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SCIENCES
FOR WESTERN AUSTRALIA

7

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About the cover

Pictured is the Bald
Head Walking trail in
the Torndirrup National
Park, Albany, Western
Australia.

Contents

PART 1

Civics and Citizenship   2

Chapter 1 Designing our political and legal system   4

PART

2

Economics and Business   46

PART

3

Geography 90

About the authors

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Jessica would like to thank her husband Adrian for his support in writing this book.

Key concepts and HASS skills

The Western Australian Humanities and Social Sciences curriculum lists a range of **HASS skills** applicable across the four subject areas, as well as **Key concepts** per subject.

It is important to realise that in each subject, the HASS skills and Key concepts should be interrelated. For example, the following diagram demonstrates how the relationship between concepts and skills can work in the study of History.
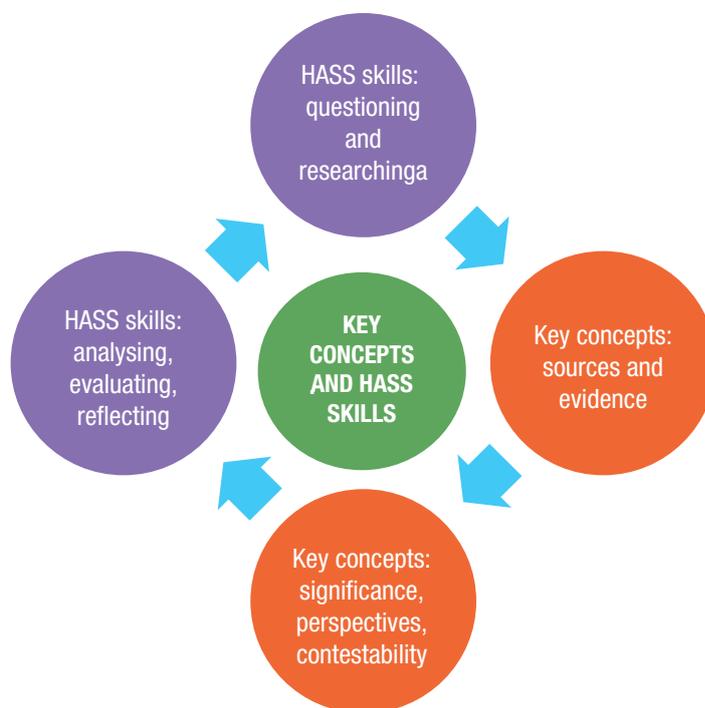
Please note: further example diagrams of how this relationship works for the other HASS subject areas (Civics & Citizenship, Economics & Business and Geography) can be found in the digital versions of this text.

In this series, the Key concepts and HASS skills used are **indicated below each activity** for ease of reference. Each topic concludes with a **Making Connections** activity which helps you to see links between the topics, and the **Putting it all together: key concepts for your memory bank** task at the back of the book is designed to help you integrate the skills and concepts you have learned for each topic.

How to use this resource

This book contains four parts, with each part covering one of the four topic areas: Civics and Citizenship, Economics and Business, Geography and History.

All chapters have been closely aligned to the Western Australian Curriculum for Humanities and Social Sciences (HASS) for this year level.

Each part of the book begins with a range of overview spreads introducing you to the subject at hand.
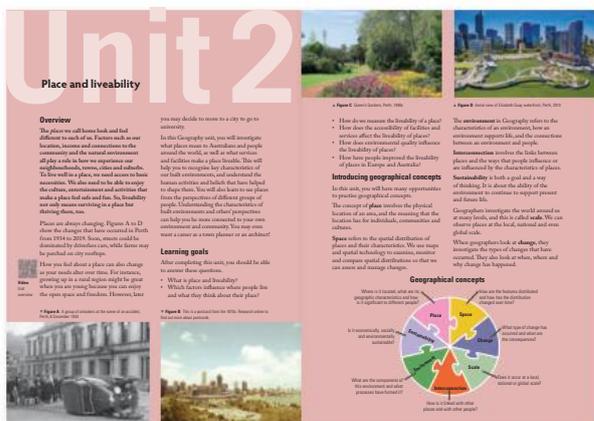
The **QR code** gives you instant access, via your phone, to videos introducing units or depth studies. Historical overviews also include detailed videos.

The History topic includes a detailed **Historical overview.** Each chapter within the depth studies of History also open with timelines of key events.

Chapters open with a short **Setting the scene** story to hook you into the new topic, along with a **Making Thinking Visible** activity to get you thinking.

Chapter overview pages provide an Introduction, list of Learning Goals, and Digital Resources available for the chapter. Some chapters also include a list of skills you will develop be working through the topic.

Relevant videos can also be viewed on your phone by accessing the QR code in the margin.

A variety of **activities** explore key concepts and enable you to develop HASS skills while engaging with the topic.

History and Geography chapters also include many **skill-based activities** aligned to the curriculum.

The **end of chapter activities** contain a variety of concluding tasks to consolidate and extend your learning.

Making connections between the HASS topics: at the end of each topic area we include a range of activities to help students and teachers make connections between the topics and expand their understanding of HASS concepts.

At the end of the book is another activity which brings the four topics together, called **Putting it all together: Key concepts for your memory bank**. The authors have chosen certain key concepts per topic area to highlight in each year of the course from the Western Australian Curriculum. This activity brings these concepts together and can be used to consolidate the year's learning in HASS, for revision, or as an assessment task.

Glossary terms are bolded in the text, defined on the page and collated in the digital versions of the textbook for easy reference.

Each chapter section ends with a set of **end of section review questions**, to check your recall of the material, as well as interpreting it and creating arguments.

These activities are different for each topic so are useful no matter what order the topics are learned in.

The Interactive Textbook includes a range of additional digital resources including videos, image galleries, interactive activities, Scorcher quizzes and more.

Part 1

Civics and Citizenship

What is Civics and Citizenship?

Australia is a democratic country, with many laws that affect our daily lives. The rules and regulations contained in these laws tell us what we must do and cannot do. For example, road safety rules mandate the speed at which we are allowed to travel on a freeway and determine when we are legally allowed to drive. These rules help keep Australian society in order, and there are consequences when a breach occurs.

Civics and Citizenship in Year 7 examines the way that Australia is governed and the legal protections given to its citizens. The purpose and value of the Australian Constitution will be examined, as will the ways that citizens participate in constitutional change through voting in what is known as a referendum. We will look at Australia's parliamentary system and consider how political power is exerted in Australia through the different states and territories and the federal government. The study of Civics and Citizenship also involves the Australian legal system. We will examine how the Australian legal system aims to provide justice through upholding key principles, including the rule of law and the right to a fair trial.

Video
Unit overview

► **Figure A** Parliament House in Canberra, where the federal government meets and makes decisions.

CHAPTER 1

Designing our political and legal system

1.1 Setting the scene: the Magna Carta and the Australian Constitution

On 15 June 1215, the unpopular King John of England met with his political enemies at Runnymede, on the River Thames near Windsor in the south of England. The document the king placed his seal upon included democratic and legal principles that are still relevant today, including in Australia.

What is the Magna Carta?

The Magna Carta is often claimed to represent the foundation of democracy in England, and by extension in Australia, due to our shared history and the way our nation was formed in 1901. A democracy is a system of government based on the belief that there should be freedom and equality between people, and that power is held by elected representatives (politicians) who are chosen in an election by the people of the nation through voting.

How did an event in English history that took place over 800 years ago come to be so influential? In 1215, King John (who ruled between 1199 and 1216) agreed to peace terms with rebelling barons. These were powerful people who were protesting against his rule. The terms of this peace were written in the Magna Carta. King John gave up some of his powers to help fix a threatening situation at the time. Before the Magna Carta, people in medieval England believed that a king ruled by divine right – that is, that royal leaders were
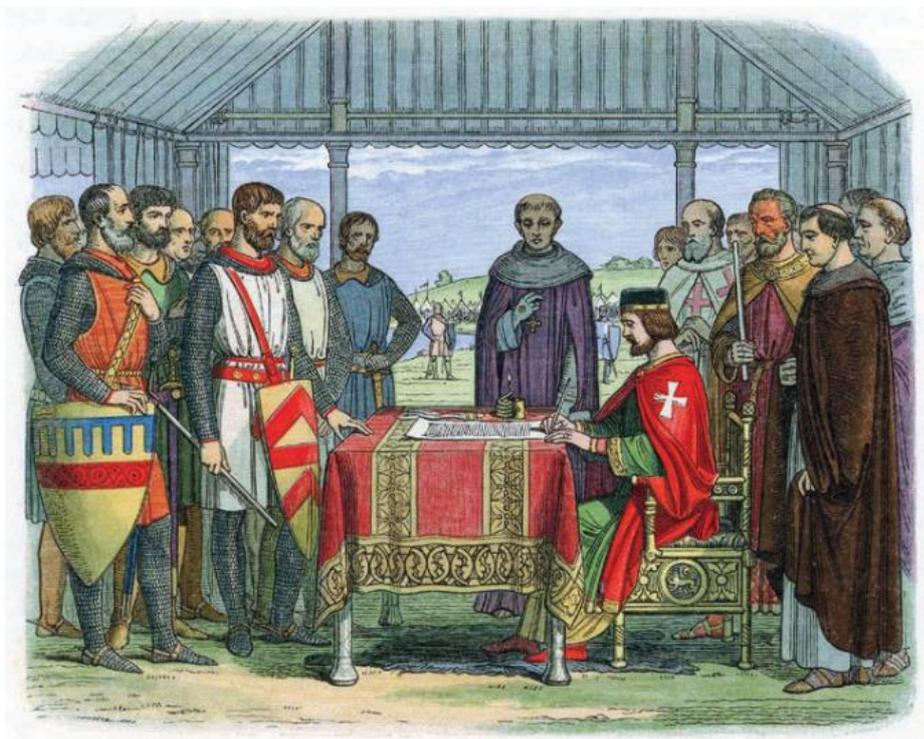
◄ **Figure 1.1** An illustration showing King John signing the Magna Carta in 1215. The document is today remembered as a milestone in democratic principles and was influential on the writers of the Australian Constitution.

chosen by and received their power from the will of God. The Magna Carta established for the first time that neither a monarch like King John nor a government was above the law. This concept, in which no one is above the law, is known as the *rule of law*. It marked a significant change in attitudes to the Crown (i.e. the monarchy) which, over many centuries, would develop into limitations on government in a broader sense.

Why does the Magna Carta matter for us in Australia today?

The people of Australia own one of the 17 known copies of the Magna Carta to still exist today. It was purchased by the Commonwealth Government in 1952 and is on display at Parliament House in Canberra. According to the Parliament of Australia website:

> The Magna Carta (Latin for the 'Great Charter') is famous around the world as the foundation stone of constitutional and parliamentary government.
>
> It confirmed the rule of law – the principle that nobody, not even the monarch, is above the law – and, among other freedoms, laid the basis for establishing trial by jury …
>
> Over the centuries, its principles have been incorporated into the common law of many nations, and embodied in such momentous documents as the United States Declaration of Independence and Constitution, the Universal Declaration of Human Rights, and, of course, Australia's own Constitution.

In this quotation, the 'foundation stone of constitutional and parliamentary government' refers to the way that the Magna Carta was firmly in mind when the Australian Constitution was being written in the early years of Australia's formation as a new nation. A constitution is a set of political principles by which a nation is governed, especially in relation to the rights of the people it governs. Coming into effect in January 1901, the Constitution of Australia is the supreme law of Australia. It established Australia as a federation (a united body of states and territories) under a constitutional monarchy (headed currently by Queen Elizabeth II) and

outlined the structure and powers of the federal executive government (such as the roles and responsibilities of the Queen's representative, the Governor-General), legislature (the people who make laws) and judiciary (judges who make decisions about enforcing the law).

As with other new nations of the British Empire at the time, including New Zealand and Canada, many of the values mentioned in the Magna Carta found their way into the Constitution. The Constitution ensures that, like the Magna Carta, those in power in Australia are held to account by the people of Australia. As you will learn in this chapter, in Australia, executive accountability is guaranteed in part by spreading power through:

- separate arms of government
- mechanisms for parliamentary scrutiny
- scrutiny by the Australian people, through the right to engage in open political debate and the right to vote.

The Parliament of Australia website also mentions 'rule of law' and 'trial by jury' as important values Australia has inherited from the Magna Carta. Perhaps the most famous clause of the Magna Carta, clause 39, is said to embody these ideas:

> No free man shall be seized or imprisoned, or stripped of his rights or possessions, or outlawed or exiled, or deprived of his standing in any way, nor will we proceed with force against him, or send others to do so, except by the lawful judgment of his equals or by the law of the land.

This clause has been interpreted in constitutions such as Australia's to give all individuals the right to justice and a fair trial – both values held highly in Western democracies today.

Finally, the Parliament of Australia website also mentions that the values of the Magna Carta made their way into the 'common law' of Australia. As you will learn in your studies of Civics and Citizenship, 'common law' refers to the legal system in Australia that has developed over a period of time from old customs and court decisions, rather than laws made by politicians.
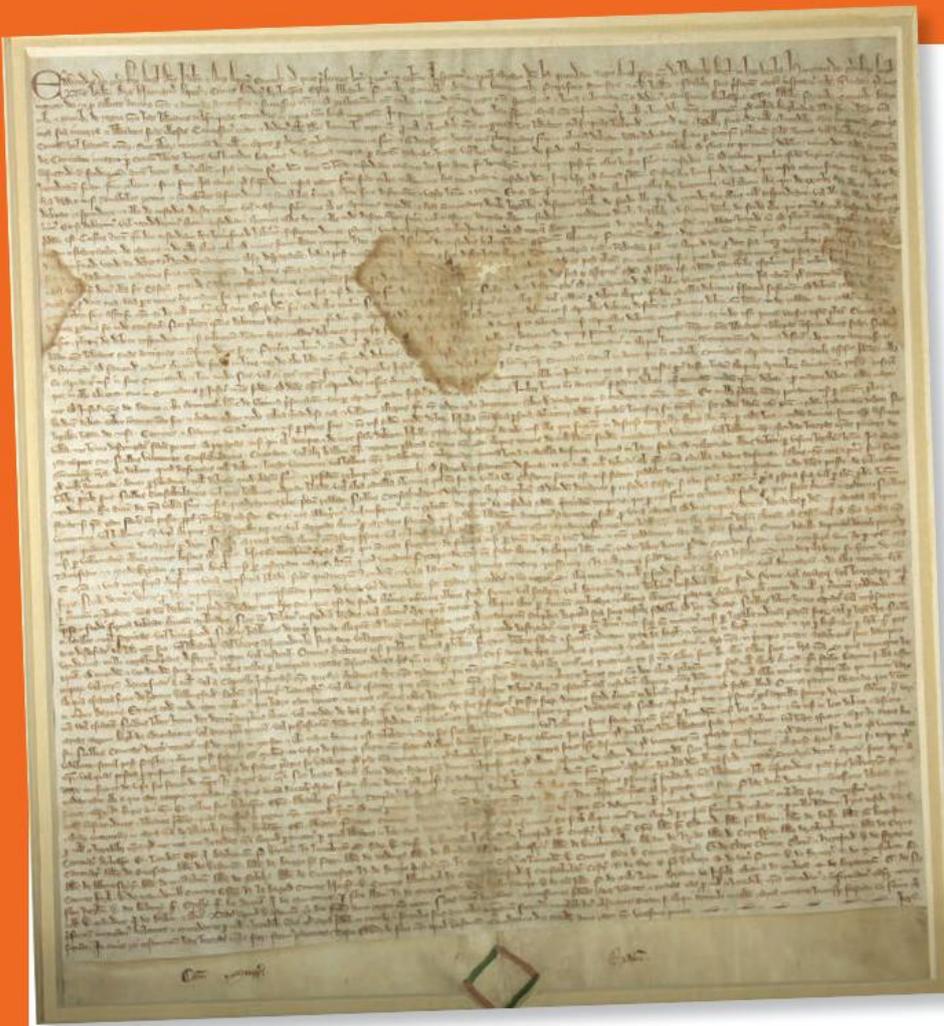
▲ **Figure 1.2** A 1297 edition of the Magna Carta which is owned by the Government of Australia and on display in the Members' Hall of Parliament House, Canberra.

Today, the Magna Carta is still mentioned in a range of court cases across Australia and is valued as a momentous document that protected the values held highly by Western democracies like Australia's. It retains enormous *symbolic power* as an ancient defence of individual liberties against power-mad rulers.

Key concepts for your memory bank

Rights and responsibilities refer to the various freedoms and obligations individuals have within a democracy. For example, all Australian citizens over 18 have the right to vote in elections, but due to voting being compulsory in our country, individuals also have a responsibility to participate in the election process. *Pop this concept into your memory bank – at the end of this book is an activity which will test your understanding of this, and other key HASS concepts!*

MAKING THINKING VISIBLE 1.1

Think, pair, share

Read the 'Setting the scene' story and the statement below.

'The Magna Carta was written in medieval England and is no longer relevant to Australians today.'

1 *Think* about both the 'Setting the scene' story and the statement you have just read. Write down or draw any questions or thoughts you might have. What do you think about the statement? Is it accurate? Why/why not?

2 *Pair* up with a partner, and take it in turns to share your thoughts about the statement. Listen carefully as your partner shares their thoughts, and try to summarise in writing what your partner thinks about the topic.

3 *Share* your thoughts with the class.

Key concepts: democracy, democratic values, the Westminster system

HASS skills: questioning and researching, analysing, evaluating

1.2 Chapter overview

Introduction

The *Commonwealth of Australia Constitution Act 1900* established the principles of representative and responsible government which are highly valued in our society. The Constitution contains the set of rules by which Australia is governed. These rules are important and cannot be changed unless the change is approved by the people through the process of a referendum. Changing the words of the Constitution is hard due to the double-majority requirement – a feature we will examine in detail.

We will look at important concepts for the way our democracy operates and how power is kept in check in the Australian system of government, including the 'separation of powers', the 'division of powers', the different roles of the House of Representatives and the Senate in our parliament, and the ways that the justice system provides legal protections for Australia's citizens.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What is a democracy?
- What is a constitution?
- How does Australia's democracy operate?
- How does the structure of the Australian Government uphold and protect democracy?
- What is the structure of government in Australia?
- How do Australian citizens elect members of parliament?
- Who is eligible to vote?
- How do we change the Australian Constitution?
- What is the structure of the Australian legal system?
- What are the roles of each court?
- How do the courts provide justice through the rule of law, presumption of innocence, burden of proof, right to a fair trial and right to legal representation?
- What is the difference between common law and statutory law?
- How can citizens influence a change in the law?

Digital resources

Visit the Interactive Textbook to access:

- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video
Five interesting facts about Australia's government

1.3 The purpose and value of the Australian Constitution

FOCUS QUESTIONS

- What is democracy?
- What is a constitution?

Democracy

The Western Australian Curriculum states that a **democracy** is:

> A system of government based on the people of an entity, that is, 'government by the people'; a form of government where the supreme power is vested in the people and exercised directly by them or by their elected representatives under a free and fair electoral system.

In the *Cambridge Dictionary,* the definition of democracy is:

> the belief in freedom and equality between people, or a system of government based on this belief, in which power is either held by elected representatives or directly by the people themselves.

democracy a political system where a government's power is vested in its citizens, who vote through elections to shape decisions

Australia's government processes and structures of parliament are designed to uphold representative democracy. Representative democracy refers to a system of government where citizens choose representatives from among themselves to form a government through the process of an election.

▲ **Figure 1.3** A protestor at the Fremantle Passenger Terminal on 24 March 2020. The MSC *Magnifica* arrived on Tuesday morning, with police and border force officers monitoring the ship to ensure no crew or passengers disembarked while it refuelled due to concerns over COVID-19. The legal right to protest is fundamental to our democracy.

Representative and responsible government

In 1870, Western Australia was granted representative government, with the Legislative Council consisting of 12 elected members and six nominated by the Governor. Representative government is when the people entrust the job of governing to representatives chosen at regular elections.

Western Australia adopted the British constitutional practice of responsible government in 1890. Responsible government is a political system in which accountability is crucial; the government is responsible to the parliament and the people; and it can be held to account (i.e. held responsible) for its actions. Within responsible government, a government is formed by the political party (or coalition of parties) with the most representatives in the lower house (Legislative Assembly). This government must maintain the confidence or support of that majority to remain in power. Under this system, executive power is officially held by the British monarch and is represented by the Governor of Western Australia. The Governor (currently Kim Beazley) acts on the advice of the Premier and the ministers (the cabinet) of the state. As such, the executive power is in reality held by the ministry or cabinet. Ministers may be appointed from either house (Legislative Council – upper house, Legislative Assembly – lower house), but may only hold office while retaining the confidence (majority) of the lower house.

There are currently 36 Members of the Legislative Council (MLCs), elected from six regions for a term of four years. Each of these regions has six members. Members of the

Legislative Assembly (MLAs) are elected from each of 59 electoral districts for a four-year term.

Responsible government also needs to consider and be responsive to public opinion. For example, if people are protesting due to environmental concerns about an issue that is ongoing, and perhaps also receiving a lot of media coverage, the public has expectations that they are heard. Members of Parliament are representatives of the people, and as mentioned, are responsible to their electors through the system of elections. A government that does not act for the people and is not responsive to their needs or concerns is likely to not be voted back into power.

Ministerial responsibility

A shared ministerial responsibility is the main component of responsible government. The expectation is that the ministry or cabinet 'speak with one voice' and so a minister is obliged to resign if they are unable or not willing to publicly support a key ministry or cabinet decision. If the Opposition is successful in raising a breach of individual ministerial responsibility within parliament, this is known as a *censure motion*. It may generate negative public opinion and lead to the resignation of a minister. The values of 'unity, solidarity and secrecy' are key components of ministerial responsibility. Another component of this principle is that cabinet decisions are made 'behind closed doors' and its discussions remain 'secret'. So with discussions remaining private and an expectation to publicly support decisions, these practices are known as 'cabinet solidarity'. Other expectations of a responsible government are:

- individual ministerial responsibility. A minister is responsible to the Parliament for the management and administrative decisions in matters under the minister's control.
- the expectation of integrity. Some are included in the Ministerial Code of Conduct, including:
  - **i** ministers must not mislead Parliament
  - **ii** ministers must not use their position for personal gain
  - **iii** ministers should avoid any conflict of interest between their private actions and their official duties
  - **iv** ministers must not engage in any unethical behaviour which is unacceptable to the community.

Australian Constitution

The Western Australian Curriculum states that a constitution is:

> The fundamental principles on which a state or other organisation (such as a club) is governed. Usually this takes the form of a legal document setting out specific powers for the government or governing of that entity.

▲ **Figure 1.4** His Excellency the Hon. Kim Beazley and his wife Susanna Annus are received by Queen Elizabeth II during an audience upon his appointment as Governor of Western Australia at Buckingham Palace on 26 March 2019 in London, England.

▲ **Figure 1.5** Senator Marise Payne has served as Australia's Minister for Foreign Affairs since August 2018.

In the *Cambridge Dictionary,* the definition of a constitution is:

> the set of political principles by which a state or organisation is governed, especially in relation to the rights of the people it governs.

On 1 January 1901, Australia gained a Commonwealth Constitution, which outlined the legal framework and rules that apply to the governance of Australia. Prior to the **Australian Constitution** coming into force, Australia consisted of six colonies, which were independent of each other and had the right to govern within their own borders. These six colonies were not answerable to any authority in Australia, but rather to the British Government. Throughout the 1800s, many groups and individuals began to promote the concept that Australia would be better off if the six colonies amalgamated into one nation, under one centralised government. An emotional and sometimes bitter debate raged for the two decades in the lead-up to **Federation** in 1901.

The different viewpoints and the fears of the smaller colonies of being 'consumed' by New South Wales and Victoria played a substantial role in shaping the final Constitution document. As with any democratic process, politicians have to persuade the public to vote for their proposals, and sometimes they have to make trade-offs to gain voter confidence. This was essential to get the necessary votes in each of the Federation **referendums**.

> **Australian Constitution** a set of rules that came into effect on 1 January 1901; it outlines some of the rights of Australians and how power is shared between federal and state parliaments
>
> **Federation** the process of uniting several states to form a single national government
>
> **referendum** a general vote on an issue affecting the Australian Constitution that all enrolled voters must vote on

► **Figure 1.6** Commonwealth of Australia Constitution Act 1900: Original Public Record Copy (1900). Parliament House Art Collection, Art Services Parliament House.

▲ **Figure 1.7** A procession to mark the opening of the Federal Parliament makes its way down Swanston Street, Melbourne, May 1901.

ACTIVITY 1.1

Check your understanding

1 In what year did Western Australia adopt the British constitutional practice of responsible government?

2 Recall what a censure motion against a minister is.

⚙ **Key concepts:** democracy, the Westminster system   📋 **HASS skills:** analysing

After a series of referendums in 1898, 1899 and 1900, the colonies eventually found a compromise position on a proposed constitution, but, before it could take effect, approval from the British Parliament was required. The *Commonwealth of Australia Constitution Act 1900* (UK) was passed and Australia came into existence as a nation on 1 January 1901.

The following are the key features of the British Act:

- Australia was a federated nation consisting of six states (Western Australia joined shortly after the other states). The Northern Territory gained self-government in 1978 and the Australian Capital Territory in 1988.
- There was a bicameral federal parliament (House of Representatives and Senate).
- The High Court of Australia was established to oversee any other courts and provide 'final and conclusive' judgments upon any appeals it hears (s 73 Australian Constitution).
- It outlined both the division of power between the state and federal governments (s 51) and the separation of powers (Chapters I, II and III) as they would apply in Australia.
- It enabled the Constitution to be altered by a referendum (s 128 Australian Constitution).

The Constitution itself is section 9 of the Act. Although the Constitution came into force through an Act of the British Parliament, the Act brought the Commonwealth of Australia into existence as a nation, and the Constitution can only be changed by a referendum of Australian voters.

The Australian Constitution contains certain mechanisms to limit the power of the new federal parliament that resulted from debate and discussion during the Federation process:

- The Senate provides a 'check' (restraint) on the power of the House of Representatives.
- The Senate is sometimes called the 'states house', since all states have the same number of senators (12) regardless of population. Each territory has two senators.
- Section 128, which covers the process for altering the Constitution, specifies that a majority of states need to vote 'yes' on a proposal for it to succeed; that is, four out of six states. In addition, an absolute majority of voters Australia-wide must vote 'yes'; that is, 50 per cent of voters plus one. This strict requirement has made constitutional change very difficult: no referendum has succeeded since 1977.
- 'Division of powers' ensures that the federal and state parliaments have separate law-making responsibilities. Section 51 outlines the law-making responsibilities of the federal parliament. Some of these are shared with the states, such as trade; however, responsibilities not mentioned in s 51 are the responsibility of the state parliaments, such as law and order and public transport.

Australia's representative democracy is enshrined in the Australian Constitution. Members of the upper and lower houses of parliament must be elected as sections 7 and 24 of the Constitution dictate that both of the houses of federal parliament need to be 'directly chosen by the people'.

The process of **elections** is the keystone to representative government, where Australian voters elect members of Australian political parties, or independent candidates, for office. Once elected, members of parliament must act on behalf of voters by representing their views in parliament. This ensures that issues within **electorates** are raised and matters dealt with.

election a local, state or national ballot cast by citizens who vote for a person from a political party or a person standing independently

electorate a defined area within a state or territory that is represented by a member of a political party or an independent

▲ **Figure 1.8** Leader of the Opposition Anthony Albanese (left) and Prime Minister Scott Morrison during Question Time in the House of Representatives at Parliament House on 12 June 2020 in Canberra. Discussions can sometimes be quite heated between the parties.

The Opposition and scrutiny

In parliament the structure of the House of Representatives also shapes who will form the official Opposition. The party (or coalition of parties) which has the most non-government Members in the House of Representatives becomes the Opposition party and its leader becomes the Leader of the Opposition.

The Opposition has the officially recognised objective of challenging the government. Its job is to make sure that different points of view are raised and that it scrutinises the government. It is considered an 'alternative government'. This means that it would form government if the existing government loses an election.

The Opposition and other non-government Members have opportunities to initiate debate on subjects of their own choosing and to question ministers. This may be on matters for which they are administratively responsible. Most discussions of matters of public importance (held daily except Mondays) are on topics proposed by non-government Members. These are usually critical of some aspect of government policy or administration.

END OF SECTION REVIEW 1.3

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define the term 'election'.
2 What is representative democracy?

Interpretation

3 Why are sections 7 and 24 of the Australian Constitution important?
4 What is the role of the Opposition and why is this role important?

Argument

5 Class activity: Divide the class into two groups. A collective ministerial responsibility is the main component of responsible government. The expectation is that the ministry or cabinet 'speak with one voice' and so a minister is obliged to resign if they are unable or not willing to publicly support a key ministry or cabinet decision.
   Debate this statement, perhaps providing some examples of when a minister might find this difficult. Alternatively, prepare a short oral speech on the positive aspects of this responsibility.

Key concepts: democracy, democratic values, the Westminster system

HASS skills: analysing, evaluating, communicating and reflecting
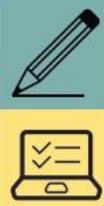
1.4   The separation of powers: arms and levels of government in Australia

FOCUS QUESTIONS

- What is the separation of powers between the legislature, executive and judiciary?
- What is the composition of the legislature, executive and judiciary?

Separation of powers

In 1887 Lord Acton, an English historian, writer and member of the British House of Commons, famously stated: 'Power tends to corrupt, and absolute power corrupts absolutely.'

This well-known quote is often credited with outlining the core reasoning behind the separation of powers principle that modern democracies are built upon. It was developed by the eighteenth-century French political philosopher Baron de Montesquieu, Charles-Louis de Secondat. He believed that the civil liberties of society were at risk if the key organs of government were controlled by one person or group.

Baron de Montesquieu identified these key organs of government (branches or arms of government) with separate roles in governing a state as:

▲ **Figure 1.9** Portrait of Baron de Montesquieu, Charles-Louis de Secondat (La Brede, 1689–Paris, 1755), French philosopher, jurist and historian. Painted in 1728.

