skillbuilder: Conducting research

LEARNING INTENTION

By the end of this SkillBuilder you should be able to approach a research task.

17.4.1 Tell me

While studying economics and business, you will develop the skill of asking questions. Asking questions will help you to complete research (through discovering or verifying knowledge about something). Questioning relates to posing statements that require answers. You usually ask questions about what is known and what is not known in order to improve your knowledge. Research is important because it allows us to find out what is unknown and contributes to filling in gaps in our knowledge.

The following steps provide a useful guide to the process of writing questions and 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.

17.4.2 Show me

Imagine you have been asked to research the details of a specific product by reading a manufacturer label.

Your first step is to clearly identify the key task. This could be expressed as follows:

Prepare a report on how reading a food label provides information for consumers about products.

It is now necessary to break this down into a series of more specific questions. These could include:

1. What words or phrases are used on food packaging to suggest that the food is healthy?
2. What sort of information is included on food labels?
3. What is the 'health star rating system'?
4. How can food labels be improved?
5. What are some relevant examples?

FIGURE 1 Food labels can contain a lot of information and can be difficult to understand if you don't know what the information means or how to use it.

The next step is to locate your sources. The Australian government's business.gov.au website has information for businesses on labelling products, so this is a good starting point. By entering the term 'food label' in a search engine, you will be presented with a number of sources. Searching for Australian sources is a good idea.

Keep your questions beside you as you navigate through the sites and sources, and note the location of material that provides answers. You can select and save 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.

17.4.3 Let me do it

Complete the following activity to practise this skill.

17.4 ACTIVITY

Using the process outlined in section 17.4.2 as a model, devise a series of questions and carry out research to produce a report on the following key question:

Using a specific product, such as fruit juice or yoghurt, prepare a report on how reading a food label provides information for consumers about that product.

LESSON
17.5 Skillbuilder: Interpreting and explaining graphs

LEARNING INTENTION

By the end of this SkillBuilder you should be able to interpret and explain a graph.

17.5.1 Tell me

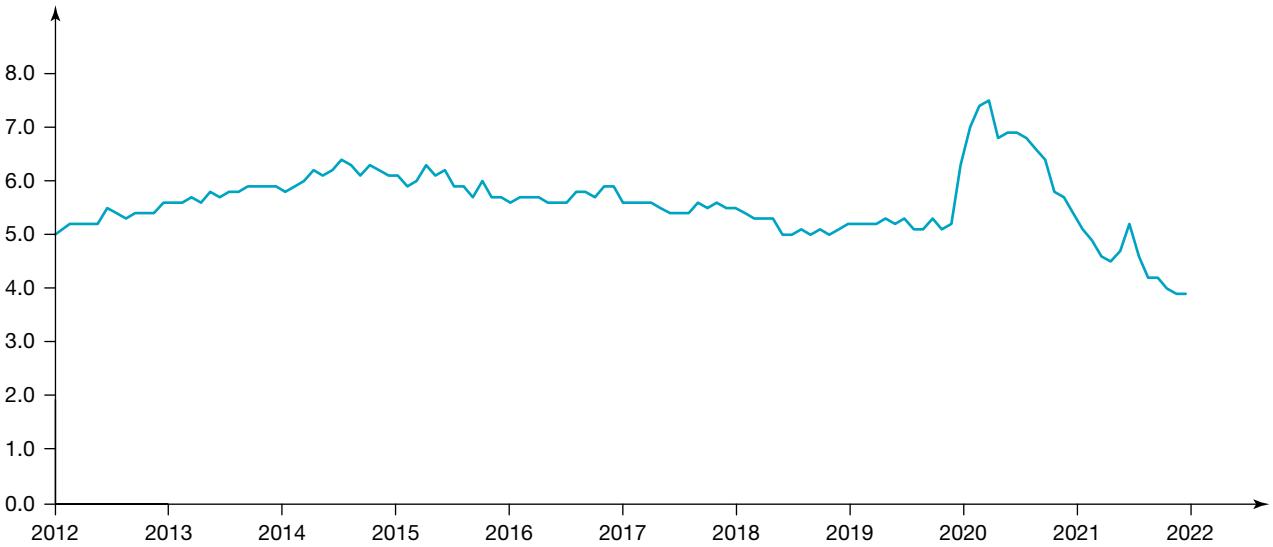
Interpreting and analysing is another skill that you will develop while studying Economics and Business. This skill involves studying information to identify the main features or ideas. You may also be able to determine how the parts relate to the whole. One way in which you might analyse in economics and business is by interpreting information in a graph.

17.5.2 Show me

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? Next, examine the key, which identifies what each of the lines on the graph represents. Then look closely at the vertical and horizontal axes, which show you the variables as numbers, percentages, years and so on.

When reading the lines on a graph you should be able to see 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 change has occurred 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 to summarise the information you have found in your analysis.

FIGURE 1 Australia's unemployment rate (%)



Source: Graph based on data compiled from Australian Bureau of Statistics, *Labour force, Australia*, March 2020 (cat. no. 6202.0.).

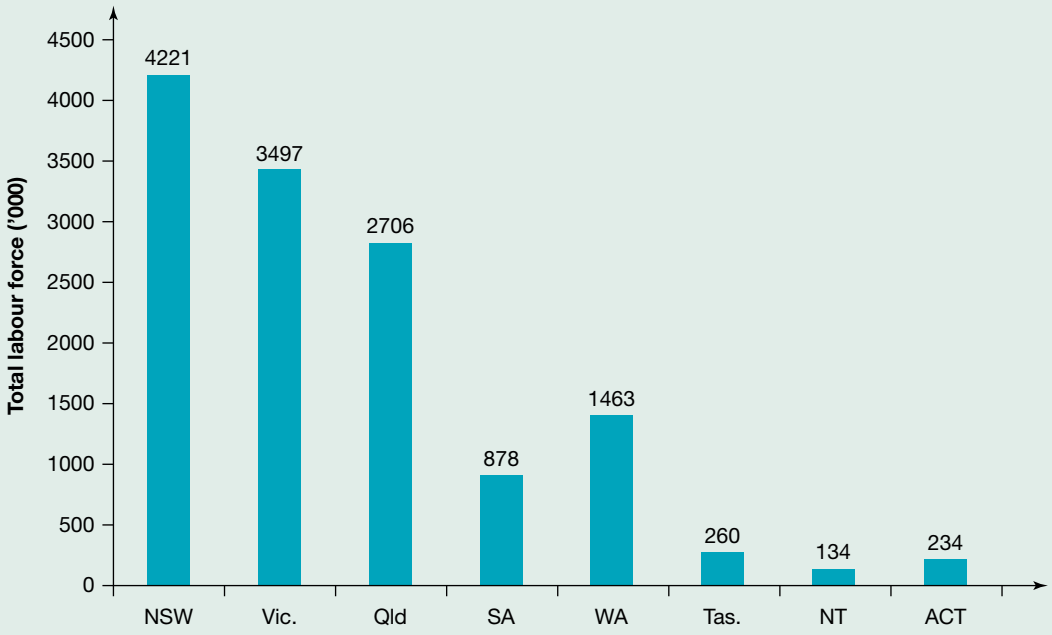
17.5.3 Let me do it

Complete the following activity to practise this skill.

17.5 ACTIVITY

Analyse and **interpret** the following graph. Use what you have learned about the line graph (vertical axis and horizontal axis and variables) to **analyse** what the graph tells you. Write a paragraph describing the trends shown.

FIGURE 2 Total labour force by state, 2022



Source: Graph based on data compiled from Australian Bureau of Statistics, *Labour force Australia*, April 2022 (cat. no. 6202.0).

LESSON
17.6 Skillbuilder: Evaluating a business plan

LEARNING INTENTION

By the end of this SkillBuilder you should be able to accurately and appropriately evaluate a business plan.

17.6.1 Tell me

Evaluating means to propose explanations for events or issues and to make overall judgements based on the evidence. This is a skill that you might develop in economics and business by looking at the benefits or advantages of something and then examining the costs or disadvantages of something.

17.6.2 Show me

For example, consider the following business plan that Gemma has presented for her new café.

Element	Application
Executive summary	The name of the business is The Bookshop Café. This will be a sole trader business located in Northbridge and owned by Gemma Potter. The business will start trading on 15 October 2023. The Bookshop Café will sell a range of products including offering a brunch menu (fruit toast, eggs on toast, soup, burgers, fries and salads), cakes, scones, juices, hot and cold chocolate drinks, as well as various types of teas and coffees. A gluten-free menu will also be offered. The Bookshop Café will also offer a range of books for sale. The Bookshop Café's vision is to be the coffee shop with the most relaxing environment in Perth and its mission is to provide a great experience while enjoying high-quality refreshments, using ingredients from local and sustainable suppliers.
Operations plan	The production process will involve waitstaff greeting customers and showing them to a table. Customers will then order their food and/or beverages from the counter, paying at the same time. Food and beverages will be served within 20 minutes of ordering. A waiter or waitress will serve meals to the table. Customers can browse through a range of books on sale. Customers can purchase these books once they have finished their meal. Food supplies will be sourced from local suppliers. The equipment required includes a coffee machine, espresso maker, food display cabinet, refrigerator, cooking equipment, dishwasher, cash register, computers and book shelves.The business currently has no stock. Opening hours will be from 8.00 am to 5.30 pm weekdays and 10.00 am to 4.00 pm on weekends. Payment methods will be cash and credit (EFTPOS will be made available). To maintain quality, customers will be asked to complete an optional survey. The business will employ 11 people, including three chefs (two will work weekdays, and the other will work weekends), three baristas (two will work weekdays, and the other will work weekends) and five waitstaff (three will work weekdays, and two will work weekends). Employees will receive training as necessary.
Financial plan	The Bookshop Café's balance sheet shows a healthy financial position, with funds available for capital purchases and for purchasing new stock. The Bookshop Café has a high level of liquidity, with $70 000 in cash available. The other source of finance is a business loan from National Australia Bank. Estimated sales will be 500 cups of coffee every day. Together with other food and beverages and book sales, the estimated annual revenue will be $800 000 or more each year. Expenses are estimated to be $550 000 annually. Therefore, The Bookshop Café's estimated profit is $250 000 annually. This should increase over the next five years. The cash flow forecast shows that cash flow is anticipated to be positive over the following five years.

Element	Application
Marketing plan	Residents of Northbridge are predominantly aged between 18 and 64. Of these, 46 per cent is made up people aged 25 to 34. The vast majority of people living within the suburb are professional couples without children. Several competitors are in Northbridge, offering similar menus such as breakfast and coffee. One of The Bookshop Café's main points of difference will be the books available to read or purchase. Prices will be determined by completing research on what competitors are charging. Pricing will also take into account costs (of each item on the menu as well as fixed and variable costs). The Bookshop Café will rely on word-of-mouth advertising and will provide free wi-fi and powerpoints at tables for laptops. A loyalty program will be introduced as well as the offer of a free item in return for completing online surveys. Advertising will occasionally occur in local newspapers and magazines. Social media will be kept updated regularly.

Gemma's business plan is a good one. However, it is not perfect. Gemma still needs to consider some aspects. Her business plan needs to be evaluated.

FIGURE 1 Will Gemma's business idea succeed?

17.6.3 Let me do it

Complete the following activities to practise this skill.

17.6 ACTIVITY

Write down the benefits or strengths you can see for Gemma and her new business in her business plan. For example, Gemma is planning to operate as a sole trader — this type of business is very suitable if she wants to maintain full control of her business and wants to keep all the profit.

Next, write down costs or limitations that you can see in the business plan. For example, operating as a sole trader means that the business is very reliant on Gemma being able to operate the business every day.

Finally, what do you think? Should Gemma go ahead with her business? Write down an evidence-based **conclusion**.

LESSON
17.7 Skillbuilder: Writing a business case study

LEARNING INTENTION

By the end of this SkillBuilder you should be able to prepare, research, structure and write a business case study.

17.7.1 Tell me

When you use the skill of communicating in Economics and Business, you will be presenting your findings or representing information using an appropriate format for a particular audience. You will also need to use terminology that is used by economists and people in the world of business. For example, when writing a case study on a business, you would be expected to use business terminology.

A business case study is a description of a real-life business, requiring you to explore the main issues affecting the business and how the business owner has responded. These issues and responses need to be analysed and related to your economic and business knowledge. Conclusions can then be drawn about why the issue occurred and how to best respond to it, based on what the business owner did.

Writing a business case study is a way to apply the theoretical knowledge that you have learned about economics and business to a real-life business. It can also develop research skills. Consider the following case study of Boost Juice.

CASE STUDY: Boost Juice

Who is Boost Juice?

Boost Juice Bars is a global chain of retail stores selling fruit juice and smoothies. Boost Juice also sells snacks, including banana bread, wraps and yoghurt. Janine Allis and her husband, Jeff, started the business in 2000 in South Australia.

Reason for Boost Juice's success

Janine was inspired by a trip to the United States, where juices and smoothies were common. Back in Australia, Janine found, 'In shopping centres, there was nowhere to get something healthy.' Using her trip to the United States as research, Janine explains, 'I studied the concept of smoothies and juice and took what I liked to develop a new concept in Australia called Boost.' The business started small with just one shop in Adelaide.

Janine was very hands-on in setting up the business — developing the structures, business plan and ethics that were needed to grow the business. This meant getting involved in every aspect: 'I flew to Adelaide to open the first store; I ran it, scrubbed the floors and really learned the business.'

This modest start gave Janine the chance to test the market. To reach their goal of expanding their brand, Janine focused on franshising, developing strong branding as a way to lure the best franchisees and to win customers. 'I never had the intention of opening just one store, but you have to open the first one to work out the cost of goods, your wages, expenses and income and work out if you have a viable business.'

Running her own business was a risk, but it gave Janine a way to try to balance her work and home life and the opportunity to work from home when her children were young. 'When the time came to expand with a building program on 15 to 18 sites, we sold the house and put the money into the business.'

Other information about Boost Juice

- 2000: Opened first Boost Juice (Adelaide)
- 2002: $1 million annual turnover
- 2008: 213 stores and on track for $100 million annual turnover
- 2014: 300 stores in 10 countries and annual turnover of more than $135 million
- 2022: More than 580 stores in 15 countries
- Highest grossing company stores: Sydney and Melbourne airports
- Highest grossing company franchisees: Chadstone and Pacific Fair Shopping Centres
- Ethical and social responsibility: Boost uses paper cups that are renewable, sustainable and biodegradable, and which are printed using non-toxic, food-safe inks and are not harmful to the environment. Boost Juice has a tree planting and school fundraising program.

FIGURE 1 Janine Allis and her husband Jeff

17.7.2 Show me

Elements of a good business case study

You might note that a good case study has the following features:

- includes a profile of the business (the trading name and the products it sells)
- explains some of the history of the business
- gives reasons the business has been successful
- covers any other issues or questions as required
- includes extra information about the business
- is of reasonable length (approximately 300 words)
- is easy to read
- is well presented.

To complete a good business case study you should complete the following:

- Gather information about the business. The best way to do this is to interview the owner or someone who works at the business. If you cannot speak to someone who knows about the business, you will need to complete research on the internet or use magazines and newspapers.
- Work out the interview questions you will need to ask the business owner, manager or employee.
- Visit the business and interview the owner, the manager or an employee. Be polite. Do not try to interview them if they are busy. You might need to ask them if you can come back at a more convenient time. Explain why you are doing the interview and what will happen to their responses. Remember to thank the person for their time.
- Complete any further research that may be needed to address all the items listed in the preceding list in this section. You could complete your research on the internet or using magazines and newspapers.
- Write your case study using proper sentences and headings. Present it so that it is easy to read.

17.7.3 Let me do it

Complete the following activity to practise this skill.

17.7 ACTIVITY

Have a go at writing your own business case study. Use the following questions to guide you:

- What is the name of the business and what products does it sell?
- When and why did the owner start the business?
- Does the owner consider himself or herself to be an entrepreneur?
- What are the reasons for the success of the business?
- Do any other issues or information need to be covered? These might include:
  - where the business is located and why it is located there
  - how it develops or developed a high-quality product
  - how it maintains quality service
  - the promotion or advertising it uses
  - the number of staff it employs
  - who gave the business support and advice when the business was getting started
  - whether the business has a business plan (or ever had one)
  - who manages the finances of the business and how they are managed
  - in what ways the business is ethically and/or socially responsible.

18 Our economy — consumers, producers and government

LESSON SEQUENCE

18.1 Overview 667
18.2 What are our needs and wants? 668
18.3 What are the types of businesses and why do they exist? 674
18.4 How can we use our finite resources sustainably? 681
18.5 What are your rights as a consumer? 684
18.6 What responsibilities do businesses, producers and government have to you? 691
18.7 INQUIRY: How did First Nations Australians satisfy their needs and wants? 700
18.8 Review 702

LESSON
18.1 Overview

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How do societies allocate resources to meet the needs and wants of individuals and communities, and why do consumers and businesses have both rights and responsibilities?

18.1.1 Introduction

You are an important part of the Australian economy. This is because each time you (or someone connected to you) buys something, you are contributing money to a business.

You are also sending a signal that you want this business to keep on producing those products! This sets off a cycle, as businesses employ people to produce goods and services, and the wages they earn get spent in the economy on more goods and services.

FIGURE 1 The choices you and others make every day affect the economy.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10570)

Video eLesson What is economics? (eles-0253)

LESSON
18.2 What are our needs and wants?

LEARNING INTENTION

By the end of this lesson you should be able to explain consumers and producers and how they interact, identify what is a need and what is a want, and be able to describe how we use an economic system to fulfil our needs and wants through the supply of goods and services.

TUNE IN

You probably know the story of Aladdin — a young boy who lives on the streets and finds a magic lamp containing a genie who grants him three wishes.

In some ways, we can all relate to Aladdin and use the story to think about our needs and wants in relation to the economy.

We all have things we wish for (wants) but limited means of gaining them (resources).

1. Write a list of the three wishes (wants) you desire most and compare your list with the rest of the class.
2. Discuss with your class which of your three wishes satisfied needs. Which of your three wishes satisfied wants?
3. Explain the difference between needs and wants.

FIGURE 1 Like Aladdin, we all have things we wish for, but limited means of these wishes being granted.

18.2.1 Producers and consumers

The overview lesson introduced us to the idea that the economy is a cycle. In simple terms, the economy consists of **producers**, who make and sell goods and services, and **consumers**, who buy the goods and services.

Producers pay their **employees** with money, and also hope to make money themselves out of what they sell. This money is used to buy goods and services from other producers. Producers rely on consumers to buy from them, and consumers rely on producers to provide the goods and services they want. Money allows this relationship to work.

producer an individual or a business involved in the production of goods and services

consumer a person or group who is the final user of goods and services produced within an economy

employees people who work for a wage or salary

DISCUSS

'Money makes the world go round' is an old phrase that is used often. Do you believe that money makes the world go around? Is too much or too little importance placed on money in our society?

18.2.2 Needs and wants

Imagine that you are alone on an island. To survive, you will have to find the essentials — food, clothing and shelter. These are the basic **needs** that we must all have, whether we are on a desert island or in the comfort of our home.

As well as these needs, we might like to have additional things on the desert island to make life more comfortable. These could include a bed, a torch, a fishing rod, a comb and a toothbrush, and a table and chair. These things are called **wants**. Although we would like to have these possessions, we could survive without them.

needs goods or services that consumers consider necessary to maintain their standard of living

wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community

FIGURE 2 At a farmers' market, consumers purchase goods from producers.

FIGURE 3 Even on a desert island, you have basic needs that must be satisfied if you are to survive. Can you identify some basic needs?

TABLE 1 Needs versus wants

	Definition	Examples	Properties
Needs	Goods or services that are essential for life	Water, food, shelter, air, clothing, medication	*Finite list:* • They must be satisfied if life is to continue. • They remain throughout life. • They temporarily wane when satisfied.
Wants	Non-essential goods and services	Torch, bed, fishing rod, armchair, toothbrush, mobile phone, laptop	*Unlimited list:* • Life can continue without them. • Wants change throughout life. • New wants arise once others are satisfied.

18.2.3 Goods and services

In order to satisfy our needs and wants, we purchase goods and services. **Goods** are classified as the physical items that satisfy our needs and wants, and that we can see and touch. They include food, mobile phones, cars, refrigerators, bottles of soft drink and clothing.

Services are classified as the actions done for you by others, which are designed to satisfy needs and wants. They include the services provided by doctors, dentists, banks, mechanics and teachers.

If you are alone on a desert island, you will have to find or make all the things you need and want. In effect, you would be a one-person economy because you would be responsible for both producing and consuming all the goods and services. In a contemporary and real economy, we generally rely on **businesses** to provide us with goods and services.

FIGURE 4 As consumers, we can purchase either goods or services. Are you able to list some of the goods and services that you (or someone close to you) have purchased in the past week?

18.2.4 Relative scarcity

With so many needs and wants from consumers, it is sometimes difficult for producers to meet them all. Producers need resources such as machinery, computers, vehicles and equipment (capital), raw materials and components (natural resources) and people (labour).