- **the legislature:** the law-makers (in Australia this is the parliament: the House of Representatives and the Senate)
- **the executive:** the ministers and government departments who administer the laws made by the parliament (in Australia the Governor-General, the prime minister and Cabinet are members of the executive)
- **the judiciary:** the courts which interpret and apply the law.

If one person or group controls all three organs or arms of government, then that person or group has unregulated power and the risk of dictatorship is very real. If the three arms are independent, each acts as a **check and balance** on the others, guaranteeing that no branch has absolute power and is accountable for its actions, and that **civil liberties** are protected.

check and balance the sharing of power between groups, individuals and institutions that allows one group to prevent the abuse of power by another group

civil liberties basic rights of individuals that are protected by law; for example, freedom of religion and freedom of speech

Australia's founders certainly wanted the doctrine of the separation of powers to apply upon Federation. The first three chapters of the Constitution are set out in accordance with the doctrine:

- Chapter I: The Parliament (ss 1–60)
- Chapter II: The Executive (ss 61–70)
- Chapter III: The Judicature (ss 71–80).

In theory, Australia has adopted the doctrine of the separation of powers but, in fact, the Australian Constitution only partially realised this because some members of the executive are also members of the legislature; that is, the ministers and the prime minister are members of both the executive and the legislature – the separation of powers does not exist in its pure form in Australia.

The key feature of the separation of powers in Australia with regard to the functioning of democracy is that there is a clear distinction between the judiciary and the

justice the system of laws in a country that judges and punishes people but can also mean fairness in the way people are treated

other arms of government. For a true democracy to operate, and in the interests of **justice**, it is crucial that there be no overlap between the judicial and non-judicial arms of government.

Protecting the independence of the judiciary is one of the cornerstones of our democracy. An independent and impartial judiciary ensures that separation of powers functions effectively and that the judiciary, through its decisions, can 'check' the work of the executive and legislative, thus making sure their actions are lawful.

ACTIVITY 1.2

Check your understanding

1   Outline the role of the three 'organs' of government. Explain how the separation of powers operates in Australia.

2   Outline the significance of the separation of powers for the operating of a democracy.

Key concepts: democratic values, the Westminster system

HASS skills: analysing, evaluating

Role of the High Court

Chapter III of the Australian Constitution is titled 'The Judicature' and it is within this chapter that the judicial system of the Commonwealth is created. Section 71 creates the High Court of Australia and specifies that it must contain one Chief Justice and at least two other judges.

The first sitting of the High Court was on 6 October 1903, with three judges. In 1906 the number of judges was increased to five and in 1912 the number of judges was further increased to its current number, seven.

Section 71 also allows the Commonwealth Parliament to create other courts. Over time, parliament has created the Federal Court, the Family Court and the Federal Circuit

Court of Australia, which are all under federal jurisdiction. In 2021 the Morrison government introduced legislation merging the Family Court with the Federal Circuit Court of Australia to form the Federal Circuit and Family Court of Australia.

Section 72 outlines how High Court judges are appointed, and as a result of a successful referendum in 1977, specifies that they must retire when they reach the age of 70. Most High Court judges come from the bench of the state Supreme Courts or the Federal Court. They are chosen by the 'Governor-General in Council', which means they are chosen by the government of the day. While most sittings are in Canberra, cases can be heard in the other capital cities and even by video link if it is necessary.

▼ **Figure 1.10** High Court of Australia
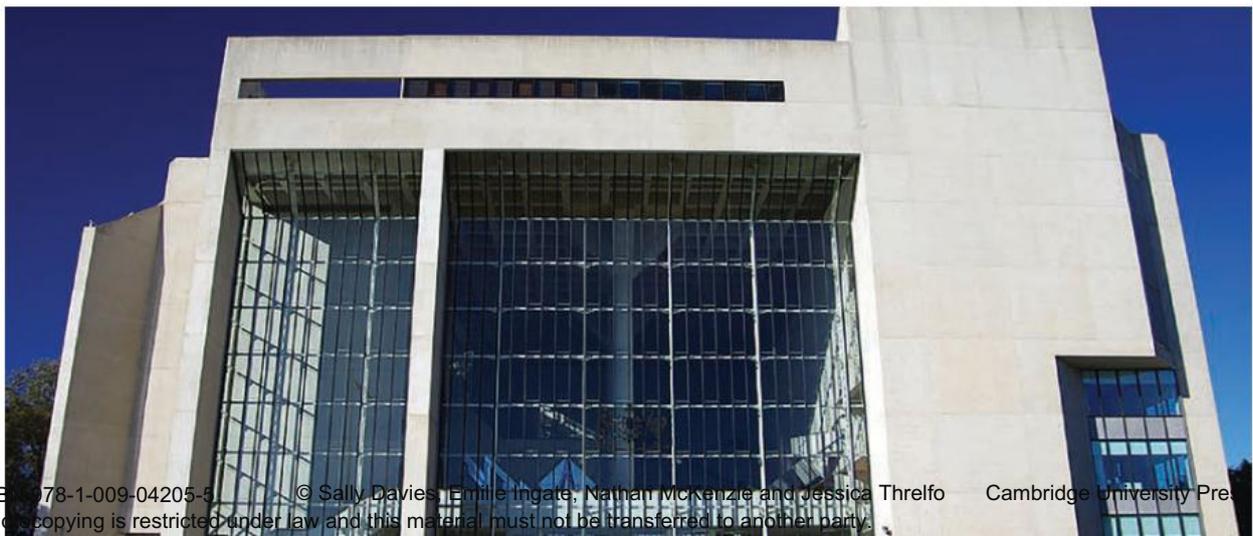
▲ **Figure 1.11** Parliament House, Canberra

Judicial review

The system of judicial review involves review of the actions of a government official or department by a court of law. Generally, the system involves investigating the legality of a decision or action. The High Court exercises judicial review whenever it makes a decision about whether a particular law is constitutionally valid or not. It has almost unlimited jurisdiction to review Commonwealth administrative decisions.

The Federal Court undertakes most judicial reviews by applying the *Administrative*

Decisions (Judicial Review) Act 1977 (Cth). It is important to understand that this Act applies strict rules and does not give the Federal Court the power to review a decision on its merits or fairness, but only on whether the decision is made in accordance with the law. Appeals can go to the High Court.

A far more effective and efficient way for individuals to appeal the decision of a government official or body is through non-judicial review of administrative action in the Administrative Appeals Tribunal (AAT), which has jurisdiction to review the merits, that is, decide the case again. As it states on its website:

> The AAT aims to provide fair, impartial, high quality and prompt review with as little formality and technicality as possible.

Courts other than federal courts may also review decisions on the merits, if they have statutory authority to do so. Generally, judicial review involves the court with appropriate jurisdiction investigating whether a government official or department has acted *ultra vires* (beyond the legal power or authority of the person performing an action), or whether they or it have followed the rules of natural justice (procedural fairness).

END OF SECTION REVIEW 1.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define the term 'the legislature'.

2 Define the term 'the executive'.

3 Define the term 'the judiciary'.

Interpretation

4 What feature of the Australian system of responsible government means that the separation of powers does not exist in its pure form?

5 Why is it important that the High Court has almost unlimited jurisdiction to review Commonwealth administrative decisions?

Argument

6 Class activity: With a partner discuss what Lord Acton meant by the statement: 'Power tends to corrupt, and absolute power corrupts absolutely.'

Key concepts: democratic values, the Westminster system justice

HASS skills: analysing, evaluating

1.5 The division of powers between state/territory and federal levels of government in Australia

FOCUS QUESTIONS

- What is the structure of government in Australia?
- Why is there a division of power between the states and territories and the federal government?

Westminster system based on the British political system developed in Westminster, London. It is another term for parliamentary government, in which the Executive is drawn from the Legislature; that is, government is formed by the majority party or coalition in the lower house of parliament. The leader of that party or coalition becomes the prime minister.

state a defined area within Australia controlled by its own political unit, which has the power to pass its own laws. These laws are protected by the Australian Constitution, except where they contradict Commonwealth law.

territory a defined area within Australia controlled by its own political unit, but its laws can be revoked by the federal government

Australia's system of government

Australia's federal system of government is modelled on the British **Westminster system**. This federation consists of six **states** and two **territories** as well as a federal body known as the Commonwealth Parliament, making up nine parliaments in total in Australia. The Commonwealth Parliament is located in Parliament House in Canberra, the capital of Australia.

THE PARLIAMENT OF AUSTRALIA

THE QUEEN + GOVERNOR-GENERAL + SENATE + HOUSE OF REPRESENTATIVES = PARLIAMENT OF AUSTRALIA
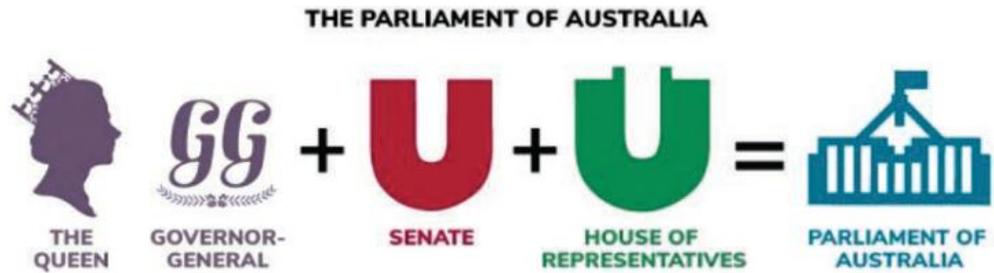
▲ **Figure 1.12** The Parliament of Australia is made up of the Governor-General who represents the Queen, the upper house (Senate) and the lower house (House of Representatives).

Key concepts for your memory bank

The Westminster system is a key concept that you should work hard to understand well. 'Westminster' refers to the UK Parliament, or the part of London where the parliament buildings are located. Due to Australia's history as a British colony and adoption of a similar legal and political system, we have inherited many shared values, traditions and processes. These include a constitutional monarchy, a bicameral parliament and parliamentary system of government. However, other influences, such as from the United States, have meant Australia's system is different to that of the United Kingdom. *Pop this concept into your memory bank – at the end of this book is an activity which will test your understanding of this, and other key HASS concepts!*

▲ **Figure 1.13** The British Houses of Parliament and Big Ben can be seen here, situated in the part of London known as Westminster. Australia's democratic system has inherited many processes from England.

MAKING THINKING VISIBLE 1.2

Think, pair, share

Look at Figure 1.12. Think about which of the three branches of government each part of the equation would belong to. What responsibilities would they have in these branches of government? Journal one point for each part. Share this with your partner or class.

Key concepts: democratic values, the Westminster system   **HASS skills:** analysing

A parliament is a body of elected representatives. It debates proposed legislation, passes or rejects it, and amends legislation. Apart from Queensland and the territories, all state parliaments and the federal parliament are **bicameral**. This means that they have two houses, an upper house and a lower house. The Australian Capital Territory's parliament is **unicameral**: it only has a lower house, called the Legislative Assembly. In Western Australia, the lower house is known as the Legislative Assembly and the upper house is called the Legislative Council. In federal parliament, the upper house is the Senate and the lower house is the House of Representatives. Lower houses are elected based on population. For each 151 federal electorates with roughly the same voting population, one representative is chosen. The states with a greater population will have more representatives. Upper houses are usually formed on equal representation, so that each state or region has the same number of Senators or Councillors.

The upper and lower houses of parliament have different roles, as seen in Figure 1.14.

State parliaments delegate their law-making authority to local councils. Local councils are comprised of elected members from a council electorate. The number of members who make up local councils vary and this depends on the size of an electorate.

Australia is a **constitutional monarchy**. This means that the monarch of the United Kingdom is also the monarch of Australia. The monarch is represented by the **Governor-General** at the federal level and by the **governor** at a state level. Governors-General and governors are appointed by the monarch based on advice from the respective federal and state governments.

> **bicameral** refers to the two houses of parliament in New South Wales, Victoria, Western Australia, South Australia and Tasmania
>
> **unicameral** refers to a parliament having one house, such as in Queensland, the Northern Territory and Australian Capital Territory
>
> **constitutional monarchy** a form of government where the monarch is the head of state
>
> **Governor-General** the monarch's representative at a federal level
>
> **governor** the monarch's representative at a state level

Roles of the houses of parliament and the Governor-General

Lower house	Upper house	Governor/Governor-General
• Forms government • Decides matters of national interest • Represents the interests of the people in their electorates • Proposes, debates and votes on Bills and amendments • Examines issues in committees • Scrutinises executive government	• Decides matters of national interest • Represents the interests of people in their states/territories • Proposes, debates and votes on Bills and amendments • Examines issues in committees • Scrutinises executive government	• Gives Royal Assent (approval) to a Bill passed by the House of Representatives and the Senate; makes recommendations to change a Bill • Starts the process for a federal election • Appoints times for sessions of parliament to be held • Appoints and dismisses ministers

▲ **Figure 1.14** The roles of the Governor-General and the upper and lower houses of parliament are distinct.

▲ **Figure 1.15** Australian actor Hugh Jackman is awarded an Order of Australia by the Governor-General of Australia David Hurley at Government House on 13 September 2019 in Melbourne. David Hurley became Australia's Governor-General on 1 July 2019.

ACTIVITY 1.3

Check your understanding

1 How many states and territories make up Australia's Federation?

2 The Western Australian Parliament is bicameral in nature. What does this term mean?

3 Why do you think the upper house does not form government?

4 Outline two strengths and weaknesses of Australia's bicameral parliament.

Key concepts: the Westminster system, participation

HASS skills: analysing, evaluating

Why is there a division of power between the states and territories and the federal government?

The actual makeup of the Australian Constitution clearly reflects the chief concerns of the Federation process. The reluctance of the states to hand over complete control to the Commonwealth is evident in Chapter I, Part V of the Constitution, in sections 51 to 60. These sections provided the split (or division) of powers between the Commonwealth and the states.

Section 51 of the Constitution specifies the **legislative powers** of the federal parliament. The federal parliament has the power to make laws with respect to all of the matters listed in s 51. These are sometimes referred to as the 'enumerated powers'. It is important to realise that the states can also make laws in many of the areas listed in s 51; namely, those areas over which the federal and state governments have **concurrent powers**.

Section 52 outlines the **exclusive powers** of the federal government;

legislative power the legal power or capacity to make laws

concurrent powers existing at the same time; powers held by both state and federal parliaments

exclusive powers powers that can be exercised only by the federal parliament

that is, only the Commonwealth (federal) Parliament can legislate on:

i the seat of government of the Commonwealth, and all places acquired by the Commonwealth for public purposes

ii matters relating to any department of the public service [controlled by the Commonwealth, according to the Constitution]

iii other matters declared by the Constitution to be within the exclusive power of the parliament.

Section 52(iii) refers to other sections of the Constitution that give the Commonwealth exclusive powers or restrict the states from making laws in that area. Section 90 gives the Commonwealth exclusive powers over customs and excise duties for goods and services entering the country, and s 114 restricts the states from raising or maintaining a military force, giving the Commonwealth sole responsibility for national defence. Section 115 also prevents states from creating money and currency, making this exclusive to the Commonwealth parliament.

The Constitution is an older document and it is not very flexible. As society, technology, values

and ethics have evolved over time, it has been the job of the High Court to interpret how the Constitution applies in a contemporary context and which parliament – state or Commonwealth – has power in particular areas. The High Court has had to make decisions about who has law-making responsibility in areas such as trade and commerce with other nations and foreign affairs.

Obviously there needs to be a conflict-resolution mechanism in place if a state and the Commonwealth make contradictory laws. This is found in s 109:

> When a law of a state is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

Those powers that belong solely to the states are known as the **residual powers**; that is, all the powers left over that are not otherwise given to the Commonwealth exclusively. Each state has its own constitution, which enables the state to make laws in various areas. This excludes any area directly denied to the states by the Australian Constitution.

Chapter V of the Constitution outlines some of these prohibitions.

Some of the key residual powers are in the areas of public housing, criminal/civil law, development, schools, police, hospitals and public transport. Environmental protection is another area that was not a consideration at the time the Constitution was drafted and is thus considered a 'residual power'.

There is a provision in s 51(xxxvii) that allows for a 'referral of powers', which means states are able to 'give' power to the Commonwealth to make laws with regard to a specific matter. States such as New South Wales, Victoria, Queensland and Tasmania have done this in family law, whereas Western Australia has kept this power. All states have referred power to the Commonwealth with regard to anti-terrorism laws.

Voluntary assisted dying

An example of an issue in which a state can legislate as it is not referred to in the Australian Constitution is the matter of voluntary assisted dying (VAD). In 2019 Western Australia passed legislation which enabled voluntary assisted dying to become a choice available to people in mid-2021 (expected 1 July 2021). The reason for the time delay was so that there would be an 18-month implementation period.

residual powers those matters on which the states can legislate, as they are not referred to in the Australian Constitution

As of early 2021, voluntary assisted dying was only available in Victoria. It involves the permission for a person to access medication to legally choose the time and manner of their death. Sometimes a person with an incurable or terminal illness who may be suffering from debilitating pain or movement may want to opt for VAD. There are certain criteria associated with this option. The criteria for VAD in Western Australia are that the person must:

- be aged 18 years or over
- be an Australian citizen or permanent resident who has been ordinarily resident in Western Australia for at least 12 months
- have been diagnosed with at least one disease, illness or medical condition that is advanced, progressive and will cause death; and, will, on the balance of probabilities, cause death within a period of six months (or 12 months for neurodegenerative); and, is causing suffering that cannot be relieved in a manner that the person considers tolerable
- must have decision-making capacity in relation to voluntary assisted dying
- must be acting voluntarily and without coercion
- must have an enduring request for access to voluntary assisted dying.

The person would then need to be assessed by two doctors who have met certain conditions and undergone required training. These doctors are also able to refer the person for additional assessments if they feel this is necessary.

The next step in the procedure is that the person must make three separate requests, which include an initial request, a written declaration

▲ **Figure 1.16** Labor minister Alannah MacTiernan joins in with the congratulatory cheers after Belinda Teh spoke on the steps of the WA Parliament on 6 August 2019 in Perth. Teh met with Premier Mark McGowan and Health Minister Roger Cook coinciding with the Voluntary Assisted Dying Bill being introduced to the WA Parliament.

(witnessed by two people who meet specific requirements) and finally a third request.

The death certificate must not include any reference to voluntary assisted dying.

Essential to the process is that it remains voluntary and the person can withdraw from the process at any stage.

Progress through Parliament

The table below is a timeline of how the matter of VAD came to be passed as legislation in Western Australia during 2019.

VAD legislative timeline

Legislative Assembly	Date
Introduced	7 Aug 2019
First Reading	7 Aug 2019
Second Reading	7 Aug 2019
Second Reading Agreed	3 Sep 2019
Consideration in Detail	3 Sep 2019
Third Reading	24 Sep 2019
Legislative Council	**Date**
Introduced	26 Sep 2019
First Reading	26 Sep 2019
Second Reading	26 Sep 2019
Second Reading Agreed	23 Oct 2019
Committee of the whole	23 Oct 2019
Amendments adopted	4 Dec 2019
Third Reading	5 Dec 2019

END OF SECTION REVIEW 1.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define the term 'exclusive powers'. Provide an example.
2 Define the term 'concurrent powers'. Provide an example.

Interpretation

3 Australia is a constitutional monarchy, meaning that at present Queen Elizabeth II is the head of state. An alternative system of government is a federal republic. This would mean an Australian citizen could be chosen to become the president. Outline two reasons why Australia should remain a monarchy and two reasons why it should become a federal republic. Which system do you think we should have?
4 Why do you think a division of powers between the Commonwealth and state parliaments is necessary?

Argument

5 Class activity: As a class, discuss why, as society, technology, and values and ethics have evolved over time, it has fallen to the High Court to interpret how the Constitution applies in a contemporary context. Why can't the states do this?

Key concepts: democratic values, the Westminster system, participation

HASS skills: analysing, evaluating, communicating and reflecting

1.6   The different roles of the House of Representatives and the Senate in Australia's bicameral parliament

FOCUS QUESTIONS

- What does the Governor-General do?
- What are the different roles of the House of Representatives and the Senate?
- What is the role of the prime minister, ministers or the Cabinet, and courts?

The role and structure of parliament

The political party that wins the majority of seats in the lower house forms the government. Sometimes different parties will unite to form a government (such as the Liberal–National Coalition). The leader of the winning party becomes the prime minister and is the leader of the government. The political party or coalition of parties with the second-largest amount of seats in the lower house forms the Opposition.

Ministers are those members of the government who have a special responsibility for particular departments; for example, Minister for Education and Minister for the Environment.

The prime minister offers positions (or portfolios) to them and these ministers usually form the Cabinet, or the 'front bench' as they sit at the front in parliament sittings. Cabinet makes decisions on policy and laws to be drafted for consideration by parliament. Non-ministerial members of parliament are known as the 'back bench'. When changes are made to the front bench positions, this is known as 'reshuffling the Cabinet'.

The Opposition party appoints shadow ministers who are responsible for forming and promoting the Opposition's position on such areas as defence, health and education. The Executive Council is made up of the Governor or Governor-General and selected ministers. It is the body that enables legislation to be put into operation.

▼ **Figure 1.17** The Hon. Melissa Price, Minister for Defence, addresses guests during a keel laying ceremony for the first Offshore Patrol Vessel *Pilbara* on 11 September 2020 in Perth.

The British monarchy still plays a role in the parliament in Australia. The Queen must assent to laws. At the federal level, she is represented by the Governor-General and at the state level by a governor in each state.

The Queen
(represented by the Governor-General)

Government members of parliament

Executive members of parliament

Non-government members of parliament

House of Representatives

Senate
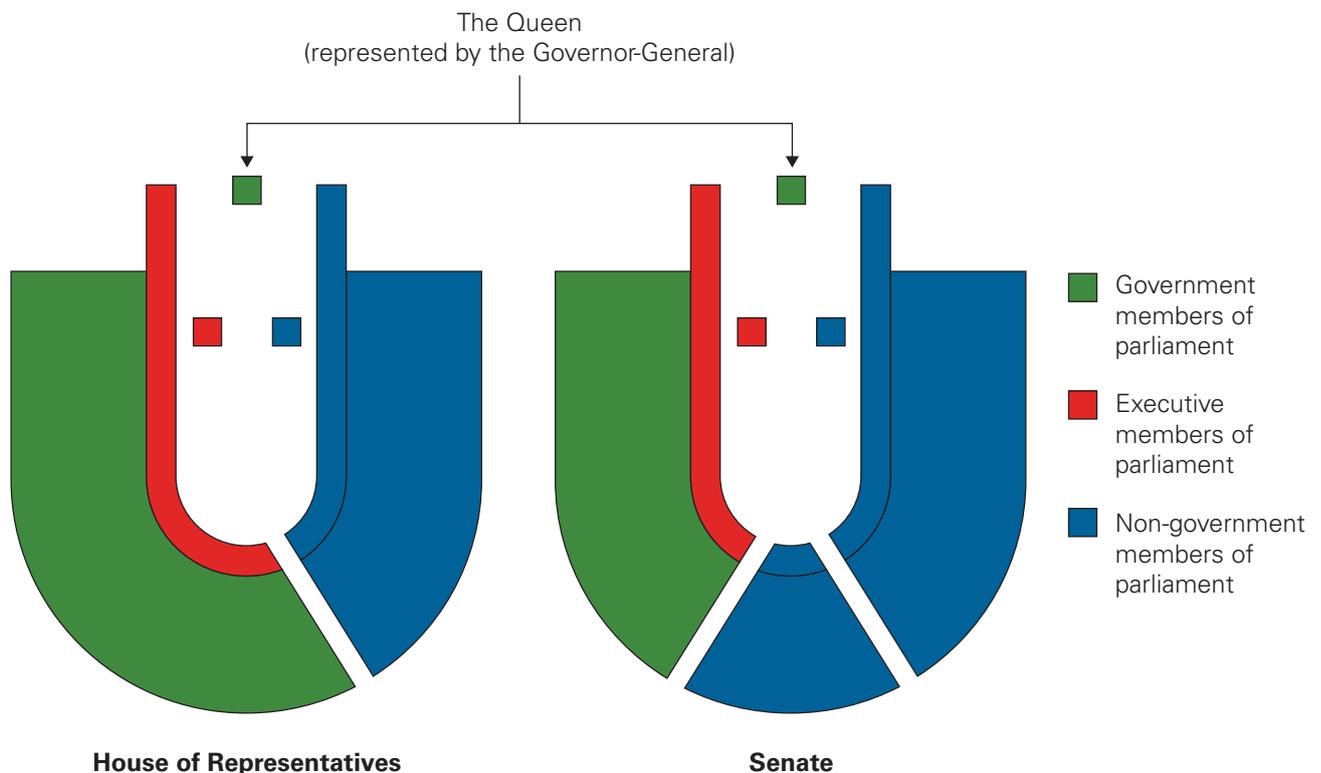
▲ **Figure 1.18** The Parliament of Australia – the number of members in each house is determined at the conclusion of each election.

Statute law

Statute law is the law made by parliament. It is also known as 'legislation' or 'Acts of Parliament'. In Australia, any parliament has the power to make statute law. This means that state, territory and federal governments all have the right to make laws.

Bill a drafted law that has not yet been passed by parliament

The Australian Constitution sets out the powers of the state and federal parliaments with respect to making law. The Constitution also sets out what **Bills** the House of Representatives and the Senate can introduce. Section 53 gives both houses equal legislative powers, except that the Senate is not allowed to introduce laws about supply and taxation (government revenue and spending).

The legislative process

Passing legislation

One of the most important functions of parliament is the passing of laws.

The government introduces most laws. A proposed new law is known as a Bill. Ministers, who are responsible for their preparation, usually introduce Bills. Any Member of Parliament can introduce a Bill; however, if a member who is not a minister (called a backbencher) introduces a Bill, the Bill is known as a private member's Bill.

The making of a law can be time-consuming and difficult. The process is open to public scrutiny and, as a result, well-organised pressure groups and members of the public can influence parliamentarians' opinions.

As members of parliament are subject to elections every few years, they are well aware of the consequences of passing unpopular legislation. This means that proposed legislation often undergoes much discussion in parliament and may be redrafted many times. Before a Bill passes and becomes federal law, it requires the

approval of both Houses of Parliament and the Governor-General. It then becomes an **Act of Parliament**.

The process for passing laws through the Western Australian Parliament (as well as other states with bicameral parliaments) is generally the same as passing laws through federal parliament. This process is outlined in Figure 1.20.

The process for passing laws in the Legislative Assembly of the Australian Capital Territory has fewer steps, as there is only one legislative chamber. Bills of the Australian Capital Territory are not given royal assent by the Governor-General, and this territory has no governor or administrator.

> **Act of Parliament** statute law, resulting from a Bill successfully passing through parliament and gaining royal assent

▲ **Figure 1.19** The Parliament of Western Australia in Perth

MAKING THINKING VISIBLE 1.3

See, think, wonder

Look at the process of passing a Bill through parliament flowchart in Figure 1.20.

1 What do you *see*?
2 What do you *think* about it?
3 What does it make you *wonder*?

Key concepts: the Westminster system, participation   **HASS skills:** questioning and researching

The process of passing a Bill through parliament

Need for new law is identified

Influences on governments to make laws come from many and varied sources. These include:
- community interest/lobby groups
- electoral mandate
- the need to continue or enhance existing laws
- party policy
- national/international events
- proposals put forward during election campaigns.

Draft Bill

Cabinet approves the drafting of a Bill. The proposed Bill is drafted by parliamentary clerks and timetabled for its first reading in the lower house. The Bill is presented by the minister, ready for its first reading.

First reading

The first 'formal' reading of the Bill takes place: the Clerk of the Parliament reads out the title of the Bill. Each member receives a copy of the proposed Act.

Second reading

The minister then speaks about the proposed Act, elaborating on its general aims. Debate over the Bill takes place. This stage is completed by the clerk, who reads the title of the Bill for the second time.

Committee stage

The Bill is examined and debated in detail and changes (known as amendments) are made if necessary.

Third reading

During the third reading, a vote is taken on the Bill. If the Bill passes, it moves to the upper house. A Bill requires a majority vote before it can pass to the next house.

Upper house

In the upper house, the process is repeated. If the Bill does not pass in the upper house, it may be returned to the lower house for amendments or may be rejected.

Royal assent

If the Bill is passed in the upper house, it is presented to the Governor (in the case of Western Australian legislation) or Governor-General (in the case of federal legislation) for formal approval. The Bill now becomes an Act of Parliament and is law as of the date specified in the Act.

▲ **Figure 1.20** The passage of a Bill through parliament

Delegated legislation

Delegated legislation is legislation made by non-parliamentary bodies. It involves 'less important' laws that parliament does not have time to draft, consider and pass, and so delegates (passes on) the responsibility to 'subordinate' bodies such as government departments or local councils. The Act that authorises a body to make delegated legislation is called an 'enabling Act'.

Types of delegated legislation include:

- **regulations:** laws made by the Governor-General, state governors or members of the Executive Council
- **ordinances:** laws made for Australian territories (e.g. Norfolk Island and the Australian Antarctic Territory)
- **rules:** legislation made for government departments, usually by the department involved
- **by-laws:** laws made by local councils, which are restricted to the area governed by that council.

Examining Bills and issues in committees

A parliamentary committee is a group of representatives and senators who are chosen to investigate proposed laws and issues of concern. Committees are comprised of members of the House of Representatives and the Senate, except for government ministers. Some committees have members from both houses, and these are called joint committees.

A committee aims to ensure that the parliament's work is beneficial for Australians and that the laws it makes do not unfairly impact upon groups and individuals. Members of the public, experts and those who work in government are often asked to present their views on Bills and issues in the community. A committee can also ask people to attend a question-and-answer session in order to gather information. It is one method for ensuring the accountability of the government because it means it can be questioned on its activities.

> **delegated legislation** laws made by authorities other than parliament, which are delegated the power to do this by an Act of parliament

Senate estimates are particular committees designed to investigate government spending. Ministers, government department officials and staff can be called on to explain how money is spent, on what programs and services it is spent and the impact it has.