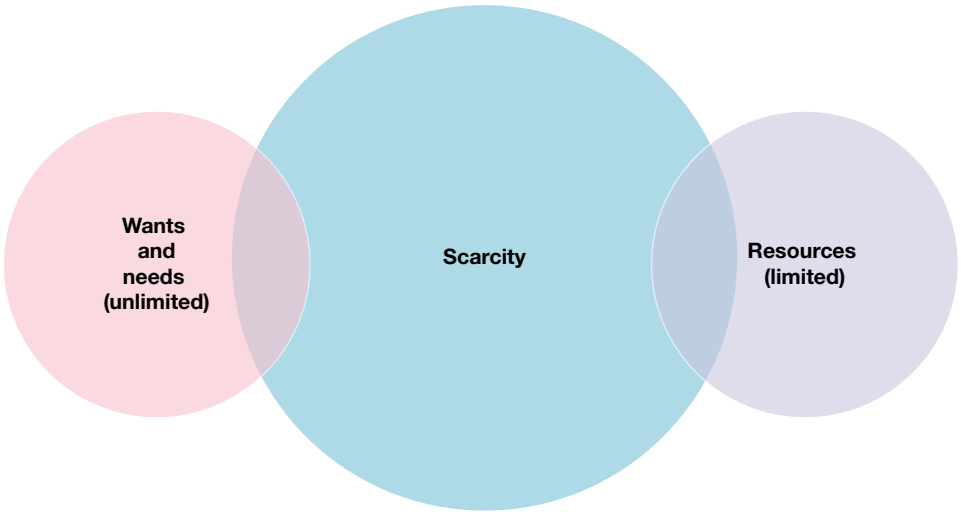
These resources can sometimes be in short supply and so the concept of relative scarcity is created — this means that the resources available to satisfy our unlimited needs and wants are limited.

goods physical or tangible items that satisfy needs and wants

services actions done for you by others to satisfy your needs and wants

business any activity conducted by an individual or individuals to produce and sell goods and services to make a profit

FIGURE 5 Scarcity occurs when the resources available to satisfy our unlimited needs and wants are in limited supply.



18.2.5 Opportunity cost

Because our economy has limited resources and unlimited needs and wants, the economy has to make choices. In the economy of a country such as Australia, these choices are important. The economy must decide:

- *What to produce?* What goods and services will the economy produce? Will we produce cars or clothes, railway systems or roads and bridges? Businesses will also make this choice because they want to produce goods and services that consumers want and will purchase.
- *How to produce?* What methods of production will businesses use to produce the goods and services we want? Businesses can use capital (machinery) resources, predominantly labour resources, or a combination of the two. They can also source materials and components from overseas or from local suppliers.
- *For whom to produce?* How will the business decide which consumers will be able to buy the goods and services? This is usually determined by the price set for the good or service and so will depend upon the **income** of consumers, the demand for the good or service and the profit hoping to be made by the business.

Just as the economy as a whole and businesses need to make choices, so too do consumers. This is because most consumers have some limit to their income. So, they will need to decide what to buy. Making this choice is known as **opportunity cost**.

For example, on the weekend you may have the choice of playing basketball with your team, or going to the movies with some friends. The 'cost' of choosing to play sport is losing the opportunity to go to the movies. Every choice we make will have an opportunity cost, and one role of consumers is to minimise these costs.

18.2.6 The relationship between businesses and consumers

In the Australian economy, we satisfy our needs and wants by having an income. This income may come from sources such as work, government assistance or investment. We then buy goods and services from businesses. 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.

income money earned through employment or investment

opportunity cost the next best alternative given up whenever a choice is made

labour the human skills and effort required to produce goods and services

To satisfy needs and wants, consumers like you make economic decisions every day. For example, you may decide to buy milk from a supermarket rather than from a convenience store, catch a bus to school rather than walk, use a laptop rather than a workbook, or buy an item of clothing from an Australian brand rather than one from overseas. Your decisions influence what businesses produce and, therefore, affect the economy.

We can examine the relationship between businesses and consumers by looking at the model in **FIGURE 6**. It demonstrates how labour is exchanged for money, and how that money is used to purchase goods and services.

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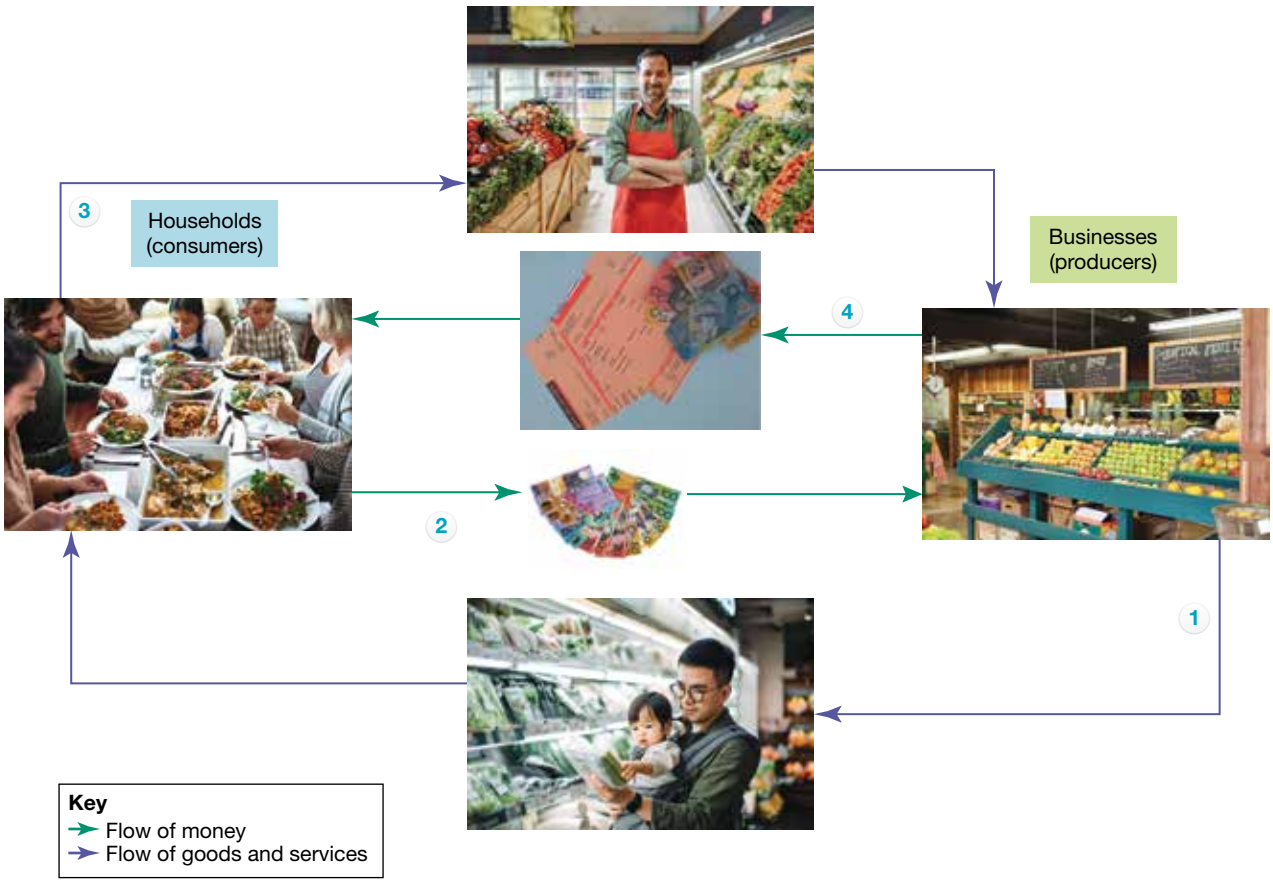
FIGURE 6 The interrelationship between consumers and business



1. Businesses are producers that make or supply goods and services that are distributed to households.
2. Consumers use cards and cash mostly to purchase goods and services.
3. Consumers are often also employed. This means that they have a job and provide businesses with their labour to produce goods and services.
4. Employees receive money in the form of wages for their labour.

SkillBuilders to support skill development

- 17.4 Conducting research

18.2 SKILL ACTIVITY: Interpreting and analysing

In this activity, you will gather data regarding the spending on needs and wants of your household, and then share this data with your class.

Individually, **discuss** with your parents or care givers what they buy during an average week, and then complete the following.

1. **List** five goods and five services that you or someone you know may have purchased in the last week.

2. **Classify** the items listed as a need or a want, and organise them into categories — for example, food or entertainment.
3. **Survey** your family about approximately what proportion of their weekly budget they spend on each category. (Some banking apps can also provide this information.)
4. **Create** a piechart showing this breakdown.
5. Share and **discuss** your findings as a class.

18.2 Exercise

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18.2 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 3, 6	4, 7, 8	5, 9, 10

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Check your understanding

1. What is the difference between needs and wants? **Identify** all possible answers from the options provided.
   - A. Needs are non-essential goods and services, whereas wants are goods or services that are essential for life.
   - B. Needs are goods or services that are essential for life, whereas wants are non-essential goods and services.
   - C. Needs include food, water and shelter, and wants include designer clothes, a mobile phone and a computer.
   - D. Needs include designer clothes, a mobile phone and a computer, while wants include food, water and shelter.
2. **Identify** three types of business that provide services.
   - A. Doctors
   - B. Teachers
   - C. Car manufacturers
   - D. Clothing retailers
   - E. Mechanics
   - F. Food manufacturers
3. **Identify** three types of business that provide goods.
4. _____ is the performance of mental or physical tasks in exchange for _____. It contributes to the production of goods and services.
5. **Explain** why wants are considered to be unlimited.

Apply your understanding

Communicating

6. **Explain** the role of a producer in the economy.
7. **Explain** the role of a consumer in the economy.
8. **Explain** how an individual can be both a producer and a consumer in an economy.
9. **Describe** one way that producers and consumers are dependent on each other.
10. **Consider** whether the relationship between producers and consumers could succeed without money. **Propose** what you think might happen if money didn't exist.

LESSON
18.3 What are the types of businesses and why do they exist?

LEARNING INTENTION

By the end of this lesson you should be able to compare different forms of business ownership, explain why a person or group of people would choose to establish a business, and identify why they would choose one type of business over another.

TUNE IN

Many decisions go into starting and running a business. These decisions will affect the size of the business, how many stores there may be and how the business will be run.

FIGURE 1 Pacific Fair Shopping Centre located on the Gold Coast houses over 400 businesses.

1. With a partner, name ten businesses that you know. Include five businesses from your local shopping strip or local area, and five other businesses that you might visit either in person or online. Write the names of the ten businesses.
2. Categorise the ten businesses into small, medium or large. What aspects give you an idea of the size of the business? Does it have multiple stores? Or is it the only one?
3. Try to find out who owns the business. Search online if needed. When you think you are sure, add the name of the owner to your list. Does the name give you a clue about the ownership structure?

18.3.1 Why businesses exist

Starting a business is a difficult process and many 'dangers' exist. The decision to start a business is one that needs to be considered carefully because if the business were to fail, the owner may suffer financial hardship as a result.

Businesses are often started by people who want to achieve one or more of the following:

- *To make a profit:* A successful business can provide more profit and income for the owner than what they might earn through paid employment.
- *To provide goods and services:* Some business owners recognise a market that is missing something. Starting a business is a means of filling that gap in the market.
- *To meet a social need:* Some people identify social issues in an area and start a business to do something about that issue. For example, the owners of Thankyou Water recognised that in some areas of the world people didn't have access to clean drinking water. This is a major health issue and so profits from sales of their product were directed to providing such water to these areas. (Thankyou no longer produces its single-use water bottles, but continues to fund projects to end extreme poverty through its other products.)
- *To extend a hobby:* Some business owners, especially as they move towards retirement, take the opportunity to start a business based on a hobby they have.
- *To provide employment:* Businesses usually have employees as well as owners. A business might be started to provide employment to people in a local area or to a specific group of people, such as youth, disabled or elderly people.

Regardless of the reason a business is started, all businesses must have some form of business ownership structure.

18.3.2 Three main forms of business ownership

A business owner can choose from several structures, or forms of ownership, 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 run a business together, and a corporation, which is owned by shareholders. A business can also be owned as a cooperative or a franchise.

FIGURE 2 Many types of businesses are possible.

Sole proprietorship

A sole proprietorship (or sole trader) is a business that is owned by one person, even though it may employ other people to work for the business, or to operate and manage the business. A sole proprietor business can operate in almost any industry. However, they are usually small businesses such as cafés, newsagents and hairdressers, and trades such as plumbers and electricians.

FIGURE 3 A sole proprietorship means the business is owned and operated by one person.

The sole proprietor receives all the profit that the business makes but is also responsible for any losses. This is known as **unlimited liability**. This means the sole proprietor 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, Mario's Café. Individuals who establish a sole proprietor business are often referred to as entrepreneurs.

unlimited liability where a business owner is personally responsible for all the debts of their business

TABLE 1 Advantages and disadvantages of sole proprietorship

Advantages	Disadvantages
Simple and low cost	Unlimited liability
Owner has full control and keeps all profit	Owner must perform multiple roles
Minimum regulations	Long hours because success depends on effort

Partnership

A partnership is a business usually owned and operated by two or more people (generally up to 20 people but exceptions do exist), called partners. The partners share their profits and losses, usually equally. Together, they decide how best to operate the business.

Commonly people with similar skills, such as doctors, accountants, solicitors and dentists, 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.

FIGURE 4 Partnerships are businesses run by two or more people.

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 if the partnership ends.

TABLE 2 Advantages and disadvantages of a partnership

Advantages	Disadvantages
Inexpensive and simple form of ownership	Unlimited liability
Partners can share the responsibility for decision-making, the risks and the workload	Finding suitable partners can also be difficult
Partners can pool their finances and their expertise	Disputes between the partners can arise
Minimal government regulation	Future of business can become complicated if partners decide to leave

Corporation

A corporation, otherwise known as a 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.

Corporations can be organised as either public or private. The 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.

TABLE 3 Advantages and disadvantages of a corporation

Advantages	Disadvantages
Attract finance by selling shares	Complex to establish and set up
Can continue after an owner of the business sells their shares	Strict laws outline the operation of corporations
	Large corporations can become very inefficient

18.3.3 Alternative forms of business ownership

Sole proprietorship, partnership or corporation are not the only forms available to create a business. A business can also be structured as a cooperative, which is a business owned and controlled by the group of people it serves, and a trust. In this set up, 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.

limited liability where shareholders cannot lose more than their investment in the event of the failure of the business

Cooperative

In a cooperative, a number of people combine resources for a particular purpose. Typical cooperatives involve farmers, community education centres and credit unions.

FIGURE 5 The Dairy Farmers Milk Co-operative is an example of a farming cooperative.

The benefit of a cooperative is that people who work in one industry can join together to manage their 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.

Dairy Farmers Milk Co-operative is a true cooperative — it describes itself as 'farmers helping farmers'. Dairy Farmers Milk Co-operative has over 300 members from more than 250 farms in Queensland, New South Wales, Victoria and South Australia. These farmers supply over 230 million litres of milk every year to Bega Dairy & Drinks in a long-term partnership that is beneficial to all members.

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.

Franchise

While it is not actually a form of business ownership, operating a business as a franchise is a popular choice. 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 or corporation.

FIGURE 6 McDonald's has the highest number of franchises worldwide, almost reaching 40 000.

Advantages and disadvantages of a franchise

The benefit to the franchisee is that they are granted an instantly recognisable business name — for example, Subway or Hungry Jack's. The business owner can immediately start to benefit from the reputation and customers 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. In return, the franchisee pays the start-up fees and provides labour, and agrees to meet the terms and conditions of the franchise agreement. This can mean that a franchisee must 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.

The disadvantages of operating a business as a franchisee include:

- Freedom over making business decisions such as the product and marketing is reduced.
- The franchisor controls the operations, the product and the marketing.
- All advertising and promotional campaigns are decided by a centralised office and must be run in all franchise stores in the same way.
- The responsibility is on the franchisee to follow the instructions set by the franchisor, or the franchisee may be reprimanded, receive a fine or even lose the rights to the business.

DISCUSS

Experts estimate that over 1300 franchise systems exist in Australia. This includes businesses such as 7-eleven, Roll'd, Bakers Delight, McDonald's and Grill'd. When you visit a Grill'd store, the decor is always recognisable, the staff wear the same uniform, and the food tastes the same as in any other Grill'd anywhere in Australia. Do you think this an advantage or a disadvantage to the franchisee?

18.3.4 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 personal preferences, as well as the advantages and disadvantages of each type of business. Someone who prefers to work alone and wants to start a business that is easy to set up might choose a sole proprietorship. A person who wants to raise the finances to grow a business selling products around Australia, and perhaps overseas, might consider a company structure. The form of ownership used by the business can change over time. After a business is started, it can grow. As it does so, its goals might change, which means the owner might need to review the most appropriate ownership structure as well.

18.3 SKILL ACTIVITY: Evaluating, concluding and decision-making, Communicating

Work with a partner to complete the following:

1. Use the **Business structures** weblink in the Resources panel to find out more information about business planning and types of business structures. Using the categories provided, read the information on the different types of businesses covered in this topic.
2. Using this information **summarise** three advantages and disadvantages of each form of business ownership using a table such as the one provided.

Business ownership type	Advantage	Disadvantage

3. **Discuss** an idea for a business with your partner. Write a paragraph on what you might sell, who you might sell to, and where you might be located.
4. **Choose** an appropriate type of ownership for the business. Write a paragraph to **justify** why this type of ownership will suit you best.
5. **Present** your idea and your chosen business ownership to your class.

Resources

Weblink Business structures

18.3 Exercise

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18.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 5	4, 6, 8	7, 9, 10

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Check your understanding

1. **Identify** the difference between a sole proprietorship and a partnership.
   - **A.** A sole proprietorship has unlimited liability but a partnership does not.
   - **B.** A partnership has unlimited liability but a sole proprietorship does not.
   - **C.** A sole proprietorship has only one owner and a partnership has two or more owners.
   - **D.** There is no difference.
2. A partnership has unlimited liability. True or false?
3. **Explain** what is meant by a cooperative.
4. **List** five examples of franchise businesses.
5. Circle the correct options to **complete** the sentences. **Unlimited** / **Short-term** / **Limited** / **Fixed** / **Financial** liability means that the owner(s) of a business can be held personally responsible for the business's debts. **Unlimited** / **Short-term** / **Limited** / **Fixed** / **Financial** liability means that if the business cannot pay its debts, shareholders in the corporation will only lose the money they have invested.

Apply your understanding

6. **Distinguish** between a sole proprietorship and a partnership.
7. 'The public corporation ownership structure allows access to greater finance but can lead to a loss of control of a business.' **Discuss** this statement.
8. **Define** what is meant by a partnership.
9. List the possible consequences of the partners of a business having a dispute.
10. **Discuss** the benefits of operating a business as a franchisee.

LESSON
18.4 How can we use our finite resources sustainably?

LEARNING INTENTION

By the end of this lesson you should be able to explain how resources might be used more sustainably to meet needs and wants into the future.

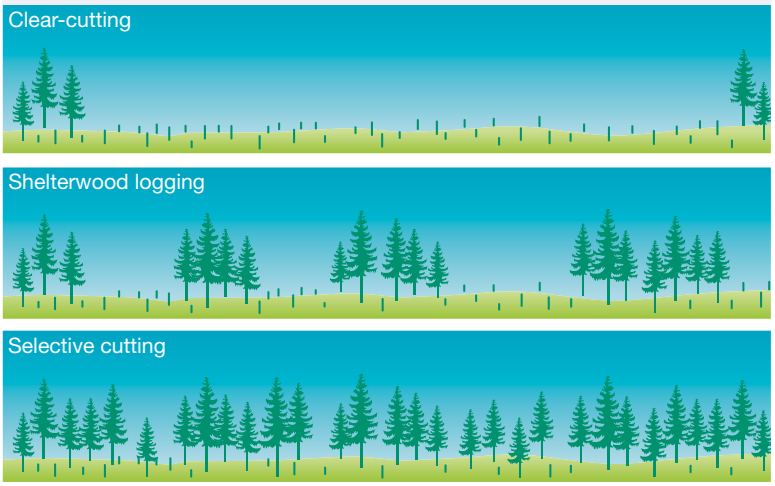
TUNE IN

As identified in lesson 18.2, consumers have an unlimited number of needs and wants. These needs and wants require the continued use of resources. One such resource is timber. Timber is a renewable resource but it must be managed so it is sustainable.

Look at **FIGURE 1**.

1. Explain which is the most sustainable method of logging.
2. What happens if we don't use this resource sustainably?
3. Brainstorm four more resources that might run out if we don't use them sustainably.

FIGURE 1 Which method of logging is the most sustainable?



18.4.1 Sustainability

Meeting the needs and wants of consumers is important because those who don't have all their needs satisfied may go hungry or become homeless. To produce the goods and services we need, producers must utilise the resources in the economy — the land, labour and capital. However, because many of our resources are non-renewable, we need to consider the **sustainability** of the resources we use.

18.4.2 Environmentally sustainable resources

All producers should ensure that the resources used in the production process do not have a serious or negative impact on the environment or the community health and social conditions. A producer could consider the source of its electricity, for example, in an effort to combat climate change. A producer could source their energy through renewable energy initiatives such as solar power.

Producers are also able to source sustainable ingredients such as raw materials from farmers who use sustainable methods of production.

sustainability meeting our own needs without compromising the ability of future generations to meet their needs

DISCUSS

The population of bluefin tuna in the ocean has dramatically decreased because of consumer demand for it, with some estimates saying that the current population is now only 4 per cent of what it once was. Is buying pole- and line-caught tuna enough, or should we be doing more to protect the ocean environment?

Other examples of environmentally friendly products include cosmetics produced by The Body Shop, which endorses environmentally sustainable production methods and has always promoted the fact that none of its products are tested on animals. Washing detergents often advertise that they are biodegradable and so will not harm the environment. Electrical goods are often sold with a sticker indicating their level of energy efficiency. All of these are examples of producers responding to consumer concern for the environment. Perhaps a more recent change is the decision by supermarket giants Coles and Woolworths to no longer provide single-use plastic bags. These plastic bags are not bio-degradable and often end up in landfill or waterways once discarded.

FIGURE 2 Consumers have shown a preference for environmentally friendly methods of catching tuna.

18.4.3 Organic food

The growth in demand for organic food combines both environmental concerns and a desire for healthy food options. Food labelled as 'organic' is generally understood to have been grown without the use of pesticides and other chemicals, and so is a healthier choice. The absence of chemical use also means the soil is not contaminated and so can be re-used in future years to grow fruit and vegetables or used for grazing by animals.

In addition, if the producer has not used chemicals, the risk of them causing damage to other plants or animals, or harming the environment in other ways, is reduced.

FIGURE 3 Organic fruit and vegetables are seen to be both healthier and more environmentally friendly.

18.4.4 A First Nations Australian food business

First Nations Australians have always had a deep connection to the land. Prior to colonisation, they used a complex system of land management, utilising the resources provided in nature to provide food, clothing and shelter for themselves. A key element to their successful use of resources was the sustainable use of their food sources.

This belief in sustainability has translated into businesses established throughout Australia that focus on First Nations Australian cultures and foods.

Kaiyu Superfoods

Kaiyu Superfoods is a First Nations Australian owned and operated food manufacturing business located in Humpty Doo in the Northern Territory.

Owners Pete and Cate both have a love of, and strong connection to, the bush and animals within it. Pete is an Awabakal man from the Hunter Valley Region who grew up in Quilpie and Inglewood, Queensland. Cate was born in South Australia and lived in various places, with her teen years being spent on farms in New South Wales and Queensland.

Their shared love of the land inspired them to combine farming with their passion for and knowledge of native plants. After much research, they set themselves the goals of using native fruits to create products that everyone can enjoy while also increasing people's awareness of the health benefits of these fruits. They aim to help stimulate demand for native fruits, allowing the industry to grow and more First Nations Australian families and communities to become involved in the industry and benefit from it.

The business buys from First Nations Australian communities and businesses that wild harvest fruits sustainably, making sure a percentage is left for native animals and natural regeneration of the plants. They have also planted Kakadu plums, red bush apples, green plums, lemongrass and other local natives in among the grasses, small shrubs and trees that are regenerating and growing on their property. If necessary, they will supplement their produce purchased from First Nations Australian sources with plants and fruits from some non–First Nations Australian farms in New South Wales.

Their commitment to the land and the sustainability of First Nations Australian farming methods has seen the business commit to increasing First Nations Peoples' participation in the Native Food and Botanical Industry. They do this through giving back to communities and having a commitment to at least 75 per cent of their employees coming from First Nations Australian communities.

on Resources

Interactivity Responding to consumer demand (int-5685)

18.4 SKILL ACTIVITY: Questioning and researching

Sustainability is a key concern for individuals, businesses and the government. In February 2022, Australian billionaire Mike Cannon-Brookes launched a bid to buy AGL Energy. Cannon-Brookes, one of the founders of Atlassian, made the extraordinary offer to take over Australia's most polluting company with a goal to shut its coal power plants earlier than planned.

His idea was to replace much of the power plant's equipment, and to introduce new equipment that would move the company to having clean energy assets, and a zero emissions target by 2035.

Individually or as a group, **develop** a series of questions to conduct research on how sustainably a business operates. Write four questions you would like to investigate about this case study and **research** the answers online, writing them down in dot points.

FIGURE 4 The sustainability priorities of businesses can vary.

18.4 Exercise

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18.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 4, 7	3, 6, 8, 9	5, 10

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Check your understanding

1. _____ means meeting our needs without making it harder for future generations to meet their needs.
2. **State** one means by which producers can produce sustainably.
3. **Identify** which of the following is not one of the three resources used by producers to satisfy our needs and wants.
   - **A.** Land
   - **B.** Labour
   - **C.** Time
   - **D.** Capital
4. **Explain** how recycling could assist sustainability.
5. **Explain** why sustainability is important.

Apply your understanding

Interpreting and analysing

6. 'Sustainability is good for producers, good for consumers and good for the community as a whole.' **Explain** why this statement could be seen to be true.
7. **Provide** a reason some producers may not want to use resources in a sustainable manner.
8. **Provide** a reason some consumers may not buy goods produced from sustainable sources.
9. **Consider** three products you use every day. Explain how they could be produced in a more sustainable manner.
10. 'As we learn more about the earth and our impact on it, we will become more sustainable in our use of the earth.' **Explain** whether you agree or disagree with this statement.

LESSON
18.5 What are your rights as a consumer?

LEARNING INTENTION

By the end of this lesson you should be able to identify ways the rights of consumers are protected through the law when purchasing a good or service (for example, through warranties, cooling-off periods and returning goods).

TUNE IN

We all buy goods and services. Sometimes we feel the need to return a good or a service to the seller and ask for a refund or an exchange.

As a class, discuss whether signs like the one in **FIGURE 1** should be allowed and, if they should, under what circumstances.

FIGURE 1 Should signs like this one be allowed?

18.5.1 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.

tlvd-10569

FIGURE 2 Australian Consumer Law protects consumers from unscrupulous businesses that could try to cheat them.

on Resources

Video eLesson Consumer rights — services (eles-2529)

18.5.2 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, and not trying to disadvantage you. The Australian Consumer Law aims to make sure that every transaction between buyers and sellers is fair to both parties.

18.5.3 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.

tlvd-10568

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 them.*
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 3 Any discounts, special offers or specials offered by sellers must be genuine.

18.5.4 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 30 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 10-day 'cooling off period'. This means that the consumer has the right to cancel the agreement within 10 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 change their minds and nothing is wrong with the product.

FIGURE 4 A door-to-door salesperson must leave immediately if requested.

18.5.5 Guarantees for consumers

Manufacturers or sellers often offer 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:

- The consumer will gain clear legal ownership to goods; that is, the seller 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.

FIGURE 5 Goods must be of acceptable quality; if a phone stopped turning on after a few weeks, it 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.

18.5.6 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.

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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 7 Fair Trading and Consumer Protection offices will usually recommend that the consumer first attempt to sort out a problem directly with the seller.

FIGURE 6 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.

18.5.7 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 include the following.

- 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, particular types of written documents 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.

on Resources

Video eLesson What is an ethical consumer or producer? (eles-0255)

18.5 SKILL ACTIVITY: Interpreting and analysing

Online shopping, sometimes called ecommerce, really took off in the mid-1990s with the rise of huge online companies such as Alibaba and Amazon. Sites such as eBay and apps such as PayPal have all helped enormously. If you asked your parents or care givers what shopping was like when they were young, they would likely tell you they bought just about everything in store and with cash. Has online shopping revolutionised shopping and what will shopping look like in the future?

In this activity, you will learn how to interpret trends, consider possible causes of those trends, and use data to make predictions about the future.

TASK

Look at the data provided in **FIGURES 8** and **9** and **discuss** the following.

tlvd-10567

FIGURE 8 Ecommerce snapshot, December 2021, Australia Post

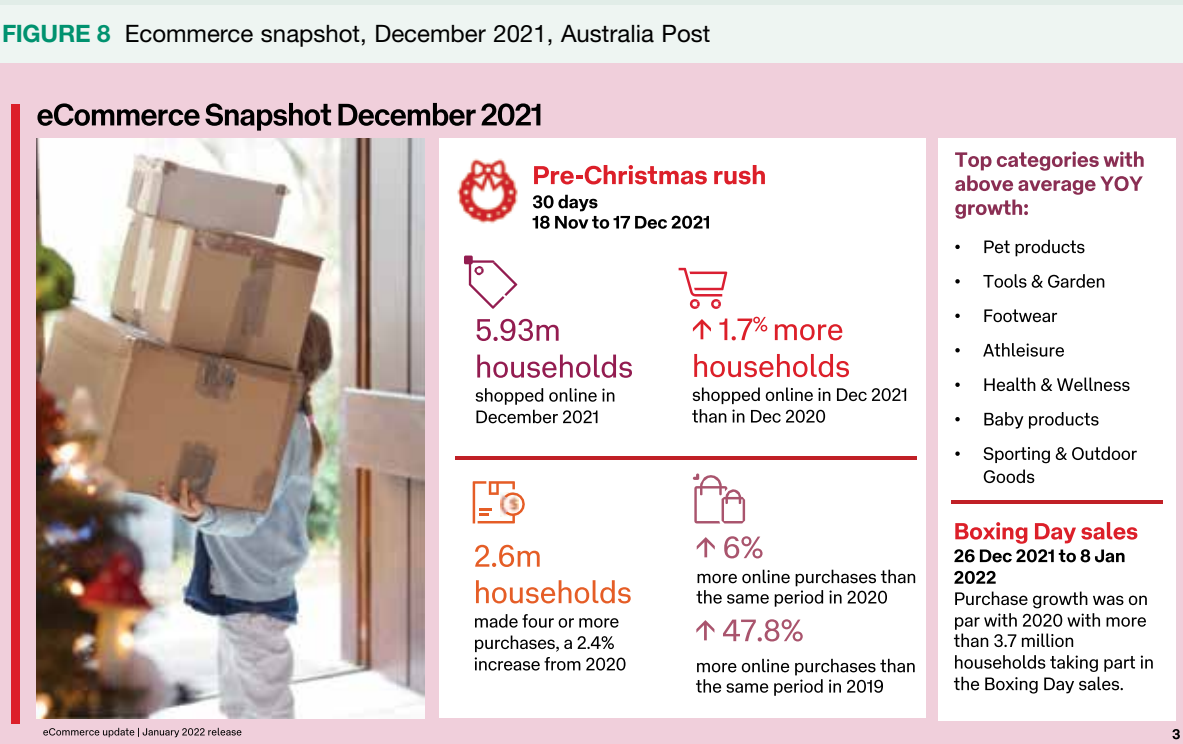
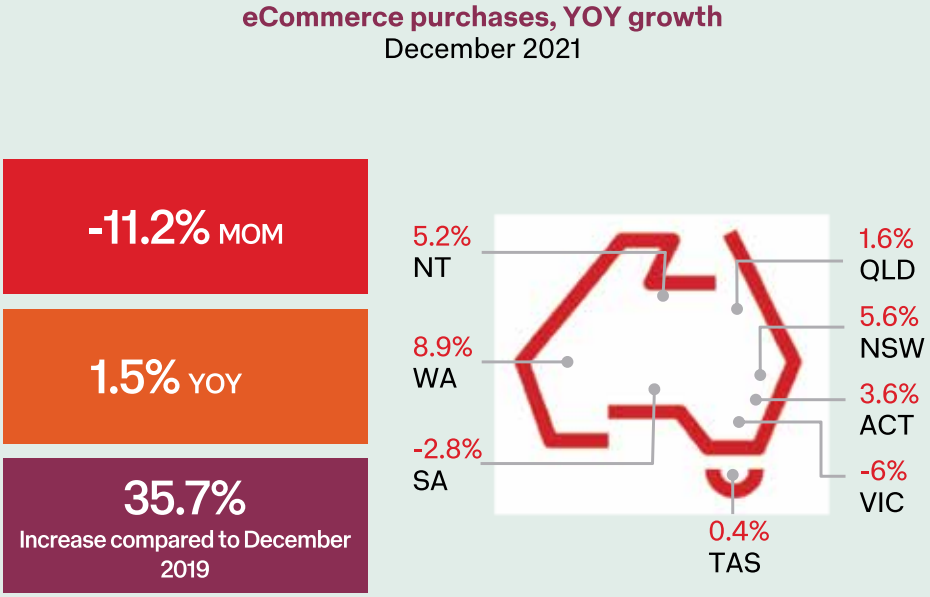


FIGURE 9 Ecommerce purchases, year on year growth, December 2021, Australia Post



1. **Identify** the overall trend in ecommerce (online shopping).
2. Look at the year during which the data was collected. What significant event occurred during that year and how might that have affected ecommerce?
3. Look up the most recent data on ecommerce figures for Australia Post. Has the trend shown in **FIGURES 8** and **9** continued or changed in any way?
4. **Predict** the future of ecommerce in the next five years. **Justify** your prediction with data.
5. **Describe** any changes to your local or city shopping strips. **Predict** how these shopping strips might change in the future based on the data and trends you have researched.
6. Google online shopping fails. Have you ever bought anything online that wasn't exactly what you thought it would be? What protections do you have as a consumer if you buy something from an overseas site and it isn't how it was described?

18.5 Exercise

learnon

18.5 Exercise

Learning pathways

■ LEVEL 1	■ LEVEL 2	■ LEVEL 3
1, 2, 3, 8	4, 5, 7, 9	6, 10

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Check your understanding

1. One responsibility that _____ have is to use the goods as manufacturers intended.
2. Australian Consumer Law aims to ensure all interactions between buyers and sellers are fair. True or false?
3. **Identify** two guaranteed rights that consumers have in relation to goods they purchase.
4. **Select** the correct option to complete the sentence. Consumers are entitled to a refund **if they change their mind** / **if the item is faulty** / **for any reason at all**.
5. **Provide** a brief description of each of the following.
   a. Misleading conduct
   b. Bait advertising
   c. Referral selling

Apply your understanding

Interpreting and analysing

6. In each of the following examples, **explain** why a breach of the *Competition and Consumer Act* has occurred.
   a. An electrical goods business advertises a particular brand of television and falsely states that it is at a cheaper price than that offered by a competitor.
   b. A clothing store advertises t-shirts and claims that they are made in Australia when they are made in Hong Kong.
   c. A take-away food outlet advertises that a special deal is only for one week when 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.

Commmunicating

7. **Explain** the rules that apply to phone sales and door-to-door selling.
8. What powers does a Consumer Protection or Fair Trading authority have to enforce Australian Consumer Law?
9. **Explain** what is meant by a 'lay-by' and why consumers may use this method of purchasing goods.
10. 'Most businesses are concerned about maximising their profits and so we need consumer protection laws to regulate their behaviour.' **Discuss** this statement.

LESSON

18.6 What responsibilities do businesses, producers and government have to you?

LEARNING INTENTION

By the end of this lesson you should be able to identify and explain how businesses are required by government to protect the safety of consumers (for example, through mandatory and voluntary standards and product safety recalls).

TUNE IN

As consumers, we are often looking for goods and services that are affordable (not necessarily cheap, but good value for money).

Competition in the market between producers assists in ensuring that prices are competitive and the quality of goods and services is maintained at a high level.

Look at **FIGURE 1** and discuss the following questions:

1. How do Coca-Cola and Pepsi compete?
2. What are the benefits of their competition for consumers?
3. What are some negatives related to their competition for consumers?

FIGURE 1 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.

18.6.1 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, plenty of alternatives are 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.

18.6.2 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 takeovers. 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. Some accusations have emerged 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 2 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?

Misuse of market power

Not all businesses are the same size, and a risk exists 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.

FIGURE 3 Woolworths was fined for attempting to misuse its market power to restrict the operations of competing liquor outlets.

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 then leaves the business with less competition so that it can disregard market forces, raise prices and exploit consumers. A recent example is from 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 4 A supermarket using predatory pricing to try to put other milk retailers out of business is illegal.

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, were often not be able to lower prices as much and so potentially lost 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 remaining competition to prevent it from doing so.

Exclusive dealing

Exclusive dealing involves one business trading with another while 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.

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 takeovers

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 *takeover* or an *acquisition*. Sometimes a merger or takeover in a particular market may lead to reduced competition in that market. The Act prohibits mergers and takeovers 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 because 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.

18.6.3 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.

FIGURE 7 ACCC officials may seize 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.

The ACCC has the power to authorise behaviour that 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 in the preceding section, businesses wishing to engage in mergers or takeovers 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.

18.6.4 When purchases go wrong

Every now and again you may 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.

18.6.5 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 in the following subsections.

Government regulators

Governments at federal, state, territory and local level have established a number of bodies to ensure product safety.

- The ACCC 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.
- 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.

FIGURE 8 Customs officers check containers of goods from overseas to prevent dangerous goods from entering the Australian market.

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 Organization for Standardization (ISO) set acceptable standards for all types of products. Any product that conforms to ISO 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, formerly the Australian Consumers' Association, publishes a magazine called *Choice* and maintains a website. The organisation examines and tests all types of products, and publishes its findings through its magazine and website. 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.

FIGURE 9 Consumers can be assured that any product carrying ISO certification will be safe and will conform to the highest standards of quality.

18.6.6 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

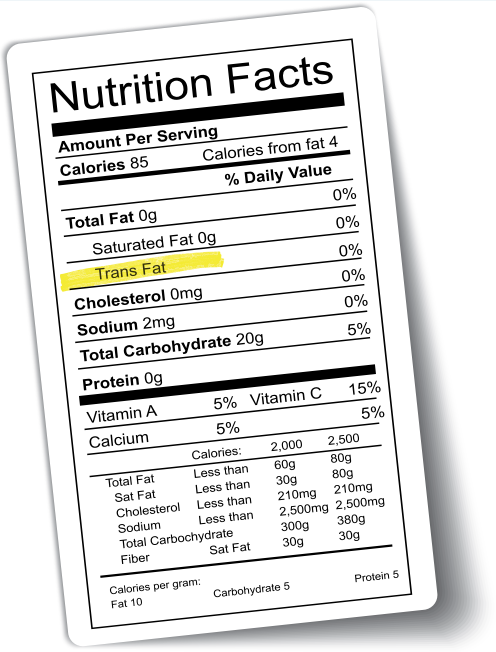
Regulatory bodies encourage safe practices through various measures:

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 recent example was the 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.

FIGURE 10 Manufacturers that discover a fault in any of their products are expected to recall these products for repair, replacement or refund.

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, very strict standards are in place 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, and are more likely to deal with issues of quality.
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.

FIGURE 11 All packaged food must provide nutritional information on the packaging.



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.

FIGURE 12 This toy wooden alphabet train was removed from sale because it contained dangerous small parts.

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 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?

18.6 SKILL ACTIVITY: Communicating

Use the **ACCC product safety recalls** weblink in the Resources panel to visit the ACCC recalls page and select three categories from the 'Product category' drop-down menu.

From each of your three categories, **select** one product that has been recalled and answer the following.

1. **State** the name of the product.
2. **Identify** the defect in the product.
3. **Explain** why that defect was dangerous.
4. What advice is given to consumers?
5. What did the ACCC recommend?

on Resources

Weblinks ACCC Product Safety Australia
ISO standards
ACCC product safety recalls

18.6 Exercise

learnon

18.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3	4, 5	6, 7, 8, 9, 10

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Check your understanding

1. Government regulators can take legal action if a person is injured after a supplier fails to remove a banned product from sale. True or false?
2. How can consumers play a role in product safety?
   - A. Buy fewer products
   - B. Only buy products from expensive stores
   - C. Report faulty products to the business or the government body
   - D. Complain about the product on social media
3. **Identify** two bodies established to maintain product safety.
4. **Provide** a brief description of each of the following.
   - a. Price fixing
   - b. Predatory pricing
   - c. Exclusive dealing
   - d. Resale price maintenance
5. **Explain** why competition between businesses is beneficial for consumers.
6. **Describe** the role of each of the following in ensuring product safety.
   - a. Industry regulators
   - b. Customs and quarantine
   - c. Local government authorities

Apply your understanding

Interpreting and analysing

7. **Explain** how 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 meet each week to determine how much they will 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 5 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.
8. In 2011 through to 2019, Coles and Woolworths sold milk for $1 per litre. **Discuss** why you think they did this and whether you think it should have been allowed.
9. What action can government regulators take if a person is injured after a supplier fails to remove a banned product from sale?
10. **Explain** the role of education in product safety.

LESSON
18.7 INQUIRY: How did First Nations Australians satisfy their needs and wants?

LEARNING INTENTION

By the end of this lesson you should be able to explain how First Nations Australians satisfied their needs and wants, and communicate how this was achieved in a sustainable manner.

Background

In this inquiry, you will investigate how First Nations Australians used their local areas, trade routes and meeting places to satisfy their needs and wants. You will also consider how this was achieved in a sustainable manner through **discussing** the following:

- Prior to the arrival of the First Fleet, how did First Nations Australians satisfy their needs and wants?
- How did First Nations Peoples engage in exchange?

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Step 1: Questioning and researching

Write your own inquiry question and **research** your question. Using a search engine, **investigate** how First Nations Australians recognised the land as theirs, how they used the land and how they developed trade routes to meet other groups and exchange items.

Step 2: Interpreting and analysing

Analyse how First Nations Australians were able to engage in exchange without the use of the money that Europeans brought with them.

Step 3: Evaluating, concluding and decision-making

Discuss how the means of exchange, use of trade routes and meeting places allowed for sustainable use of the land.

Step 4: Communicating

Write an answer to your inquiry question. Use a format of your choice agreed on by your teacher.

Complete your self-assessment using the **Inquiry rubric** or access the 18.7 exercise set to complete it online.