Scrutinising executive government

The government is responsible for creating policies and implementing laws to run the country. The parliament has an additional role to ensure the government is acting responsibly as it carries out its business. To *scrutinise* is to examine in detail and question the actions of people. In parliament, this means asking members of the government to provide details about the work they are doing. Question time is one method where the Opposition, minor parties and independents have the opportunity to ask questions to ministers about their decisions and actions. These questions may raise issues of importance or highlight areas of weakness in the government. A member of the government is also allowed to ask questions; however, these often will highlight the positive work of the government instead of critically questioning it about its performance. Question time lasts for one hour, four times a week, while parliament is sitting, and is broadcast to the public.

▲ **Figure 1.21** Scott Morrison leaves question time in the House of Representatives

END OF SECTION REVIEW 1.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define the term 'Bill'.

2 Define the term 'committee' and its role in parliament.

Interpretation

3 Any member of parliament can introduce a Bill. However, for a Bill to pass, it must have the support of a majority of members. Analyse the problems this might present for the Opposition and smaller parties and independents in passing laws.

4 Explain why you think the process from idea, to Bill and, finally, to law is comprehensive and has many steps before becoming an Act of Parliament.

Argument

5 'Parliament spends too much time arguing and debating and nothing gets done.' With reference to the roles of parliament studied in this section, discuss two arguments in support of this statement and two arguments against this statement.

Key concepts: the Westminster system, participation

HASS skills: analysing, evaluating, communicating and reflecting

1.7   The process for constitutional change in Australia through a referendum

FOCUS QUESTION

How do we change the Australian Constitution?

The *Commonwealth of Australia Constitution Act 1900* is often referred to as the 'birth certificate of the nation'. The Act contains eight chapters and 128 sections, and provides the rules on how Australia is to be governed. The Act outlines the different areas in which the states, territories and the Commonwealth can make laws. For example, Chapter 1 describes the composition and powers of the federal parliament, and its bicameral nature. Chapter 5 outlines the law-making relationship between federal and state parliaments. Overall, the rules in the Act are there to guide state and federal parliaments.

Changing the Australian Constitution

Chapter 8 of the Commonwealth of Australia Constitution Act outlines the process and rules in relation to changing the Australian Constitution. Section 128 states that the words of the Australian Constitution can only be changed by referendum. A referendum is a national ballot on a question to change the Australian Constitution. In order for a national vote to take place, the proposed change must first be approved through a Bill by the federal parliament. The Bill is then sent to the Governor-General, who issues a **writ** so that a referendum can occur.

> **writ** a form of written command that is legally binding

For a referendum to be successful, a national majority (more than half) of voters from all states and territories *and* a majority (more than half) of voters in at least four out of six states must vote 'yes'. This is commonly referred to as the 'double-majority' test. Considering these dual standards, referendums require a high level of public support for them to be successful. If the double-majority test is passed, the federal government is bound by the outcome of the referendum.

To change the Australian Constitution, each proposed alterntion must be approved by a double majority of vogters in a referendum

A referendum is passed when:

and

A national majority (more than half) of voters from all states and territories votes '**Yes**'.

A majority (more than half) of voters in at least four of the six states vote '**Yes**'.

— **Yes**
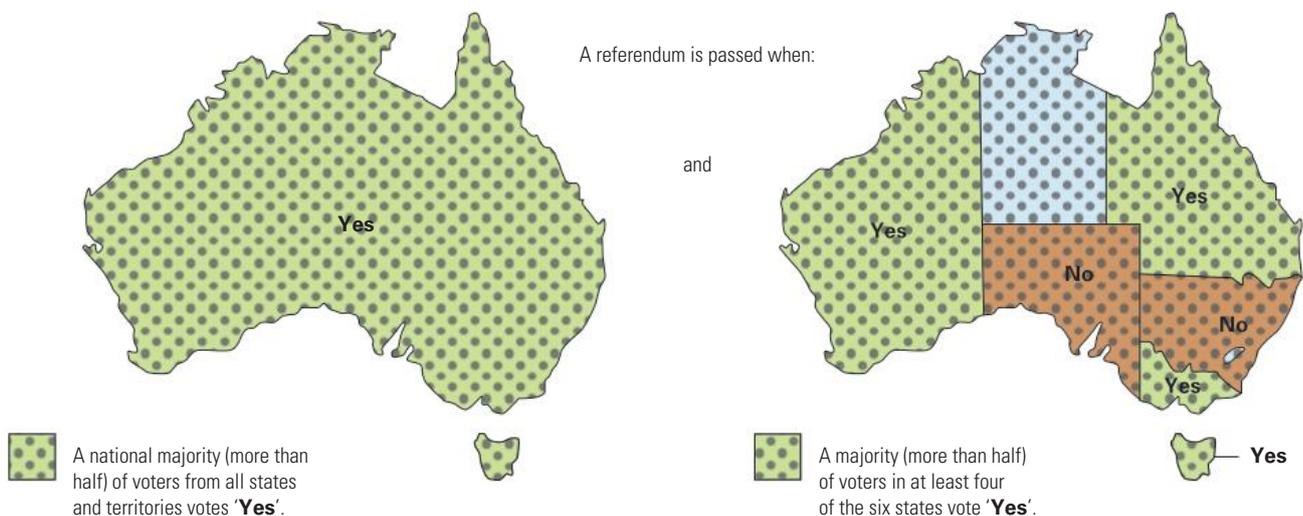
▲ **Figure 1.22** Double majority

MAKING THINKING VISIBLE 1.4

Tug of war

Consider this statement: The double-majority test is too difficult to pass. We should get rid of this test. Instead, we should pass referendums only with a national majority.

1 Identify factors that *pull* at each side of this dilemma.

2 Write down reasons why you agree or disagree with this statement.

3 Write down two 'What if' questions to help support your contention.

Key concepts: democracy, democratic values

HASS skills: questioning and researching, analysing, evaluating

Since 1901, Australia has held 19 referendums. Only eight of these have been successful due to the difficulty of achieving the double-majority requirement. The most recent referendum, known as the *Constitution Alteration (Establishment of Republic) 1999*, asked Australians to vote yes if they thought Australia should become a republic. An overwhelming number of Australians voted no to this question, which made this referendum unsuccessful.

A successful referendum

One example of a successful referendum in Australia was the famous *Constitution Alteration (Aboriginals) 1967*. Read Case study 1.1 to learn more about this change to the Australian Constitution through a successful referendum.

CASE STUDY 1.1

Referendums

Successful referendums

The last successful referendum in Australia was in 1977, when three questions were proposed to voters:

- a proposal to have Senate vacancies filled by persons from the same political party as the person vacating the position
- to allow Territorians (Australian Capital Territory and Northern Territory) to vote in constitutional referendums
- to set a fixed retirement age for High Court judges at the age of 70.

The most successful referendum in Australia was in 1967, where only one of the two proposals was carried, that being changes to the Constitution to count Indigenous peoples in the national census and to allow the Commonwealth Parliament to make laws for Indigenous people (this had previously been a law-making responsibility of the states). This proposal was passed with over 90 per cent support. In contrast, the other proposal, to be able to increase numbers in the House of Representatives without necessarily increasing the numbers in the Senate, was not passed at the same time.

Unsuccessful referendums

preamble an introductory statement or declaration

The most recent referendum was held in 1999 and proposed changes to the Australian Constitution that would effectively change the system of government from a constitutional monarchy to a republic, where the head of state would be a president chosen by the parliament instead of Queen Elizabeth II and her representative the Governor-General. It also asked whether or not a **preamble** should be inserted into the Constitution. The first change would have a significant impact on Australia's political system, but the preamble would

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simply allow the inclusion of a written statement acknowledging Australia as a modern nation, our values and aspirations and recognition of First Nations people. Both proposals were unable to achieve a popular vote of the people or a majority of states.

Reasons

Why were these referendums successful or unsuccessful? We have already mentioned the problems associated with achieving the double majority required for a referendum to be successful. However, it is not the only reason referendums do or do not pass. Some of the key factors that influence the success of a referendum include:

- Bipartisan support – when the various political parties show support for a change, then the public is likely to reinforce and vote in favour of a change. If interest groups and political parties differ in their opinions, voters presented with many options will be forced to choose a side. This is in part the reason for the success of the 1967 referendum, as there was not a 'No' campaign.
- Public education – if the public is educated about the changes and the impacts that a change will have then a 'Yes' vote is more likely. People are disinclined to make changes if they do not understand their impacts or influences on their lives.
- Voter ownership – when all citizens and voters are involved in a referendum proposal, it has personal value to them and it will positively impact upon them, they will support a change. If the change appears to only be for the benefit of politicians or small groups, they are less likely to support a change.

END OF SECTION REVIEW 1.7

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What is the aim of the Commonwealth of Australia Constitution Act?

2 What is the process of altering the Australian Constitution?

Interpret

3 Explain why it is difficult for a referendum to pass the double-majority test.

Argue

4 Search for information about the 1999 referendum.
Then, answer the following questions:
   a What were the two questions put to Australian voters in the 1999 referendum?
   b What percentage of the population was in favour of changing the Australian Constitution and how many states voted in favour of changing the Australian Constitution?
   c What were two arguments for the 'No' case and what were two arguments for the 'Yes' case to change the Australian Constitution?
   d Why do you think Australians voted against this change?

Key concepts: democracy, democratic values

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

1.8 How Australia's legal system aims to provide justice

FOCUS QUESTIONS

- What are the elements of a fair trial?
- How can citizens access legal representation?
- What is the meaning and importance of the rule of law, presumption of innocence and burden of proof?

The right to a fair trial

The right to a fair trial is an important part of the Australian legal system and it is recognised in a number of international declarations, including Article 10 of the United Nations' *Universal Declaration of Human Rights* and Article 14 of the *International Covenant on Civil and Political Rights*. The High Court of Australia in *McKinney v The Queen* (1991) 171 CLR 465 held 'the central thesis of the administration of criminal justice is the entitlement of an accused person to a fair trial according to law'.

The elements included in the right to a fair trial are encompassed in Article 14 of the *International Covenant on Civil and Political Rights*. The following is a summary of these rights:

- **Independent court:** the court must be 'competent, independent and impartial'.
- **Public trial:** the trial should be held in public and judgment given in public.

▲ **Figure 1.23** A statue of Lady Justice, a blindfolded woman carrying a sword and a set of scales, who is a common symbol at courthouses in many countries.

- **Presumption of innocence:** the defendant should be presumed innocent until proved guilty – the prosecution therefore bears the onus of proof and must prove guilt beyond reasonable doubt.
- **Defendant told of charge:** the defendant should be informed of the nature and cause of the charge against them – promptly, in detail, and in a language which he or she understands.
- **Time and facilities to prepare:** the defendant must have adequate time and facilities to prepare a defence and to communicate with counsel of their own choosing.
- **Trial without undue delay:** the defendant must be tried without undue delay – that is, undue delay between arrest and the trial, perhaps having regard to such things as the length of the delay, reason for the delay, and whether there was any prejudice against the accused.
- **Right to a lawyer:** the defendant must have the right to defend themselves, or have legal representation of their own choosing or legal assistance assigned to them of they cannot afford their own lawyer.
- **Right to examine witnesses:** the defendant must have the opportunity to 'examine, or have examined, the witnesses against him [or her] and to obtain the attendance and examination of witnesses on his [or her] behalf under the same conditions as witnesses against him [or her].
- **Right to an interpreter:** the defendant is entitled to the 'free assistance of an

interpreter if he [or she] cannot understand or speak the language used in court'.

- **Right not to testify against oneself:** the defendant has a right 'not to be compelled to testify against himself [or herself] or to confess guilt'.
- **No double jeopardy:** no one shall be 'liable to be tried or punished again for an offence for which he [or she] has already been finally convicted or acquitted in accordance with the law and penal procedure of each country'.

The right to legal representation

Unlike the USA, Australia does not provide all of its citizens the right to free legal representation. However, the complexity of court procedure makes legal representation important, because it improves a person's ability to receive a fair trial. Being poorly represented or not represented at court may impede this. In the case of *Dietrich v The Queen* [1992] HCA 57, the High Court stated:

> Australian law does not recognise that an indigent accused on trial for a serious criminal offence has a right to the provision of counsel at public expense. Instead, Australian law acknowledges that an accused has the right to a fair trial and that, depending on all the circumstances of the particular case, lack of representation may mean that an accused is unable to receive, or did not receive, a fair trial.

▲ **Figure 1.24** High Court verdict in *Dietrich v The Queen* [1992] HCA 57

However, due to the high legal costs associated with legal representation, legal aid and assistance can be sought from agencies such as Legal Aid WA. According to its website, Legal Aid WA offers free or low-cost legal services to the community. It can help with questions about the law, assist people going to court and provide advice on legal problems. It aims to:

- improve how people access legal services and participate in the justice system
- think about all of the legal needs a person might have
- target legal assistance for people who experience, or are at risk of experiencing, social exclusion

▲ **Figure 1.25** Legal Aid WA offers free or low-cost legal services to the community.

- help people avoid legal problems, and resolve them earlier, through relevant education, information, advice and referrals
- enhance how different service providers in the legal sector work together and alongside each other.

Access to legal aid services is vital, particularly for people and groups within the community who are faced with multiple disadvantages or legal issues. If a person is unable to access legal representation and requires this to understand the process and achieve a fair trial, their case can be 'stayed' or put on hold until they are able to access a lawyer.

Rule of law

The core of the **rule of law** is that no one is above the law, including those who make the law. This means that all the groups and individuals who are involved in the legal system – such as the legislators and judges who make, administer and interpret the laws, the police officers who enforce the law and the lawyers who represent and advise people about the law – are answerable to the same laws as every other citizen. Thus, the rule of law means that everyone is subject to the same laws. Obvious breaches of the rule of law occur when officials make favourable decisions for relatives and friends but apply the law fully for everyone else.

rule of law the principle that nobody is above the law; this can be seen in the requirement that government actions and decisions must be in line with the laws they create and that they themselves must follow the laws

Amazing but true …

Section 22 of the *Marketing of Potatoes Act 1946* prohibits anyone from selling, delivering, purchasing or taking delivery of 50 kilograms or more of potatoes unless they are a member of the Potato Corporation or an authorised agent. The penalty for breaking this law is a fine of up to $2000 for a first offence or $5000 for a subsequent offence, in addition to an amount up to twice the value of the potatoes.

MAKING THINKING VISIBLE 1.5

Compass points

Reflect on the issue of accessing legal representation. Record your responses to the following compass questions.

Share this with your class.

1 E = Excited

What excites you about the issue? What's the upside?

2 W = Worrisome

What do you find worrisome about it? What's the downside?

3 N = Need to know

What else do you need to help you evaluate this issue?

4 S = Stance or Suggestion for moving forward

What is your current opinion on it? How might you move forward in your evaluation of this issue?

Key concepts: democratic values, justice, rights and responsibilities

HASS skills: questioning and researching, analysing

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beyond reasonable doubt a legal concept in a criminal trial in which a person can only be found guilty if the judge or jury, after examining the evidence, finds that it conclusively shows the accused committed the crime and there is no other likely cause

plaintiff the person making a legal complaint against someone else in court in a civil case

The presumption of innocence

Australia is signatory to the United Nations' *International Covenant on Civil and Political Rights*, an international human rights treaty. Article 14(2) of this treaty guarantees that a person who faces a court trial in Australia is presumed innocent until proven guilty by a court of law. Therefore, no guilt can be presumed until the charge is proven **beyond reasonable doubt**.

The burden and standard of proof

The burden of proof is different for criminal and civil cases. For criminal cases, the burden of proof lies with the prosecution. This means

that the prosecution has the onus of proving the guilt. In criminal cases, the accused is given the presumption of innocence. This means that no guilt can be presumed of the accused until the standard of proof is achieved. The standard of proof for criminal cases is beyond reasonable doubt. It is the highest standard of proof in the Australian judicial system. This means that after examining all the evidence presented by the prosecution, the jury must be convinced that there is no doubt that the accused committed the crime.

For civil cases, the burden of proof rests with the **plaintiff**. This means that the plaintiff has the onus of proving that they have been wronged, suffered a loss and/or had their rights infringed. The standard of proof for civil cases is on the balance of probabilities. This means the onus is on the plaintiff to

prove that, based on the majority of the evidence presented, they have mostly been harmed or have suffered the loss claimed. This means civil cases do not operate in terms of guilt or innocence; rather, it is whether the plaintiff is able to show enough evidence to convince a court that they have been aggrieved.

Court hierarchy

Hierarchy of courts in Western Australia

▲ **Figure 1.26** The hierarchy of courts in the legal system of Western Australia
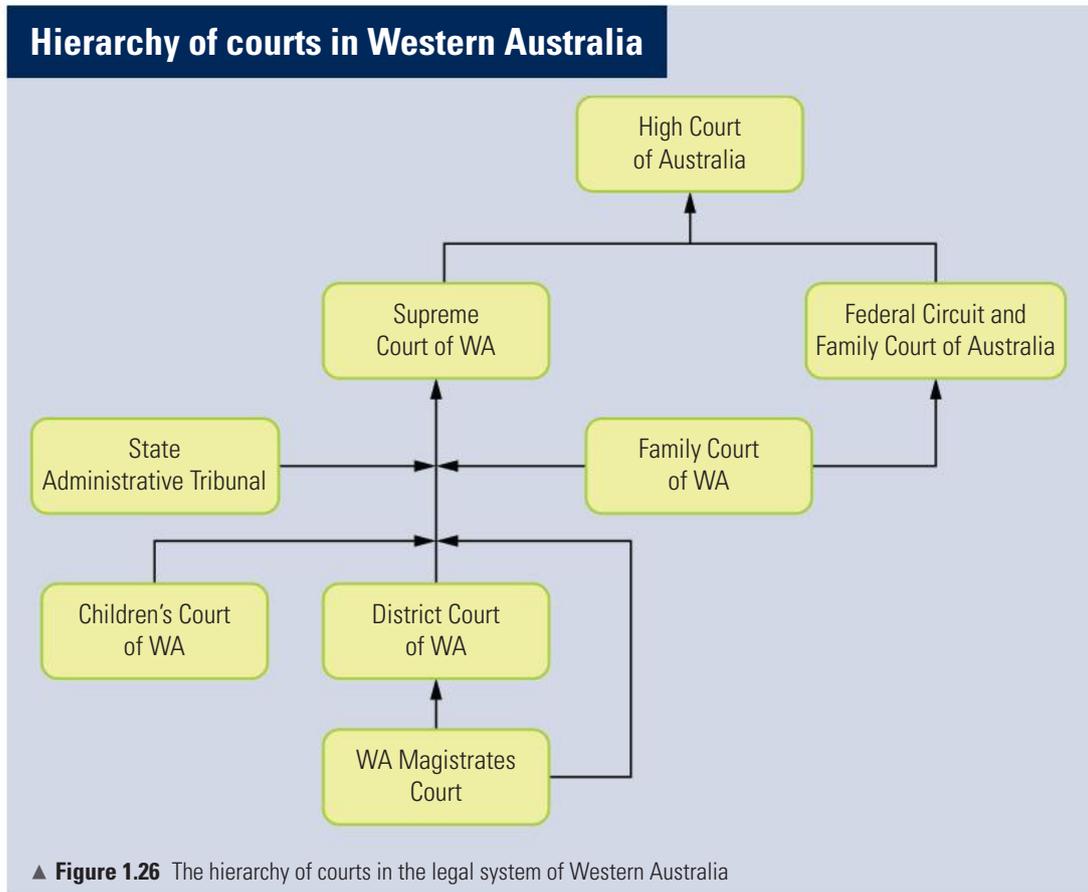
▼ **Figure 1.27** The Supreme Court of Western Australia is the highest state court in Western Australia. The current Chief Justice of the Supreme Court is Peter Quinlan SC, who was appointed to the position in August 2018.

The people in the court

The courtrooms of criminal and civil trials

▲ **Figure 1.28** The people involved in the courtrooms of criminal and civil trials in Western Australia
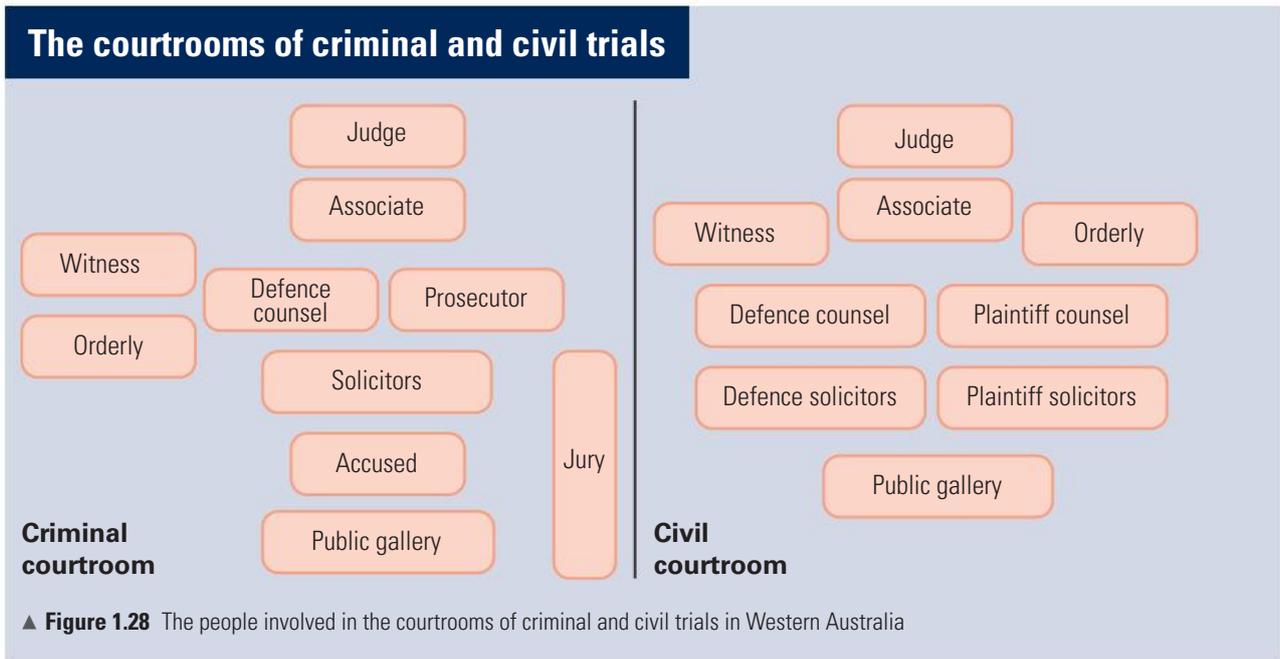
END OF SECTION REVIEW 1.8

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define the term 'rule of law'.
2 Define the term 'plaintiff'.

Interpretation

3 Using the features of a fair trial listed on pages 30–33, rank them in order of importance, with 1 being the most important to achieve a fair trial, 2 the second-most important to achieve a fair trial and so on. Once you have ranked them in order, explain the reasons why you made your first and last choices.

4 Discuss why civil cases do not operate in terms of guilt or innocence and whether or not you think this is fair.

Argument

5 Class activity: As a class, hold a debate on the premise that a person who faces a court trial in Australia is presumed innocent until proven guilty by a court of law. Therefore, no guilt can be presumed until the charge is proven beyond reasonable doubt. Half the class should take the point of view that presumption of innocence is important and the other half of the class should take the point of view that those accused should be considered guilty until proven innocent.

Key concepts: justice, rights and responsibilities

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

1.9 How citizens participate in providing justice through their roles as witnesses and jurors

FOCUS QUESTION

What can citizens do to ensure justice is upheld?

The role of a witness

The role of a witness is crucial to ensuring that a fair trial is conducted. One of the most important types of evidence is that of a witness. Witnesses can be called to give evidence in court by either the prosecution or the defence and may be examined by either in court. A witness might be someone who saw some aspect of the crime take place, or someone who simply has some relevant knowledge about an aspect of the case that supports the prosecution's or defendant's argument. Anyone who witnessed a crime or was interviewed by police may be subpoenaed to appear later in court. A subpoena is a formal court document ordering a person to attend at court at a certain time and place,

and cannot be ignored – if it is, it may result in a charge of contempt of court.

A witness giving evidence will be asked to take an oath or affirmation to tell the truth and will be asked a series of questions, usually by both the prosecution and the defence. There are rules around the order and type of questions that a witness can be asked. The information the prosecution and the defence seek is about the witness's factual first-hand knowledge or eyewitness testimony and will often be supported by an earlier statement made by the witness and recorded. Witnesses must answer questions truthfully; if not, they may be guilty of perjury, which is telling an untruth to a court.

▼ **Figure 1.29** There were approximately 200 witnesses called at the judge-alone trial of Bradley Robert Edwards.

The role of a jury

To assist in making the court system as fair as possible, major trials require 12 to 18 citizens to attend as jurors. Their job is to decide, from the evidence presented, if a person is not guilty or guilty. A jury is a panel of citizens, selected at random from a list compiled from the electoral roll, whose job it is to determine the guilt or innocence of the accused based on the evidence presented to them at trial. Their decision is called a verdict. It is a right of all people accused of serious crimes to have the option of a jury to determine their innocence or guilt. This right has its origins in the Magna Carta, as well as being written in the Constitution (s 80). It is a task that brings with it enormous responsibility. See the following article on jury duty.

Jury duty explained: From allowances to exemptions, here's what you need to know

If you're an Australian citizen and you're enrolled to vote, there's a good chance that one day you'll open your mailbox to find a fancy letter requiring you to attend your local court for jury duty.

If you haven't the faintest clue how the legal system works and your courtroom knowledge is limited to the storylines of TV legal dramas, you'll likely have a lot of questions.

For starters, what exactly does a juror do? If you've got to work, can you skip jury duty? What if you have family to look after or live far away from the court?

The good news is we've done the hard yards for you – so here's what you need to know.

WHAT DO JURIES DO? AND WHY DO WE HAVE THEM?

Juries are a key part of our legal system. They're generally made up of 12 people who are tasked with hearing evidence presented in a trial and returning a verdict of guilty or not guilty.

SO WHY DO WE HAVE JURIES? AND WHY DON'T WE LET JUDGES DECIDE EVERYTHING?

The key reason is that juries help people trust the justice system. Without juries, trials would be decided by a single judge (who might not be representative of the broader population) instead of a group of people representing a cross-section of society.

Think about someone who is particularly biased or prejudiced: if they were deciding on a case themselves, the outcome could be very different than if they had to reach agreement with 11 other people in a jury room.

Having a jury also forces lawyers to explain things in terms an average person can understand, rather than a bunch of legal mumbo jumbo.

After all, we need to understand the law if we're going to avoid breaking it, says Jacqui Horan, a jury researcher and associate professor at Monash University.

HOW CAN YOU GET EXCUSED FROM JURY DUTY?

Look, I get it. You saw the jury duty letter and thought, 'How I am going to get out of this?'

We all have busy lives and jury duty can be a major inconvenience. But, like voting, it's an important civic duty that we shouldn't take for granted. (I'll get to this shortly.)

All that said, sometimes jury duty is going to be impractical or impossible, which is why courts allow people to be exempted or excused in certain circumstances.

Here's a short and abridged list of some of the reasons you might be excused, courtesy of David Tait, a professor of justice research at Western Sydney University:

- if you are self-employed or run a small business that would be affected by your absence

- if you are a student or apprentice

- if you have a health issue or live with a disability that would make jury service difficult

- if you aren't living in the state where you have been summoned to attend court, or if you have transport difficulties (e.g. you live very far from the court)

- some professions may exempt you from serving on a jury; this usually covers criminal lawyers, police officers and other people who work in the criminal justice system, but each jurisdiction is different.

For most people though, simply having to work is not going to be a good enough reason to avoid jury service.

For a case in point, consider the chief financial officer who tried to dodge jury duty in Victoria because he had meetings to attend. For his indiscretion, he was fined $2000 and ordered to do 80 hours of community service.

▲ **Figure 1.31** Jury duty

HOW ARE JURIES SELECTED?

If you're called to court, it's not a given that you'll be put on a jury immediately.

For one, lawyers have an opportunity to veto potential jurors by using what's called a 'peremptory challenge'.

The reasoning for these challenges tend to be based on little more than superstition or folklore, says Professor Horan.

In Victoria, for instance, teachers and nurses are often challenged because of pervasive stereotypes that they have 'strong views' or are overly sympathetic to victims.

In many cases, lawyers will challenge potential jurors simply because of the way they look, Professor Horan adds.

If you are excused, challenged or otherwise exempted, you might be required to come back to court another time.

WHAT DOES JURY DUTY PAY?

Jurors are paid allowances by the court for their time (and sometimes travel), which can range from $40 per day to more than $100 depending on the state*.

In longer trials, jurors are typically paid more to make up for the inconvenience.

Your work may also pay you while you're on jury duty.

Under the National Employer Standards, all employers are required to top up their staff's jury pay to their normal wage for the first 10 days of jury service, but this does not cover casual workers.

Some states like Victoria require employers to keep paying their staff at full pay. Some lucky employees (often public servants) will get full pay even when it isn't required by law.

But, if you don't have access to these generous perks, you're a casual worker, or if you're assigned to a particularly long trial, there's a real chance you could be left worse off financially for serving on a jury.

HOW LONG DO PEOPLE SERVE ON JURIES?

Jurors typically serve on trials that take between seven and 12 days, though more involved matters – such as those for alleged terrorists – can take months or even a year or more, says Professor Tait.

Jurors are often asked about their availability in advance if they could be selected for a particularly long trial.

WHAT HAPPENS IN THE COURT ROOM?

In court, the role of the juror is to be a 'fact finder', Professor Horan says. In a jury trial, jurors are asked to decide upon the key facts of the case and return a verdict of guilty or not guilty. (In judge-only trials, the judge also takes on this responsibility.)

Consider someone on trial for allegedly driving a getaway car in a robbery: the jurors have to decide whether the accused intended to rob something, the extent of their involvement and whether they were acting in concert or alone, Professor Tait says. The judge's role in jury trials, by comparison, is to deal with questions of law, such as what evidence can be presented to the court.

JURIES IN THE INTERNET AND SOCIAL MEDIA AGE

When jurors are empanelled, they are usually given stern instructions not to talk to anyone about the case or to look up information online.