FIGURE 1 First Nations trade routes in Australia

on Resources

Digital document Inquiry rubric (doc-39386)

LESSON
18.8 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

Watch teacher-led videos

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18.8.1 Key knowledge summary

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

18.2 What are our needs and wants?

- The Australian economy is the total of all activities undertaken within Australia for the purpose of producing, distributing and consuming goods and services.
- We purchase goods and services to satisfy our needs and wants.
- Employees provide labour to businesses and receive money in return, enabling them to purchase goods and services from other businesses.
- The unlimited wants competing for limited resources create the problem of scarcity.
- The three choices an economy must make are what to produce, how to produce and for whom to produce.
- Consumers must consider the opportunity cost of all decisions.

18.3 What are the types of businesses and why do they exist?

- People start a business for a number of reasons.
- The three main types of business ownership structures are sole proprietorships (with one owner), partnerships (with two or more owners) and companies (which can have up to 50 shareholders for a private company, or an unlimited number for a public company.
- Other ownership structures include cooperatives and franchises.

18.4 How can we use our finite resources sustainably?

- Production should consider current and future needs.
- Markets in Australia are influenced by what consumers wish to buy, including products that are healthy and environmentally friendly.

18.5 What are your rights as a consumer?

- 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.
- Australian Consumer Law also provides a number of basic guarantees in relation to the quality of goods purchased.

18.6 What responsibilities do businesses, producers and governments have to you?

- Practices that would lessen fair and open competition between businesses are banned under the Competition and Consumer 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.
- 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.

18.7 INQUIRY: How did First Nations Australians satisfy their needs and wants?

- First Nations Australians used their local areas, trade routes and meeting places to satisfy their needs and wants.
- Needs and wants were satisfied and goods were exchanged in a sustainable manner.

18.8.2 Key terms

business any activity conducted by an individual or individuals to produce and sell goods and services to make a profit
consumer a person or group who is the final user of goods and services produced within an economy
employees people who work for a wage or salary
goods physical or tangible items that satisfy needs and wants
income money earned through employment or investment
labour the human skills and effort required to produce goods and services
limited liability where shareholders cannot lose more than their investment in the event of the failure of the business
needs goods or services that consumers consider necessary to maintain their standard of living
opportunity cost the next best alternative given up whenever a choice is made
producer an individual or a business involved in the production of goods and services
services actions done for you by others to satisfy your needs and wants
sustainability meeting our own needs without compromising the ability of future generations to meet their needs
unlimited liability where a business owner is personally responsible for all the debts of their business
wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community

18.8.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How do societies allocate resources to meet the needs and wants of individuals and communities, and why do consumers and businesses have both rights and responsibilities?

1. Now that you have completed this topic, what is your view on the questions? 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 questions, outlining your views.

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10570)
Reflection (ewbk-10572)
Crossword (ewbk-10571)

Interactivity Our economy — consumers, producers and government crossword (int-8964)

18.8 Review exercise

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Multiple choice

1. Which of the following accurately describes a need?
   - A. Life can continue without it.
   - B. It temporarily goes away when we are satisfied.
   - C. All needs are the same.
   - D. Our needs never change.
2. Which of the following items can be classified as a want?
   - A. A container filled with water
   - B. A container filled with food
   - C. A container filled with lollies
   - D. A container filled with air
3. Which of the following is not a resource used to produce goods and services?
   - A. Land
   - B. Labour
   - C. Capital
   - D. Money
4. Which of the following is not considered a part of the basic economic problem?
   - A. Lack of money
   - B. Relative scarcity
   - C. Consumer sovereignty
   - D. Opportunity cost
5. Identify the best definition of ‘goods’.
   - A. They are tangible items that we like.
   - B. They are tangible items that we need.
   - C. They are tangible items that we want.
   - D. They are tangible items that satisfy what we need and want.
6. Businesses that show concern for the welfare of communities are known as _____ responsible.
   - A. ethically
   - B. environmentally
   - C. socially
   - D. morally
7. Which of the following can be used by a business to demonstrate their commitment to sustainability?
   - A. Reducing waste
   - B. Ethical sourcing of inputs
   - C. Recycling
   - D. All of the above
8. What is ‘bait advertising’?
   - A. When customers are fraudulently enticed into a business by lower prices on a small number of items
   - B. When a business offers customers a special deal to persuade their friends to deal with the business
   - C. When a business uses fake samples to entice the customer into the business
   - D. When a business lowers its prices

9. When does a customer have no automatic right to return goods for replacement or refund?
   - **A.** If the goods are found to be unfit for their usual purpose.
   - **B.** If the customer has lost the receipt issued by the business.
   - **C.** If the business clearly displays a 'No refunds or replacements' sign.
   - **D.** If the customer changes his or her mind and decides not to keep the goods.
10. What does ACCC stand for?
   - **A.** Australian Consumer and Competition Commission
   - **B.** Australian Competition and Consumer Commission
   - **C.** Australian Competition and Consumption Commission
   - **D.** Association of Consumers and Competitors Commission

Short answer

Communicating

11. **Outline** the role of consumers in the economy.
12. **Explain** how the problem of scarcity arises.
13. **Explain** the concept of sustainability.
14. Why do producers and consumers have an important relationship within the Australian economy?
15. Why do consumers need protection from the actions of producers?

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19 Work and entrepreneurship

LESSON SEQUENCE

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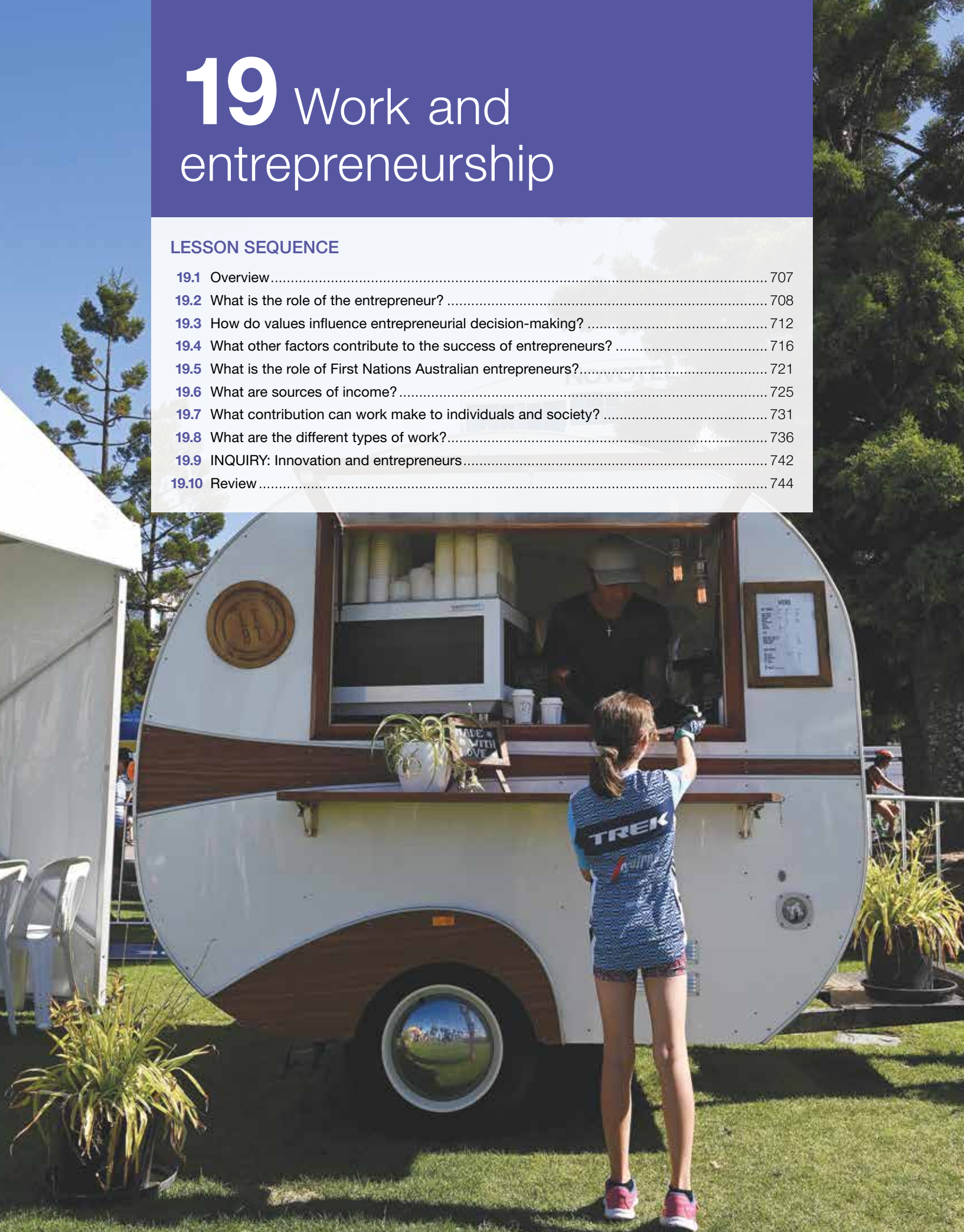

LESSON
19.1 Overview

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What is the role of the entrepreneur within the economic and business environment? What types of work exist and in what other ways can people gain an income?

19.1.1 Introduction

Do you want to be your own boss? How will you earn an income? What different types of work can you do? You might start to think about the answers to these questions as you get older.

Some people aspire to have their own business, and anyone wishing to be successful in business must supply goods or services that consumers wish to buy. The ability to recognise what consumers want and need is an important skill for anyone wishing to go into business.

In this topic, we will consider the type of person who is able to respond to and meet customer needs and wants. We will also look at the type of person who is willing to take a risk, and the kinds of characteristics and values that allow them to turn an idea into a successful business.

FIGURE 1 Entrepreneurs have new ideas and can do something about them.

This type of person is called an entrepreneur. Entrepreneurs sometimes come up with business ideas that have no guarantee of success, and this is sometimes a big motivator. For those whose ideas do translate into a successful business venture, the profits are often huge. Do you have what it takes to be an entrepreneur?

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-10573)

Video eLesson Work and entrepreneurship (eles-6016)

LESSON
19.2 What is the role of the entrepreneur?

LEARNING INTENTION

By the end of this lesson you should be able to identify the role of the entrepreneur, including the knowledge and skills they bring to the Australian economic and business environment.

TUNE IN

The word 'entrepreneur' is used a lot in business, but what is an entrepreneur? What does an entrepreneur look like? How do you know if someone is an entrepreneur?

1. Brainstorm the skills and qualities that an entrepreneur might have and share these with your class.
2. Make a list of famous or well-known entrepreneurs.
3. Next to your list of names, write down what you think the entrepreneur is mainly known for.

FIGURE 1 What is an entrepreneur?

19.2.1 What is an entrepreneur?

An **entrepreneur** is someone who could be just like you. Entrepreneurs have certain knowledge, skills and attitudes, and they use these to turn their ideas and plans into actions. Entrepreneurial behaviour is encouraged in Australia, and the government provides support for individuals to develop their own ideas and start up their own business enterprises.

Entrepreneurs display the following attitudes:

- They persist in doing something about an opportunity they have recognised.
- They are not afraid to search for opportunities to promote their ideas.
- They have an ability to thrive on the challenge of creating their own successful business.
- They have a problem-solving mindset.
- They are not afraid of taking risks.
- They are innovative.

These attributes generally translate into an entrepreneur pushing an idea forward idea and starting a business.

How old do you have to be to be an entrepreneur? The answer is any age! If you have a great idea and the determination to make it happen, you could join this list of young entrepreneurs who have enjoyed some huge success stories:

- Sleepwear company **Night Sweet Thing** was started in 2019 by friends 18-year-old Bridey Drake and 20-year-old Gandhari Gurung from New South Wales, Australia. They successfully used TikTok to help promote and grow their business when COVID-19 hit.
- Founded in 2015 when he was just 17, Blake Garrett's school administration software startup **School Bytes** was developed after the founder overheard members of his school's office staff complaining about the clunky current system they were using.
- **Subway** sandwich shops were the brainchild of 17-year-old US-based Fred DeLuca.
- **Rip Curl**, an Australian company, was started up in the Australian backyard of surfers Brian Singer and Doug Warbrick.
- **Dell Computers** was set up when 18-year-old Michael Dell realised it was a lot cheaper to build computers than to buy them ready made.
- Poppy King founded **Poppy Industries** at age 18 after recognising the gap in the market for matte lipstick.
- Molly Whiticker-Ferrie was aged 14 when she started her Melbourne-based business **Fairy Friends Forever**, which specialised in birthday parties for girls.

entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise

Many more examples exist of young entrepreneurs who have gone on to be successful business owners. A famous one is Sir Richard Branson, chief executive officer of the Virgin Group. He started his first business, a student magazine, when he was aged 16 and still at school. Another example is Bill Gates, co-founder of Microsoft. His interest in computers and computer software began when he was 13 years old.

Richard Branson

Richard Branson is the founder of the Virgin group, which comprises hundreds of companies including an airline, a train company and a mobile phone network. He started his first business at the age of 16. You may have seen Richard Branson in the media because he is famous for his publicity stunts whenever Virgin launches a new business or project. One of Richard Branson's current big ideas is commercial space travel.

FIGURE 2 Richard Branson

If you have heard Richard Branson speaking, you will know that he is passionate and enthusiastic. He also listens to staff and customers, carrying a notebook with him wherever he goes so that he can write down what he sees and hears. He then follows up on the ideas. He shares Virgin's future plans with his staff, and his vision inspires people to perform at their best.

Mark Zuckerberg

Mark Zuckerberg is a famous American entrepreneur. He is one of the founders of the tech company Meta Platforms, Inc. which includes the successful social media site Facebook. Mark Zuckerberg is a computer programmer who began creating websites while he was at university. In 2004, he launched Facebook and it has grown in popularity ever since. As of October 2022 according to Statista, Facebook had over 2.96 billion monthly active users. His business has been successful because he has specialised skills and was willing to take a risk to develop a unique business idea.

FIGURE 3 Mark Zuckerberg

Mark Zuckerberg believes in the open and free flow of information between people. Facebook has allowed this to occur, but it has also created controversy throughout its years of operation. As a result of Facebook's success, Mark Zuckerberg has been able to donate significant amounts of money to charitable causes.

Lorna Jane Clarkson

Lorna Jane Clarkson is the founder of workout fashion business Lorna Jane. She began making leotards while she worked as a dental therapist and realised demand existed for fashionable activewear. Lorna Jane Clarkson and her husband, Bill, opened their first store in 1993, and now have over 130 stores worldwide.

FIGURE 4 Lorna Jane Clarkson

The Clarksons have never been afraid to take a risk. While other businesses believed that the market for fitness garments was too small to make a profit, the Clarksons decided to focus on that niche market anyway. The success of their business can be traced back to their vision and good management. Lorna Jane is renowned for innovative designs and for listening to customers, particularly through social networking.

19.2.2 The difference between a business owner and an entrepreneur

We have looked at some examples of well-known entrepreneurs. But what is the difference between a business owner and an entrepreneur? Unfortunately, this question has no easy answer. Both business owners and entrepreneurs run businesses, and both are very important for the Australian economy. The difference is best seen in the behaviours and skills that entrepreneurs bring to a business that people who run businesses do not have.

A business owner might start their own businesses, just as entrepreneurs might. Business owners might purchase an existing business and run that, just as entrepreneurs also run businesses. However, business owners tend to be content with running a business on a day-to-day basis so that it makes a profit. They prefer to minimise risks and make calculated decisions where the outcome is reasonably clear.

Entrepreneurs, on the other hand, do much more. Entrepreneurs continue to recognise opportunities and take risks. Entrepreneurs also establish a shared vision and demonstrate **initiative**, **innovation** and **enterprise**.

A business owner might have an idea for solving a problem and meeting needs in order to satisfy a **target market**, whereas an entrepreneur's vision might be to make a big change or have an impact on the world. Entrepreneurs often do not know whether their ideas are achievable or not but they go with them anyway.

initiative the first step or opening move in a series of actions

innovation either adding a new product to an existing product line, or significantly improving an existing product or process

enterprise the creative or bold efforts made by someone to achieve something new

target market a market at which a product is deliberately aimed

SkillBuilders to support skill development

- 17.4 Conducting research

19.2 SKILL ACTIVITY: Questioning and researching, Communicating

Many Australian entrepreneurs have launched successful businesses. Afterpay is an example of this.

FIGURE 5 Australian business Afterpay is a 'buy now pay later' platform. Launched in 2014 by now billionaire founders Anthony Eisen and Nicholas Molnar, Afterpay has 16 million active customers globally.

1. On your own or in pairs, **research** Australian entrepreneurs. An online search for the term 'Australian entrepreneurs' is a good starting point.
2. **Create** a shortlist of three entrepreneurs you are interested in finding out more about.
3. **Write** a short summary on each entrepreneur. You should include the following:
   - what idea or product the entrepreneur has developed
   - how long the business has been running or when it started
   - whether the entrepreneur's idea or product has changed in this time, or whether the entrepreneur has developed a new idea
   - the profitability of the business or the wealth that the entrepreneur has gained.
4. Choose one entrepreneur to **investigate** further. At this stage, you should include **discussion** of the following:
   - Based on your research, what kind of attitude does your chosen entrepreneur have?
   - In your opinion, do you consider your chosen entrepreneur to be successful? **Justify** your answer.
5. **Present** your entrepreneur profile to the class.

19.2 Exercise

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19.2 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
2, 3, 4	1, 5, 6, 7	8, 9, 10

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Check your understanding

1. **Define** what is meant by the term 'entrepreneur'.
2. Which of the following best describes the attributes of an entrepreneur?
   - A. Persistent innovators who do not want the responsibility of owning a business
   - B. Persistent innovators who provide the money to start a business
   - C. Persistent and problem-solving innovators who pursue an idea for a business opportunity through to start up
   - D. People who have the same attitudes as business owners, but are wealthier
3. Complete the following sentences.
   Entrepreneurs are _____ for the Australian economy. Entrepreneurs can be any _____. One of the defining features of an entrepreneur is that they are willing to take _____.
4. **Determine** if the following statements are true or false.
   - a. Business owners and entrepreneurs are the same thing.
   - b. Entrepreneurs are successful because they avoid challenges.
   - c. Entrepreneurial behaviour is encouraged in Australia.
5. **State** what is meant by the following entrepreneurial behaviours.
   - a. Seizing an opportunity
   - b. Showing initiative
   - c. Being innovative
   - d. Being enterprising

Apply your understanding

Communicating

6. **Explain** the difference between a business owner and an entrepreneur.
7. **Explain** what is meant by a target market.
8. Why is being an entrepreneur so important to the success of a business?
9. **Distinguish** between innovation and enterprise.
10. Entrepreneurs and business owners take risks. **Describe** two risks they may take and why it is important that they take these risks.

LESSON
19.3 How do values influence entrepreneurial decision-making?

LEARNING INTENTION

By the end of this lesson you should be able to analyse the influence of values on entrepreneurial decision-making with relation to negotiating with stakeholders and complying with the law.

TUNE IN

Understanding your values can help you decide what is important in life.

1. Brainstorm the times when you felt the happiest or proudest. What were you doing? What had you achieved?
2. Your brainstorm should have got you thinking about what is important to you. Make a separate list of up to ten values that are important to you — for example:
   - Ambition
   - Family
   - Friendship
   - Hard work
   - Honesty
   - Reliability
3. With a partner, discuss which five of the ten values you identified might be important for an entrepreneur.

FIGURE 1 Volunteering to help others can make you feel proud.

19.3.1 The values of an entrepreneur

So far, we have considered some of the attitudes and characteristics that entrepreneurs have — these being an ability to show initiative and persistence, the ability to seize an opportunity and the willingness to take a risk. Such attributes are closely linked to a person's **values**. For example, if you value hard work, this may influence the type or amount of work that you do.

Your values can help you determine what is important to you. Entrepreneurs may possess certain values that are more likely to influence the decisions that they make. As an example, entrepreneurs are often sophisticated **negotiators**, and this may come from the value of viewing competitiveness, or getting what they want, as important.

values things a person holds as being important; can affect the way you live and work

negotiator a person who either comes to an agreement with someone else, or helps other people reach such an agreement

DISCUSS

When would an entrepreneur be required to negotiate? What skills might you need to be a good negotiator?

Case study: Values held by the Oodie founder

Davie Fogarty, 27, found success through unconventional means — via a colourful wearable blanket that has been referred to as 'one of Australia's biggest fashion crimes'. Millions of the fleecy garment, known as the Oodie, have sold around the world — and the product saw sales spike during lockdown, with people spending more time at home in loungewear.

Davie Fogarty has been coming up with business ideas since he was a child. He started the Oodie business with $500. Davie Fogarty has since featured in the *Financial Review*'s Young Rich List with an estimated wealth of $170 million — largely due to the wearable blanket. But he prefers not to talk about money.

FIGURE 2 Australian entrepreneur Davie Fogarty values the creation of new ideas and has always thought that he would be successful.

'You know, I don't think it's really about money anymore . . . It's more about doing things we enjoy and creating new products', he said. Aside from the Oodie, Davie Fogarty has had many business ventures and some failures. He describes himself as someone who is 'constantly trying to launch ideas', and added that he always thought he'd be successful and has 'always been dedicated to this path'.