The reason is fairness, Professor Tait says. In a court room, the defence lawyers have an opportunity to explain or question any evidence that's presented to the jury.

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* Standard fees payable for jury attendance in WA, according to the regulations are: Half a day $10, full day $15 or $20 for every full day after the third day.

▲ **Figure 1.32** Why would it be bad for a jury member to be able to access social media during a trial?

When a juror is searching around online in their private time, they might be reading something mistaken or misleading [without] knowing it. The defence doesn't have an opportunity to point this out, which could lead to a miscarriage of justice.

Similarly, jurors are often warned to keep off social media. The fear is that jurors could become aware of information that wasn't heard in court, that they contact people involved in the trial, or that they use social media to discuss the trial with others.

Judges take this stuff very seriously, and have even dismissed jurors who have researched online or posted about their cases on social media.

WHAT'S THE EXPERIENCE LIKE?

While most people are initially apprehensive about serving on a jury, those who have gone through it often value the experience. 'What we have learnt from surveying jurors is that although jurors are often initially nervous and hesitant … after they've been on a jury, they're far more inclined to do it again because they really appreciate what an amazing experience it can be,' Professor Horan says. 'You get to see what it's like being a judge for a week or two.'

For some people though, jury duty can be confronting and even traumatic.

If you're serving on a sexual assault or murder trial, you are likely to encounter confronting evidence. Jurors also feel pressure to make the right decision, which can be difficult when evidence is conflicting or confusing.

Sometimes, there are disagreements in the jury room. (In Australia, juries often have to come to an unanimous verdict, though in some circumstances judges will still accept verdicts of juries with one dissenting vote.)

It's a lot to deal with, so it's no surprise that one study found that 70% of Australian jurors found the experience stressful in some way. Today, many courts offer jurors counselling services to help manage this problem.

While it is not always going to be pleasant, jury duty can be a great experience – and one that we shouldn't necessarily shy away from.

'This is one of the most interesting experiences as a citizen you could possibly have,' Professor Tait says. 'You will meet people you would never meet otherwise, and you will have really momentous decisions resting on your shoulders. It's not just a duty, it's an opportunity.'

Source: *ABC News,* 16 October 2019

END OF SECTION REVIEW 1.9

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define the term 'witness'.
2 What is the role of the jury?

Interpretation

3 Discuss why a person may not want to appear as a witness at a court case.
4 How and why would it be difficult to achieve a unanimous (everyone agrees) verdict?

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Argument

5   A jury is a panel of citizens, selected at random from a list compiled from the electoral roll, whose job it is to determine whether an accused person is guilty or not guilty based on the evidence presented to them at trial. Consider some of the reasons why a person may not be the right choice at a criminal trial. Write a paragraph or two on this topic.

Key concepts: participation, rights and responsibilities

HASS skills: analysing, evaluating, communicating and reflecting

1.10 Conclusion: why does it matter?

It is easy to look around the world and see conflict in a number of countries. In Syria, where a civil war has been raging since 2011, citizens fight against their own government for improved conditions and more freedom, and this has escalated as extremist groups and other countries use the situation to promote their own agendas. Hundreds of thousands of people have died, many are missing and millions have fled to protect themselves. In Hong Kong, protestors line the streets to voice their opposition to the Chinese Government's plan to arrest and extradite people from Hong Kong to China with limited accountability. Even more recently, in the United States on 6 January 2021, individuals stormed, looted and damaged the legislative branch of government, the Capitol Building, under the guise of peaceful protests aimed at 'fixing' American democracy.

In a well-governed country, events such as these should not occur.

Systems of government and nations are only as strong as the institutions and processes they have in place to ensure fairness and the good order of society. This includes making sure power is distributed fairly and that there are mechanisms to address abuses of power and protect the rights and freedoms of people. While Australia itself is not a perfect example of a well-governed country, it does have strong democratic processes and institutions that prevent corruption, allow for participation of people in civic and economic life and, to some extent, protect the rights and freedoms of people that allow for prosperity, freedom and fairness. Australia often scores highly on global scales of freedom and democracy. In one of the oldest political concepts, known as the 'social contract', the people of a nation are willing to cede power to another authority in return for protection and safety. If the authority abuses that power, the people must be able to change it. Australia's system of democracy reflects the social contract in that it upholds principles, such as the separation of powers and rule of law, that limit the power of government, and it weaves into its institutions accountability measures to hold government responsible for its actions, such as elections, question time and committees. People are provided ways to participate in political and legal life, such as voting and jury duty. People can also influence the systems, accepting that they need to be part of it in order to live a good life. Without strong democratic systems and institutions, fair distribution of resources, as well as the protection of rights and freedoms, societies are at risk of conflict and anarchy.

1.11 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter?

Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Inquiry

Research task

The 1967 Referendum

Using the internet and library, research Australia's 1967 Referendum.

- What was this referendum about?
- What changes did the referendum propose?
- Why do you think the referendum called for these changes?
- What was the outcome of the referendum vote? Find out how each state and territory voted, stating whether the double majority was achieved and explaining how it was achieved.
- What did the referendum achieve for Australia's First Peoples?
- Going further, what new referendum topics have been proposed for Aboriginal and Torres Strait Islander peoples?

Present your research in the form of a poster, presentation, infographic, booklet or website.

Plebiscites and referendums

A plebiscite is a survey on the opinions of people to a change in law or the Constitution. Unlike a referendum, it has no legal applications. A plebiscite was held in 2016 to determine the opinions of Australians to a change in the *Marriage Act 1961* (Cth) to allow marriage between same-sex individuals.

Using the internet and library, research the 2017 Australian Marriage Law Postal Survey (the same-sex marriage plebiscite) and find answers to the following questions.

1   What was this plebiscite about?
2   What changes did the plebiscite propose?
3   Why were these changes proposed?
4   What was the outcome of the survey? Find out how each state and territory voted, and the nation total.
5   What happened after results were received? Did a change occur?
6   Going further, do you think there are other topics where the government should conduct a plebiscite to propose changes to the law?

Present your research in the form of a poster, presentation, infographic, booklet or website.

Creative task

2050 – A future referendum

It is 2050, you are an Australian voter and you believe the Constitution needs to be amended, as its composition does not meet the values and aspirations of future Australians. Propose a change to the Australian Constitution for a future Australia. Develop a campaign that outlines the 'Yes' and 'No' arguments, predict what factors would lead to its success, and then conduct a survey of your classmates and teachers to determine its likelihood of success.

Some possible changes you could consider include:

- recognition of Aboriginal and Torres Strait Islander peoples and/or local government
- a bill of rights
- a republic (perhaps with a new model different from the one proposed in 1999)
- protection of the environment.

Present your campaign in the form of a poster, presentation, infographic, booklet or website.

A Martian constitution

Mars is about to be colonised, but first it requires a structure for how it will be governed, and who will have power and over what areas. This requires a constitution to be written. Your task is to create a new Martian Constitution. It will need to have the following:

- system of government (will you choose constitutional monarchy or a republic?)
- separation of powers (will you separate the roles of government?)
- roles and responsibilities (what laws can the government/parliament make?)
- law-making process (will you include how laws are passed/approved?)
- rights and freedoms (will you include a list of rights that all Martians will have? What will they be?)
- rules for changing the constitution (how can the constitution of Mars be amended?).

Analysis

Communism and the 1953 referendum

In 1953, a referendum was put to the people of Australia that proposed giving power to the Commonwealth Parliament to make laws regarding communists and communism. Communism is an economic system in which resources are owned by the government and distributed equally among people. It is often associated with authoritarian political systems and dictatorships and, at the time, the USSR, China, North Korea and Vietnam (progressing) were under communist rule.

- Why would the Australian parliament want to make laws about communism and communists, but not about other political parties?
- Do you think this is fair? Why or why not?
- The referendum was unsuccessful – only three states were in favour and 49 per cent of the population voted in favour. Why do you think the results were so close?
- What may have happened if it had been successful?

Comparison – the Constitution of the USA

The American Constitution was signed on 17 September 1787. It influenced the development of the Australian Constitution. In 1791 the US Constitution included 10 amendments known as the Bill of Rights. The Bill of Rights guaranteed certain rights and freedoms to the people of the United States. These include the First Amendment (freedom of speech, freedom of religion and the right to protest peacefully); the Second Amendment (the right to keep and bear arms [weapons]; the Fourth Amendment (freedom from unreasonable search and seizure in your home); and the Fifth, Sixth and Seventh Amendments (guaranteeing legal rights such as non-incrimination, fair, public and speedy trials, the right to seek remuneration for wrongdoings). Australia does not have a Bill of Rights.

▲ **Figure 1.33** The American Bill of Rights

- Why do you think a Bill of Rights is important in the governing of a country?
- Which rights that existed in 1791 are still relevant and which ones need to be amended or adjusted? Give reason for your choices.
- Do you think Australia should have a Bill of Rights? If so, what would it include?

Writing

✏ Essay

Discuss why the key feature of the separation of powers in Australia with regard to the functioning of democracy is that there is a clear distinction between the judiciary and the other arms of government. Include in your essay the fact that for a true democracy to operate, and in the interests of justice, it is crucial that there be no overlap between the judicial and non-judicial arms of government.

Key concepts: democracy, democratic values, the Westminster system, justice, participation, rights and responsibilities

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

Making connections: Civics and Citizenship and the other HASS topics

Civics and Citizenship has many connections with other subjects in the Humanities. Have you considered how what you have learned about Australia's political and legal system relates to the other topics you will cover this year? Here's a sample:
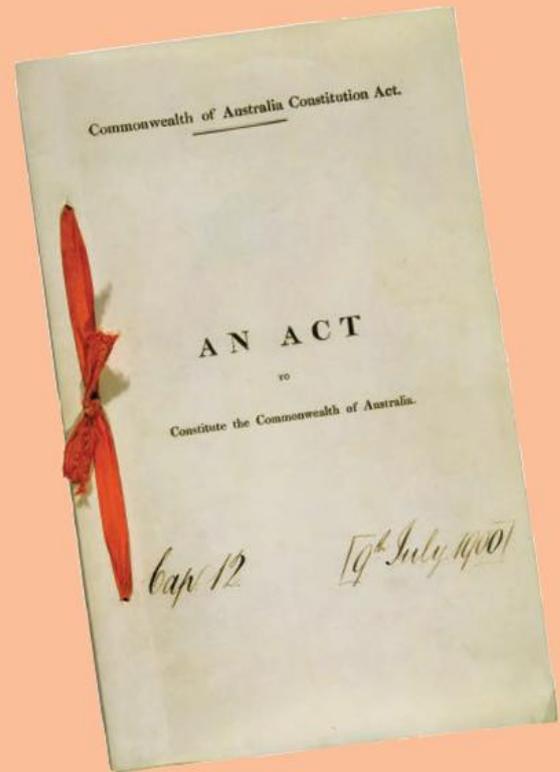
Economics and Business

Types of work and division of powers

Find out which level of government has responsibility and law-making powers over employees and investigate the rules and laws associated with work. Consider the following topics:

- hours that constitute full-time, part-time and casual work
- minimum wages and awards
- safe workplaces
- responsibilities of employers and employees
- unfair dismissal and dispute resolution.

Superannuation and the government

The Commonwealth Government introduced mandatory superannuation payments for workers. Research this change in laws and find out:

- What is superannuation?
- When was the Superannuation Guarantee introduced?
- Why did the government introduce a mandatory payment?
- When are employers not required to pay superannuation?
- How much superannuation is guaranteed?

There has been discussion about introducing an increase in the super guarantee from 9.5 per cent to 12 per cent. What are the advantages and disadvantages of doing this? Consider, for example, disposable income (spending money), impact on the rich and poor, available money in the future.

Geography

Water – is it a right?

Constitutions often set up how government is structured and run, its responsibilities and people's rights. Due to a variety of factors, water has become scarce in parts of Australia. Consider how water and its use and distribution should be governed in Australia.

- Which level of government is responsible for water legislation currently? Should this change?
- Would you consider water a right? Why or why not?
- If water is a right, how can it be protected in the Constitution?
- What current laws and regulations govern the use of water to conserve it now and into the future (e.g. think about sprinkler days/bans, bore restrictions, cost of water).
- Can we change the laws and regulations to increase the conservation of water? How?

Local government and liveability

Local government is one of the three levels of government but it is not mentioned in the Constitution as it is given its responsibilities and powers by state legislation. Investigate the responsibilities of local government and the services your local council or shire provide for the community (council and shire websites are handy here).

- What services does it not provide that you think are needed to improve the living standards and conditions of the community?
- How will the provision of these things improve the lives of people living in the area?

History

Hierarchy of power

The ancient society you studied would have had a hierarchy of power; that is, ways in which different groups in society were organised in terms of who had the most power through to those who had the least.

Create a hierarchy of power for your ancient society and a hierarchy of power for modern Australia, and then consider the following questions:

- Who has the most power?
- How do they get power?
- Who is responsible for making laws (legislative), enforcing laws (executive) and judging the laws (judiciary)?
- Did principles like separation of powers and rule of law exist?

Law-making in history

In Australia, parliaments are responsible for making laws, and often ideas come from the community and their changing values.

Find out who was responsible for making laws in your ancient society. Research:

- What kinds of laws existed in this society and who was impacted by these laws?
- Did the people have a say in the laws that were made?
- Was there a police force to enforce criminal law, and courts where trials took place?
- How were those accused of crimes treated and punished? Did presumption of innocence and rule of law exist? Could witnesses be called and juries summoned to make decisions?

Part 2

Economics and Business

What is Economics and Business?

If you have shopped in a supermarket, you will know that there are many different goods available to shoppers. Do you ever wonder where the goods come from? Are the products locally produced or do they come from overseas? Do you know how demand influences the price of a product? Or how demand ensures that the supply of a good is always met?

The study of Economics and Business is important because it helps us to develop an understanding of market forces. This understanding influences our decisions as consumers. Understanding the market enables us to see how producers meet our needs and wants. It also means that we can understand how consumers decide what they will purchase.

The relationship between consumers and producers depends on the laws of demand and supply. Since the Earth's resources are finite, producers need to use resources efficiently. This is so waste is minimised and the future is safeguarded.

Overview

How do consumers rely on businesses to meet their needs and wants? How do businesses respond to the demands of consumers and why do they set a certain price for a product and adjust the price according to demand? In this unit these questions will be examined, as well as considering how consumers might influence producers in other countries, such as those in the Asia region, to provide goods and services. You will investigate the role and interactions of consumers and producers in the market and learn about successful entrepreneurs and the behaviours and skills that they bring to their business. There will be discussion about local businesses to identify factors that contribute to their success and an investigation into the contribution that work can make to an individual. You will also explore different types of work, such as full-time, part-time and casual, and investigate alternative sources of income – for example, owning a business, being a shareholder or providing a rental service. Finally, there is discussion on the ways people who have retired from employment earn an income to protect consumers from faulty products.

Learning goals

After completing this unit, you should be able to answer these questions:

- How do consumers rely on businesses to meet their needs and wants?
- How do businesses respond to the demands of consumers?
- Why might businesses set certain prices for products and how might they adjust prices according to demand?
- What are the characteristics of entrepreneurs, including the behaviours and skills they bring to their businesses?
- Why do individuals work?
- What are the different types of work?
- How do people derive an income and what are some alternative sources of income?
- In what ways do people who have retired from employment earn an income?

Video
Unit overview

CHAPTER 2

Producing and consuming

2.1 Setting the scene: tourism in Australia

Which Australian destinations lose, and which may win, without international tourism

Christmas promises the gift of open travel within Australia, and possibly to New Zealand and even other Pacific Island nations.

But it seems increasingly likely international borders will remain largely closed until at least mid-2021. The mothballing plans of airlines such as Qantas further suggest international travel will take years to recover to pre-pandemic levels.

For any tourist attraction primarily geared to international visitors, and for the hotels, restaurants and shops that cater to that tourist traffic, this spells trouble.

In 2019 more than 9 million international tourists injected an estimated A$47 billion into the Australian economy.

On the other hand, local destinations that primarily attract local tourists could be in for boom times, attracting those who might otherwise have gone overseas. (In 2018–19, more than 10 million did so, spending A$65 billion in the process.)

Tourism, though, is not a zero-sum game. Not all of the money that might have been spent overseas will necessarily be spent on a local holiday. Even if it was, and the boom in domestic tourism more than made up for the loss of international tourists, the impact would be different across cities and locations.

That's because local and foreign tourists tend to opt for different holiday experiences. International visitors are more attracted to the sights of Sydney and Melbourne, and the tourist hot spots of Queensland. Locals disproportionately want to get away from the city and avoid the tourist traps, relaxing in the country or on the coast.

▲ **Source:** *The Conversation*, Isaac Gross, 30 September 2020

Where Australia's international tourists have come from

Monthly short-term arrivals in Australia from select nations, January 1991 to November 2019.
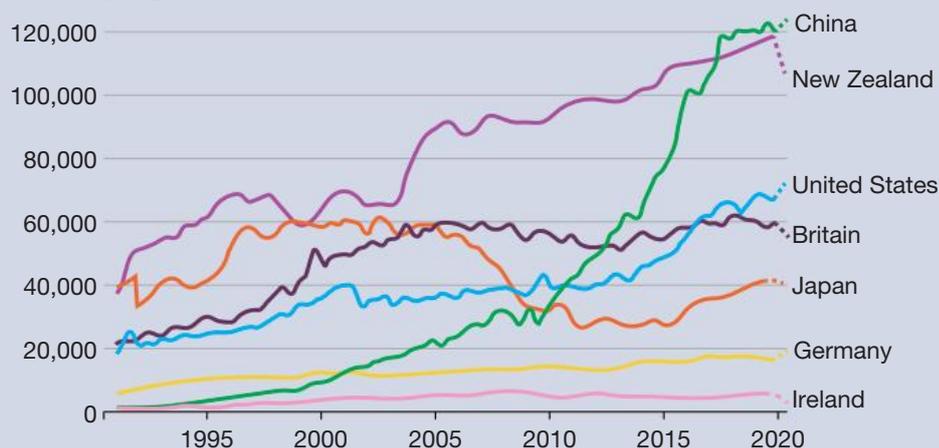
◄ **Figure 2.1** Overseas arrivals and departures, Australia, November 2019, ABS 3401.0

The biggest losers

About two-thirds of all international passengers touch down in Sydney and Melbourne. Data from Tripadvisor also suggests this is where foreign visitors spend most of their time and money.

In Sydney the Opera House, Harbour Bridge and Bondi Beach are magnets for foreign tourists. Melbourne has the Eureka Skydeck and its Royal Botanic Gardens. Any business attached to the traffic for these attractions will face a tough year ahead.

The only upside is the big cities have more diverse labour markets. So those losing tourism jobs in these areas have a slightly better chance of finding work elsewhere.

The bigger risk comes to Cairns and other smaller tourist hubs with star attractions that entice a large flow of international tourists. For many businesses in these local economies, a closed border could be an existential challenge.

The potential winners

While our results are more robust for predicting where lost international tourism will hurt most, we can also see some possibilities of boom times for destinations that provide the experience local tourists are seeking.

Two examples are Echuca in Victoria and Busselton in Western Australia. These are very different towns. Echuca is an historic inland town on the Murray River often associated with paddle steamers. Busselton is a fishing town south of Perth long associated with lazy beach holidays.

Locations offering the more relaxed 'getaway' experience might find their bookings overflowing this holiday season as Australians unable to visit Barcelona or Bali look to holiday closer to home.

▲ **Figure 2.2** Busselton, Western Australia

MAKING THINKING VISIBLE 2.1

Think, pair, share

After reading the information on tourism in Australia, consider the following questions.

1 What has impacted international tourism?
2 Should places like Busselton put more money into trying to attract holiday makers?
3 Brainstorm some ideas on what a tourist attraction primarily geared to international visitors can do due to the changes with international travel. Journal your answers and share your work with a partner or the class.

Key concepts: scarcity, making choices, specialisation and trade, interdependence

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

2.2 Chapter overview

Introduction

Producing and consuming is a necessary part of an economy. This chapter discusses how essential resources are allocated through the forces of supply and demand. You will learn the characteristics of successful businesses, including how specialisation and entrepreneurial behaviour contribute to business success. Work and work futures are introduced, as you consider why people work. There will be a focus on national issues, with opportunities for the concepts to also be considered in relation to local community or global issues where appropriate.

Learning goals

After completing this chapter, you should be able to answer these questions:

- How do consumers make economic decisions?
- How do demand and supply influence the prices of products and services?
- How do businesses set prices and respond to changing consumer demand?
- What are work and work futures?
- Are there any issues in relation to local community or global issues?
- What is an entrepreneur?

Land is considered to be a natural resource. It includes blocks of land where commercial buildings are built, and farmland and pastures for the growing of crops and herding of cattle. Land also includes the ocean, forests, natural gas, water resources (such as lakes and rivers), as well as oil and mineral deposits. Land refers to all economic resources we find in nature.

Labour is also known as human resources. It is the work put in by people who participate in the production processes of goods and services. Labour is the work done by everyday workers such as factory workers, teachers, builders, office administrators and cleaners, as well as unskilled workers in the workforce.

Capital in economics is not the money used or spent on a business. Rather, it refers to the assets used to create the goods. Machinery, buildings and equipment, and transport vehicles (such as trucks) are known as capital.

Enterprise refers to knowledge and skills. Enterprise is used by owners of businesses and managers to coordinate the production process of goods and services. These skills are sometimes referred to as 'entrepreneurship'.

▲ **Figure 2.3** Land, labour, capital and enterprise are the four types of 'economic inputs' or factors of production.

Digital resources

Visit the Interactive Textbook to access:

- interactive chapter Scorcher Quiz
- videos, image galleries and other extra materials.

Video

Five interesting facts about resource allocation

2.3 How consumers rely on businesses to meet their needs and wants

FOCUS QUESTIONS

- How do consumers make economic decisions?
- How does demand and supply influence the prices of products and services?

Consumers make choices every day about the types of goods and services they spend their money on. Their choices are affected by cost, the availability of goods and how much money they have to spend on an item. The consideration of these and other factors is part of **economics**.

Economic resources or inputs are also known as factors of production. They are divided into four categories: *land*, *labour*, *capital* and *enterprise*. Figure 2.3 shows these four categories for economic inputs.

Making economic decisions

We make economic decisions every day based on our **wants** and **needs**. A want refers to something that you desire to have. It is something that would be good to have, but it is not *necessary*. A want is something that you may or may not be able to obtain. For example, you may want to have an overseas holiday, buy a luxury car or own the latest designer jacket, but you might not always be able to attain these things.

A need, on the other hand, refers to something that you *cannot do without*. For example, a human being needs food, water and shelter to survive. You could possibly go without water for a day, but you do need to drink water to stay alive.

The value of needs and wants are different. By differentiating our needs and wants, we are able to allocate resources to create goods to meet the needs of consumers. When we balance the **scarcity** of resources, we are able to meet as many additional wants as possible, after the needs are satisfied.

> **economics** the study of the way in which economies work
>
> **wants** products and services that people want but are not necessary for survival
>
> **needs** products and services that people cannot do without
>
> **scarcity** refers to the finite resources we have on Earth and the decisions we make to allocate these resources to satisfy consumer needs

▼ **Figure 2.4** Consumers and producers have a closely connected relationship, which influences the supply and demand in markets, and the allocation of resources.

market the business or trade in a particular product, including financial products

demand the quantity of a good or service that consumers wish to buy at a given price

supply the quantity of a good or service that producers wish to sell at a given price

There are many concepts associated with the market system. Understanding these concepts helps us to understand how consumers and producers influence the **market**.

Markets

In economics, the price that is paid for a good or service is dependent on its **demand** and **supply**. Consumers and producers are the key players in any market.

Consumers are those who purchase goods and services from producers and suppliers. Producers are also known as manufacturers. They can be entrepreneurs who make goods and services for people to consume. Producers are often employers because they hire people to work in different parts of their businesses.

In any market, the price for a good or service is dependent on consumer demand and the quantity supplied by a manufacturer.

The law of demand

The law of demand is that when demand rises for a product, the price also rises.

This means that the higher the demand for a product, the higher the price a consumer is prepared to pay for it (see Figure 2.6). The factors that influence the demand of a product include:

- the price of a competitor's substitutes
- a consumer's income level
- a consumer's personal taste and expectations
- the number of consumers in the market
- the price of complementary products.

The law of supply

The law of supply is that as the price of a good or service increases, the quantity supplied by the manufacturer will also increase. This means that the higher the price of a product, the larger the quantity of the product that will be supplied. Similarly, the lower the price of a product, the lower the quantity of the product that will be supplied (see Figure 2.6). The factors that influence the quantity of a product supplied include:

- the price of the inputs (the raw materials) used to make the product
- the price of the product itself

▼ **Figure 2.5** A shopper pays a vendor for fruit at a market. In this case, the woman is the consumer, the person who grew the fruit is the producer, and the fruit-store vendor is the supplier.

- the amount of time the product has been in the market
- new technology
- government policies.

Scarcity

Some of the Earth's resources are limited in nature. Gas, coal and other precious minerals are scarce because they have a limited supply. As the human population grows, scarcity becomes more of an issue. This is because we are trying to satisfy unlimited human wants in a world that has limited resources to manufacture products.

Demand and supply
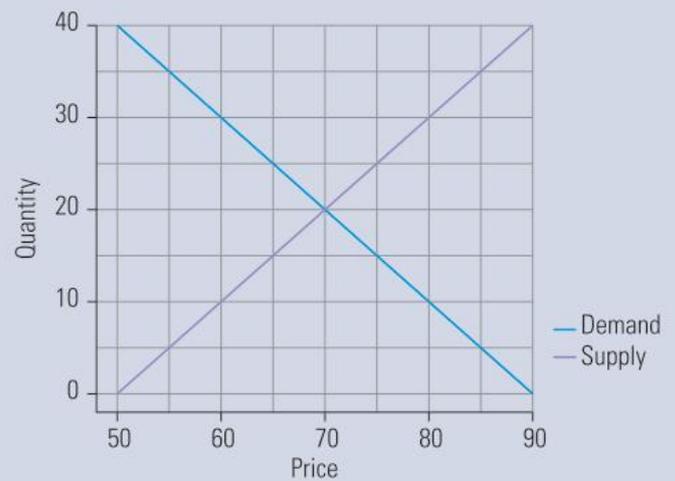
▲ **Figure 2.6** Demand and supply lines

MAKING THINKING VISIBLE 2.2

Explanation game

Look at Figure 2.6 and answer the following questions.

1 Identify something interesting about this graph. You can use the sentence prompt 'I notice that …'.
2 Now that you have your observation, ask yourself: 'Why is it that way?' or 'Why did it happen that way?'
3 Discuss what you think with a partner.

Key concepts: making choices, allocation and markets, economic performance and living standards

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

The rise and fall of the demand and supply of a product directly affects the price of a product. This relationship is known as the **price mechanism**. The price mechanism informs producers how much they should or should not produce in order to maximise their profits.

price mechanism the relationship between the supply and demand of a product or service, which affects its price

Key concepts for your memory bank

Making choices is a crucial element in economics and business. Whether a consumer, business, or government is faced with a decision, they must weigh up the costs and benefits of any choice they make. People should conduct research to ensure they make informed decisions and avoid making a poor choice. *Pop this concept into your memory bank – at the end of this book is an activity which will test your understanding of this, and other key HASS concepts!*

▲ **Figure 2.7** The price of avocados in the supermarket might be one place where you can see the effects of supply and demand most obviously – when they are out of season, or the crop has been affected, the price will soar.

▲ **Figure 2.8** The shelves are almost empty of baby formula at this large supermarket. Many Australian supermarkets placed signs on their shelves to advise customers that they could only buy a certain number of tins.

equilibrium price occurs when demand and supply are equal

shortage a situation in which there is not enough of something

In January 2019, there was a scarcity of infant baby formula in Australia. This forced supermarkets like Coles and Woolworths to limit the purchases of these products. The supermarkets did this to discourage consumers from bulk-buying infant baby formula due to shortages of this product.

The shortage in infant baby formula was caused by *daigou*, which is when personal shoppers buy products in one country to sell to customers overseas in their market. In this case, the personal shoppers were purchasing infant baby formula from supermarket shelves for resale in China. The Chinese demand for infant formula was fuelled by inflated prices for these products in China. This made the *daigou*-sourced baby formula more affordable for this overseas market.

The equilibrium price

Manufacturers have to find ways to use precious resources efficiently because of scarcity. In this way, resources are not wasted and profits are maximised. The best outcome is when the quantity supplied equals the demand for a product. When this occurs, the product is sold at the **equilibrium price**. The equilibrium price occurs when the demand line intersects the supply line. It is the optimum price because it is where supply equals demand. For example, in Figure 2.6, the equilibrium price is $70 because consumers will demand 20 units and producers will supply 20 units at this price point.

The impacts of shortages and surpluses

When demand exceeds quantity, a **shortage** arises. A producer usually responds by increasing the price of the product, which earns them a greater profit. Consumers are willing to pay more for a product that is in short supply, but if the price continues to rise due to ongoing shortages, different scenarios may occur. For example:

- consumers might be put off by the high prices and the product could drop out of the market
- entrepreneurs could spot an opportunity and produce similar-type products, which drives prices down again.

Conversely, when supply exceeds demand, a **surplus** arises. A producer responds by decreasing the price of the product so they can sell all their available stock and recoup their costs. Some scenarios that might occur then are:

- new consumers are attracted to the reduced price and enter the market
- the lowered price decreases profits so much that the producer leaves the market (and so manufacturing of the product stops).

Opportunity cost

Opportunity cost relates to the economic decisions we make every day. It refers to the value of something being given up in order to acquire something else instead. Opportunity cost is also known as the 'best forgone alternative'.

Every economic decision made by a consumer has an associated opportunity cost. For example, the opportunity cost of you buying a new pair of runners for $50 could be the interest you would have earned from having that same $50 in a bank account. Another example is the opportunity cost of doing homework on Sunday night because you went out all weekend.

> **surplus** an amount that is more than is needed
>
> **opportunity cost** the loss of an alternative course of action when an economic decision is made

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END OF SECTION REVIEW 2.3

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 How do the laws of demand and supply work?