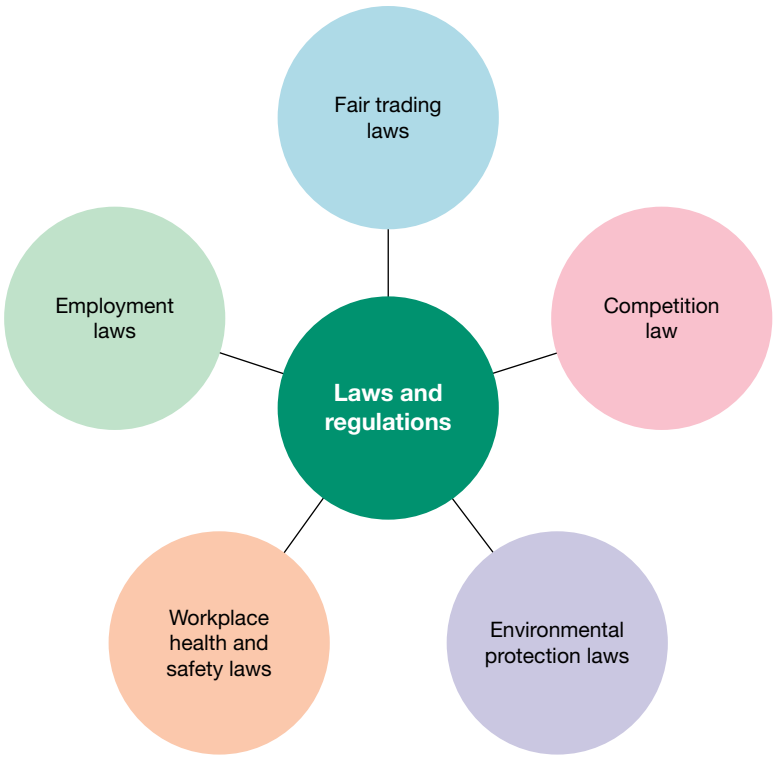
19.3.2 Complying with law and regulations

tlvd-10570

Australian federal, state and territory government legislation exists to protect consumers, the environment and the community, as well as to promote fair trading and competition. These laws govern how businesses interact with their suppliers, customers and other businesses. They also outline the rights of businesses and business owners when conflicts arise. (Refer to topic 18 for more on this.)

Entrepreneurs have to follow these laws and regulations, and their values will need to incorporate things such as looking after workers, taking care of the environment, and producing and selling a safe product. If an entrepreneur's values do not align with laws and regulations, and if entrepreneurs neglect these important areas, it can lead to many problems including customer complaints, poor reviews and fines, and the ultimate failure of the business.

FIGURE 3 Some of the laws and regulations that entrepreneurs need to abide by



Fair trading laws

When you sell a product or service, you must comply with fair trading regulations. This means selling a product that is safe and priced fairly, and meets Australian Standards. When you buy a product or service, you also have consumer rights and guarantees. An entrepreneur must be aware of these laws and have the values that align with these laws.

Competition law

While entrepreneurs can be competitive by nature, they must comply with the Competition and Consumer Act. The Australian Competition and Consumer Commission (ACCC) enforces laws that stop businesses from doing things such as making false advertising claims or misleading consumers with prices.

Employment law

An entrepreneur who values doing the right thing for employees may find it easy and personally satisfying to do what is legally required regarding paying staff the correct wage, and giving them the rights that they are legally entitled to.

Workplace health and safety laws

All employers need to make sure that workplace health and safety laws are met. All employees in any business must be provided with a safe work environment, have safe machinery and equipment, be trained in health and safety issues, and be given any information, supervision or training that will help them stay safe.

An entrepreneur who has firm values in this area may innovate new solutions to keep workers safe.

Environmental protection laws

Some entrepreneurs naturally pursue causes that are of high value and importance to them, and this includes the environment. Certain environmental laws apply to certain businesses; however, these are determined by different states. An entrepreneur who values the environment and who pursues innovative and environmentally sound products has the potential to be more successful, because many customers also value this.

SkillBuilders to support skill development

- 17.4 Conducting research

19.3 SKILL ACTIVITY: Questioning and researching

Entrepreneurs are required to negotiate with various stakeholders as they go about pursuing their ideas.

1. **Create** a mind map of the stakeholders that an entrepreneur may need to negotiate with.
2. Choose three stakeholders. **Describe** the kind of negotiation they may have with an entrepreneur. An example is an employee who may negotiate with an entrepreneur over their wage.
3. Entrepreneurs also need to follow certain laws and regulations. Customers are one of the stakeholder groups that an entrepreneur needs to perhaps negotiate with, and consider and treat according to the law.

Using the internet, **research** information on treating customers fairly. You may like to visit the **ACCC** weblink in the Resources panel.

4. Using the information you find, select five areas of consumer law. For each, in a table similar to the one provided, **explain** how the entrepreneur should respond to that law. The first one has been done for you in the provided table.

Area of consumer law	How should the entrepreneur respond?
Customers rights and obligations	• The entrepreneur must provide safe goods that are fit for purpose and last a reasonable amount of time. • The entrepreneur must provide options for refund according to the law.

Resources

Weblink ACCC

19.3 Exercise

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19.3 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 4, 5	2, 3, 6, 7	8, 9, 10

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Check your understanding

1. **Identify** how a value can best be defined.
   - A. The things that you believe are important in the way you live and work
   - B. Believing in being the best at all the things that you do
   - C. The things that you like doing
   - D. The things that you are good at
2. **List** five values that you think most entrepreneurs possess.
3. **Explain** what is meant by the value of being 'hardworking'. What would be the actions of someone who possesses this value?
4. **Determine** if the following statements are true or false.
   - a. Entrepreneurs value money and success over all else.
   - b. Business laws and regulations are designed to only benefit businesses.
   - c. Entrepreneurs are exempt from fair trading laws.
   - d. Following environmental protection laws benefits entrepreneurs and businesses because many customers value this.
5. **Complete** the following sentence.
   An entrepreneur must abide by all _____ that apply to them. Laws and regulations are there to _____ both consumers and _____. Failure to follow such laws and regulations can lead to _____ of the business.

Apply your understanding

Communicating

6. Read the Oodie case study in section 19.3.1. **Explain** what makes Davie Fogarty an entrepreneur.
7. **Outline** the values that Davie Fogarty might possess.
8. Do you think you have got what it takes to be an entrepreneur? **Explain,** drawing attention to what you see as your strengths and weaknesses for such a career.
9. **Explain** how an entrepreneur's values can help them to meet employment laws.
10. **Describe** the values that you possess, and outline how these values might help you in your future.

LESSON
19.4 What other factors contribute to the success of entrepreneurs?

LEARNING INTENTION

By the end of this lesson you should be able to describe the combination of knowledge, skills and attitudes demonstrated by entrepreneurs, and identify other factors that contribute to success, such as seeing and taking advantage of an opportunity or demonstrating initiative and innovation.

TUNE IN

Imagine that you want to buy a white T-shirt.

1. Write down the factors that you might take into consideration when making this purchase.
2. What are the main three factors that would influence your choice in purchasing a white T-shirt?
3. Make a list of five recent purchases that you have made. Next to each item on your list, write down the main factor that influenced your purchase.

FIGURE 1 Are all white T-shirts the same?

19.4.1 A high-quality product

If we consider the example of the white T-shirt, an entrepreneur may be able to combine a number of factors that make a T-shirt business a successful one. This might include taking advantage of the opportunity that many customers want a high-quality product.

Developing a high-quality product may not be easy, and it may involve an entrepreneur showing initiative in seeking out appropriate suppliers or innovative production techniques. An entrepreneur may instinctively recognise that high quality can be associated with Fair Trade practices.

The innovation strategy at Patagonia is based on minimising the environmental impact of their clothing. Their team innovates by using recycled materials, and researches the market for radical new materials that they can use.

FIGURE 2 Patagonia make products that last a long time, and also encourage repairing and reusing their products.

Patagonia sells clothing from materials you would never guess could become clothes: they were the first large company to sell clothing made from recycled plastic bottles, and also use material from discarded fishing nets, which they call NetPlus. This is a demonstration of innovation that environmentally conscious customers are drawn to.

19.4.2 A quality service

An entrepreneur can also take advantage of an opportunity by using innovative ways to provide a **quality service**, above that of any competitors. This can lead customers being satisfied with the product of the business. Highly satisfied customers obviously generate profit, but by returning to the business they can also bring other customers with them. This is referred to as **word-of-mouth** marketing.

FIGURE 3 Customers being treated well by staff can give a business the lead over its competitors.

19.4.3 Sound management practices

An entrepreneur may also use their knowledge and skills to ensure that their business, and those working alongside them in the business, are using sound management practices. Sound management practices include planning carefully, leading with good values, and showing **moral** concern for society and the environment. This is often referred to as **socially responsible management**. Sound management practices mean that all those within the business who are responsible for decision-making display the same socially responsible behaviours.

19.4.4 A suitable location

An entrepreneur may be able to use their skills to take advantage of innovative business locations. This might involve the entrepreneur choosing a physical location, or **premises**.

An entrepreneur will have the skills to weigh up the costs and benefits of different locations, with the aim of finding one that is going to be best for the business. An entrepreneur may need to investigate many factors when considering a location for the business. These factors are covered in the following subsections.

Visibility

An entrepreneur understands that the product and the business need to be available to potential customers. Businesses such as department stores and hairdressers rely heavily on passing trade for sales. That is why these types of businesses typically locate in shopping centres or on shopping strips.

quality service dealing with clients and customers in a respectful and helpful way

word-of-mouth the passing of information about a business from a satisfied customer to prospective customers

moral concerned with the principles of right and wrong behaviour

socially responsible management when a business shows concern for the social welfare of the community, including customers, staff and the environment

premises the land and buildings occupied by a business

tlvd-10571

FIGURE 4 The aspects usually considered when selecting a location for a business

FIGURE 5 Why have these businesses chosen these different locations?

Accessibility

A business generally needs to be located as close as possible to its customers or suppliers. These considerations generally depend on the nature of the business. The entrepreneur will consider that a retail business needs to be close to customers, with access to parking or nearby public transport. A clothing store might decide to locate in a shopping centre or a shopping strip. For a business that manufactures goods, being close to suppliers might be more important. A car parts manufacturer would need to be close to transport networks, such as freeways or railway lines, so that it can easily receive raw materials from suppliers and then distribute the finished goods.

Competitor location

Entrepreneurs should be able to take advantage of locations that will suit the business the best. This might mean that some entrepreneurs will choose to locate in an area where other businesses are selling the same product. They will do this because customers are attracted by the competition and choices offered by the collection of businesses. Examples of this include fruit and vegetable markets or car dealerships located together along a busy highway.

Cost

When considering the cost of a location, an entrepreneur must decide whether to rent or purchase the premises. In general, the cost of the location will be affected by the location's size, quality, visibility and accessibility, and the amount of passing trade. Locating in a shopping centre is usually more expensive than locating on a shopping strip. An ideal location would be one where costs are kept to a minimum, but access to customers is still maintained.

Online businesses

Online businesses can be located anywhere. An online business may operate from a home or from a warehouse facility. Location is not as important because the customer does not have face-to-face contact with the business and its products.

Some entrepreneurs have been able to take advantage of changes in the market to spot opportunities in online sales. This may have required innovation and initiative to seize such opportunities. During the pandemic, for example, drone delivery services such as Wing were established. These online services promise drone delivery of groceries, coffee and takeaway food directly to your door.

FIGURE 6 Drones can deliver products directly to your door.

SkillBuilders to support skill development

- 17.4 Conducting research
- 17.6 Evaluating a business plan
- 17.7 Writing a business case study

19.4 SKILL ACTIVITY: Communicating

1. **Select** a successful and well-known product (a specific make and model of car, for example, or brand of clothing, make and model of phone or food item).
   a. **Write** down the name of the product, the brand, the company that produces it and the founder of the company.
   b. What do you think the goal or vision is of the business that makes this product? Provide a reason for your answer. You may wish to **research** this.
2. **Explain** why your chosen product is successful. Can you **identify** a key point of service or does the product have certain attributes?

3. Visit the company's website. Can you find a page about their environmental or sustainability pledges? What does this business do to protect the environment?
4. Where is your product available? What locations can it be found in? Is it sold in select stores or can you purchase it in many different locations? Why do you think that they have chosen the locations that they have?
5. **Communicate** your findings to your class.

19.4 Exercise

learnon

19.4 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 7, 10	6, 8, 9

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Check your understanding

1. What attributes might a business owner attempt to include in their new product before taking it to the marketplace?
   - A. Premium features, high performance, or durability and reliability
   - B. New features that have not been fully tested
   - C. A feature that a competitor introduced last year
   - D. A short lifespan and making it disposable
2. **Identify** the management practices that entrepreneurs should display.
   - A. Planning, delegating, controlling, managing
   - B. Planning, organising, and controlling
   - C. Planning, leading with moral concern for society and environment
   - D. Planning, delegating, being enterprising, being innovative
3. How can a business develop quality service?
   - A. By seeking feedback from customers through customer surveys
   - B. By using customer loyalty programs and giving discounts
   - C. By training staff
   - D. All of the above
4. **Explain** what is meant by meeting customer expectations.
5. **Explain** why location is important for a business.

Apply your understanding

Communicating

6. **Describe** a scenario in which a business provides poor customer service and predict the possible outcomes of that poor service.
7. **Distinguish** between planning and organising.
8. **Explain** what is meant by a business being ethical and socially responsible.

Evaluating, concluding and decision-making

9. **Outline** the main factors that need to be considered when deciding the location of the following businesses.
   - a. A car manufacturer
   - b. A restaurant
   - c. A supermarket
   - d. An online T-shirt supplier

Communicating

10. **Explain** one advantage and one disadvantage of locating your business close to a competitor.

LESSON
19.5 What is the role of First Nations Australian entrepreneurs?

LEARNING INTENTION

By the end of this lesson you should be able to describe the characteristics of First Nations Australian entrepreneurs.

TUNE IN

You can find your purpose in your working life in many ways.

1. Consider what you would like to do when you leave education and enter the world of work.
2. What would be your aim or purpose? Would you focus on earning money? If so, what would you do with the money that you make?
3. Would you focus on helping a community group? If so, which one and why?
4. What do you think the term 'profit with purpose' means? Discuss this with a partner.

FIGURE 1 What's your purpose?

19.5.1 First Nations Australian entrepreneurs

First Nations Australian entrepreneurs have the oldest cultures and traditions in the world and, as you can imagine, they have spent their many thousands of years innovating and adapting to the climate around them. First Nations Australians are thought to be among the world's first bakers of bread, and they are well known for their innovative land schemes, including aquaculture and firestick farming.

FIGURE 2 First Nations artists show entrepreneurial skills when they produce and sell their art.

Since the first settlement of Europeans in Australia, First Nations Australians have not had the same opportunities as others within our society; however, government agencies, partnerships and programs are now more tuned in to support First Nations Australian entrepreneurs to achieve their aspirations.

First Nations Australian entrepreneurs share the same characteristics of all entrepreneurs of identifying opportunities and taking risks. However, they tend to pursue profit-generating activities with a strong focus on social reasons; that is, businesses that are also run to benefit the community.

Many First Nations entrepreneurs have found opportunities in the areas of tourism, art, clothing, natural skin and beauty products and cuisine, and in establishing businesses that supply First Nations communities in rural areas.

Tahnee Edwards is a proud Yorta Yorta and Taungurung woman. Tahnee set up Gammin Threads as a side hustle and creative outlet from her part-time job at a First Nations family violence prevention service.

Gammin Threads was born from a love of typography, language and pride. It consists of 'chillwear' and accessories for people who believe in living colourfully. Tahnee pays respect to and empowers women through her business.

FIGURE 3 Gammin Threads offers colourful 'chillwear' and accessories

19.5.2 Community-run companies

Social traders, profit for purpose and social enterprise businesses all have much the same aim. They are driven by a public or community cause (be it social, environmental, cultural or economic) to make the world a better place. These types of businesses make most of their income from trade and they use the majority of their profits (at least 50 per cent) to work towards a specific social mission.

Unlike charities, they do not rely on donations or grants.

The government offers specific support for First Nations Australian entrepreneurs, just as it does for many other entrepreneurs. However, much of the assistance for First Nations Australian entrepreneurs is focused around First Nations principles and ways of doing business, which can differ in practice and approach. Two common sources of assistance for First Nations Australian entrepreneurs are through the Indigenous Advancement Strategy (IAS) and Indigenous Business Australia, which both provide business grants and loans.

Joint ventures

The Gumatj Corporation is a joint venture between investors, project proponents and traditional custodians of the land. The venture represents the interests of the Gumatj people, who are based in Miwatj area, east of Darwin. The corporation runs a range of businesses in Gunyangara and the Gove Peninsula area to support local employment. These include a saw mill and timber works, concrete batching plant and concrete works, a construction joint venture, a cattle farm and butcher shop.

A **cooperative** refers to a business model based around the idea of democratic ownership and control by the people who use the business, or the customers of the business. This is favoured by some First Nations Australian entrepreneurs because it allows them to grow their business but still retain a community element to the business.

cooperative a farm, business or other organisation owned and run jointly by its members, who share the profits or benefits

Cooperatives are typically owned by employees of the business and/or customers. An advantage of this model for many First Nations Australian entrepreneurs is that all members involved benefit from the success of the business, not just the owner.

Case study: Muru Office Supplies

Muru Group was founded in 2012 by Mitchell Ross, a Bidjigal man from La Perouse in southeast Sydney.

In 2014, a partnership was formed between the Muru Group and Complete Office Supplies (COS) to found Muru Office Supplies (MOS), a 100 per cent Australian-owned national Supply Nation–certified workplace supplies provider. The business sells office supplies including brochures, stationery, prints, labelling, and office and desk essentials among other things for the workplace.

MOS describes itself as a purpose-driven, community-focused organisation that contributes a percentage of all profits to education, employment, and health and **wellbeing** initiatives that support Indigenous communities.

wellbeing an overall measure of quality of life

For example, the business supports an early childhood education program that operates three days a week. The aim of the program is to improve literacy and numeracy skills through structured play. Over 30 Indigenous children receive free access to this program.

In 2017, Muru partnered with KPMG to fulfil a contract to supply. The contract includes supplying KPMG with products such as copy paper, office supplies and kitchen supplies, as well as printing and promotional items.

Source: https://supplynation.org.au/stories-of-success/mos-kpmg/ and https://muruoffice.com.au/.

SkillBuilders to support skill development

- 17.4 Conducting research

19.5 SKILL ACTIVITY: Questioning and researching

Clothing The Gaps is a Victorian Aboriginal-led and -controlled, and majority Aboriginal-owned, social enterprise, co-founded by Laura Thompson (Gunditjmara) and Sarah Sheridan (non-Indigenous). The business is registered with Social Traders, which advocates for social enterprise businesses.

The business is proud to be a First Nations employer, with 81 per cent of staff members belonging to the First Nations community.

Clothing The Gaps uses its profits to fund health initiatives in Aboriginal Communities. It ultimately aims to 'help close the life expectancy gap between Indigenous and non-Indigenous people'.

1. a. Clothing The Gaps is a First Nations Australian business with an objective other than profit. **Explain** what this business aims to do.
   b. **Propose** attributes that the owners of Clothing The Gaps are likely to have.
2. **Research** another First Nations Australian entrepreneurial venture. Typing 'First Nations Australian entrepreneurs' into your browser will give you a good start.
3. **Choose** a First Nations Australian business that interests you. Access their website and visit the 'About us section' to answer the following questions.
   a. What does this business sell?
   b. Does this business have a 'profit for purpose'? What aims does the business have?
   c. How did the entrepreneur behind this business achieve success?
   d. Does this business partner with other businesses or government agencies?
   e. What attributes are the owners of this business likely to have?

FIGURE 4 Clothing The Gaps founders Laura Thompson and Sarah Sheridan

19.5 Exercise

learnon

19.5 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7	8, 9, 10

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Check your understanding

1. **Complete** the following sentence:
   Social traders, profit for purpose and social enterprise business have similar _____. They are motivated not only to make a _____, but also to _____ a public or community cause.
2. **Determine** if the following statements are true or false.
   a. Social traders, profit for purpose and social enterprise businesses are the same as charities.
   b. First Nations Australian entrepreneurs tend to pursue profit-generating activities while supporting remote and rural communities.
   c. The government offers no support for First Nations Australian entrepreneurs.
3. First Nations entrepreneurs often prefer the **sole trader** / **cooperative** / **partnership** business model because it is based around the idea of democratic ownership and control by the people who **created** / **run** / **use** the business.
4. **Explain** what is meant by a social enterprise.
5. **Outline** why First Nations Australian entrepreneurs seek to support their local communities.

Apply your understanding

Interpreting and analysing

6. **Explain** what is meant by a partnership and outline how this is different from a cooperative.
7. Read the case study on Muru Office Supplies (MOS).
   a. **Outline** what the business sells.
   b. **Explain** how this business helps the local First Nations Australian community.
8. **Explain** how Muru Office Supplies makes use of partnerships to increase sales.
9. After reading the case study on MOS, **list** the values that the owner and founder might have.
10. **Justify** why it is important for First Nations Australian entrepreneurs to receive support.

LESSON
19.6 What are sources of income?

LEARNING INTENTION

By the end of this lesson you should be able to describe the reasons individuals choose to work, how they may derive an income and the types of work that exist.

TUNE IN

By now you will likely have given some thought to what you want to do when you leave education.

1. What kind of occupation would you like to work in? Can you write down the specific job that you would like to do?
2. How do you feel about work? Are you excited to think about becoming an entrepreneur or working in a job that you think you will love? Explain your answer to a class peer or your teacher.
3. Brainstorm all the other ways that you could earn an income, aside from working for yourself or for someone else.

FIGURE 1 Zookeeping is one of the jobs many young people aspire to do.

So far in this topic we have considered entrepreneurism and starting a business as a way of making a living. In the following lessons, we will look at why and how individuals work, including First Nations Australians, the types of work they are involved in, and how they derive an income in the Australian economic and business environment.

19.6.1 Work as a source of income

As you get older, the importance of money and its uses becomes clearer. For example, you need money when you catch up with friends and plan a day out to the movies, ice skating, rollerblading, visiting the art gallery or many other exciting or interesting activities. You need money to fund your lifestyle.

So where does the money you need come from? If you said your parents or caregivers, you know that the money probably comes from these people going to work. Once you leave school, though, chances are you will enter the workforce — if you haven't already started working while at school.

FIGURE 2 Going to a concert is just one of the many activities for which you need money.

Being part of the workforce will enable you to start earning money, which you can then use to buy things that you need and want.

Earning a **wage** is often the primary reason that people work. Earning a wage affords you a certain **standard of living** where you can purchase the things that you want.

The entrepreneurs we have learnt about in this topic work to gain an income. They will probably pay themselves a **salary**.

The main form of income for most people is the wage or salary they earn from their job. A person who receives a wage is paid an hourly rate for each hour they work, and their wage may vary from week to week.

A person on a salary receives a set amount of pay regardless of how many hours they work. However, income can come from many sources, not just work. Some of these sources are show in **TABLE 1**.

wage payment for work completed or services performed, usually dependent on hours worked per week or month

standard of living quality of life as measured by the amount of money made by an individual or household (using income per capita or income per household)

salary fixed or regular payment for work completed or services performed

FIGURE 3 Jobs provide income that is used to buy goods and services.

TABLE 1 Alternative sources of income

Alternative source of income	Description
Superannuation	Superannuation is the money that people save for their own retirement. Money is deducted (taken) from a person's weekly income and placed into a superannuation fund. People are able to access their superannuation upon retirement. Given that Australia's population is ageing, superannuation is an increasingly important form of income.
Commission	People such as real estate agents may earn a commission. This means that for every sale they make, they receive a small percentage of the money made. The more they sell, the larger the commission they receive.
Welfare payments	People may receive a welfare payment for a range of different reasons. Some retired people receive a pension to help them with their living expenses. Other people may receive a welfare payment if they are unemployed or if they are not working for some other reason (such as illness).
Rental income	A large number of people in Australia own an investment property. An investment property is one that the owners do not live in. Instead, they rent it out to tenants. The rent payments received from tenants provide an alternative source of income for the owners of the property.
Dividends	Some people choose to invest in companies. To do this they buy a 'share' in the company. These people will then become part owners of the business and they are known as shareholders. When the company makes a profit, it distributes some of the profit to the shareholders, and this is called a dividend.

19.6.2 Being a shareholder

At the age of 18 you will be able to buy shares in a company. This means that you become a shareholder. Shareholders own a part of a business; this can be a very small part of a business or a larger part — which could see you owning a significant percentage of a business. Either way, when you are a shareholder, you can participate in and benefit from a business's future growth. Some people buy and sell shares and earn a significant amount of income from this activity.

If a company is successful in growing its earnings and profit over the years, its share price is likely to rise. This means if you then sell your shares, you can make a profit. You also have the right to receive dividends, which are portions of a company's profit that it decides to pay out to shareholders.

Dividends are not guaranteed. If the business makes a loss, no dividends will be paid to shareholders. Even when the company makes a profit, it is up to a company's board of directors to decide on how big a dividend to pay, if at all.

A person who invests in stocks, property or other ventures in the hope of making a profit, and to provide a source of income, is known as a **speculator**.

19.6.3 Providing a rental service

Another alternative source of income is providing a rental service in the form of a property that you lease to renters for a monthly fee. People who have second homes or holiday homes can rent out their property — during holiday season, for example — and this can bring in a substantial income.

Some people will buy a property such as an apartment as an investment. They will rent out the property over several years or more and then sell the property once the price has risen. This source of income can be very lucrative, and some people have multiple properties from which they earn an income.

speculator a person who invests in stocks, property or other ventures in the hope of achieving a profit and a source of income

FIGURE 4 Both residential and commercial properties can be leased out.

19.6.4 Receiving a social security benefit

Most residents in Australia are able to access a social security scheme payment at some point. Social security schemes are classed as a type of income that enable those people most at need in society to access at least essential health care, basic shelter and housing, water and sanitation, foodstuffs, and education.

FIGURE 5 Social security benefits include rebates from Medicare.

Social security schemes provide a range of benefits and payments that can apply to a wide range of people at different points in their lives. Mainly, these payments help people on low incomes and in times of need. For example, a crisis payment can be provided if you are in severe financial hardship because you have been forced to leave your home and find a new home because of an extreme event such as domestic violence or your house burning down. Social security benefits also include the more well known payments such as the pension, parental leave and unemployment benefits.

Social security benefits can also include rebates (money back). For example, Medicare is a common form of rebate where you receive money back from the government on healthcare expenses.

19.6.5 Sources of income for First Nations Australian entrepreneurs

First Nations Australian entrepreneurs play an important role in the Australian economic and business environment. The sources of income are much the same for First Nations Australians. According to a recent report, the First Nations Australian businesses sector was experiencing strong growth of around 12.5 per cent per year before the COVID-19 pandemic. Experts estimate over 2300 Indigenous businesses are in operation, and these generate over $3 billion in annual revenue and employ over 11 000 Indigenous employees in Australia.

Work as a source of income for First Nations Australians is important. Yet, First Nations Australian communities and their custodians, such as Wadandi custodian Josh 'Koomal' Whiteland, have found ways to combine earning a living while continuing their cultural practices and management of country.

Josh is part of Koomal Dreaming in Busselton, Western Australia. Koomal Dreaming is a First Nations run cultural experience business. Josh introduces visitors to the world's oldest living culture, giving them the opportunity to taste native foods, discover bush medicine and experience traditional fire lighting. Josh also recounts stories of the Dreaming spirits that relate to his traditional area.

First Nations Australian businesses often have a multiplier effect — that is, the impacts of a successful business go beyond financial benefits to the owner. Rather, businesses that are bound in traditional practices and management of country help to contribute to sustaining First Nations Australian communities. The government offers some support for First Nations Australian entreprenuers in the area of regional tourism ventures. For example, Koomal Dreaming has received government support to improve their food preparation and storage areas at tour locations and employ more local First Nations people to cater for more guests on their food tours.

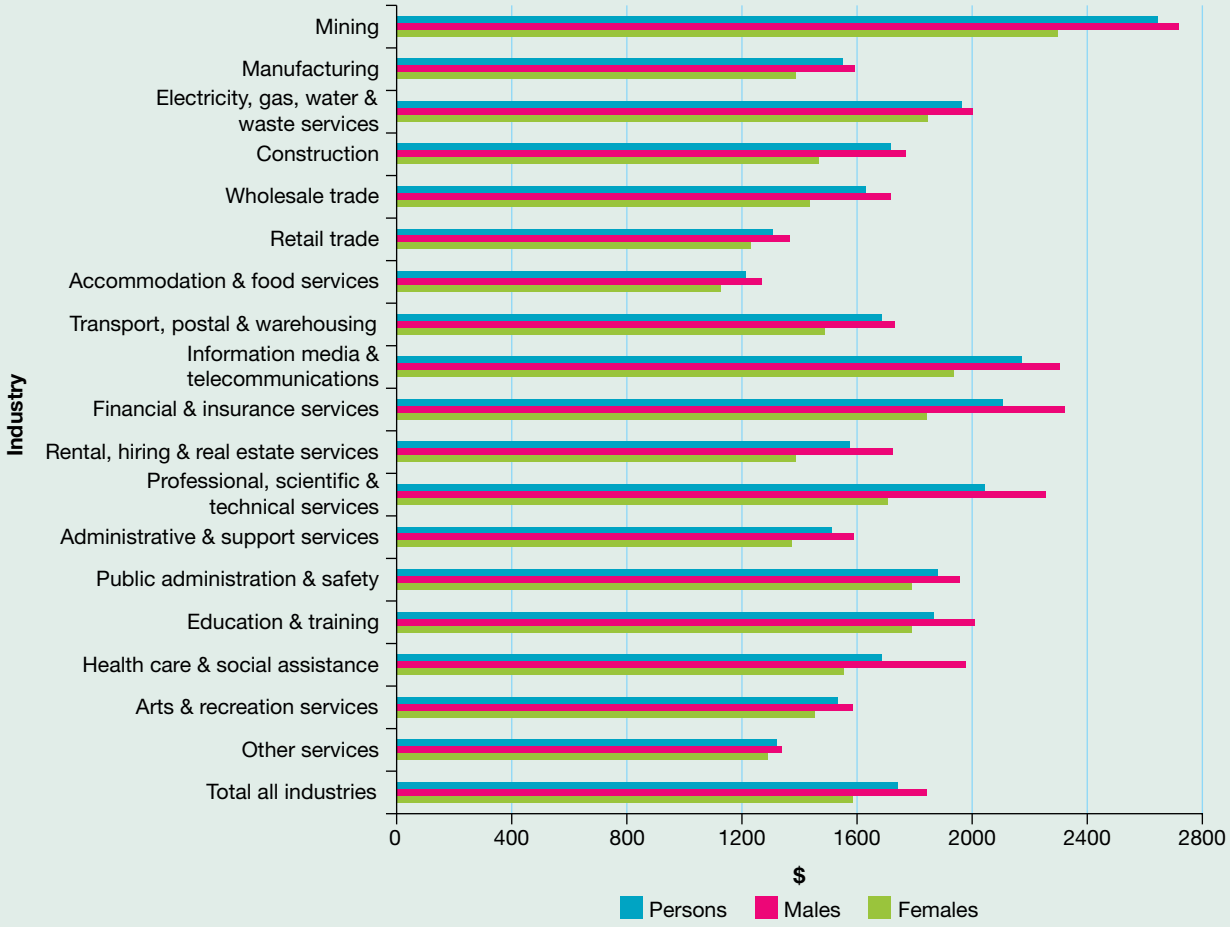
SkillBuilders to support skill development

- 17.5 Interpreting and explaining graphs

19.6 SKILL ACTIVITY: Interpreting and analysing

FIGURE 6 shows average weekly earnings for full-time workers in Australia.

FIGURE 6 The average weekly ordinary time earnings of full-time adults, by industry



Source: Australian Bureau of Statistics, Average Weekly Earnings, Australia November 2021

1. **Identify** the five highest paying industries for all persons.
2. Choose three of the industries you have identified and **explain** why these are high-paying industries.
3. **Identify** the three lowest paying industries. **Explain** why these industries offer lower earnings.
4. **Outline** the trend between the amount males earn and the amount females earn in each industry.
5. **Explain** the potential reasons for your findings in the previous question.

Resources

Interactivity The average weekly ordinary time earnings of full-time adults, by industry (int-8965)

19.6 Exercise

learnon

19.6 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2	3, 4, 6	5, 7, 8

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Check your understanding

1. **Determine** if the following statements are true or false.
   a. The income you can earn from a job can help you to improve your living standards.
   b. A wage is different from a salary.
   c. Dividends are a reliable source of income.
2. **Identify** three reasons a person may receive a welfare payment.
   A. They are working full-time.
   B. They are sick.
   C. They have retired and cannot support themselves.
   D. They are under the age of 16.
   E. They are unemployed.
   F. They are working for the healthcare system.
3. Rental income often comes from an investment property. **Propose** some of the risks involved in owning a rental property.
4. **Rank** each of the following occupations according to their level of status and prestige on a scale of 1 to 10, where 1 is the highest status and 10 the lowest. Place your number rankings in the column on the right. **Compare** your list with those of other class members.

a. Entertainers		b. Doctors	
c. Teachers		d. Bankers	
e. Firefighters		f. Scientists	
g. Police		h. Athletes	
i. Plumbers		j. Computer programmers	

Apply your understanding

Communicating

5. Answer the following.
   a. **Explain** what is meant by being a shareholder.
   b. **Outline** the benefits and risks of being a shareholder.
6. **Differentiate** between a wage and a salary.
7. **Explain** what is meant by the term *standard of living*.
8. **Explain** how a person might combine different sources of income.

LESSON
19.7 What contribution can work make to individuals and society?

LEARNING INTENTION

By the end of this lesson you should be able to analyse the contribution that work can make to an individual's identity and role within a community.

TUNE IN

Work with a partner and brainstorm the reasons that people go to work.

1. No doubt you thought of money! What do you think are the best paid occupations in Australia?
2. If you won the lottery tomorrow, would you still plan to go to work? Discuss your answer with a partner.
3. Write down the advantages and disadvantages of continuing to work if you won the lottery.

FIGURE 1 If you had a big win, would you still work?

19.7.1 What is work?

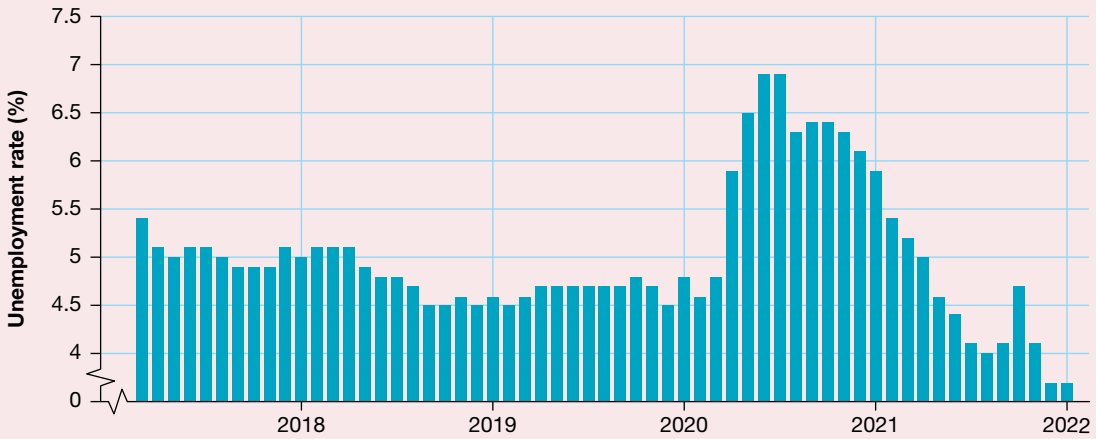
The Australian Bureau of Statistics defines people as 'employed' if they work one hour or more in a week. This includes everyone who works — from teenagers working part-time after school, to adults working full-time jobs and semi-retired people continuing part-time in the work force to stay active and engaged.

To be unemployed, you must not be employed for one hour or more, you must be actively seeking work and you must be currently available for work.

DISCUSS

The graph in **FIGURE 2** shows the unemployment rate in Australia. What has happened to the unemployment rate in Australia over the period shown? How might this affect people in Australia?

FIGURE 2 The unemployment rate in Australia from 2018 to 2022



Source: Australian Bureau of Statistics. (2023, August). *Labour Force, Australia*. ABS. https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release.

19.7.2 The importance of work in our community

Since early times, people have busied themselves, undertaking tasks and performing activities such as hunting for food, gathering berries, planting seeds and picking fruit, all of which required manual labour.

When we think of the term 'labour', our first thought will often be 'work'. In very general terms, work is defined as human labour. A more complex definition is the performance of laborious tasks (mental and physical) and/or the provision of time and effort in exchange for money.

FIGURE 3 Aged care workers have a clearly defined role in our community because they help an important group of people in our society.

Supporting the community

If you are working, you are part of the labour force and being in the labour force means that you are earning a wage and participating in a community, where people may have similar interests and things in common. You will gain many things from being a part of this community, including feelings of self-esteem, belonging and purpose. Some types of occupation, however, link directly with a community group and these jobs can define our role in our local community. A police officer or teacher is a good example of this, and these occupations support key groups of people within a community setting.

19.7.3 Why do people work?

Even the wealthiest people in the world often choose to work. This is because many personal benefits can be gained from working, aside from financial benefits. You may have already come up with some responses, but here are some of the common reasons that people work.

FIGURE 4 A cardiologist is a medical specialist who can diagnose and treat diseases and conditions of the heart and blood vessels. Cardiology is one of the highest paid professions in Australia.

Earning an income

The main reason we work is to get paid: to receive a wage or salary for the work that we perform or the services we provide. When someone is working, they are classed as being employed. It is a fact that to survive, we must have money. While earning money, many workers will struggle to maintain some degree of balance between work and leisure, known as **work–life balance**. This need for work–life balance is important to many workers, and maintaining a good balance can form the foundations of a good life and a worker's sense of wellbeing.

Improving living standards

Imagine that you have a teenage cousin or friend who has just received her first pay packet from a part-time job. At the weekend, she decides to visit a shopping centre and buy some new running shoes. The income from her job has provided her with the money to buy the running shoes, and this will help her to train better.

work–life balance the division of one's time and focus between working and family or leisure activities

Working generates an income that enables consumers to satisfy their needs and wants. When people can buy the things that they need and want, this is classed as satisfying your **material living standards**. People who have high incomes are generally able to buy a large amount of material possessions such as designer clothes, jewellery, cars, expensive mobile phones and overseas holidays.

However, work can also affect a person's **non-material living standards**. Non-material living standards are classed as factors that affect a person's quality of life irrespective of income. Non-material living standards includes things such as crime rates, public health facilities, pollution levels, stress levels and general feelings of happiness. These are hard to measure; however, as a general indicator, when people are working, they are generally happier.

Self-esteem

In a recent survey, 200 employees of a factory were asked to write down the most important aspect of their work. The responses revealed that it was not money — 67 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. Both job satisfaction and self-satisfaction were important. This doesn't mean that money is not important; it is. However, you can get many other rewards from a job, such as feelings of accomplishment and self-esteem.

material living standards
access to physical goods and services

non-material living standards
factors that affect a person's quality of life regardless of income

FIGURE 5 Knowing they are doing a job well is very important to many workers.

Happiness

For some of us, work genuinely brings happiness. Studies have shown that if you are happy with your work and your work colleagues, you will be happier in other aspects of your life. Furthermore, the social elements of work, such as friendship, help us to feel more engaged and productive at work.

TABLE 1 summarises some of the non-financial and financial benefits of being employed and participating in the workforce.

TABLE 1 Some of the benefits of participating in the workforce

Non-financial benefits of participating in the workforce	Financial benefits of participating in the workforce
• The opportunity to use your skills and abilities in a positive way • Meeting and mixing with new people • Doing something you love and are passionate about • Increasing your self-esteem and confidence • Developing your natural strengths and talents • Wanting to be part of a group or a team at work • Having friends at work • Contributing to the Australian economy • Being happy	• Earning an income • Exchanging money for goods and services • Being a consumer • Having the ability to buy what you need and want • Creating and maintaining a good standard of living for your family

SkillBuilders to support skill development

- 17.4 Conducting research

19.7 SKILL ACTIVITY: Evaluating, concluding and decision-making

By this point, you should have had some discussions about your future aspirations. This activity will allow you to research this further and think about the different dimensions of a job.

FIGURE 6 Enjoying something, such as photography, might be a good place to start when thinking about a career. However, many other aspects need to be considered.

1. **Conduct research** on the different types of jobs available. You might like to use the **Careers** weblink in the Resources panel, which shows a list of many possible occupations. Choose an occupation that you think you would be interested in (for example, actor, doctor or photographer).
2. Click on your chosen job profile and locate the expected wage/salary that this job pays. Write this down if it is stated. Do you think that this is a fair wage? How does it **compare** with other wages for other jobs?
3. Read the overview of the job. **Explain** how this job would contribute to making you feel part of a community. Would it involve you directly caring for a person or group of people? In what way is your chosen job important for society?
4. **Explain** three other benefits that you imagine this job would bring to you.

Resources

Weblink Careers

19.7 Exercise

learnon

19.7 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3, 4	5, 6, 7, 8	9, 10

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Check your understanding

1. **Identify** three important reasons people work.
   - A. To earn an income
   - B. To improve their standard of living
   - C. To decrease their standard of living
   - D. To increase their stress levels
   - E. To feel improved self esteem
2. **Determine** if the following statements are true or false.
   - a. Work can be defined as something that you have to do to pay your taxes.
   - b. According to a recent survey, employees generally care more about making money than about doing their job well.
   - c. Work can be defined as human labour.
3. **Define** what is meant by *being employed*.
4. **Select** the correct options to complete the sentence.
   To be unemployed, you must not be employed for one **hour** / **day** / **shift** or more, you must be actively **completing** / **seeking** work, and you must be currently **unavailable** / **available** for work.
5. Look at the benefits that can be gained from participating in the workforce discussed in this lesson. Do you agree with them? **Explain** your answer.

Apply your understanding

6. **State** two reasons it is important for people to work.

Communicating

7. **Explain** what is meant by material living standards.
8. **Outline** the difference between material and non-material living standards.
9. **Explain** how work can increase your material living standards.
10. Work is important for providing people with self-esteem. **Explain** what this means and provide an example of how someone may feel higher self-esteem from their employment.

LESSON
19.8 What are the different types of work?

LEARNING INTENTION

By the end of this lesson you should be able to identify the different types of work (including full-time, part-time, casual, at home, paid, unpaid, unrecognised and volunteer work) to appreciate the reasons people work or contribute to community organisations.

TUNE IN

Study the two images shown in **FIGURE 1** that show two very different types of work.

FIGURE 1 Many different types of work exist.