2 Describe the four types of economic inputs.

Interpret

3 Why is it important for a producer or manufacturer to strive for an equilibrium price?

4 Explain the impact on price and recommend profit-making strategies for a manufacturer in the following scenarios:

    a There is a surplus of a product.   **b** There is a shortage of a product.

Argue

5 Create a poster showing the opportunity cost of buying a brand-new pair of runners that cost $250. Use different examples and images in your answer.

6 Use a spreadsheet to create a graph that shows the demand and supply curves for the sale of the runners in Question 5. Use the data in the table here to create your graph. (Hint: use a scatter chart.)

PRICE	QUANTITY DEMANDED	QUANTITY SUPPLIED
$80	45 000	25 000
$90	40 000	30 000
$100	35 000	35 000
$110	30 000	40 000
$120	25 000	45 000
$130	20 000	50 000

Key concepts: scarcity, making choices, specialisation and trade, interdependence, allocation and markets

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

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2.4 How businesses respond to the demands of consumers

FOCUS QUESTION

How do businesses respond to the demands of consumers effectively?

A good business will respond to the demands of consumers so that it remains in business or has an opportunity to grow. To remain **competitive**, businesses have to genuinely empathise and service their customers better than anyone else, or at the very least do their best to achieve this goal.

Brand

Businesses are also beginning to recognise that their '**brand**' is not just about who their consumers are but how they are regarded in the market. Many businesses pride themselves on attracting talented people who want to work for them and make their business a place where people want to be.

Innovation

Another initiative is changing traditional practices with something more imaginative.

competitive aspiring very much to win or be more successful than others

brand a business asset that is essentially a characteristic or what it is known as; it creates and brings with it awareness, desirability and power. An example of a famous brand is Coca-Cola.

An example of this is the Costco cooperation. Costco Wholesale is a multi-billion dollar global retailer with warehouse club operations in 11 countries. According to its website it is: 'the recognised leader in the field, dedicated to quality in every area of their business and respected for their outstanding business ethics. Despite their large size and explosive international expansion, they continue to provide a family atmosphere in which their employees thrive and succeed.' To shop at Costco, a person needs to be a member or to go with a member. Memberships are $60 a year for individuals and $55 a year for businesses. It charges this membership fee to offset operating costs and claims this allows it to keep the prices of its products lower, which in turn benefits the customer. Costco's products are supplied in bulk and even its shopping trolleys are bigger than the standard trolleys in other supermarkets. It also offers products that are often not available in supermarkets, such as jewellery or couches.

▼ **Figure 2.9** Costco Perth opened in March 2020.
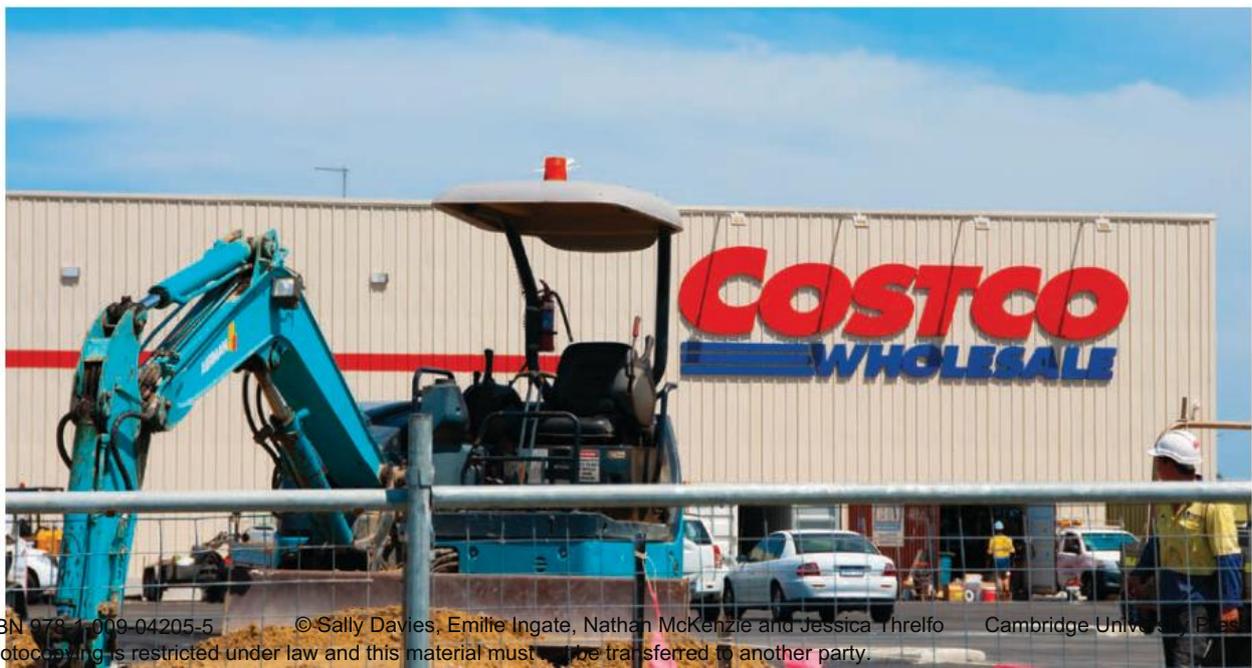
Responsive

Businesses have be **responsive** to change. Years ago, if a customer received poor service or a faulty product, they may have written a letter of complaint or just not bothered to go back to the company again. However, with changes to technology, customers can now post their opinion on social media like Facebook or Instagram. Rising competition and customer choice also place higher demands on businesses because if they do not deliver quickly and efficiently then the customer can go elsewhere.

> **responsive** saying or doing something as a reaction to something or someone, especially in a quick or positive way

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MAKING THINKING VISIBLE 2.3

Compass points

Reflect on the statement, 'Businesses have had to be responsive to change', and go through the reflective questions below.

1 E = Excited

What excites you about the issue? What's the upside?

2 W = Worrisome

What do you find worrisome about it? What's the downside?

3 N = Need to know

What else do you need to help you evaluate this statement?

4 S = Stance or Suggestion for moving forward

What is your current opinion on it? How might you move forward in your evaluation of this statement?

Key concepts: making choices, interdependence

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

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CASE STUDY 2.1

Bob's Healthy Breads

Bob's Healthy Breads* has been producing high-quality, environmentally friendly and health-conscious baked goods for almost 50 years, and is now one of Australia's favourite bakery brands. Their products are available all across the country.

Founded by Robert Toast in 1975, the business has recently moved away from traditional, plain wheat breads, instead choosing to help foster the trend towards healthier choices in food. "When we started, we used to just be called Bob's Breads, and mainly sold white bread" explained Toast. "Nowadays, we focus on producing healthier options, and that explains the name change." Toast indicated that the business was profiting from the change to healthier options. "The products are also bringing in a lot of dough, you could say."

By developing new product lines and using ancient bread-raising techniques, Bob's Healthy Breads caters for people with wheat or gluten-intolerance and vegans. People looking for healthier alternatives are also drawn to Bob's new range of breads.

»

»

Sourdough, rye, wupper, and barley breads, organic spelt flours, and spelt breads, bread-mixes and biscuits, are included in Bob's range of more than 30 gourmet and dietary loaves.

Coeliac's have a range of products available to them, as Bobi's offers gluten-free cookies, pizza bases, rolls and breadcrumbs.

Spelt, kamut and triticale – purchased from organic-certified farmers in Western Australia - are some of the organically grown grains the Bob's specalise in and the business is a member of the Organic Growers Group of Australia.

Bob's Healthy Breads aims to be ethical and environmentally conscious in all aspects of their business. Instead of wood-fired ovens, the bread is baked in natural gas-fired ovens to produce less smoke. Business cards and brochures are printed on recycled paper.

All of Bob's products include a list of ingredients, so those with special dietary requirements are safe. Customers with allergies, intolerances or specific preferences can be sure they are not eating anything they want or need to avoid. Products are free of artificial additives, and low in sugar, salt and fat.

Bob's is a wholesale bakery, but its products are widely available at supermarkets across Australia.

*Bob's Healthy Breads is a fictional business based on similar real-life companies, created for the purposes of this case study.

ANALYSIS QUESTIONS

1   Describe some of the ways that Bob's is seen to be both ethically and environmentally conscious.

2   List a reason as to why it especially caters for people with wheat or gluten intolerance and vegans, or those looking for healthier alternatives.

3   Using examples from the text, discuss the reasons why the company has evolved over time.

Key concepts: allocation and markets, scarcity, making choices, interdependence

HASS skills: analysing, evaluating, communicating and reflecting

personalised has been made for a particular person

global awareness an awareness of what's happening worldwide

sustainably in a way that can continue over a period of time

slave labour very hard work for which people are paid very little

forest degradation involves a change process that negatively affects the characteristics of a forest

Technology

Consumers have grown used to **personalised**, immediate service at affordable prices. Technology has also assisted with businesses being able to capture data and adjust their offerings if demand for an item is low. How often an item on the website is viewed, how many clicks, and how many purchases or inquiries are made can all be viewed, along with what the customer has bought previously, where they live and perhaps even their age bracket.

Ethical concerns

Often customers are more demanding than they were in the past. Due to growing **global awareness**, customers are now asking if their product was produced **sustainably** or in an environmentally friendly manner. Some other issues that concern many consumers are **slave labour, forest degradation** and the inhumane treatment of animals.

Amazing but true …

From 1 July 2018, the supply of lightweight plastic bags was banned in Western Australia.

Every year billions of lightweight plastic shopping bags were supplied nationally, with around seven million littered in WA alone.

While plastic shopping bags make up a relatively small portion of solid waste and litter, they do not break down and can have devastating impacts on marine wildlife and birds.

Since its announcement, WA's plastic bag ban has been widely supported by the community and industry, including major retailers – some of the biggest suppliers of lightweight plastic shopping bags.

▲ **Figure 2.10** It takes 500 (or more) years for a plastic bag to degrade in a landfill.

The New South Wales Government announced in March 2020 that discussion would begin on banning plastic bags, which makes it the last state in Australia to do so.

END OF SECTION REVIEW 2.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define 'demand'.
2 List some ways that Costco is different to traditional supermarkets.
3 List two issues that are a cause of concern for consumers.

Interpret

4 Why do businesses want to be seen as a good place to work?
5 Discuss why WA's plastic bag ban was widely supported by the community and industry.
6 Technology can assist businesses by capturing customer data. Describe some ways this has been achieved.

Argue

7 Social media makes it much easier for customers to provide public feedback to businesses, and reviews can make a big difference to business success. If you were a business owner, would you consider this technology to be a positive or a negative factor? Justify your position.

Key concepts: making choices, specialisation and trade, allocation and markets, economic performance and living standards

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

2.5   Why businesses might set a certain price for a product and how they might adjust the price according to demand

FOCUS QUESTION

How do businesses set and adjust pricing?

Pricing can be difficult to determine. A business has to cover the costs of operating, and aim to make a profit, but at the same time ensure that its prices aren't too high. Pricing that is too high may result in the customer not being able to afford the item. Pricing that is too low will impact the business negatively.

When determining a price for a product other considerations may be:

- a competitive pricing point
- brand
- how much it cost to produce the product
- who the product is aimed at

- costs of storing the product
- costs of delivering the product.

In a highly competitive market other pricing strategies may come into play. A business, for example, may bundle products together at a cheap price to 'hook' the consumer in. This strategy relies on getting a customer to try the product and hope they continue to purchase it. It also has the potential to wipe out some competitors who can't afford to offer the same option. However, this strategy may also create a perception of a lower-quality product, which could result in people being wary of this tactic.

▼ **Figure 2.11** Pricing decisions can be variable.
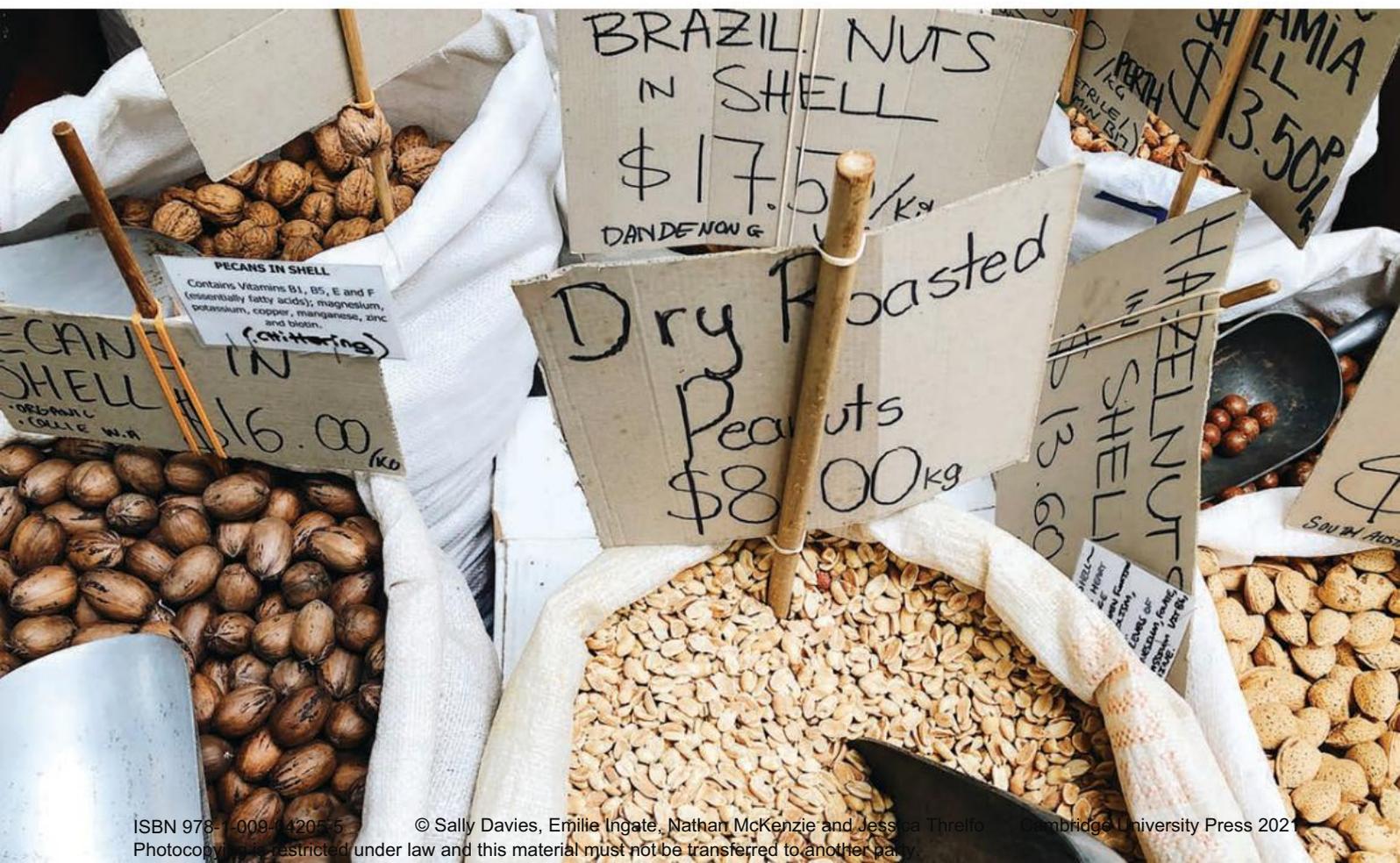
MAKING THINKING VISIBLE 2.4

Compass points

Reflect on the statement, 'A business, for example, may bundle products together at a cheap price to "hook" the consumer in,' and respond to the reflective questions below.

1 E = Excited

What excites you about the statement? What's the upside?

2 W = Worrisome

What do you find worrisome about it? What's the downside?

3 N = Need to know

What else do you need to help you evaluate this statement?

4 S = Stance or Suggestion for moving forward

What is your current opinion on it? How might you move forward in your evaluation of this statement?

Key concepts: scarcity, making choices, specialisation and trade, interdependence, allocation and markets

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

Skimming pricing

Another pricing method is skimming pricing. This is when a business sets a high initial price to attract buyers who want the product quickly and can afford to pay for it. These consumers are also attracted to the perceived exclusivity associated with the product. In other words, only a few people will have it. Gradually the business then reduces the price to attract the next lot of customers and so on.

Penetration pricing

On the other hand, penetration pricing is when the business releases the product at a low **price point** in the hope that there are multiple sales.

Image or premium pricing

Image or premium pricing is similar to skimming pricing, although the prices do not eventually reduce. This is aimed at **top end** customers who believe in the product and are willing to pay more because they value the look, and perhaps the performance, of the product (e.g. Ferrari).

Flexibility

Businesses should be flexible with their pricing and make changes according to **market conditions**. **Globalisation** and online selling are also factors that should be considered. Research should be done on whether a product is priced competitively globally, and if the reach is expanded with worldwide potential, delivery, pricing expectations and the ability to meet demand should also be factored in.

price point the price that is chosen for a product, usually when there are several different prices to choose from

top end best or most expensive of a type

market conditions relates to the status of the overall market in which a business trades

globalisation the process by which particular goods and services, or social and cultural influences, gradually become similar in all parts of the world

CASE STUDY 2.2

WA camel dairy could revolutionise pricing of camel milk

We could be witnessing the camel milk industry's next big step.

West Australian camel milk farm Good Earth® Dairy has developed a 'unique agri-tech' way to produce camel milk for below AUD $3 per litre – a massive feat considering their only competitor has a production cost of $12 per litre.

The business has spent five years and over $4 million perfecting their camel herd, milking process, and developing the IP needed to significantly drop milk prices.

▲ **Figure 2.12** Good Earth® Dairy is WA's first commercial camel dairy. The 800-hectare farm is located in Dandaragan, two hours' drive from Perth.

IP an abbreviation of intellectual property; someone's idea, invention, creation, etc., that can be protected by law from being copied by someone else

disruptor in business this is a company that changes the traditional way an industry operates, especially in a new and effective way

lucrative producing a lot of money

crowdfunding the practice of getting a large number of people to each give small amounts of money in order to provide the finance for a business project, typically using the internet

stockist a shop that sells a particular type of goods

Good Earth® Dairy co-founder and chief executive Marcel Steingiesser said with the novel **IP** to reduce costs and increase yields, camel milk is now a viable **disruptor** in the **lucrative** infant formula industry.

'And we intend to enter that market with the support of this equity **crowdfunding** campaign,' Mr Steingiesser said.

The business has launched an equity crowdfunding campaign on Australian crowdsourcing website Birchal in an effort to raise $1.2 million, a sum which will go towards breaking into the infant formula market.

Camel milk is ideal for infant formula and other specialised health products because it is naturally lactose free and promotes gut health.

Good Earth® Dairy's ground-breaking IP was co-founded by cameleer Stephen Geppert, ex-government employees Henry and Marcel Steingiesser, and former Western Australian politican Kim Chance.

Currently all milk being produced by the dairy is sold in over 50 **stockists** throughout Western Australia.

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The company is aiming to list on the **ASX** in early 2021 while also creating a sustainable, **ethical** agricultural industry focused on large scale production of 'pure Australian camel milk'.

Good Earth® is a registered trademark.

▲ **Source:** Daneka Hill, *Dairy News Australia*, 30 October 2020

ASX an abbreviation of Australian Securities Exchange, a stock exchange where people can buy shares in a business

ethical relating to beliefs about what is morally right and wrong

ANALYSIS QUESTIONS

1 Discuss why the business spent five years and over $4 million perfecting its camel herd, milking process, and developing the IP needed to significantly drop milk prices.
2 List a reason why Good Earth® Dairy co-founder and chief executive Marcel Steingiesser stated that camel milk is now a viable disruptor in the lucrative infant formula industry.
3 Why is camel milk ideal for infant formula and other specialised health products?

Key concepts: allocation and markets, scarcity, making choices, interdependence

HASS skills: analysing, evaluating, communicating and reflecting

END OF SECTION REVIEW 2.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define 'skimming pricing'.
2 What is the difference between image or premium pricing and skimming pricing?
3 Should businesses be flexible or rigid with their pricing?

Interpret

4 Research or list some examples of where penetration pricing was utilised.
5 How has technology assisted businesses with pricing information of competitors?
6 Research a product and see how it is priced globally. Discuss some ways this could be approached.

Argue

7 If you were a business owner, would you prefer to sell more products at a lower price or make fewer sales of higher-priced items? Why?

Key concepts: making choices, specialisation and trade, interdependence, allocation and markets

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

2.6 Characteristics of entrepreneurs

FOCUS QUESTIONS

- How do enterprising behaviours and capabilities help entrepreneurs?
- Why is innovation important?
- How does a business plan help start up a business?

Enterprising behaviours and capabilities

Enterprising behaviours and capabilities refer to those attributes that individuals or entrepreneurs possess that make a business successful. An enterprising individual is usually creative, displays a high level of initiative and takes risks when planning projects or seeking new endeavours. They work hard and use long-term and short-term goals to achieve a business's objectives. Entrepreneurs who are enterprising use these traits successfully to make a business profitable.

Additional traits include being versatile and strategic in planning, decision-making and problem-solving. Entrepreneurs are also required to be great leaders and communicators.

Amazing but true …

The world's first bionic ear was created by an Australian, Professor Graeme Clark, in the 1970s. The first prototype of the cochlear implant was successfully implanted in 1978. This Australian invention has brought hearing to thousands of hearing-impaired people around the globe.

Attributes of enterprising behaviours and capabilities

planning the process of planning activities or events in an organised way so that they are successful or happen on time

business plan a detailed plan describing the goals of a business and how to achieve them

Good leadership is vital in the daily running of a company. An enterprising individual is strategic at **planning** long-term and short-term goals. Planning involves a series of actions and activities that are put in place to achieve a company's objectives. An entrepreneur often uses a **business plan** to list these actions as it keeps them accountable to tasks. Their creativity is also instrumental to the success of their ventures, helping them to persevere to achieve the goals for their business.

Victorian-based entrepreneur Nathan Weyers, owner of NJW Designs, is one example of an enterprising individual. NJW Designs creates sets for theatre shows. Nathan began working in theatre as a teenager, assisting his grandfather to build theatre sets. He designed his first set when he was 16 and went on to study theatrical design at the Western Australian Academy of Performing Arts in Perth. He then toured for 10 years as a theatre set designer on shows such as *Mary Poppins*, *The Lion King*, *Phantom of the Opera* and *Aladdin*.

▼ **Figure 2.13** Strategy and preparation are essential qualities, not only required to make a great leader, but to build an enterprise.

Starting NJW Designs has allowed Nathan to be based in Australia. His company was a finalist for the 2019 Ballarat Business Excellence Awards. Nathan's company has worked on more than 120 theatre shows. In an interview with the *Ballarat Courier*, Nathan stated, 'I would set up the shows, work behind the scenes and run the automation in the shows of a night, about eight shows a week. Then I would move them between cities and countries.' Since establishing his company, Nathan has created the sets for productions including *Harry Potter and the Cursed Child*, the Australian Ballet and several Disney shows.

An entrepreneur needs to also have excellent skills for **decision-making** and **problem-solving**. This may involve taking risks when new opportunities arise. Recognising new business potential for growth requires an astute approach to growth prospects, which may involve risks. Informed decisions will need to be made based on research and expert advice. During the COVID-19 pandemic in 2020, NJW Designs had to reinvent itself due to the closure of theatres. More than 40 projects were put on hold. A solution had to be found to retain staff and to ensure income. After a week of brainstorming, the team anticipated that many Australians, workers and students alike, would be working from home without proper desk equipment. This led to the company's decision to use its equipment and the skills of its staff to create easy-to-assemble furniture, beginning production on laptop stands, desks, monitor stands and hobby tables that could be dismantled quickly when not in use.

An entrepreneur needs to display good **leadership** in the daily running of a company. They should possess a good understanding of where a company is headed and be attuned to the needs of staff and customers. A good leader will also be able to negotiate with staff effectively to ensure that management goals are met. They should be a good motivator so as to influence change within the company, improving profits, employee satisfaction and customer satisfaction. Having a consultative management style is favourable as it allows views and opinions from staff to be expressed before decisions are made. This creates an atmosphere of inclusivity because staff feel heard in important matters.

Having great **communication** skills is vital for any entrepreneur. There are three types of communication – verbal, non-verbal and written. An effective manager uses easy-to-understand language to communicate with staff and customers. Clear professional language is also used when dealing with the public. This can be seen in a company's letterhead, website, logos, slogans and emails.

> **decision-making** the process of gathering information and assessing solutions in order to make a choice
>
> **problem-solving** the ability to find solutions to problems
>
> **leadership** the set of characteristics that make a good leader
>
> **communication** the process of sharing information, especially when this increases understanding between people or groups

▼ **Figure 2.14** Nathan Weyers, founder of NJW Designs, began designing home furniture instead of theatre sets when the COVID-19 pandemic closed theatres.

Ideas are expressed without **ambiguity** to promote understanding. **Body language** and **professional dress** are examples of non-verbal language and they reflect the company's approach in dealing with customers and staff.

MAKING THINKING VISIBLE 2.5

Headlines

Using the information about Nathan Weyers, owner of NJW Designs, write a headline for a news article that is to appear in a business newsletter. If you were to write a headline for NJW's success that captures its most important attribute, what would the headline be? Explain your choice.

Key concepts: making choices, interconnections   **HASS skills:** evaluating, communicating and reflecting

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ambiguity able to be interpreted in many ways

body language the movements or positions by which we show other people our feelings without using words

professional dress wearing appropriate clothes for a business setting to present a professional image

innovation the development of a new idea or product

competitive advantage the conditions that make a business more successful than the businesses it is competing with, or a particular quality that makes it more successful

start-up company a new business in its initial stages of operation that is developing a product or service that is new and innovative

Innovation

Innovation is critical to the survival of a business. To innovate means to develop a new design, product or idea. Australian businesses need to innovate in order to stay competitive. Having a **competitive advantage** is beneficial to a business as it allows it stay ahead of its competitors.

In 2015, Facebook founder, Mark Zuckerberg, stated: 'There are different ways to do innovation. You can plant a lot of seeds, not be committed to any particular one of them, but just see what grows. And this really isn't how we've approached this. We go mission-first, then focus on the pieces we need and go deep on them and be committed to them.'

The importance of innovation

In May 2019, the *Global Startup Genome Ecosystem* report found that Australian cities Sydney and Melbourne had fallen in a global ranking of the best cities for **start-up companies**. A start-up is a new business in its initial stages of operation that is developing a product or service that is new and innovative.

▲ **Figure 2.15** Innovative Facebook founder Mark Zuckerberg. As of late 2020, Zuckerberg was estimated to be worth US$104 billion dollars.

The top cities classified as the best innovation hubs in the world include Silicon Valley and New York City in the US, Amsterdam in the Netherlands and Bangalore in India. There is a strong contention that Australian businesses and start-ups lack government support due to a lack of accurate advice and insufficient support from grant bodies.

However, the Department of Innovation's *Australia 2030: Prosperity Through Innovation* document, published in 2017, maintains that innovation is critical for Australia's future. There were five strategic frameworks recommended.

- **Education:** respond to the changing nature of work by equipping all Australians with skills relevant to 2030.

- **Industry:** ensure Australia's ongoing prosperity by stimulating high-growth firms and raising productivity.
- **Government:** become a catalyst for innovation and be recognised as a global leader in innovative service delivery.
- **Research and development:** improve effectiveness in increasing translation and commercialisation of research.
- **Culture and ambition:** enhance the national culture of innovation by launching ambitious national missions.

CASE STUDY 2.3

Tech Gym

The University of Technology Sydney (UTS) Startups program is an example of how education and industry have come together to create collaborative workplaces. Since July 2018, more than 110 student teams have come together to found a start-up or to work in one.

One example is Tech Gym, a start-up by UTS mechatronic engineering students Thirunisha Thirumurugan and Rowan Smith. Their rehabilitation gym consists of 'Rehab to the Beat', a virtual piano rehabilitation device for people who have had a stroke to use at home or in their hospital bed, and a robotic assistance device called 'Universal Care' that can set a series of independent exercises for the patient to play. The device has a hand-controlled mode to move the arm of the robot. Search online for 'UTS Tech Gym' for more information and multimedia resources on how this works. The Tech Gym is also a strong example of how entrepreneurs with a shared vision and strong initiative can break the mould.

ANALYSIS QUESTIONS

1 What entrepreneurial characteristics do the founders of Tech Gym need to ensure the success of their business?

2 Re-read the five strategies identified in *Australia 2030: Prosperity Through Innovation*.

   How is the Tech Gym an example of what can be achieved between businesspeople with a shared vision?

Key concepts: scarcity, making choices, interdependence

HASS skills: analysing, communicating and reflecting

Amazing but true …

The inflatable aircraft escape slide used on thousands of aircraft around the world was invented by Jack Grant, who was an employee of Qantas in 1965. The invention helps passengers to exit the plane safely if a plane lands on water or ice, and can also be used as a flotation device.

CASE STUDY 2.4

Boost Juice

Janine Allis is the founder of Boost Juice, the iconic Australian fruit juice brand. She started the business with her husband, Jeff, in 2000 with a store in William Street, Melbourne. Its success allowed them to open up three new sites shortly after but not without trouble. With their shiny new juicers refusing to work, their staff had to dash off to stores to buy domestic blenders to use, which worked well only for a day. However, it allowed them to carry on the business while new equipment was on the way.

▲ **Figure 2.16** Boost Juice CEO Janine Allis

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Boost Juice now boasts more than 500 stores worldwide. The team recently opened its 250th store in Australia. Success did not come easy for Janine. In an interview with SmartCompany in 2013, she stated, 'For me, success or failure has been down to the people I've surrounded myself with. Some people are only half full, they live in fear. But as an entrepreneur you need to find the people that say "Give it a go". Find people who support the idea, have started their own business intelligently and are ahead of the curve.' Janine also believes that a great leader is someone who actualises their company's vision, knows where it is going and has great communication skills.

ANALYSIS QUESTIONS

1   What attributes does Janine Allis possess that make a successful entrepreneur?

2   If sales decline, what should Janine do to help save her business?

3   Janine has decided to introduce a sandwich bar to each of her stores. What are the arguments for and against this idea? Explain your reasoning.

Key concepts: specialisation and trade, making choices, interdependence

HASS skills: analysing, evaluating, communicating and reflecting

END OF SECTION REVIEW 2.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1   What do enterprising behaviours and capabilities refer to?

2   Define the following attributes and give an example for each:

　a   planning

　b   decision-making

　c   problem-solving

　d   leadership

　e   communication.

Interpret

3   Re-read the five strategies identified in *Australia 2030: Prosperity Through Innovation*. Highlight any words that you are unfamiliar with and find the meaning of these words by creating a glossary. Identify one way in which each of the five strategies can be achieved.

Argue

4   Evaluate the five strategies identified in *Australia 2030: Prosperity Through Innovation*. Rank them from 1 to 5 in terms of their importance to Australia's future. Write a paragraph explaining why you have ranked them in the order you have chosen.

Key concepts: scarcity, making choices, specialisation and trade, interdependence, allocation and markets, economic performance and living standards

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

2.7 Why individuals work

FOCUS QUESTION

Why do we work and how does work affect our wellbeing?

Many of you would have been asked, 'What would you like to be when you grow up?' There are many careers to choose from, depending on your interests, skills, abilities and aptitudes. Getting work experience can often help you identify your strengths and weaknesses and your ultimate **vocation**.

In Western Australia, a teenager can start to seek casual **employment** from the age of 15.

There are restrictions on the type of job and working hours for children under 15 years of age. As long as the work does not prevent school attendance, children of any age can: work in a family business owned by a relative such as a parent, aunt, uncle or grandparent; perform professionally as an actor, musician, entertainer or in an advertisement; and work for charities and other not-for-profit organisations.

Children aged 10, 11 or 12 are allowed to deliver newspapers, pamphlets or advertising material, but they cannot work during school hours, cannot start work before 6 a.m. or finish later than 7 p.m., and must be accompanied at all times by a parent or another adult who has written permission from a parent.

> **vocation** a type of work that you feel you are suited to doing and to which you give much of your time and energy
>
> **employment** being paid to work for a company or organisation

Children aged 13 and 14 are allowed to: deliver newspapers, pamphlets or advertising material; work in a shop, fast-food outlet, cafe or restaurant; or collect shopping trolleys from a retail outlet or adjacent area, as long as: they have written permission from a parent; the job is outside school hours; and they do not start work before 6 a.m. or finish after 10 p.m.

It is a rite of passage for many middle-school students to get their first part-time job, and many work in supermarkets, convenience stores and fast-food restaurants. **Work** is defined as a paid or unpaid activity that is completed when something of value is produced for a purpose.

> **work** an activity, such as a job, that a person uses physical or mental effort to do, usually for money

Teenagers often secure jobs as casual employees, working for a select number of shifts per week in order to have a balance between school and work commitments.

There are many reasons why people work.

- It gives us a sense of purpose and fulfilment as we achieve career goals. It builds our self-esteem and independence as we earn money in our jobs.
- It adds to the quality of life we have through the salary and wage we earn in our job, and through networking with other colleagues or people we meet through our work.

▲ **Figure 2.17** There are over 2300 Volunteer Fire and Rescue Service (VFRS) members from 94 brigades in Western Australia who provide firefighting and prevention services throughout the state.

- It gives us a sense of accomplishment when we complete the tasks related to our job. This is known as **job satisfaction**.
- It gives us an opportunity to meet different people when we take on unpaid work through **volunteering**. Unpaid volunteer work helps us connect to others in the community through working on a common area of interest. It also offers the chance to make a difference to the people around us, can provide an opportunity to develop new skills, or build on existing experience and knowledge.

job satisfaction the feeling of pleasure and achievement that we experience in a job when we know that our work is worth doing

volunteering the act of offering to do something that you do not have to do, often without having been asked to do it and without expecting payment

▲ **Figure 2.18** The North Metropolitan TAFE Clarkson Campus in Perth offers a range of Certificate III and IV courses in line with the Australian Qualifications Training Framework (AQTF).

Career planning

Before you finish school, there will be many important questions to ask yourself about what you would like to do in the future. Even though it is a few years away, there are many questions to consider about what you will do when you finish school. For example: What things are most important to you in a career? What goals would you like to achieve? What are you interested in? What qualifications will you need to enter different fields or job areas? What subjects will you need to study throughout your time at high school in order to put yourself on the path you want? If you are interested in entering a trade, do you know the pathways to undertake to get an apprenticeship? Perhaps there are people at your school who can help you to answer these questions.

Some young Australians find it a struggle to decide on a career. There are lots of questionnaires and personality quizzes you can complete online that match you up with different types of careers based on your responses. The Australian Government Department of Education website outlines five principles of career development:

1. **Change is constant.** Recognise that the world around you is constantly changing. Be open to change and remain alert to new opportunities.
2. **Learning is ongoing.** Strive for continuous personal improvement. Stay motivated by learning new skills and developing new talents.
3. **Focus on the journey.** Don't focus on one destination only. Recognise that your career will be a journey throughout your lifetime. Appreciate and value each experience along the way.
4. **Know yourself, believe in yourself and follow your heart.** Pursue your passion to find fulfilment. Discover ways to combine your interests with career opportunities.
5. **Access your allies.** Rely on the support of your family, friends, mentors, colleagues and peers. Career success can be a team effort.

Indeed, it is predicted that you may have at least seven different jobs before you retire! The Institute for the Future's 2017 report determined that 85 per cent of the jobs that will exist in 2030 haven't even been invented yet. The California-based institute argued that innovation of new technology will mean that future employees will have to relearn 35 per cent of their job within three years – your current skills will therefore be required in a different form. All this points to the fact that Australians will need to adapt to change and upgrade their skills through continuous education and professional learning.

MAKING THINKING VISIBLE 2.6

Compass points

Reflect on the statement, 'It is predicted that you may have at least seven different jobs before you retire,' and go through the reflective questions below.

1 E = Excited. What excites you about the issue? What's the upside?
2 W = Worrisome. What do you find worrisome about it? What's the downside?
3 N = Need to know. What else do you need to help you evaluate this prediction?
4 S = Stance or Suggestion for moving forward. What is your current opinion on it? How might you move forward in your evaluation of this prediction?

Key concepts: making choices, specialisation and trade, interdependence, economic performance and living standards
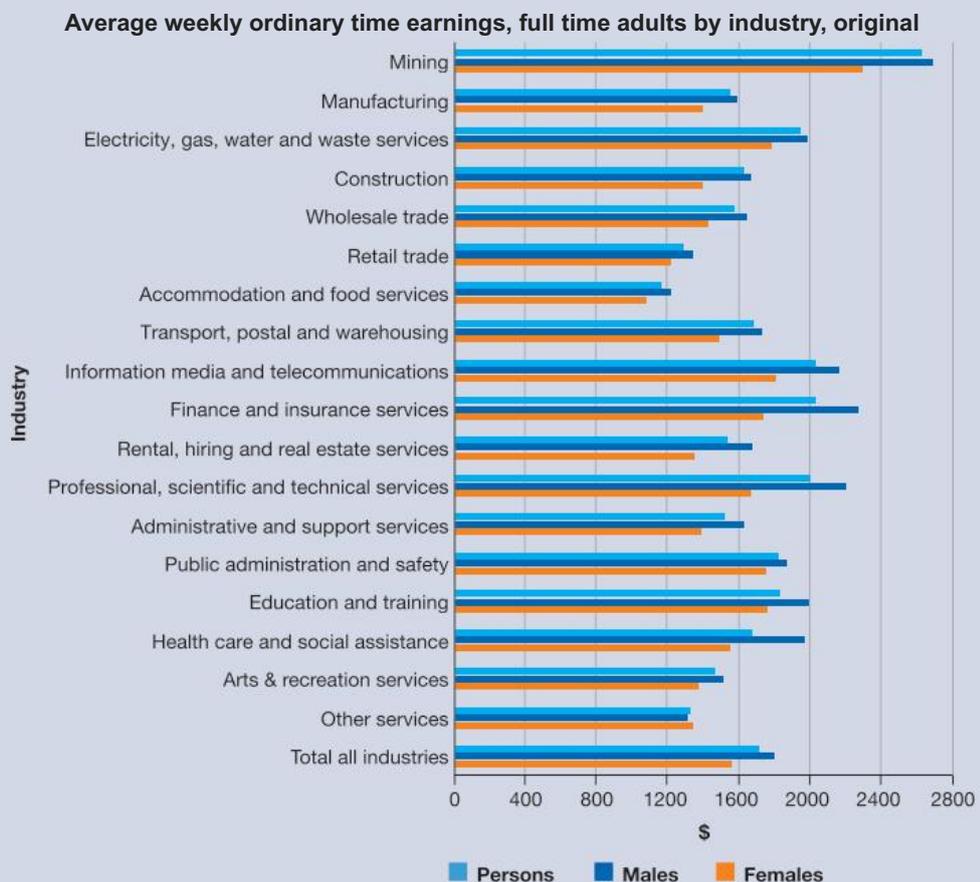
HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

The job sector in Australia

Different types of jobs attract different rates of pay, due to the demand and skills required for the job. The Australian Bureau of Statistics 2020 report on employee earnings and hours indicated that the average weekly earnings increased by 3.2% to $1,711.60 annually to November 2020. The scale and speed of changes in the labour market due to COVID-19 has been unprecedented. Employment and hours have changed considerably as various restrictions to control COVID-19 have been implemented, relaxed and lifted. Figure 2.19 shows the average earnings by industry.

Average weekly earnings

Average weekly ordinary time earnings, full time adults by industry, original

Industries (top to bottom): Mining, Manufacturing, Electricity, gas, water and waste services, Construction, Wholesale trade, Retail trade, Accommodation and food services, Transport, postal and warehousing, Information media and telecommunications, Finance and insurance services, Rental, hiring and real estate services, Professional, scientific and technical services, Administrative and support services, Public administration and safety, Education and training, Health care and social assistance, Arts & recreation services, Other services, Total all industries

X-axis: $ — 0, 400, 800, 1200, 1600, 2000, 2400, 2800

Legend: Persons, Males, Females

▲ **Figure 2.19** The mining industry topped the average weekly earnings in 2020, with average weekly salaries of $2633.20. The lowest paid workers were from the accommodation and food services sector, with average weekly salaries of $1161.10.

Source: ABS

END OF SECTION REVIEW 2.7

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1　Define 'work'.

2　What are the five guiding principles of career development?

3　List four reasons why we work.

Interpret

4　What is job satisfaction?

5　How does volunteering contribute to job satisfaction and the wellbeing of society?

6　Examine the chart in Figure 2.19. Choose three industries. Estimate their weekly wages – are they high or low? Why do you think that is?

Argue

7　Safety in a workplace is critical for young workers. When they begin work in a new environment, many are unfamiliar with workplace behaviours and may be overconfident or overly keen to make a good impression with their managers. Sometimes, this leads to accidents at work. Visit the WorkSafe Western Australia website for more information.

　a　What are the safety issues that young workers need to be aware of in the areas of retail and hospitality? Why are they important?

　b　What is workplace bullying? What are the laws related to this topic? Why is this issue important? Research online and find one news article that relates to this topic. Summarise the article.

Key concepts: scarcity, making choices, specialisation and trade, interdependence, allocation and markets, economic performance and living standards

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

▼ **Figure 2.20** Manganese ore falls from a conveyor at Port Hedland.

![icon] ## 2.8   Different types of work

FOCUS QUESTION

What are the different types of work available?

There are many different kinds of work available. The following information describes some of them.

Full-time

Under Western Australian awards a full-time employee works 38 hours per week. People who have their own businesses may work longer hours. A full-time employee receives benefits such as sick pay, annual leave and other entitlements. Having a full-time job that you enjoy is enormously important. You may have heard the expression 'work–life balance' and this usually is in reference to full-time workers. If you work for a business that you are happy to work at, and you complete your tasks in a satisfactory manner, then often the benefits of achievement can be very rewarding. Full-time work offers financial security and this may enable people to enjoy other things in life like holidays, travel and spending time with friends and family. This is where the term 'work–life' balance comes in. Full-time work is often described as a career, although this may apply to other categories of workers. A career is something that you should enjoy and is usually something that you feel passionate about. A job can also be something that you enjoy but it is usually more about the salary and less about the personal fulfilment. A career can sometimes be less financially rewarding, but may be very rewarding emotionally.

▼ **Figure 2.21** Rockingham Lakes Regional Park. Environmental and conservation work is rewarding for many people.

Part-time

Part-time workers work less hours than full-time employees but are entitled to similar benefits to full-time employees, although proportionally less.

Casual

A casual employee usually receives more pay per hour than a permanent employee but does not have the same benefits such as holiday or sick leave, and often does not have stable employment. Casual employment may occur during Christmas time when retail shops are busier or at popular tourist spots over summer.

Unpaid work

Unpaid work may include a trial at a workplace to see if the potential employee likes the job and if the employer thinks that the person is suited to the role. The trial period should only be as long as necessary for the person to demonstrate if they are suited to the role or not and should generally not be longer than one 'usual' shift.

It may be that a workplace offers to train a person so that they can apply for a role that provides payment once they have gained some experience.

> **freelancer** self-employed and hired to work for different companies on particular assignments

Work around the home (e.g. garden and house cleaning) is often unpaid work and volunteering also falls into this category. Around 80 per cent of the population in Western Australia volunteer some time and effort to charities, sporting clubs or businesses each year.

Other types of employment

Fixed term employment is an agreed-upon task over a specific length of time that is formalised by an employment contract. Part-time or full-time working hours can be negotiated when discussions take place with respect to this appointment. Commission employees are paid on a percentage of sales and this method may help with motivating the employee. The more sales they make, the more earning potential they have.

Piece rate employment is on the completion of a task. For example, for each piece of steel that is welded to specifications the employee receives an agreed amount. Or if your role is to clean old mortar from bricks at a building demolition, payment is negotiated at a certain amount for each brick that is cleaned.

Even before the onset of COVID-19 there were many people who chose to work from home on a **freelance** basis. The flexibility of this type of work suits many people who can choose what work they want to accept and what tasks they decline. This work is not without risks because freelancers are often looking for work, but in many cases once they build up a reputation for good work they are kept busy.

A probationary period is often standard practice when a person is employed and it is a period of time (three to six months) where both parties can determine if the role is suitable or being performed to satisfactory standards.

ACTIVITY 2.1

Research activity

1 Search online for job advertisements, perhaps via a large employment agency like SEEK, and look through some listings that may be of interest to you.

2 Find three listings that appeal to you. Note down the hours and any other positives about working for the company that are claimed.

3 List some words from the ad that might appeal to job seekers. Consider the reasons given in the text about why people work.

Key concepts: scarcity, making choices, interdependence

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

CASE STUDY 2.5

Swimming and water safety training

In November 2020 the Western Australian Government announced two nationally recognised short courses to beef up Western Australia's swimming instructor and pool lifeguard numbers.

The courses are the Pool Lifeguard Skill Set and Swimming and Water Safety Teacher Skill Set. They were developed after consultation with Royal Life Saving WA (RLSWA) and are available free for certain groups such as jobseekers and concession students. They can be used as credit for further study.

Additionally, students in Years 11 and 12 will have the opportunity to receive fully-funded training to become qualified swimming instructors for the Department of Education's VacSwim program.

The Education and Training Minister Sue Ellery was quoted as saying:

'Spending time around the water is part of the Western Australian way of life and these new courses will ensure swimming is safe and learning how to swim is accessible.

▲ **Figure 2.22** Being a lifeguard or swim instructor offers flexible hours and a good lifestyle for young casual workers

'These new pathways are a great opportunity for young people and jobseekers to secure year-round work that offers flexible hours and makes a real difference in the community.

'They will not only lead to jobs that are available right now, they can also be used as a stepping stone to further study, providing pathways to roles in management and program co-ordination across the community recreation field.'

ANALYSIS QUESTIONS

1 The Education and Training Minister Sue Ellery mentioned year-round work that offers flexible hours. How important is this for Year 11 and 12 students? Can you think why these students would be interested in flexible hours?

2 List a reason why the McGowan Government announced two nationally recognised short courses.

3 Do you think these courses may appeal to some senior students because they could provide pathways to roles in the community recreation field?

Key concepts: allocation and markets, scarcity, making choices, interdependence

HASS skills: analysing, evaluating, communicating and reflecting

▲ **Figure 2.23** Journalism is an industry that interests many young job seekers.

Work can be very enjoyable and fulfil people's lives, not just in a financial sense. Work can make life interesting and often people continue to learn new skills every day. To be the head of paediatrics at Perth Children's Hospital would be a difficult job but there are probably many satisfying moments in the job too. Building a house and seeing it completed and ready for a family to move into would also be very rewarding. In Year 7, you still have plenty of time to decide what work you would like to do when you are an adult. There is a lot to consider!

END OF SECTION REVIEW 2.8

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 How many hours per week does a full-time employee work?
2 Define what a trial at a workplace means.
3 Define 'piece rate employment'.

Interpret

4 Propose a scenario where a probationary period might be unsettling for the employee.
5 Discuss why many people choose to work from home on a freelancer basis.
6 'A career can sometimes be less financially rewarding but may be very rewarding emotionally.' Discuss this statement and list some examples of careers you think would be rewarding.

Argue

7 What does the term 'work–life balance' mean to you?
8 What factors are most important in your life and how should work fit into these?
9 Explain how you think the idea of work–life balance might change for people as they progress through their career.

Key concepts: scarcity, making choices, specialisation and trade, interdependence, economic performance and living standards

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

2.9 How people derive an income and alternative sources of income

FOCUS QUESTION

How can you derive an income?

Earning an income is necessary to pay for food, luxury items and general day-to-day living requirements. This is obtained by working for an employer but income can also be generated by other means, such as owning a business, being a shareholder or owning a rental service.

Owning a business

Owning a business has many benefits, although perhaps the major benefit is that you get to make the decisions and are not accountable to anyone else. You can create your culture and decide for yourself what your work–life balance can be. The COVID-19 pandemic meant that a lot of people lost their jobs, but also presented an opportunity for many people to reconsider their careers and decide to open their own business. Data from the Australian Securities and Investments Commission (ASIC) shows the number of new business registrations climbed in 2020, up by 34 per cent on 2019. Another benefit of owning your own business is you can choose who you work with and who will work for you. Sometimes when people work for an organisation, they enjoy their job but have conflicts with colleagues. Employing friends and family can mean that you have people working for you who care for you and your business. Of course, owning your own business has elements of risk, because if you are not successful or make a mistake then the onus is on you and you must bear the consequences. However, if your business is successful then you reap the rewards from that. Many big businesses have procedures, documentation and meetings which in combination can be distracting and time wasting. Owning your

▲ **Figure 2.24** Owning your own business can be very fulfilling.

own business means that you can decide what requirements are necessary.

Franchising

An alternative to owning a business is a franchise. Usually you have to pay an upfront amount to the person/business who owns the intellectual property and then you pay an amount per month (or an alternative time period) based on what was agreed or a percentage of how much revenue you make. There is also usually a set time period associated with the agreement. As the business may have an established brand, issues such as a profile in the market or growing your brand are not things that you have to be concerned about. It does come with drawbacks though. Unlike owning your own business where you have autonomy, being part of a franchise means that you have to comply with a certain set of standards and regulations. This is to ensure that the reputation of the brand is not altered or damaged.

CASE STUDY 2.6

Franchise formula

Margaret's Mowing* is one of the most respected professional lawn care business franchises worldwide. We are one of the fastest growing businesses across Australia. We have perfected the formula for lawn mowing and gardening and would like to share our knowledge. Capitalise on your talents and skills by joining our team as a franchise owner!

We help all franchise owners improve their lawn care and gardening skills, alongside continued business training and support through active field trainers and seminars. To ensure your success, all franchise owners are trained in customer service skills to ensure customer satisfaction and improved communication skills.

From the day that you choose to invest in our business by becoming a franchise owner for us, you are guaranteed work and can trust that all your gardening and lawn mowing needs are taken care of. We will help you do what you enjoy the most and you will have peace of mind knowing that we are a well-respected and recognised brand!

*Margaret's Mowing is a fictional business based on similar real-life mowing companies, created for the purposes of this case study.

ANALYSIS QUESTIONS

1 List the words in the article that suggest this is a successful franchise.

2 Why do you think the article mentions 'investing' in the business?

3 Why does Margaret's Mowing offer continued lawn care business training and support through active field trainers and seminars?

▲ **Figure 2.25** Margaret's Mowing offers opportunities for people to become part-owners in the Margaret's Mowing business through franchising.

Key concepts: allocation and markets, scarcity, making choices

HASS skills: analysing, evaluating, communicating and reflecting

ACTIVITY 2.2

Research activity

1 Search online for businesses for sale.
2 Find three listings that appeal to you. Note down the positive factors about owning the business that are claimed in the ad.
3 Write a paragraph on what business appeals to you and why.

Key concepts: making choices, interdependence

HASS skills: questioning and researching, evaluating, communicating and reflecting

Being a shareholder

You may have heard of the stock market. The stock market acts for the companies that list **equity** shares for public investors to buy and sell. Stock exchanges are the organisations that enable the trading of those equity securities, or stocks. Without a stock exchange, companies would have nowhere to list shares. Stock exchanges can be electronic or manual, and they provide important information about the size of the stock market.

Some companies are listed on the Australian Securities Exchange (ASX) to raise money by selling shares to investors who then have the chance to make a profit if the company performs well.

There are over 2000 companies listed on the ASX, although smaller companies are sometimes considered to be a more risky investment as they are more likely to go out of business than larger companies. A shareholder is a person who owns a share (or shares) in a company. To become a shareholder you need to buy shares, which in turn means you are part of the company and can benefit from its successes. It also has the element of risk that if the company is not successful you will not receive any leftover funds (e.g. if the company were sold) until all other debts have been paid.

> **equity** the value of the shares issued by a company

People earn money from shares when the company pays out portions of profits at certain times. However, this is not guaranteed, as it is up to the board of directors to decide on paying out dividends (profit). Buying shares is more often worthwhile if you invest in the company over a long period of time. If the company is successful and grows, then its share price increases. This in turn results in a profit to you when you sell your shares.

▼ **Figure 2.26** If you choose to become a stockholder, you can now monitor your stocks and the stock market with ease from a smart device.
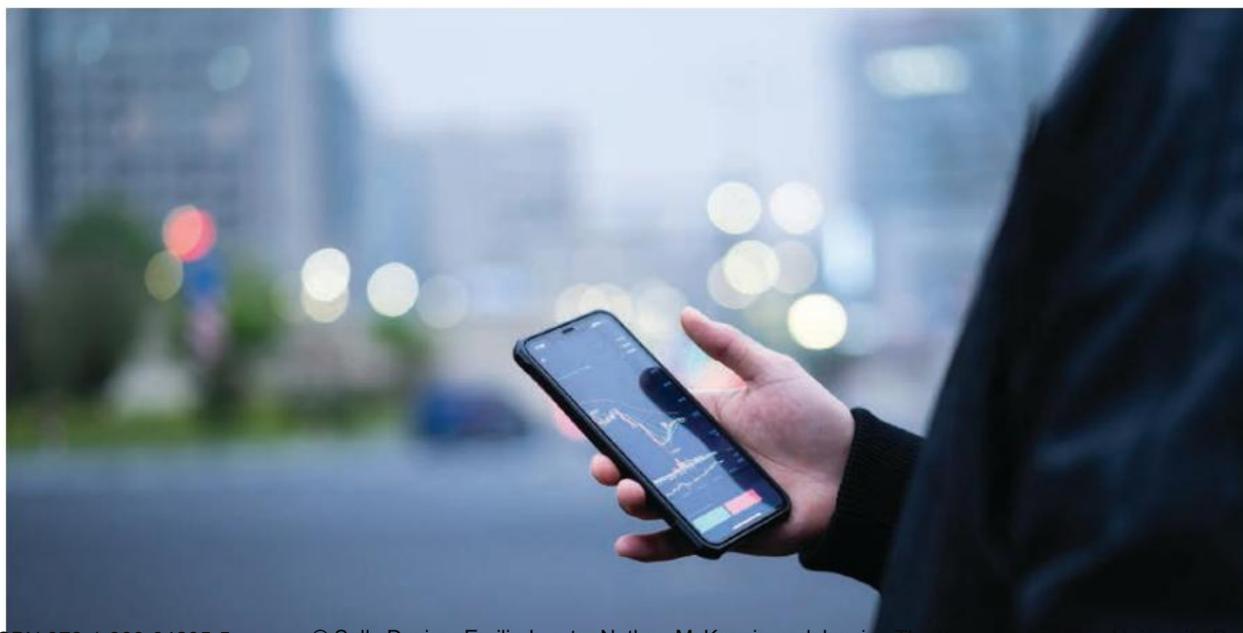
Owning a rental service

Owning a rental service is another way to earn an income. If you are able to continually rent out a product it will eventually pay for itself. Ensuring the equipment is in good order and is regularly serviced will guarantee customer satisfaction and perhaps generate repeat customers. Buying and selling is a one-off exchange, as opposed to renting, which could be a regular income. It is also possible to start small and then expand your business by offering additional extras or services to customers. For example, if you own a marquee rental business, you could offer to install it for the customer for an additional fee.

END OF SECTION REVIEW 2.9

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Are the number of new business registrations rising or falling as compared to 2019?
2 Define what a shareholder is.
3 How many companies are listed on the ASX?

Interpret

4 Suggest a negative of employing a family member in your own business.
5 Discuss why it may be important to find reputable maintenance firms if you owned a rental service.
6 'Unlike owning your own business where you have autonomy, being part of a franchise means that you have to comply with a certain set of standards and regulations.' Discuss this statement and list some examples of what could happen if franchisees could do whatever they wanted with the business.

Argue

7 Would you rather start a business from scratch or buy a franchise? Outline two positive and two negative points about each option, and decide which type of business would suit you best.

Key concepts: scarcity, making choices, specialisation and trade, interdependence, economic performance and living standards

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

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▲ **Figure 2.27** Owning a rental service can be a viable option for earning an income.

2.10 The ways people who have retired from employment earn an income

FOCUS QUESTION

How do people who have retired earn an income?

Earning an income may still be necessary after people retire and there are still quite a few options available. Private savings, superannuation and the Age Pension are some of them, as well as selling items that are no longer needed or working part-time. Working part-time or volunteering can also assist with personal fulfilment because people can feel that they have lost their purpose if they retire and stop doing anything.

The Age Pension

The Commonwealth Government Age Pension is available to people who are 66 years old (soon to be 67) and is available to people who don't have enough savings or superannuation to cover their expenses. Some people qualify for a part or full pension depending on their financial status. People applying for the Age Pension are provided with an income test which will determine if they are eligible. Assets will also be included in the assessment (excluding the family home). Even if people are not eligible for the Age Pension they may still receive discounts through a Commonwealth Seniors Health Card. It authorises discounts on medication or medical services. In March 2021, the Age Pension payments were:

- single: $944.30 per fortnight (approximately $24 554 per year)
- couple (each): $711.80 per fortnight (approximately $18 507 per year)
- couple (combined): $1423.60 per fortnight (approximately $37 014 per year).

▼ **Figure 2.28** Retirees wanting to claim the Age Pension must submit an income test.

ACTIVITY 2.3

Research activity

1 If possible, talk to an elderly relative or friend about whether they think the Age Pension is enough to live on.

2 Do you think it's fair that people who have managed to save a lot of money and assets are not able to access the Age Pension?

3 Discuss with a partner if you think that 67 years old is too high or too low for people to access the Age Pension.

Key concepts: scarcity, making choices, economic performance and living standards

HASS skills: questioning and researching, evaluating, communicating and reflecting

Superannuation

Superannuation (super) is money that is paid by your employer to a super fund so that you can access this money when you retire. Business owners manage their own super. The super fund is charged with looking after the money and investing it in certain areas that will positively increase the return on investment. Super is for people who are over 18 years of age and earn a minimum of $450 per month. Super can be paid to a person under 18 years of age if they work more than 30 hours per week. The employee can nominate which super fund they would like the money to be paid into and some people decide to boost their super by depositing additional funds on top of the 9.5 per cent of salary that the employer must provide.

CASE STUDY 2.7

Saving for retirement gives you power, and ethical responsibilities

If you're in a super fund, then, like it or not, you've got ethical decisions to make.

More than 10 million Australians have a superannuation account. Which means, effectively, more than 10 million of us are mini-shareholders with the capacity to influence future business decisions.

With that power, however small, comes responsibility. And nowhere more apparent than in relation to climate change.

Last month, the world's biggest asset manager, BlackRock, surprised Australia's biggest electricity producer and carbon dioxide emitter, AGL, by backing a motion that would have forced it to close its coal-fired plants earlier than planned.

The resolution at AGL's annual general meeting failed, but when a global firm managing more than US$7 trillion in investors' savings says it's time to accelerate the exit from coal, it's wise to sit up and take notice.

Interestingly though, some of Australia's biggest industry super funds, among them Cbus, HESTA and Aware, refused to support the motion, which was put forward by the Australasian Centre for Corporate Responsibility.

Work 'behind the scenes'

It's been a pattern with industry super funds.

Rather than using their overt voting power to try to change corporate behaviour, or divest from companies altogether, they say they prefer to exert influence behind the scenes, through conversations in board rooms and executive suites.

Take UniSuper, to which I contribute. It says it engages with companies 'to encourage rapid decarbonisation of their operations and supply chains'.

UniSuper is one of only three industry funds to commit to achieving net zero carbon emissions across its portfolio by 2050 – the others are Cbus and HESTA.

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Yet doubling down on gas

UniSuper has joined eight other funds in divesting from companies that predominantly make their money from producing coal for electricity generation.

Yet if your retirement savings are in UniSuper's default balanced option, then they are partly invested in Woodside, a company seeking to build a huge new gas hub on the Burrup Peninsula in Western Australia.

▲ **Figure 2.29** Burrup Peninsula, Western Australia

Woodside says the hub, which will operate for 'decades into the future', could process more gas than the entire volume extracted so far from another of its resource projects, the North West Shelf which began operations 36 years ago.

If you've chosen UniSuper's conservative option, then you are not only invested in Woodside, but also in Santos, which is behind the contested Narrabri coal seam gas project in NSW.

UniSuper's annual report on climate risk also reveals smaller investments in gas producers Origin and Oil Search.