1. Brainstorm what work each person might be doing.
2. Estimate the salary that each person might earn.
3. Discuss how the work the person on the left is doing might contribute to society.
4. Discuss how the work the person on the right is doing might contribute to society.

19.8.1 What counts as work?

Work is defined as human labour, or the performance of laborious tasks (mental and physical) and/or the provision of time and effort in exchange for money. When the exchange involves money, we refer to this as paid work. The money we receive is, as we know, referred to as a wage or salary. Of course, other types of work that we do go unpaid. Jobs such as cooking, cleaning and gardening are all work, but you cannot argue that you are employed when you are cleaning your own room.

Similarly, household chores do not earn an income, although your parents may reward you with pocket money for performing them. In the world of economics, however, pocket money is not considered an income. Other examples of unpaid work are family duties, school, voluntary work and community service.

full-time an employee who works 35 hours or more per week, or who works the minimum number of hours stipulated by the industrial award for that occupation or industry

part-time an employee who works fewer than 35 hours per week

casual an employee who works only when needed

seasonal an employee who usually works during a season, such as winter or the fruit-picking season

19.8.2 The labour force

As we learned in lesson 19.7, Australia's labour force is made up of people who are working. This also includes people who are actively looking for employment, whether it is **full-time**, **part-time**, **casual** or **seasonal**.

Our labour force is made up of people aged 15 and over who are either employed (including self-employed people) or unemployed. People not regarded as part of the labour force include:

- people eligible for the state pension
- people who have retired from the workforce
- people with a physical or mental disability that prevents them from working
- full-time students who do not work
- full-time carers who look after children or other family members
- volunteers working without pay in institutions such as the State Emergency Service and charities.

FIGURE 2 People who work or are looking for work are part of the labour force.

A small percentage of the labour force (4.2 per cent in March 2022) is unemployed.

In Australia, we have **industry-wide awards** that set out the minimum wages and **working conditions** for all employees in an entire industry or occupation. These awards also set out the award hours, which are the minimum weekly hours of work that a person covered by that award must be given.

19.8.3 Types of workers

In Australia, workers are classified as full-time or part-time, permanent, or casual, self-employed or seasonal. People have different reasons for being employed on a particular basis. As an example, a student studying at university will most likely decide to work on a part-time basis, so that they can fit the work in with their study. The four main categories of work are described in **TABLE 1**.

Some key facts about types of work include the following:

- The proportion of employed people who are classified as full-time has fallen over the past 10 years.
- In January 2021, 68.8 per cent of employed people were employed on a full-time basis; 10 years ago, it was 70.9 per cent.
- In contrast, part-time employment sits at around 30 per cent, although this is rising.
- Women made up almost half the paid workforce in Australia in 2020, compared to around 30 per cent in 1966.

industry-wide awards legally binding documents that set out the minimum wages and other entitlements for all employees in an industry or occupation

working conditions all those things an employer has agreed to provide in exchange for the employee's work, ranging from the physical work environment to hours of work, rates of pay and leave entitlements

TABLE 1 Different types of workers

Type of worker	Features
Full-time worker	• Ongoing employment • Number of hours per week is 35 or more
Part-time worker	• Ongoing employment • Number of hours per week is fewer than 35 • Number of hours may be fixed or variable
Casual worker	• Employed on an 'as needed' basis • No permanent weekly roster • Hours vary from week to week; for instance, 10 hours one week and 3 hours the next • May work for more than one employer
Self-employed	• An individual who works for himself or herself

The unemployed

The unemployed are those people who are actively looking for work but are not presently employed. The unemployed includes people who have lost their jobs because of changes in the economy, those about to start a new job, and those who are between jobs (such as fruit pickers and ski-resort workers).

Permanent, casual and seasonal workers

Permanent workers are those who as part of their working conditions are entitled to either paid holiday leave or sick leave, or both. Casual workers are those who as part of their working conditions are not entitled to either paid holiday leave or sick leave, or both. Seasonal workers are usually workers who are employed during a season, such as summer or winter. For example, apple fruit pickers would work only during the apple harvesting season and ski instructors would work only during the cold winter season when there is snow.

FIGURE 3 Ski instructors are seasonal workers who are employed only during winter.

Voluntary work and other unpaid work

When we look at Australia's labour force, we tend to focus on who is employed, who is unemployed or who is seeking employment. While we focus on paid work, we also need to remember that not all work is done for a receipt of payment. Sometimes we neglect to acknowledge the valuable contributions made by other groups that do not fit into these categories. These groups include:

- volunteers or contributors to community organisations, such as medical specialists working with Doctors without Borders (Médecins Sans Frontières) or country firefighters
- a grandparent caring for a grandchild
- parents caring for a sick or disabled child
- parents who stay at home to raise the family.

According to govolunteer.com.au, more than 6 million Australians volunteer each year. People volunteer for many reasons and in many ways. Some use volunteering as way to gain new skills or add experience to their resume. Others use it to meet new people, make new friends or try something new. Making a difference to the community and having a sense of purpose are also popular reasons for volunteering.

Volunteer workers play a significant role in society. Their contribution to the economy is vital, necessary and valuable. Many people work part-time for non-profit agencies such as the Volunteer Fire and Rescue Service (VFRS), Meals on Wheels, help lines, and with community support groups such as those helping the aged, reading to preschool children, or even handing out pamphlets for political parties on election day. These workers will usually not receive any payment for the work they perform. They freely volunteer their time and effort to help others in the community, yet in many cases are undervalued and do not receive the recognition they deserve.

FIGURE 4 A surf lifesaver is a trained volunteer who patrols beaches on the weekends. Surf lifesaving can be fun and rewarding, and can lead to employment in the sector.

Not all unpaid work is volunteer work. Unpaid work can occur in the workforce in different forms — from vocational placements to unpaid job placements, internships, work experience and trials. Reasons for this type of unpaid work include:

- giving a person experience in a job or industry
- providing training and skills and/or work experience as part of formal programs to assist people to obtain work
- testing a person's job skills
- volunteering time and effort to a not-for-profit organisation.

A large amount of unpaid work goes on within our own homes, and this includes the vast amount of work that is undertaken to cook, clean, wash, repair, run errands, care for others and so on. Experts estimate that if all this work was to be actually paid for, it would be worth over $605 billion dollars.

FIGURE 5 Caring for a family member with a disability is a common type of unpaid work.

According to a 2021 report, women account for most unpaid work, such as domestic household chores and other types of caring (including caring for people with disability or older Australians) and volunteer work.

This report highlighted that women conduct 76 per cent of childcare, 67 per cent of domestic work, 69 per cent of care of adults and 57 per cent of volunteering. The report also looked at results by location. In more advantaged areas, couples may substitute unpaid work for paid domestic help. Regardless, if a household had 20 hours of unpaid work a week, a woman would conduct 15 hours of it and a man five hours.

19.8 SKILL ACTIVITY: Communicating

Consider the following scenario.

Every Thursday, single mum Alicia works for 14 hours but is only paid for eight of them. Before she gets to the school where she's a full-time Physical Education teacher, she's already done a load of laundry, hung it out, made the beds and chopped vegetables for the evening meal.

When the school bell rings at 3:30 pm, she leaves school to take her 83-year-old mother to the local supermarket. Alicia carries the groceries up the stairs to her mother's home, unpacks them and helps her mum prepare a meal.

When her mum is settled and eating her meal, and the fridge is cleaned and organised, Alicia heads home to cook dinner for her own family. She then packs the dishwasher, soaks the pans, puts on some washing, makes the lunches for the following morning and cleans the house.

1. Using **FIGURE 6** to help you, **describe** the different types of work that Alicia does.

FIGURE 6 Categories of unpaid work and care

Household or domestic work

All housework, errands and outdoor tasks:

- **Housework** such as preparing meals, washing dishes, cleaning the house, washing clothes, ironing and sewing.
- **Errands** such as shopping, banking, paying bills, and keeping financial records (but not driving children to school and to other activities).
- **Outdoor tasks** including home maintenance (repairs, improvements, painting etc.), car maintenance or repairs, and gardening.

Caring for the ill, disabled or elderly

Caring for a disabled spouse or disabled adult relative, or caring for elderly parents or parents-in-law.

Caring for children

All care provided to your own children and to the children of others:

- **Caring for your own children** including playing with your children, helping them with personal care, teaching, coaching or actively supervising them, or getting them to child care, school and other activities.
- **Looking after other people's children** aged under 12 years.

Volunteer or charity work

Volunteer or charity work such as canteen work at the local school or unpaid work for a community club or organisation.

Source: *Modelling the value of unpaid work and care*, Office for Women, Department of Health and Human Services, October 2018.

2. Using **FIGURE 6**, **identify** someone in your life with a similar role to Alicia or someone who does work in all four categories. **Create** a brief account of their day.
3. **Explain** the benefits that doing different types of work can give a person.
4. **Describe** the disadvantages of juggling so many different roles.

19.8 Exercise

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19.8 Exercise

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
1, 2, 3	4, 5, 6, 8	7, 9, 10

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Check your understanding

1. **Identify** the difference between paid and unpaid work.
   - A. Unpaid work is rewarding, and paid work is not.
   - B. Paid work is performing services for one hour or more per week in return for receiving an income, whereas unpaid work comprises those tasks performed without receiving an income.
   - C. Paid work is performing services for at least five hours per week in return for receiving an income, whereas unpaid work comprises those tasks performed without receiving an income.
   - D. All of the above
2. **Recall** the least number of hours per week that an employee must work to be considered working full-time.
3. **Identify** three examples of volunteer work.
4. **Match** each of the following terms to the correct definition by placing the corresponding letter in the middle column.

Part-time		a. The hours of work change each week.
Full-time		b. Two hours each day from Monday to Friday are worked.
Casual		c. At least 35 hours a week are worked.

5. **Determine** if the following statements are true or false.
   - a. The role of women in the workforce has not changed since the 1960s.
   - b. If work is not paid for it does not count as work.
   - c. A part-time worker is anyone who works under 25 hours a week.
   - d. The proportion of employed people who are classified as full-time has fallen over the past 10 years.
   - e. 'Award hours' refers to being awarded extra pay for working overtime.
   - f. Casual workers are entitled to paid sick leave and annual leave as part of their working conditions.

Apply your understanding

Interpreting and analysing

6. **Identify** what types of work are described in the following.
   - a. Hours vary per week and employment is on an 'as needed' basis
   - b. Ongoing employment but the number of hours per week is fewer than 35
   - c. Tasks performed without receiving an income
   - d. Performing services for one hour or more per week in return for receiving money or income
7. The number of people looking for and accepting part-time work has increased recently. **Analyse** why this may be occurring.

Communicating

8. Most people who work full-time happen to be men, while the greatest proportion of part-time and casual staff are usually women. **Explain** why this might be.
9. Voluntary workers play a significant role in society. Do you agree or disagree? **Justify** your response.
10. **Differentiate** between casual employment and part-time employment.

LESSON
19.9 INQUIRY: Innovation and entrepreneurs

LEARNING INTENTION

By the end of this lesson you should be able to summarise a recent innovation and explain the role of the entrepreneur within the economic and business environment.

Background

Society is diverse and so is the world of work. Work comes in many different forms and has a large role to play in helping us and our communities.

FIGURE 1 The world of work is as diverse as society.

Before you begin

Access the **Inquiry rubric** in the digital documents section of the Resources panel to guide you in completing this task at your level. At the end of the inquiry task, you can use this rubric to self-assess.

Inquiry steps

Step 1: Questioning and researching

Visit the **Australian Government Business** weblink in the Resources panel. The pages within this website detail how entrepreneurs can apply for business support and show some of the new innovations coming to market.

Define what is meant by an 'entrepreneur'.

Using the **Australian Government Business** weblink in the Resources panel or other websites, find news and updates on new innovations.

Step 2: Interpreting and analysing

Select one innovation and **summarise** it. Include information about whether the innovation has any of the special features that enable a good or service to be more successful.

Explain how this innovation can benefit society.

Do you think that everyone can become an entrepreneur? **Explain** your answer.

Step 3: Evaluating, concluding and decision-making

Explain how you might like to contribute to society in the future. Will you be an entrepreneur? Will you work for someone else? Will this ideally be full-time or part-time? Will you volunteer? **Explain** the reasons for your answers.

Step 4: Communicating

Communicate your findings on the role of the entrepreneur. Use a format of your choice agreed upon by your teacher.

Complete your self-assessment using the **Inquiry rubric** or access the 19.9 exercise set to complete it online.

on Resources

Digital document Inquiry rubric (doc-39387)
Weblink Australian Government Business

LESSON
19.10 Review

Hey students! Now that it's time to revise this topic, go online to:

Review your results

Watch teacher-led videos

Practise questions with immediate feedback

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19.10.1 Key knowledge summary

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

19.2 What is the role of the entrepreneur?

- An entrepreneur takes on a risk by starting any business with an idea, hoping to make a profit through initiative and enterprise.
- Any person, of any age, can be an entrepreneur as long as they have a great idea and the determination to make it happen.
- Business owners run businesses on a day-to-day basis to make a profit. They minimise risks and make calculated decisions where the outcome is reasonably clear. A business owner might have an idea for solving a problem and meeting a need in order to satisfy customers.

19.3 How do values influence entrepreneurial decision-making?

- Entrepreneurs may possess certain values that are more likely to influence the decisions that they make.
- Entrepreneurs must follow government laws and regulations, and their values need to incorporate elements such as worker and product safety.

19.4 What other factors contribute to the success of entrepreneurs?

- Successful entrepreneurs aim to have a high-quality product, quality service, sound management practices and a suitable location.

19.5 What is the role of First Nations Australian entrepreneurs?

- First Nations Australian entrepreneurs are innovating and building strong business ventures.
- Many First Nations Australian entrepreneurs incorporate community support into their ventures.

19.6 What are sources of income?

- Sources of income include work, owning a business, being a shareholder or providing a rental service.

19.7 What contribution can work make to individuals and society?

- Work is an important part of every person's life, and is necessary to fund the purchase of goods and services to meet needs and wants. Work also has non-financial benefits.
- People work for different reasons: to earn money, to improve living standards, to gain prestige, to obtain self-satisfaction, to make friends and to help others.

19.8 What are the different types of work?

- Work can be paid or unpaid.
- Work can be voluntary, and volunteers make an important contribution to the community.
- More men than women are in full-time employment. Women tend to have more part-time or casual employment.

19.9 INQUIRY: Innovation and entrepreneurs

- Entrepreneurs and innovation enable goods and services to be more successful.

19.10.2 Key terms

casual an employee who works only when needed
cooperative a farm, business or other organisation owned and run jointly by its members, who share the profits or benefits
enterprise the creative or bold efforts made by someone to achieve something new
entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise
full-time an employee who works 35 hours or more per week, or who works the minimum number of hours stipulated by the industrial award for that occupation or industry
industry-wide awards legally binding documents that set out the minimum wages and other entitlements for all employees in an industry or occupation
initiative the first step or opening move in a series of actions
innovation either adding a new product to an existing product line, or significantly improving an existing product or process
material living standards access to physical goods and services
moral concerned with the principles of right and wrong behaviour
negotiator a person who either comes to an agreement with someone else, or helps other people reach such an agreement
non-material living standards factors that affect a person's quality of life regardless of income
part-time an employee who works fewer than 35 hours per week
premises the land and buildings occupied by a business
quality service dealing with clients and customers in a respectful and helpful way
salary fixed or regular payment for work completed or services performed
seasonal an employee who usually works during a season, such as winter or the fruit-picking season
socially responsible management when a business shows concern for the social welfare of the community, including customers, staff and the environment
speculator a person who invests in stocks, property or other ventures in the hope of achieving a profit and a source of income
standard of living quality of life as measured by the amount of money made by an individual or household (using income per capita or income per household)
target market a market at which a product is deliberately aimed
values things a person holds as being important; can affect the way you live and work
wage payment for work completed or services performed, usually dependent on hours worked per week or month
wellbeing an overall measure of quality of life
word-of-mouth the passing of information about a business from a satisfied customer to prospective customers
working conditions all those things an employer has agreed to provide in exchange for the employee's work, ranging from the physical work environment to hours of work, rates of pay and leave entitlements
work–life balance the division of one's time and focus between working and family or leisure activities

19.10.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry questions posed in the Overview:

What is the role of the entrepreneur within the economic and business environment? What types of work exist and in what other ways can people gain an income?

1. Now that you have completed this topic, what is your view on the questions? 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 questions, outlining your views.

on Resources

eWorkbooks Customisable worksheets for this topic (ewbk-10573)
Reflection (ewbk-10575)
Crossword (ewbk-10574)

Interactivity Work and entrepreneurship crossword (int-8966)

19.10 Review exercise

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Multiple choice

1. Sources of income include
   - A. casual work and odd jobs.
   - B. salaries from working full-time or part-time.
   - C. payments from superannuation.
   - D. all of the above.
2. What must you be to be officially considered employed?
   - A. Actively contributing to society
   - B. Working more than one hour in a full-time, part-time or casual position
   - C. Over the age of 15 and looking for work
   - D. All of the above
3. Which of the following groups is not part of the labour force?
   - A. People actively looking for work
   - B. Unemployed people
   - C. Casual workers
   - D. Pensioners
4. Why do most people work?
   - A. To get rich and famous
   - B. To buy a brand-new car and designer clothes
   - C. To receive an income
   - D. To fulfil a lifelong dream
5. What can material living standards be measured by?
   - A. The amount of goods and services you can afford
   - B. The feeling of satisfaction you receive from work
   - C. How stressed you feel
   - D. The levels of crime, and the leisure time and facilities you have access to
6. What is meant by non-material living standards?
   - A. Factors that affect a person's quality of life irrespective of income
   - B. Access to more goods and services
   - C. Dividing your time between work and leisure
   - D. All of the above
7. What is a financial benefit of participating in the workforce?
   - A. Developing your skills and talent
   - B. Being able to be a consumer
   - C. Increasing your levels of happiness
   - D. Contributing to the Australian economy
8. Working can improve self-esteem. What does self-esteem mean?
   - A. Feeling of stress from too much work
   - B. Feeling good about yourself and your accomplishments
   - C. Being able to use your skills
   - D. Earning money and increasing your material living standards

9. What can casual work be defined as?
   - A. Full-time employment
   - B. Volunteer or community support roles
   - C. Working a set shift pattern each week
   - D. Working only when needed
10. Unpaid work
   - A. is not included in official measurements of work.
   - B. includes caring for family members, and completing household chores.
   - C. is mostly performed by women.
   - D. includes all of the above.

Short answer

Communicating

11. **Discuss** the benefits of being an entrepreneur.
12. **Discuss** the benefits of working as a volunteer
13. **Explain** how First Nations Australian entrepreneurs contribute to society.
14. Do we work for a living or do we live to work? **Explain** your answer.
15. Income is not limited to earning a wage. **Discuss** two alternative forms of income.