Experts say worldwide gas use needs to peak before 2030 in order to keep global warming below agreed levels.

It means UniSuper, and other big funds, are investing our collective retirement savings in firms whose corporate strategies threaten our collective future.

UniSuper cites AGL as an example why it stays with polluting companies. While it runs power stations fuelled by coal and gas, it also invests in renewable technology.

It says, if it were to divest, its AGL shares might be acquired by investors with less concern for the environment.

It's a justification that could equally be used to defend running a gambling venue – if I didn't install poker machines, someone else would, and at least I care for my customers.

(As it happens, UniSuper's 'balanced' option includes shares in Aristocrat Leisure, a leading maker of gaming machines.)

Super funds have more power than they use

The justification sidesteps the question of whether the investment itself is defensible.

And it ignores the opposing argument – that divestment by a leading super fund can send a powerful signal to the market that a company is not properly addressing climate risk or developing appropriate strategies for a carbon-constrained world.

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Any company not doing these things is putting our savings at risk.

According to expert legal opinion, its directors might be breaching their obligations under the Corporations Act.

We've got power ourselves

There are legitimate arguments to be had about the best way for super funds to push businesses to act more urgently on climate change, but as fund members, and the ultimate owners of our money, we need to make up our own minds and act accordingly.

To sit back and let others do it on our behalf is an abrogation of responsibility.

Superannuation may be compulsory, but we still have choices.

We can find out which companies our retirement savings are invested in, and swap to a more sustainable option in the same fund.

This can take some digging around, but as with UniSuper, some of the information is available on the fund's website or can be obtained by asking questions.

Or we can consider switching to a different fund altogether. There are websites that track and compare superannuation investments in fossil fuels.

For a range of reasons, it's more difficult to switch to a new fund for UniSuper members.

But even where it isn't possible, we can write to our funds, urging them to engage more actively on climate change. It's easy to find the addresses. They are forever sending us emails.

It's what they say they do with fossil fuel companies – engage them in conversations. We can tell them where we want our savings invested and how we want them to use their clout to influence company decisions and vote at shareholder meetings.

We can do this as individuals, and we can band together with like-minded fund members to speak with one voice.

With a combined A$2.9 trillion in assets, one fifth of which are invested in Australian companies listed on the stock exchange, super funds own a fair chunk of Australia's most important companies.

It would be wrong for them not to take that responsibility seriously, just as it would be wrong of us not to take seriously what our savings are being used for.

▲ **Source:** *The Conversation*, Peter Mares, 4 November 2020

ANALYSIS QUESTIONS

1 Why do you think the article begins with: 'If you're in a super fund, then, like it or not, you've got ethical decisions to make'?
2 Research online what 'net zero carbon emissions' means.
3 What does the writer mean when he says 'Superannuation may be compulsory, but we still have choices'?

Key concepts: making choices, interdependence

HASS skills: questioning and researching, analysing, communicating and reflecting

Private savings

Private savings in economics is defined as savings by households and businesses that are unincorporated enterprises. Unincorporated enterprises include sole proprietorships, partnerships and family trusts.

Savings accounts can earn money for a person by earning interest on savings. The more money deposited, the longer it is left in the account and the higher the account's interest rate, the more interest will be paid by the bank or financial institution.

A sole proprietor is a person who is the sole owner of a business, and is entitled to keep all profits after tax has been paid.

A family trust is a tool to gather investments with the profits distributed in the most tax-effective way. It allows the trustee to use their judgement in issuing funds to heirs for tax purposes without paying the funds out, allowing profits to be retained and reinvested into the trust. By minimising tax, they can create wealth quicker in a family trust.

As you can see from reading this section, there are many ways that a person can still generate an income even after they have retired from employment.

END OF SECTION REVIEW 2.10

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Is the Commonwealth Government Age Pension available to all people who are 66 years old?
2 Define what superannuation is.
3 Does a sole proprietor have to pay tax?

Interpret

4 Suggest why some people pay additional funds to their super account.
5 Discuss why it may be important to investigate what companies a super fund is investing in.
6 Does a savings account sound like a good way to earn an income? List a positive and a negative to this strategy.

Argue

7 Write a letter to your 67-year-old self, including a list of financial and savings targets you would like to have achieved by the time you retire. What do you hope your future self will have been able to save? What kind of life would you hope to be living?

Key concepts: scarcity, making choices, specialisation and trade, interdependence, economic performance and living standards

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

2.11 Conclusion: why does it matter?

The decisions people make every day are the essence of the economy. Producers make choices based on what they think will make the best use of resources and lead to profit. Consumers decide how to best satisfy their needs and wants given the products available. Because resources are scarce, the way we use them is critical. Entrepreneurship and innovation help to manage resources and provide goods and services, which are always driving society forward.

As participants in this system, we must also make decisions about how to spend our time and talents in such a way as to best serve ourselves and others. You will spend much of your life working, so it is important to consider how what you do makes a meaningful contribution to the wider world.

2.12 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Inquiry

Research task

Responding to consumer demands

Discover how businesses respond to the demands of consumers by researching one of the following trends:

- preference for healthy options
- environmentally friendly products and packaging
- organic food.

For your chosen trend, answer the following questions:

1 What do consumers want to buy and why is this a preference for them?
2 What have producers done to respond to this changing demand?
3 What businesses have led the market in this area? How have they done this?
4 How do you think consumers have reacted to these businesses? What positive and negative feedback can you find?
5 What do you think will happen in the future with regard to these trends?

Using your research, create an information resource. You may choose to:

- create a website on the various issues
- create a petition to raise the price of milk in support of farmers
- write a letter to the local newspaper, or your local member of parliament, putting forward the issues you have gathered.

Research task

Investigating the Australian milk industry

Research the Australian milk industry. You will need to examine:

- the background issues relating to the price of milk
- the location of Australia's milk industry
- the gross income of farmers per litre of milk
- the price of milk across supermarkets
- the regulations and industry practices surrounding the price of milk
- the opinions of consumers on the price of milk.

▲ **Figure 2.30** A dairy worker prepares cows for milking in a milking pen at a dairy farm in New Zealand. The farm supplies milk to Fonterra, which is the world's top dairy exporter.

Writing

Imagine yourself as an entrepreneur. What type of business would you be running? How would you operate it? Write a series of short and long answers to the following questions:

1 What is your business name and what does the business do?
2 Do you own the business alone or with others? Do you have employees? If so, how many?
3 What entrepreneurial skills and attributes do you bring to your business? How do you use innovation, initiative, creativity and communication?
4 How does your business make money? What is the main source of income?
5 How does your business make a difference in the community?
6 What makes your business better or more successful than other businesses?

Key concepts: making choices, specialisation and trade, allocation and markets, economic performance and living standards

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

Making connections: Economics and Business and the other HASS topics

Economics and Business has many connections with other subjects in the Humanities. Have you considered how what you have learned about scarcity, entrepreneurship and innovation relates to the other topics you will cover this year? Here's a sample:

Civics and Citizenship

Justice in the workplace

How does the justice system overlap with the world of work? What is the process if a business breaks the law? Consider the following topics:

- businesses that sell faulty or dangerous products
- employees who act dishonestly or steal from their employer
- employees who injure themselves at work
- the impact of stress and mental health on work
- discrimination and harassment in the workplace.

Funding for political parties

Where do political parties get their money from and what do they use it for? Should we be concerned about this? Find out:

- How much money do political parties receive from donations?
- Who is making these donations, and why?
- Where else do political parties get their money from?
- What do the parties use this money for?
- What laws govern the money political parties receive and spend?

Government and the economy

There is a debate in Australia and around the world about whether governments should become more involved in the economy. Research the difference between market economies and command economies and list the positive and negative factors of each.

Geography

Scarcity of natural resources

How do economists view the scarcity of natural resources such as water? Can markets and prices help to solve water scarcity? Consider:

- Why do some resources, such as water, cost money while others, such as air, are free?
- What has happened to the price of water over time?
- Would increasing the price of water make people use less of it?
- What might happen if water became so scarce that some people could not afford it?

Economic push and pull factors

Many economic factors influence the liveability of a place. Think about how each of these would push people away or pull them towards an area:

- the availability of jobs
- the price of housing
- the quality of infrastructure
- the quality and variety of shopping
- the laws around entrepreneurship and ease of starting a business.

History

The world of work in the ancient world

How was work in the ancient world similar to that of today? How was it different? Consider the following topics:

- What were the main types of work done in the past?
- How many jobs might a person have during their lifetime?
- What determined the work people did?
- What was the typical working day like?
- What were some of the challenges of working in the past?

Entrepreneurship and innovation through history

There are many examples of innovation and entrepreneurship from ancient history. Using your historical depth study, think about:

- What inventions were made during this time and how do they influence our lives today?
- Who benefited most from creativity and innovation?
- How were business owners and entrepreneurs treated during this time?

Part 3

Geography

What is Geography?

What do you think are the most important challenges facing our world today? Geography is a fascinating subject for anyone who is curious about how the world works. It can improve the lives of people and their environments. Geography involves the study of Earth's *physical environment* and *human activities*, and how these two areas affect each other. Table A shows some of the topics that geographers study. Figure A shows the devastation caused by a tsunami that hit Indonesia in 2018.

Areas of study	
Physical environment	**Human activities**
• Landforms (such as beaches, volcanoes and mountains) • Bodies of water (such as oceans, seas and lakes) • Climate and weather • Plants and animals	• Land use (such as farms and cities) • Culture, architecture, religion and language • Population growth and decline • The movement of people from one place to another

▲ **Table A** Areas of study for geographers

▲ **Figure A** This photograph shows the damage from the tsunami that hit coastal regions in Java and Sumatra, Indonesia, in 2018.

Geographers studied the area's physical environment and discovered that an unusual natural process had occurred to cause the tsunami shown in Figure A. They found that the eruption of the Anak Krakatau volcano triggered an underwater landslide that then created the tsunami. Also, by studying the human activities in the area, geographers discovered why so many people were affected.

The tsunami in Indonesia struck popular tourist beaches during peak season when hundreds of tourists were there for the Christmas and New Year holiday. Tsunami warning systems had not worked for six years because they had been damaged and vandalised. Furthermore, the warning systems that were in place only activated when an earthquake was detected, not when there was an underwater landslide. Many locals considered an earthquake to be a sign for people to move to higher ground, but they did not have a sufficient education on how volcanic activity causes tsunamis and the risks involved.

By studying the relationship between humans and the environment, geographers are able to understand why people would risk living in dangerous areas. In the case of Java and Sumatra, the natural environment provides locals with healthy soil to grow crops and the ocean provides them with seafood. The tropical **climate** and beaches also supply those who live there with a source of income from the tourist industry. The land near volcanoes is often cheaper and many cannot afford to move further away. Often, the local people do not want to move because the area is their home.

climate the long-term trends in the weather conditions of a place, such as its average rainfall and temperature

The study of geography finds solutions to important challenges. For example, geographers used sonar surveys to map the sea floor beneath the Anak Krakatau volcano in order to understand how the landslide caused the tsunami. They also educated

people about the warning signs of a tsunami when it is triggered by a volcano.

There is no doubt that geographers can be game changers and life-savers, but to perform their important role, geographers need to rely on geographical concepts and skills.

Introducing geographical concepts and skills

Geographical concepts and skills help to guide the way you question and think about an issue. The seven concepts that are used in the following chapters on geography are: place, space, environment, interconnection, sustainability, scale and change.

> **phenomenon** an occurrence or observable fact
>
> **fieldwork** gathering information and data about a natural or human environment outside the classroom
>
> **hydrological** relating to the study of water on the earth, for example, where it is and how it is used

Geography is a process of questioning, discovering and communicating what you have learned. This process of inquiry involves the following geographical skills:

- being motivated by an issue or curious about a **phenomenon**
- asking questions that relate to geographical concepts

- researching a topic by collecting primary and secondary data (see Table B)
- analysing information to come up with conclusions and to gain an understanding of a topic
- evaluating what is being done in response to an issue or phenomenon by seeing if a response is successful
- communicating and reflecting in ways that help people, governments and the media understand an issue and suggesting or creating solutions based on the research and evidence.

To give you an example of geographical concepts and skills in action, a geographer looking at Figure B might ask the following questions:

- How has this volcano changed?
- What is the scale and distribution of this change?
- What interconnections between factors caused the change?
- What impacts have these changes had on the environmental, social and economic sustainability of the region?

You will learn more about geographical concepts and skills in this and the following chapter. In Chapter 3 you will study the topic of water. This chapter describes how water connects people and places, how **hydrological** hazards occur, what their impact is on people, and how water use is managed. Chapter 4 looks

Data in geography

Primary data	Secondary data
Primary data is data that you collect specifically to help you answer an inquiry question. This data is collected during **fieldwork**.	Secondary data is data that was created by someone else for a different reason. However, the information can still help you answer your own question.
Examples: • Photographs • Collecting samples • Interviewing people	Examples: • Published statistics • Satellite imagery • Online interactive maps

▲ **Table B** Primary and secondary data in geography
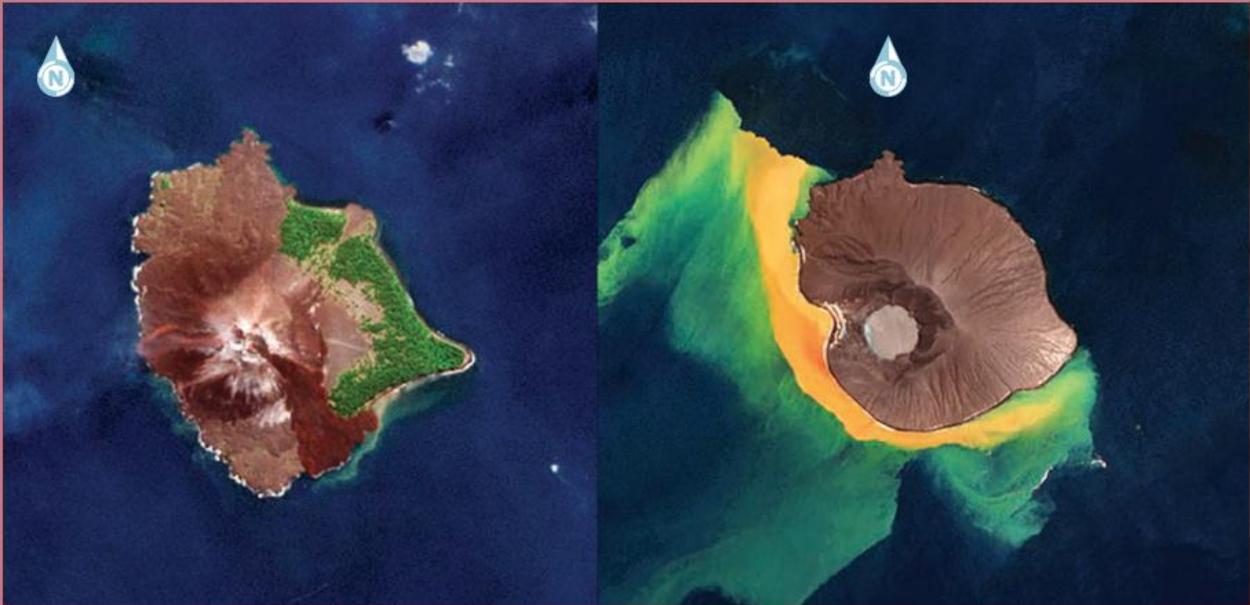
▲ **Figure B** These satellite images were taken of the volcano on Anak Krakatau before erupting (left) and after erupting (right). The most obvious change that the eruption had on the region is that a large part of the southern flank of the volcano slid into the ocean, which has changed Anak Krakatau's shape and size.

at place and liveability. You will learn what makes a place a good area to live, how a person's town can impact upon their life, and how geographers can make places safe, healthy and inspiring environments for people to thrive in.

The work of geographers has been, and will always be, important. In the past, geographers have helped to determine the circumference of the Earth, how and where to grow food, and how to reduce the damage caused by natural disasters. Today, and into the future, the discoveries geographers make will help us overcome modern challenges, such as climate change, the extinction of species and the **sustainable** use of resources such as water.

> **sustainable** causing little or no damage to the environment and therefore able to continue for a long time

Geography is an empowering and forward-thinking subject. It requires an open mind to consider many questions and perspectives. A geographer also has to be sharp enough to understand the information that is collected and to create a future that is better than the present. Who knows where your study of geography will take you? The possibilities are endless!

▼ **Figure C** Anak Krakatau erupting in 2018. The unusual interconnection between this eruption and the following tsunami launched geographers into a new area of research, in the hope that we can stop such tragedies from happening again.

Water in the world

Overview

Water is the most precious resource we have. We use it every day in our homes, as well as to grow food, make energy and products, and move people and goods all over the world. Water is a finite, renewable resource. This means that there is the same amount of water on Earth today as there was when the Earth was formed and, if managed well, it can be reused forever. In fact, the water you drink today could contain molecules that dinosaurs and cave people drank well before your time!

Every day there are more people using the water on Earth, but only 2.5 per cent is drinkable. So, how we treat this precious resource has never been so important.

As our use of water increases, we have come up with clever ways to access freshwater. In Perth, 10 per cent of the water flushed down the toilet and sink is recycled into drinking supplies. In Kuwait, almost 100 per cent of drinking water comes from desalination plants that turn saltwater into freshwater. However, there are also ways that we pollute or waste-water.

Water is part of an interconnected system called 'the water cycle'. This means that the pollutants we put into the soil and sky can contaminate our water, and reduce the amount of clean water that we can use.

In this unit, you will investigate what water means to Australians and people around the world. Understanding the connections between water, people and places is an essential part of your study. In many places, water scarcity is a serious issue that can potentially lead to disastrous consequences. Each situation is unique and requires a range of management strategies to ensure water use is sustainable.

Video
Unit overview

▼ **Figure D** Wastewater undergoing treatment at the Beenyup plant in Perth before it is returned to the city's water supply. In Perth, climate change and population growth are putting pressure on the city's ability to provide water. This has encouraged creative solutions to address the serious problem of water scarcity in the city.
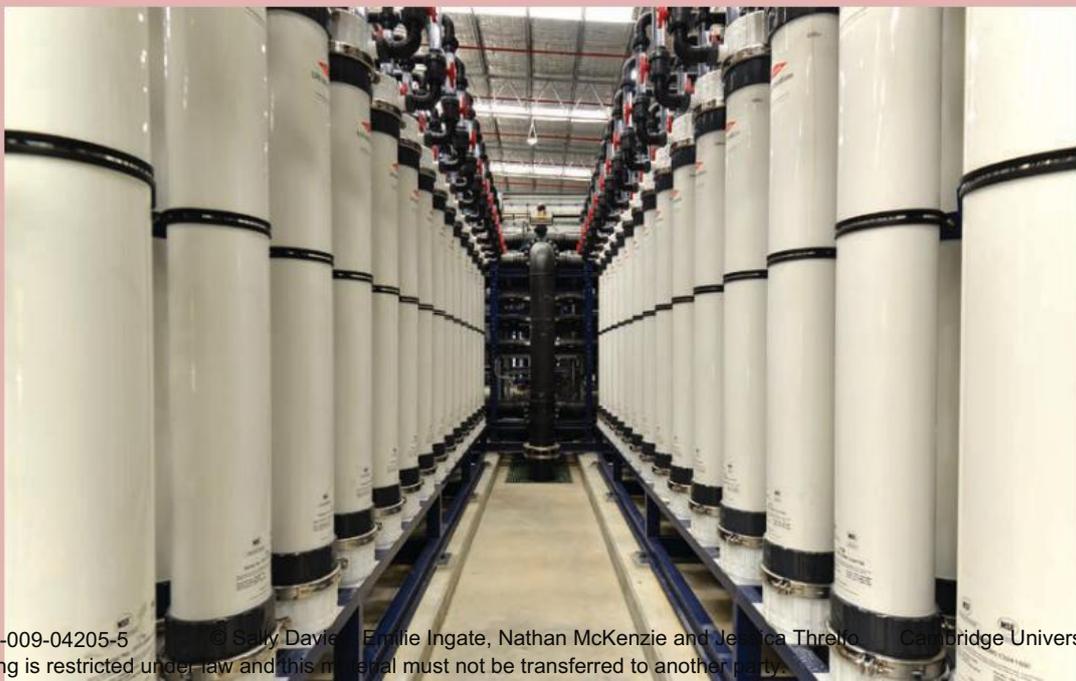
Learning goals

After completing this unit, you should be able to answer these questions.

- What is an environmental resource?
- How can water be classified as an environmental resource?
- How do people manage water resources?
- What role does water play in connecting environments and places?
- How are water resources distributed around the world?
- How do Australia's water resources compare to other countries?
- What is water scarcity and what factors lead to it?
- How is water scarcity managed?
- How can desalination, water recycling and efficient irrigation help to manage water scarcity?
- What role does water play in the spiritual, economic and cultural life of people in Australia and around the world?

Introducing geographical concepts

In this unit, you will have many opportunities to practise geographical concepts.

The concept of **place** involves the physical location of an area, and the meaning that the location has for individuals, communities and cultures.

Space refers to the spatial distribution of places and their characteristics. We use maps and spatial technology to examine, monitor and compare spatial distributions so that we can assess and manage changes.

Scale refers to how big something is compared to something else. This can be represented on maps using a linear scale, or when considering whether an impact will affect a small area, an entire country or the whole world.

When geographers look at **change**, they investigate the type of changes that have occurred. They also look at when, where and why change has happened.

The **environment** in geography refers to the characteristics of an environment, how an environment supports life, and the connections between an environment and people.

Interconnection involves the links between places and the ways in which people influence or are influenced by the characteristics of places.

Sustainability refers to whether a place or environment can maintain its current needs without affecting the ability to meet the needs of future generations.

Geographical concepts

Where is it located, what are its geographic characteristics and how is it significant to different people?

How are the features distributed and how has the distribution changed over time?

Is it economically, socially and environmentally sustainable?

What type of change has occurred and what are the consequences?

What are the components of this environment and what processes have formed it?

Does it occur at a local, national or global scale?

How is it linked with other places and with other people?

Place · Space · Sustainability · Change · Environment · Scale · Interconnection

CHAPTER 3

Water in the world

3.1 Setting the scene: water is an essential part of human existence

Water is essential to all life on Earth. A person can survive without it for only about three days. Throughout history, people have used water to not only survive, but to thrive. It is needed for drinking and to grow food, and it is a resource for transport and to create electricity.

Water is a significant part of Aboriginal and Torres Strait Islander peoples' cultures in Australia. The power of water is represented throughout Dreamtime stories. An example of this is the rainbow serpent. The story of the rainbow serpent tells of how a serpent travelled through the land creating river channels, which were then filled with water from the stomachs of frogs. This water transformed the landscape because vegetation began to grow and animals thrived. The rainbow serpent then created mountains and turned some of the animals into humans.

Aboriginal cave paintings sometimes show the rainbow serpent with a crocodile or kangaroo head, or with a crocodile or kangaroo tail. As Figure 3.1 shows, the rainbow serpent had a snake's body, and was decorated with rainbow shapes and designs. The rainbow on the serpent's body meant that it was travelling, and keeping the waterholes full and flowing. The rainbow serpent could also be destructive, and cause storms and floods when it was angry.

sediment sand and silt that is moved by rivers and deposited in a new location

floodplain an area of flat land near a river that is often flooded when the river becomes too full

See Chapter 6 for more information about the Nile River and its importance to the ancient Egyptians.

▲ **Figure 3.1** A cave painting of the rainbow serpent in Arnhem Land in the Northern Territory

Water was also central to civilisation in ancient Egypt. The Nile River flows 6650 km in length from Uganda to the Mediterranean Sea in northern Egypt. The river was the religious, cultural and economic centre of ancient Egyptian life. It would flood annually, leaving fertile **sediment** along its banks. This sediment allowed people to grow enough crops to support themselves. Figures 3.2 and 3.3 show the lush vegetation still growing along the Nile River's banks, and the surrounding **floodplain**. Without the floodplain of fertile land, this area would be part of the desert.

As described in Chapter 6, the people of ancient Egypt expressed how much they
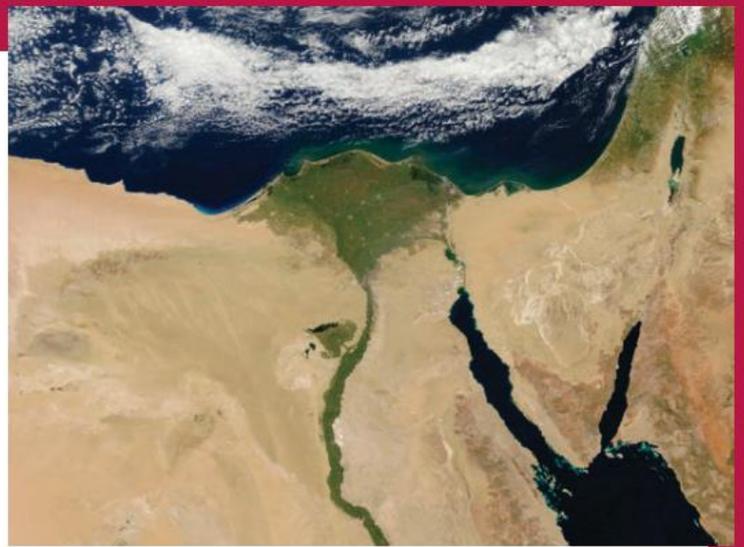
▲ **Figure 3.2** A present-day photograph of the Nile River valley in the Minieh region of Egypt

▲ **Figure 3.3** Satellite image showing the lush vegetation of the Nile River surrounded by desert

relied on the Nile River through religious rituals and hymns (songs of praise). They and their priests sang verses like:

Hail to thee, O Nile! Who manifests thyself over this land, and comes to give life to Egypt! Mysterious is thy issuing forth from the darkness, on this day whereon it is celebrated! Watering the orchards created by Re, to cause all the cattle to live, you give the earth to drink, inexhaustible one!

▲ **Figure 3.4** 'Hymn to the Nile', c. 2100 BCE, *Ancient History Sourcebook*, Fordham University website

The river was so vital to the ancient Egyptians' survival that they invented ways to move water from the river to their crops. Although the *shaduf* shown in Figure 3.5 might be considered primitive by modern

standards, the concept of using river water for watering crops within naturally dry regions is a fundamental part of agriculture in many regions of Australia.
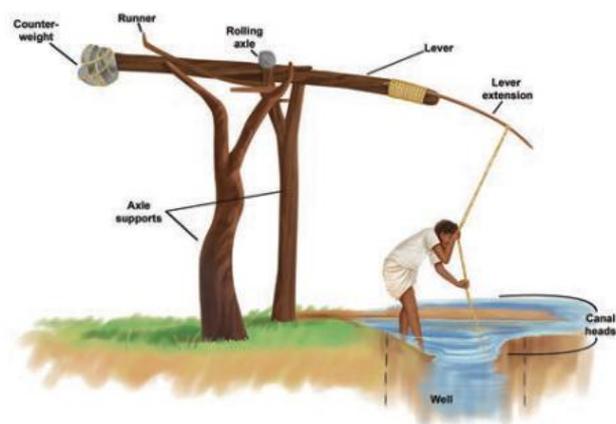
▲ **Figure 3.5** The *shaduf* is a hand-operated device for lifting water. It is still used in some countries to water crops. It moves water from the river, over the bank and into drains that are dug along and through the fields.

MAKING THINKING VISIBLE 3.1

Think, pair, share

Many cultures from the ancient past as well as today have a deep connection with water. Answer the following questions before sharing your responses with a partner. Then discuss your answers with the rest of the class.

1 List all the ways you use water in your life. Consider how water is used at home and at school. Also think about the water that might be needed to produce items that you purchase or consume.

2 What are your experiences with water in the landscape? Consider water that is near your home, a place you visit regularly or somewhere you have been to on holiday.

3 How do you think water supplies and water in the landscape might change or be impacted on in the future? Consider environmental damage, population growth and changes to the climate.

Key concepts: environment, sustainability

HASS skills: evaluating

3.2 Chapter overview

Introduction

Water is one of our most important environmental resources. This chapter explores the ways in which water can be classified as a resource and the different types of water resources that are available. It also looks at the different ways water is used in agriculture and our homes. The chapter considers the value of water, and the way it connects people, places and environments in the landscape.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What is an environmental resource?
- How can water be classified as an environmental resource?
- How do people manage water resources?
- What role does water play in connecting environments and places?

Geographical skills

After completing this chapter, you should be able to:

- Explain processes that influence the characteristics of places
- Identify, analyse and explain spatial distributions and patterns, as well as identify and explain their implications
- Identify, analyse and explain interconnections within places and between places, and identify and explain changes resulting from these interconnections
- Analyse maps and other geographical data and information, using digital and spatial technologies as appropriate, to develop identifications, descriptions, explanations and conclusions that use geographical terminology.

▲ **Figure 3.6** Some of the most spectacular places on Earth were formed by water, including Iceland's Gljufrabui waterfall that is shown here.

Digital resources

Visit the Interactive Textbook to access:

- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video
Five interesting facts about floods

Video
Five interesting facts about water management

Video
Five interesting facts about water resources

3.3 The classification of environmental resources

FOCUS QUESTION

What is an environmental resource?

What is an environmental resource?

Resources are used by people to satisfy a need. A need could be something like constructing a building, generating electricity or earning money. **Environmental resources** are those that are found naturally in the Earth's **environment**. They include things like light, wind, heat, water, plants, trees, animals, soil, rocks and minerals.

When we speak about the environment, we are referring to all the features that make up our surroundings and make it possible to live on the Earth. The features of the environment can be divided into four spheres:

- atmosphere, which includes the air we breathe and the sunlight we feel
- hydrosphere, which is all of the water found on Earth, including the oceans, rivers and lakes

- lithosphere, which includes all of the rocks and soil
- biosphere, which is all of the living things on Earth, including plants, animals and people.