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GLOSSARY

absolute dating techniques methods used to assess the age of something (e.g. radiocarbon dating, tree-ring dating)
accused a person who has been charged with a criminal offence
acropolis a city, citadel or complex that sits on a high hill
active citizenship relates to getting involved in your local community and displaying values such as respect, inclusion and helping others
acupuncture a medical practice in which long, sharp needles are inserted under the skin as a means of diagnosing, relieving or curing illness
aerial photograph a photograph taken of the ground from an aeroplane or satellite
agora large open space in the centre of a Greek city that served as a public meeting area and marketplace
agriculture the cultivation of land, growing of crops or raising of animals
alluvium the loose material brought down by a river and deposited on its bed, or on the floodplain or delta
amenities desirable or useful features of a place that make it more pleasant or attractive
amulet charm believed to protect against evil
anaesthetic drug to deaden pain
ancestral beings gods or deities who taught people how to live and the rules of society; regarded as the direct ancestors of First Nations peoples living today
ancient history the period from the beginning of civilisation to the fall of the Roman Empire
anno Domini Latin for 'in the year of our Lord'
anthropologist someone who researches the appearance and features of the life of prehistoric people and the connections they had with other human populations
anthropomorphic describing or representing something as having human traits, despite its original lack of these characteristics
appropriate technology technology designed specifically for the place and the people who will use it; features include being affordable and repairable locally
aqueduct structure built to carry water long distances
aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater; water can move along an aquifer
archipelago islands scattered over an expanse of water
arid lacking moisture; especially having insufficient rainfall to support trees or plants
artefact an object made or changed by humans
artesian aquifer an aquifer confined between impermeable layers of rock; the water in it is under pressure and can flow upward through a well or bore
artificer craftsperson or inventor
artisans skilled craftspeople
Asiatic peoples of Asia, including the Middle East
aspect feature or quality, or the direction something is facing
astrology interpreting the influence of the stars on human affairs
astronomy study of the stars and planets
atmosphere the layer of gases surrounding Earth
auxiliaries soldiers in the Roman army drawn from areas conquered by Rome and made part of its empire
avalanche rapid movement of snow down a slope, usually under the influence of gravity; can also be triggered by animals, skiers or explosions
bail the promise that an accused person makes to appear in court at a later date
barbarians the Roman term for all peoples who lived beyond the borders of the empire
barometer an instrument used to measure air pressure
Before the Present a term used by archaeologists instead of BCE (before the common era) for when time periods are vast

beyond reasonable doubt the standard of proof required in a criminal trial where the prosecution must prove that the accused is guilty to such a high degree that a reasonable person would have little doubt that the accused committed the crime
biased one-sided or prejudiced; seeing something from just one point of view
bicameral a parliament with two houses
biodiversity the variety of life in the world or in a particular habitat or ecosystem
blasphemous great disrespect shown to God or to something holy, or something said or done that shows this kind of disrespect
built environment a place that has been constructed or created by people
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
bureaucrat government official
business any activity conducted by an individual or individuals to produce and sell goods and services to make a profit
Cabinet the top-level decision-making group within the Australian Government made up of most or all ministers
canopic jars used to store the liver, lungs, intestines and stomach of the person being mummified
cassowary a large flightless bird related to the emu with a bare head and neck
castrated having had the testicles cut off
casual an employee who works only when needed
cataracts rapids, where the river's surface is broken by rocks
catchment area the area of land that contributes water to a river and its tributaries
catchment the drainage basin of a river
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
cay a small island found on coral reefs
census a regular survey used to determine the number of people living in Australia; also has a variety of other statistical purposes
chronology a record of past events in order of time, from Latin *chronos* meaning time and *logos*, meaning to work out
civil war war between rival factions within one state or country
civilisations societies that have towns and features such as complex forms of government and religion
clan a group of people of common descent or ancestry
climate change any change in climate over time, whether due to natural processes or human activities
cloud seeding implanting clouds with substances to cause rain
colonial relating to the time when Australia was a British colony, under the control of the British government
committal hearing in very serious cases, the procedure held in a lower court to determine if enough evidence exists for the case to move to a higher court
community a group of people who live and work together, and generally share similar values; a group of people living in a particular region
concubines women who lived with the emperor in a sexual relationship but were not married to him
congregate to come together in a smaller crowd or group within a larger community
conscripted forced to become a soldier
constellations groups of stars
constitution a set of rules that determines the structure of government and its law-making powers
consumer a person or group who is the final user of goods and services produced within an economy
contestability when particular interpretations of the past are open to debate
continent one of seven very large, continuous bodies of land; they are Europe, Asia, Africa, Antarctica, Australia, North America and South America
continuity and change the concept that while many changes occur over time, some things remain constant
continuous resource a resource that is never used up by humans
conurbation an extended urban area, usually made up of a town merging with the suburbs of a city
convention an unwritten rule, not a law; an accepted way of doing something

cooperative a farm, business or other organisation owned and run jointly by its members, who share the profits or benefits
corporation a legal entity that is separate and distinct from its owners
counsel for the accused a lawyer who represents the accused person
Country the place where a First Nations Australian comes from and where their ancestors lived; it includes the living environment and the landscape
crevasse a deep crack in ice
crucified killed by crucifixion, an ancient form of execution in which the victim was tied or nailed to a pole or (as was Jesus) a cross and left to die slowly in agony
cubit an ancient measure of length, based on an adult's forearm
cultural intolerance when individual differences are not accepted by others
cumulonimbus clouds huge, thick clouds that produce electrical storms, heavy rain, strong winds and sometimes tornadoes; they often appear to have an anvil-shaped flat top and can stretch from near the ground to 16 kilometres above the ground
cyclones intense low-pressure systems producing sustained wind speeds in excess of 65 km/h; they develop over tropical waters where surface water temperature is at least 27 °C
Daoist a follower of Daoism
deity god or goddess
delta low, triangular area where a river fans out as it nears the sea
demise death
democracy a political system according to which citizens choose the way in which they are governed, and elect representatives to make laws on their behalf
demographic describes statistical characteristics of a population
demotic script the simplest of the ancient Egyptian scripts; almost like handwriting
deported forced to leave the country
desalination a process that removes salt from sea water
dialects different forms of a language
dictator a person who has absolute power within a country, and who usually cannot be voted out of power by democratic elections; a government headed by a dictator is usually referred to as a dictatorship
discrimination unfair or prejudicial treatment of people and groups based on race, gender, age or sexual orientation
dissection systematic cutting up of a body for medical study
diverse showing a great deal of variety
divination the skill of reading omens
Dorians tribes from the north of Greece who moved into the south during the Dark Age
drought a long period of time when rainfall received is below average
dugong a sea animal, sometimes called a sea cow, found mainly on the coasts bordering the Indian Ocean
duties obligations placed on citizens to ensure society runs smoothly
ecological footprint total area of land used to produce the goods and services consumed by an individual or country
economic scarcity the economic problem of having unlimited needs and wants, but limited resources to satisfy them
economic system a way of organising the production and distribution of the nation's goods, services and incomes
economics a social science (study of human behaviour) that analyses the decisions made by individuals, businesses and governments about how limited resources are used to satisfy unlimited needs and wants
ecosystem a community of organisms, plants or animals and the environment they exist in
edict order issued by a sovereign to his or her subjects
El Niño the reversal (every few years) of the more usual direction of winds and surface currents across the Pacific Ocean; this change causes drought in Australia and heavy rain in South America
emotive words words that create a strong emotional reaction
employees people who work for a wage or salary
enterprise the creative or bold efforts made by someone to achieve something new

entrails internal organs of an animal
entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise
environmental resource a material found in nature that is necessary or useful to people
Ephorate five-man ruling body in Sparta that advised the kings
Etruscans advanced, civilised people who dominated early Rome from about 575 BCE to about 396 BCE
evaporate to change liquid, such as water, into a vapour (gas) through heat
evaporation the process by which water is converted from a liquid to a gas and thereby moves from land and surface water into the atmosphere
evidence information that indicates whether something is true or really happened
federation the formation of a united country from a number of separate states or colonies, with law-making power shared between the national government and the governments of each of the states
flood inundation by water, usually when a river overflows its banks and covers surrounding land
fly in, fly out (FIFO) workers who fly to work in remote places, work 4-, 8- or 12-day shifts and then fly home
forage to search for provisions or food
formal describes an event or venue that is organised or structured
forum open meeting place of a town or city
franchise a business that gives the right to another person or business to sell goods or services using its name
frostbite damage caused to the skin when it freezes, brought about by exposure to extreme cold; extremities such as fingers and toes are most at risk, along with exposed parts of the face
full-time an employee who works 35 hours or more per week, or who works the minimum number of hours stipulated by the industrial award for that occupation or industry
gale force wind wind over 62 kilometres per hour
genealogical an account of the descent or ancestry of a person or group
geologist someone who studies the sediments and landforms associated with ancient campsites
global citizens people who are aware of the wider world, try to understand the values of others, and try to make the world a better place
goods physical or tangible items that satisfy needs and wants
government a group of people with the power to rule over a country or state and make decisions and laws on behalf of the people
granary place for storing grain
Great Pyramid the oldest and largest pyramid in Egypt; one of the Seven Wonders of the Ancient World
Great Sphinx monument with the body of a lion and the face of a man; located in Giza near the Great Pyramid
grid system a street network that creates square and rectangular blocks
groundwater a process in which water moves down from the Earth's surface into aquifers
hailstone an irregularly shaped ball of frozen precipitation
hailstorm any thunderstorm that produces hailstones large enough to reach the ground
halberds daggers mounted on axe handles
helot slave of the Spartan state
heresy an opinion or belief that contradicts orthodox beliefs, especially in religion
heritage everything that has come down to us from the past
hieratic script Egyptian script that was less decorative and complex than hieroglyphs
hoplites Greek foot soldiers
horticulture the growing of garden crops such as fruit, vegetables, herbs and nuts
hydrologic cycle another term for the water cycle
hygienic healthy, sanitary
hypocaust underfloor and water heating system used in Roman villas and public baths
hypothermia when a person's core body temperature falls below 35 °C and the body is unable to maintain key systems; risk of death without treatment
hypothesis (plural: **hypotheses**) a theory or possible explanation
Ice Ages long periods during which glaciers covered much of the northern hemisphere

immortals gods who lived forever
incentive encourages a person to do something
inclusiveness providing equal access to opportunities and resources for everyone
income money earned through employment or investment
Indus seals imprints of stamps found on pottery made during the Indus Valley Civilisation
industry-wide awards legally binding documents that set out the minimum wages and other entitlements for all employees in an industry or occupation
infantry foot soldiers
informal sector jobs that are not officially recognised by the government as official occupations and not counted in government statistics
infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines
initiative the first step or opening move in a series of actions
innovation either adding a new product to an existing product line, or significantly improving an existing product or process
integrate to merge with a larger community
intensification activities undertaken with the intention of enhancing the productivity of land
inundate to cover with water, especially floodwater
Inundation the seasonal flooding of the Nile
Iron Age period in which people learned to use iron to make tools and weapons
irrigation water provided to crops and orchards by hoses, channels, sprays or drip systems in order to supplement rainfall
islet a very small island
isobars lines on a map that join places with the same air pressure
judge a court official who hears cases in the higher courts, such as the District or County Court, or the Supreme Court
judiciary a collective name given to the judges who preside over law courts
juror a person selected to hear and assess the evidence in a court case
jury a group of ordinary people randomly selected to hear and assess the evidence in a court case
justice the use of laws to treat people fairly and in a way that is morally right
labour the human skills and effort required to produce goods and services
Latin the language of ancient Rome and its empire
legacy something handed down from the past
legal aid the provision of legal assistance to those involved in a dispute or criminal matter who are unable to pay for legal representation
legal representation services performed by a qualified legal practitioner, such as a lawyer, who deals with legal matters on behalf of the person who has hired them
legal system a system for interpreting and enforcing the laws of a country
legislation a term used to describe laws passed by parliament
limited liability where shareholders cannot lose more than their investment in the event of the failure of the business
literacy rate the proportion of the population aged over 15 who can read and write
liveable city a city that people want to live in, which is safe, well planned and prosperous and has a healthy environment
livestock animals raised for food or other products
location a point on the surface of the Earth where something is to be found
loot goods or property taken from a defeated enemy after a battle
lore the accumulated traditional knowledge, beliefs and customs passed down from generation to generation in a society; it is passed on orally, not in written form
lore the customs and stories that came from The Dreaming and continue to govern all aspects of First Nations Australians' life
Macedonian native of Macedon, an ancient kingdom north of Greece
magistrate a court official who hears cases in a Magistrates Court

magistrates men elected by the citizens to run Rome for a year
mallee a low-growing bushy Australian eucalypt plant
mandate of heaven Chinese expression meaning that a ruler had been chosen by the gods
mangrove area in a tropical or subtropical climate where vegetation grows in salty or brackish water
market where goods, services or resources are exchanged between buyers and sellers
market capitalist economy economic system that relies on the market to allocate resources based on the actions of consumers and producers, and where resources are generally owned by private individuals and businesses
material living standards access to physical goods and services
mausoleum large tomb structure
medallion a coin-shaped, usually metallic, decorative disk
medieval of the Middle Ages
mercenary person who fights for a foreign country for money or other rewards
meteorologist a person who studies and predicts weather
metic free man living in Athens but not born there; could not vote or own property but served in the army and paid taxes
metope rectangular space above an architrave of a Greek building that often had paintings or sculptures on it
Middle Ages between ancient and modern historical periods (generally between the fifth and fifteenth centuries)
monsoon rainy season accompanied by south-westerly summer winds in the Indian subcontinent and South-East Asia
moral concerned with the principles of right and wrong behaviour
mound spring mound formation with water at its centre, formed by minerals and sediments brought up by water from artesian basins
multiculturalism a society in which the cultures and traditions of many different groups coexist and are encouraged
mummy body that has been embalmed
mythology a body of myths
natron a mineral salt used to dry out dead bodies
natural disaster an extreme event that is the result of natural processes and causes serious material damage or loss of life
natural environment elements — such as wind, soil, flowing water, plants and animals — that influence the characteristics of an area
natural hazard an extreme event that is the result of natural processes and has the potential to cause serious material damage and loss of life
natural resources resources (such as landforms, minerals and vegetation) that are provided by nature rather than people
needs goods or services that consumers consider necessary to maintain their standard of living
negotiator a person who either comes to an agreement with someone else, or helps other people reach such an agreement
neighbourhood a region in which people live together in a community
nomads tribal groups who wander from place to place, generally in search of food or pasture
non-government organisations non-profit groups run by people (often volunteers) who have a common interest and perform a variety of humanitarian tasks at a local, national or international level
non-material living standards factors that affect a person's quality of life, regardless of income
non-renewable resource a resource that cannot be renewed in a short time and is finite
not-for-profit organisation a business that aims to do something other than to make profit for the owners, such as providing a community service or helping people
objective objective information is where data or events are presented without emotive words or opinion
ochre a natural pigment found in soil, ranging in colour from pale yellow to orange and red
oligarchy governing council of rich aristocrats
Olympiad a staging of the Olympic Games
omen sign that predicts good or evil

opportunity cost the next best alternative given up whenever a choice is made
ostracism the punishment of being banished from Athens
pagan name used to refer to people who believed in non-Christian gods
palaeontologist a scientist who studies fossils
pan-Hellenic for all the Greeks
papyrus paper made from crushing reeds
part-time an employee who works fewer than 35 hours per week
Parthenon Athenian temple dedicated to the goddess Athena
partnership a business that has two or more owners
patricians members of the aristocratic families who founded the Roman Republic
patronage supporting and encouraging authors and artists
Peloponnese peninsula the southern part of mainland Greece, joined to the north by the narrow Isthmus of Corinth
perioeci peoples of Laconian towns around Sparta who could be required to fight for Sparta but were not citizens
persecution hostility, violence or ill-will directed at a person or group of people on the basis of their personal characteristics
perspective a particular attitude toward or way of regarding something
philosopher one who studies the fundamental principles and causes of things
place specific area of the Earth's surface that has been given meaning by people
plateau a high, flat-topped landform
plebeians all non-patrician citizens of Rome
pluralistic a society in which members of individual cultural, ethnic or religious groups can maintain their distinctive cultural identities while remaining part of the overall community
polis (plural: **poleis**) ancient Greek city-state
population density the number of people living in a square kilometre
portico a roof supported by columns, usually attached as a porch to a building
potential resource a resource that exists but is unusable in its current state, such as salt water, ice and water vapour
power vacuum a situation with a lack of political leadership
precipitation rain, sleet, hail, snow and other forms of water that fall from the sky when water particles in clouds become too heavy
prehistory the period before writing was invented
premises the land and buildings occupied by a business
presumption of innocence the principle that all accused people who appear before a court are presumed to be innocent until the prosecution proves that they are guilty
primary research collection of original information
primary sources objects and documents that were created or written in the period of time that the historian is investigating
procedural fairness refers to having fair procedures in place to protect the rights of all parties
producer an individual or a business involved in the production of goods and services
profit what is left from sales revenue after a business has paid all costs
prosecution the person who presents a criminal case on behalf of the state
prosecutor the party bringing a criminal action against the accused
public bath a public building complex containing baths of varying temperatures, and sports and beauty facilities; a popular meeting place for Roman citizens
pull factors positive aspects of a place; reasons that attract people to come and live in a place
pumice lava ejected from a volcano that solidifies into a light, porous rock
push factors reasons that encourage people to leave a place and go somewhere else
quality service dealing with clients and customers in a respectful and helpful way
quarry an excavation or pit from which stone or building material is cut
radiocarbon dating a way of dating objects of plant or animal origin according to the amount of carbon left within them

rainfall variability the change from year to year in the amount of rainfall in a given location
rebate a partial refund on something that has already been paid for
referendum a process of allowing the people to vote on an important issue
region any area of varying size that has one or more characteristics in common
relative dating techniques methods used to assess whether something is older than something else (e.g. stratigraphy, fluorine dating)
relative humidity the amount of moisture in the air
remote a place that is distant from major population centres
renewable resource a resource that can be naturally replaced if carefully managed
repeal to remove a law so that it no longer applies
republic system of government in which the head of state is not a monarch
resource allocation decisions about how scarce resources are distributed among producers, and which types of goods and services will be produced to satisfy wants and needs
resources items of value that we use to produce goods and services to satisfy needs and wants, which include land, labour, capital and enterprise
rhetoric the art of public speaking
rights guarantees of equal social opportunities and protection under the law
rite of passage a ceremony or event marking an important stage in someone's life
royal assent the formal approval by the monarch's representative, and the final step necessary before a law comes into force
rule of law the legal principle that all citizens are subject to the law, and equal before the law, as it is upheld by independent courts
sago a starch food obtained from palm used to produce a flour
salary fixed or regular payment for work completed or services performed
Samnites a mountain tribe of central Italy
sanction a penalty that is applied for breaking the law
Sanskrit ancient Indian language used in classical Hindu literature
sarcophagus stone or wooden coffin (often inscribed or decorated) in Egypt
savannah area of land that is a grassy plain with few trees in tropical and subtropical regions
sea change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small coastal town
seagrass a grass-like plant living in or close to the sea
seasonal an employee who usually works during a season, such as winter or the fruit-picking season
secondary research collection of resources on an issue, prepared by others and offering different viewpoints
secondary sources reconstructions of the past written or created by people living at a time after the period that the historian is studying
secular not having a connection to religion
sediment the material that settles at the bottom of a liquid
Senate governing body in ancient Rome; (in theory) an advisory body of ex-magistrates
services actions done for you by others to satisfy your needs and wants
shadoof irrigation device used to lift water from the river
shell midden a mound of shells and other waste material marking the site of an ancient community
significance the importance assigned to particular aspects of the past; for example, events, developments, movements and historical sites
silt fine sand or earth particles carried and deposited by running water
soak place where groundwater moves up to the surface
social cohesion the degree to which communities are united by shared values, traditions and experiences
socially responsible management when a business shows concern for the social welfare of the community, including customers, staff and the environment
sole proprietorship a business that is owned and controlled by one person
southern oscillation a major air pressure shift between the Asian and east Pacific regions; its most common extremes are El Niño events
speculator a person who invests in stocks, property or other ventures in the hope of achieving a profit and a source of income

stadia the plural form of stadium, which is a measure of about 200 metres
stalemate a situation in a contest or conflict in which neither side can defeat the other
standard of living quality of life as measured by the amount of money made by an individual or household (using income per capita or income per household)
storm surge a sudden increase in sea level as a result of storm activity and strong winds; low-lying land may be flooded
strata (singular: **stratum**) distinct layers of material beneath the ground, built up over time, that provide information for archaeologists and geologists
subjective subjective information is where information is presented based on opinion or bias
sustainability meeting our own needs without compromising the ability of future generations to meet their needs
taboo something strictly forbidden
target market a market at which a product is deliberately aimed
taro a plant with broad edible leaves and root vegetable, grown in the tropical regions, especially the Pacific Islands
temperate climate climate with generally warm summers and cool winters, without extremes
tenant farmers poor farmers who rented small plots of land
The Dreaming in First Nations spirituality, the beginning of earth and the cycles of life and nature, explaining creation and the nature of the world, the place that every person has in that world and the importance of ritual and tradition; Dreaming stories pass on important knowledge, laws and beliefs; also known as The Dreamtime
Thracian a native of the Roman province of Thracia
timeline a diagrammatic tool representing a period of time, on which events are placed in chronological order
tokenistic describes an act that is completed only as a gesture rather than being sincerely meant
torrential rain heavy rain often associated with storms, which can result in flash flooding
tree change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small country town, in the bush, or on the land as a farmer
trial the court process to determine whether someone committed a criminal act
tribalism behaviour and attitudes that stem from strong loyalty to one's own social group, sometimes in opposition to other groups
troposphere layer of the atmosphere closest to the Earth, extending about 17 kilometres above the Earth's surface, but thicker at the tropics and thinner at the poles; where weather occurs
typhoon the name given to cyclones in the Asian region
undernourished not getting enough food for good health and growth
unicameral a parliament with only one house
University of the Third Age an international movement that promotes lifelong learning; focuses on engaging with specific areas of interest as a person's working and parenting life scales down (referred to as the 'Third Age')
unlimited liability where a business owner is personally responsible for all the debts of their business
uranium a dense grey radioactive metal used as a fuel in nuclear reactors
utopia a perfect social and political system
Valley of the Kings gorge on the Nile in Upper Egypt that contains many royal tombs
values things a person holds as being important; can affect the way you live and work
vassal state a state whose ruler recognises another, more powerful ruler as overlord
virtual water all the hidden water used to produce goods and services
virtue moral standard or value
vulnerability the state of being without protection and open to harm
wage payment for work completed or services performed, usually dependent on hours worked per week or month
wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community
warlords generals from powerful landowning families

water footprint the total volume of fresh water that is used to produce the goods and services consumed by an individual or a country

water scarcity when the demand for water is greater than the supply available

water stress a situation that occurs in a country with less than 1000 cubic metres of renewable fresh water per person

water vapour water in its gaseous form, formed as a result of evaporation

weir a barrier across a river, similar to a dam, which causes water to pool behind it; water is still able to flow over the top of the weir

wellbeing an overall measure of quality of life

Westminster system the parliamentary system of Great Britain, which has been copied and adapted by many other countries including Australia; called that because the British Parliament meets in a building called the Palace of Westminster

White Australia Policy informal name for the *Immigration Restriction Act 1901*, which effectively prevented non-European immigration to Australia

whiteout a weather condition where visibility and contrast is reduced by snow; individuals become disoriented because they cannot distinguish the ground from the sky

wilderness a natural place that has been almost untouched or unchanged by the actions of people

word-of-mouth the passing of information about a business from a satisfied customer to prospective customers

work–life balance the division of one's time and focus between working and family or leisure activities

working conditions all those things an employer has agreed to provide in exchange for the employee's work, ranging from the physical work environment to hours of work, rates of pay and leave entitlements

Xiongnu the ancient Chinese name for the nomadic Turkic tribes of Central Asia

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