Different parts of these four spheres interact with one another. For example, rain that falls from the atmosphere might flow into a river, the hydrosphere. This river might cut through soft soil on a river bank, the lithosphere, and provide a water supply for local animals, the biosphere. The interactions between different parts of the environment are known as **geographical processes**.

environmental resources resources that are from the natural environment such as water and wood

environment the air, water and land of a particular area, which contains people, animals and plants

geographical processes a series of events or actions that change environments, spaces and places

renewable resources resources that can be produced as quickly as they are used

---

ACTIVITY 3.1

Features of the environment

Read about the features that make up an environment and then complete the following.

1 Draw a diagram showing how the four spheres of the environment interact with one another.
2 Provide an example of an environmental resource for each of the four spheres that make up the environment.

Key concepts: environment, interconnection   **HASS skills:** evaluating, communicating and reflecting

---

Renewable and non-renewable resources

A common way to classify environmental resources is based on whether they are renewable. **Renewable resources** are those that can naturally replenish themselves at a rate that is faster than people use them.

Some resources are renewable, but if they are used at a rate that is quicker than the rate they renew themselves, then they can eventually run out.

▲ **Figure 3.7** Harvesting pine trees in Toolara State Forest in Queensland

harvest to pick and collect crops, or to collect plants, animals or fish to eat

species a group of plants or animals that are classified as having the same characteristics

sustainability the wise use of resources so that they are available into the future

regenerate to grow again

non-renewable resources resources existing in limited quantities that cannot be replaced after they have all been used

fossil fuels fuels that were formed underground from plant and animal remains millions of years ago; examples include gas, coal and oil

For example, if people choose to **harvest** trees from a forest, they might grow back naturally or they could be replanted by people. However, depending on the **species** of the tree and the climate, it might take each tree 30 years to grow back to a mature height. This means that if trees are harvested too quickly, the supply can run out faster than it grows back, even though they are a renewable resource.

In geography, we use the concept of **sustainability** to describe whether the use or modification of an environment can continue at the same rate into the future, without leading to negative impacts. In the example just given, sustainable forest management and timber harvesting would involve logging trees at a rate that would allow a forest to **regenerate** to a point where the forest could be logged again. Logging at an unsustainable rate would mean forests are not left to regenerate. Instead, the size of a forest would continue to get smaller and smaller until timber could no longer be harvested because no trees would be left.

Non-renewable resources are those that cannot be replaced once they are used. **Fossil fuels** are a common example. Fossil fuels are produced from buried deposits, which are formed from layers of decayed plants and animals (fossils). Over millions of years, the layers of organic remains have been exposed to intense heat and high pressures. These geographical processes have changed the organic remains into fossil fuels. Fossil fuels include:

* crude oil
* coal
* natural gas.

▲ **Figure 3.8** These scientists are working in a nuclear reactor, which produces and controls the release of energy from splitting the atoms of uranium ore.

Crude oil, when extracted, can be refined into oil, grease and petroleum. Technically, new fossil fuels are being created following the same processes that formed them in the first place. However, this does not occur on a time scale that makes them renewable for use. For example, it will take 300 million years for new coal to form from the current dead plant material!

Nuclear energy is another example of a non-renewable resource. The process of creating nuclear energy requires the use of uranium **ore**. An ore is material from which a metal or valuable mineral can be extracted. Uranium ore is mined from rock deposits in different parts of the world, including Australia. Nuclear energy is created by splitting uranium atoms in a process called 'fission'. The splitting of the atoms generates heat to produce steam, which is then used to turn turbine generators that create electricity.

Finite and infinite resources

Some renewable resources will never run out. These are known as **infinite resources**. Scientists predict that the sun will last for another 6.5 billion years. Although this technically is not infinite, this time span is much longer than the amount of time that the Earth has existed, and is therefore considered to be renewable. Resources that have a limited supply, such as non-renewable resources, will eventually run out. Every time they are used, there is less of the resource remaining. These types of resources are known as **finite resources**.

> **ore** a type of rock or soil that can be mined to obtain metal
>
> **infinite resources** resources that are without limits
>
> **finite resources** resources that have a limit or end

▼ **Figure 3.9** Coal is a non-renewable fossil fuel that is mined in Australia and exported around the world for the production of electricity.

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.1

Classification

An important role of a geographer is to classify the world around them. This helps them to understand features of the Earth and how the features interact with each other. Geographers classify species of plants and animals, as well as different types of rocks, rivers and mountains.

Based on the information here about environmental resources, classify the following resources as either renewable or non-renewable. Also classify each resource as either finite or infinite. Write a sentence justifying why you have classified each resource the way that you have.

- Native animals hunted as a food source
- Saltwater from the ocean that is converted into freshwater
- A forest that is used to harvest individual trees and then left to grow back
- A forest where all the trees are harvested so that the land can be turned into a farm

You may wish to use the table template shown here to help set out your classifications.

Resource	Renewable or non-renewable	Finite or infinite	Justification

Key concepts: place, space, environment, interconnection, sustainability

HASS skills: analysing, evaluating

How much water is there on Earth?

Water is one of the most abundant resources on Earth. In fact, it is estimated that the Earth contains 1260 quintillion litres. That's 1 260 000 000 000 000 000 000 litres! Approximately 97.5 per cent of this water is saltwater. It is found in oceans, which cover 71 per cent of the Earth's surface. This leaves 2.5 per cent as **freshwater**.

freshwater water with less than 0.5 per cent of dissolved salts

Freshwater supports all life on land, including people. Though the usage varies depending on location, the average individual in Australia uses 340 litres of water per day. This does not include all the water used to grow crops. Individuals need water for drinking, cooking and washing.

▲ **Figure 3.10** Oceans cover 71 per cent of the Earth's surface.
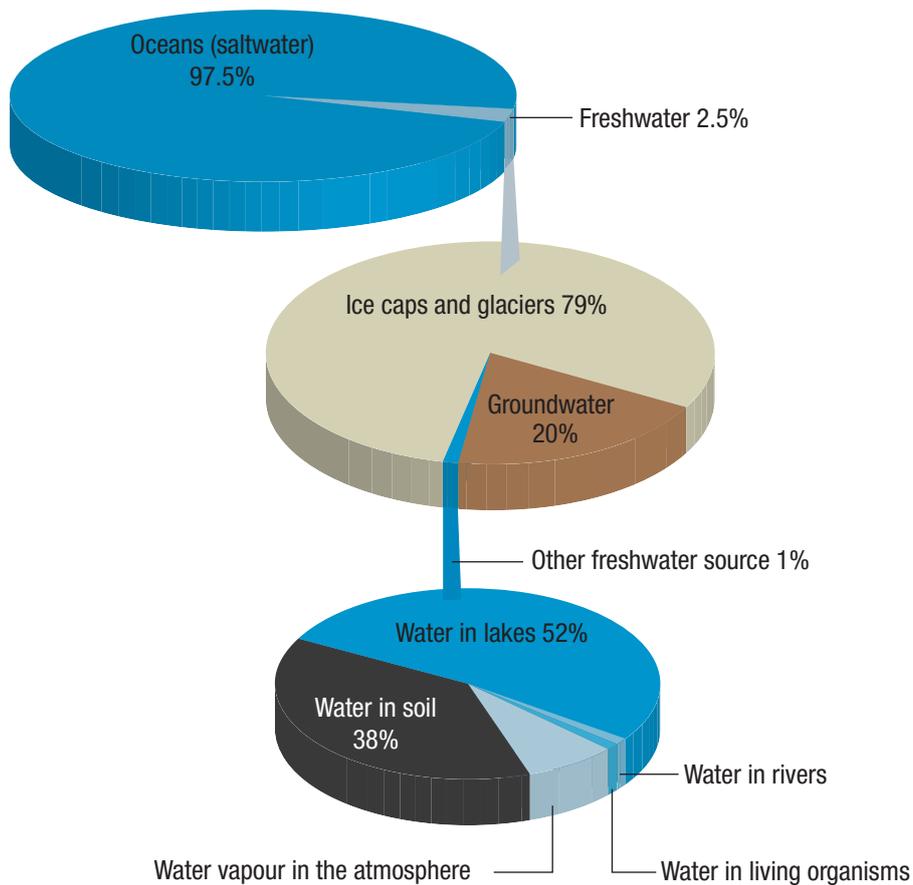
▲ **Figure 3.11** Although the Earth contains a large amount of water, only a very small percentage is available as freshwater.

Although freshwater is a small percentage of the total water on Earth, if this 2.5 per cent was readily available then it would be a plentiful supply. However, 79 per cent of all freshwater is frozen in **glaciers** and **ice caps**, such as those covering Greenland and Antarctica (see Figure 3.11). A further 20 per cent is located underground in the groundwater supply. In fact, just over 0.5 per cent of all the freshwater on Earth is available in lakes and rivers.

The natural water cycle

All of the water on Earth is constantly changing form through the processes involved in the natural water cycle (see Figure 3.12). Owing to the warmth of the sun, the surface water in rivers and lakes turns water into water vapour. This process is known as **evaporation**. Similarly, water in plants and trees undergoes **transpiration**. As water cools in the atmosphere, clouds form and the water condenses. From this **condensation**, water droplets and ice crystals form. When clouds grow large enough, the water falls as **precipitation**, such as rain and snowfall. When this falls on the land, some of the water soaks into the soil and is added to the groundwater through **infiltration**. This water eventually flows underground into rivers, lakes or to the coast. Water that does not infiltrate into the soil flows over the land and into rivers. This is known as **runoff**. This water eventually makes its way into river systems and flows back out into the ocean where the cycle repeats itself.

glaciers large masses of ice that move slowly; they are frozen rivers of ice that form when snow accumulates and is compacted

ice caps thick layers of ice that permanently cover an area of land

evaporation the process of a liquid changing to a gas, especially by heating

transpiration the process of losing water through the surface or skin of a body or a plant

condensation the process by which water vapour in the atmosphere cools and changes into liquid water

precipitation water that falls from the clouds towards the ground, especially as rain or snow

infiltration the process by which water is absorbed into the ground

runoff water that is not absorbed by the land and flows from high areas to low areas
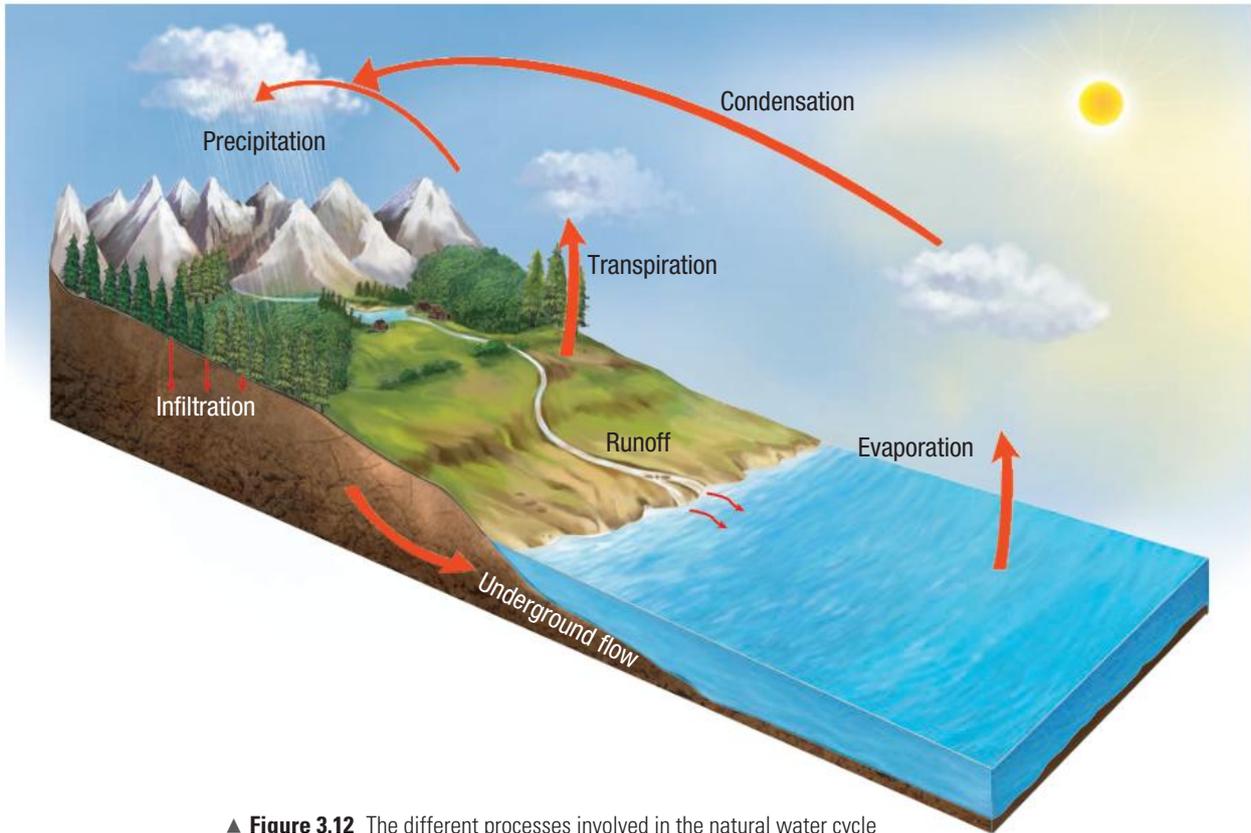
▲ **Figure 3.12** The different processes involved in the natural water cycle

Amazing but true …

In the past, Perth relied heavily on dams as a source of water. But now with climate change, Perth is receiving less rainfall, leading to lower dam water supplies. Today, most of Perth's drinking water comes from the Indian Ocean using the process of desalination. In simple terms, this is the removal of salts and other materials from sea-water to produce freshwater.

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.2

Drawing a concept map

Concept maps are a type of diagram used to show processes. They include terms inside boxes, with arrows linking the boxes to demonstrate the steps of a process.

A concept map can be used to summarise the processes within the water cycle and the different forms of water found in the cycle. Copy and complete the concept map here to summarise the water cycle.
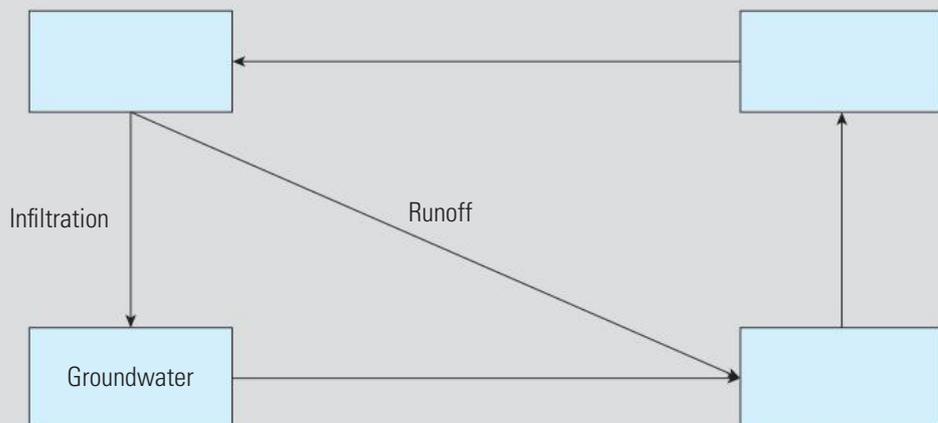
Key concepts: interconnection   **HASS skills:** communicating and reflecting

How is water used?

Water is considered an environmental resource because it has a wide variety of uses. These include:

- domestic – used in the home for flushing toilets, showers, cooking and cleaning
- agriculture – used to grow crops and raise animals
- industry – used to manufacture and transport products
- environment – used to maintain the health of natural and human environments
- recreation – used in community swimming pools, and to maintain parks, ovals and golf courses.

What kind of resource is water?

Since water is constantly undergoing different processes in the water cycle, it can be described as a renewable resource. Many communities around the world rely upon regular rainfall to renew their water supply. Although rainfall and river flows are usually regular and therefore renewable, these processes can decrease or stop completely during extended dry periods. In these cases, water is temporarily non-renewable.

Despite constantly changing between a solid, liquid and gas, the total amount of water on Earth never changes. This means that the overall supply of water is finite. However, in areas that receive high and regular amounts of rainfall, the resource can certainly seem infinite. In other places, supplies are constantly monitored and the use might need to be restricted if the finite supplies run low.

Available water resources

Available water resources are those that can be accessed relatively easily and cheaply. This includes the water found in rivers, lakes and groundwater.

Surface water

As the name suggests, surface water is water located on the surface of the Earth. This includes rivers, lakes and wetlands, such as swamps. Most major cities developed near a reliable supply of surface water that was easy and cheap to access and use.

In some cases, surface water resources are **perennial**, which means that they are permanent. Perennial resources are lakes that always contain water and rivers that flow all year round, such as the Glenelg River in Victoria. In drier areas, surface water resources are often **ephemeral**, which means they are semi-permanent. Ephemeral resources dry up during seasons with low rainfall. This is a common occurrence in many **arid** places in Australia, such as the Flinders Ranges in South Australia.

> **perennial** something that happens repeatedly or all the time
> **ephemeral** something that happens only for a short time
> **arid** very dry, often without rainfall to support plants

▲ **Figure 3.13** The Glenelg River is a perennial river in Victoria.

▲ **Figure 3.14** This dry river bed in the Flinders Ranges, South Australia, is an example of an ephemeral resource.
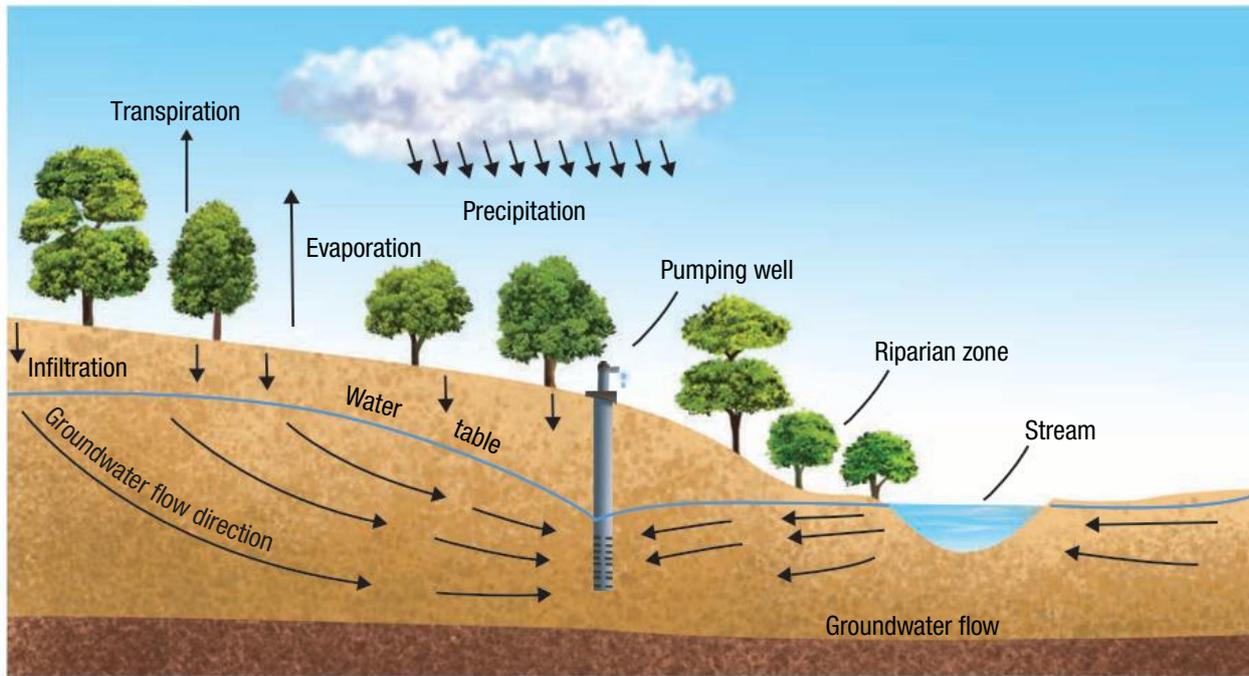
▲ **Figure 3.15** Groundwater comes from rainfall that infiltrates into the soil layer.

Groundwater

Groundwater is water that is located below the Earth's surface. It comes from rainfall that has infiltrated into the ground, and has been absorbed by soil and **porous** rocks. The boundary between groundwater supplies and the drier soil above it is called the water table.

porous something that has many small holes so liquid or air can pass through, especially slowly

megalitre a metric unit of capacity equal to a million litres

bores holes drilled into the ground to access underground water resources

Australia has a large system of groundwater basins, which stretch under about 60 per cent of the continent. The Great Artesian Basin is the largest of these; it is estimated to hold around 8700 **megalitres** of water. Many people living in dry areas are reliant on groundwater supplies, especially when rainfall is erratic or during extended periods of drought. During these periods, water is pumped to the surface using **bores**. Although groundwater supplies are finite, they are replenished during periods of high rainfall.

Potential water resources

Potential water resources are those that are not as easy to obtain. They include saltwater, ice, water vapour and wastewater. Accessing these resources requires complex and expensive extracting and filtering technologies. As populations grow, many places are forced to use these types of resources to ensure their water supply is renewable.

Saltwater: desalination

Desalination is the process of removing salt and other minerals from water. This can turn water from the ocean or underground sources into water that is safe for human consumption. Given the size of the ocean, water from desalination is a very reliable resource, particularly useful in coastal areas that have low or inconsistent rainfall. However, desalination plants are expensive to build and maintain. The cost to build a single plant in Australia is more than $1 billion and this does not include the ongoing maintenance costs on the equipment. Desalination plants also require a very large amount of energy to run. Despite the costs, desalination plants have been built to provide water to Perth, Sydney, Adelaide, Melbourne and the Gold Coast.

SEAWATER INTAKE
1 Seawater is drawn from the ocean through specially designed intake structures. Seawater is drawn at very low speeds – even small fish will be able to swim against the intake current – and a protective grille will ensure that larger marine life can't swim into the structure. Long tunnels will protect the marine environment, including the beaches and dunes.

FILTRATION
2 Pre-treatment filters remove solids such as sand and sediment.

REVERSE OSMOSIS
3 Filtered seawater passes through two stages of reverse osmosis, where it is pushed through ultra-fine membranes under high pressure. Freshwater will pass through, leaving seawater concentrate behind.

REMINERALISATION
4 Desalinated water is remineralised to meet Australian Drinking Water Guidelines and state health requirements.

STORAGE
5 Drinking water is stored before it is distributed into Melbourne and regional water networks, where it may be blended with water from existing catchments.

WATER OUTLET
6 Seawater concentrate is safely returned to the ocean through diffuser structures. Ocean currents dilute the concentrate within seconds.

▲ **Figure 3.16** The process involved in desalination to create drinkable water

Amazing but true …

Desalination is an extremely old technology. The ancient Romans used early forms of desalination to ensure that their soldiers did not get dehydrated when they were in areas without a consistent supply of freshwater. The ancient Romans used clay filters to trap salt, which allowed their soldiers to keep on the move when they were away from freshwater sources.

▶ **Figure 3.17** This stone carving from 2 CE shows Roman soldiers building a campsite. Their camp would have included set-ups for desalination.

Wastewater: water recycling

Water recycling involves reusing treated wastewater, such as **sewage**. Recycled water can be used to water crops on farms, flush toilets and replenish groundwater supplies. If wastewater is treated thoroughly, it can even be used for drinking. Water that is suitable for drinking is called **potable** water.

The process of water recycling involves transporting water to a wastewater treatment plant, where it is **filtered** and **purified**. In California's Orange County, there is a plant that recycles sewage to make it potable and then returns it to the groundwater supply. It recycles enough water to supply the needs of 850 000 people.

sewage waste matter such as human urine or solid waste

potable water that is clean and safe to drink

filtered the process of removing solids and impurities from water

purified the process of removing dirty or harmful substances from water

Amazing but true …

In 2018, the Orange County Water and Sanitation District was awarded a Guinness World Record for recycling 100 million gallons (378 million litres) of wastewater into potable water in 24 hours.

▲ **Figure 3.18** This photograph shows the pressure vessels that are used to purify wastewater in Orange County, California.

While the use of recycled water is not yet widespread in Australia, wastewater in New South Wales' Goulburn Valley is recycled and returned to the Goulburn River. It is then processed to be safe for drinking. In the future, Perth hopes to recycle all of its sewage to contribute to the city's water storages. Although many people may find the idea of drinking recycled sewage difficult to swallow, there have not yet been any cases of human health problems associated with the consumption of recycled water.

Amazing but true …

Colour terms are often used to help define different types of water resources. *Blue water* is water found in rivers, lakes and dams. *Green water* is water that is stored in the soil and used by plants during their growth. *Grey water* is wastewater that comes from household uses, such as baths, sinks, washing machines and dishwashers. It is not safe to drink but can be reused to water the garden. *Black water* is sewage and wastewater that contains everything that we flush down the toilet.

ACTIVITY 3.2

Positives and negatives

In a table, summarise the positive and negative factors of using surface water, groundwater, saltwater and recycled water as water resources. Consider the environmental and economic impacts of using these resources.

Key concepts: place, sustainability, change   **HASS skills:** questioning and researching, evaluating

END OF SECTION REVIEW 3.3

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define the following terms:

- freshwater
- evaporation
- transpiration
- condensation
- precipitation
- infiltration
- runoff
- perennial
- ephemeral
- arid
- desalination
- potable.

2 How much of the total water on Earth is freshwater?

▲ **Figure 3.19** A large percentage of the Earth's freshwater is found in frozen rivers of ice. This glacier is in Patagonia, which is at the southern tip of South America.

3 List the six processes that water undergoes within the water cycle.

Interpret

4 Explain why water can be described as both a renewable and a finite resource.

5 Describe the difference between available and potential water resources.

Argue

6 Discuss whether you think Australia should increase its investment in recycled water so that all major cities recycle their wastewater as part of their potable water supply. Consider if it would be beneficial, whether there are viable alternatives and if you think people would be happy to consume recycled water.

Key concepts: place, environment, sustainability, change

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

3.4 The quantity and variability of Australia's water resources compared with those in other continents

FOCUS QUESTION

How do people use and manage water resources?

Water use around the world

Approximately 110 000 **cubic kilometres** (km³) of rain falls on land each year and a further 398 000 km³ falls over the ocean. To get a sense of scale, this amount of water is the equivalent of 44 billion Olympic-sized swimming pools! This is an enormous amount of water, which is why it is measured in cubic kilometres rather than litres.

cubic kilometres a cubic kilometre is equal to a volume of 1000 × 1000 × 1000 metres; a cubic kilometre is also equal to a teralitre, which is exactly one trillion litres

flora the plants of a particular region

fauna the animals of a particular region

water withdrawals the total amount of water withdrawn from a surface water or groundwater source

Around 61 per cent of rainfall evaporates or transpires. This leaves 39 per cent, 43 000 km³, to fill rivers, lakes and groundwater. Some of this water is left in the environment to support local **flora** and **fauna**, and some is taken out by people to use as resources. This is known as **water withdrawals**.

Water withdrawal
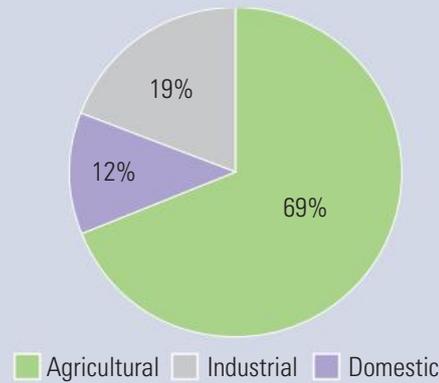
▲ **Figure 3.20** The proportion of the world's water withdrawals that are used in the agricultural, industrial and domestic sectors

Figure 3.20 shows the proportions of the water withdrawals that are used for agricultural, domestic and industrial uses when averaged across the entire world. While agriculture dominates the global use of water resources, Figure 3.21 shows that these proportions vary significantly in different continents.

Water uses by continent
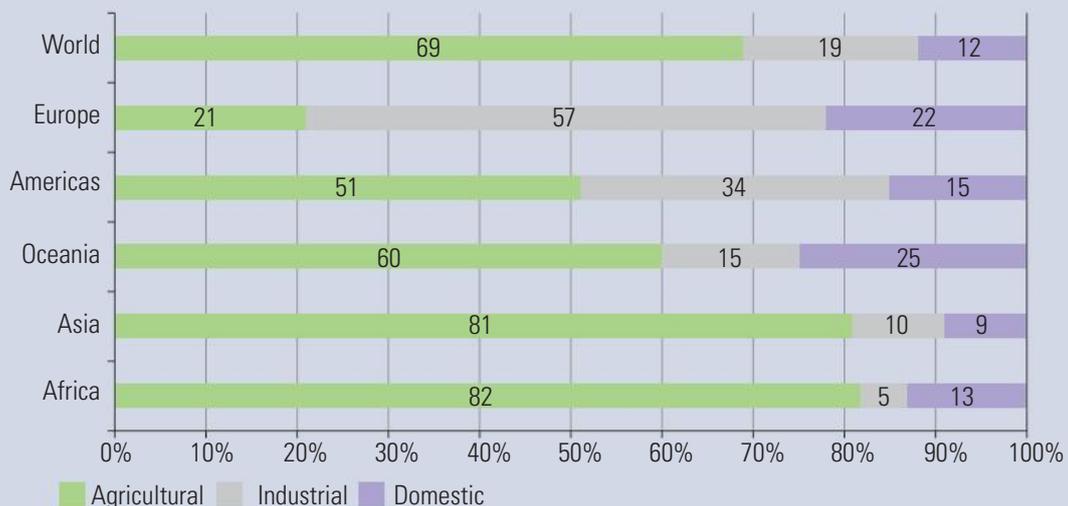
▲ **Figure 3.21** The proportion of different water uses by continent compared to world usage

The amount of water used within a country varies considerably. Table 3.1 shows the 10 countries that use the most water each year. According to this data, India and China use far more water than any other country. This is not surprising since these are the two most **populous** countries in the world. Table 3.2 shows the 10 countries that use the most water each day per capita. Per capita means per person. In this case,

it refers to the average amount of water that each person uses in these countries every year. It is important to note that this is not only the amount that each person uses in their homes. The figure also takes into account all of the water used for agriculture (to supply the food we eat) and other industries (to supply products that we use).

> **populous** a place that has a lot of people living in it

Most water every year

Country	Total yearly water used (km³)
India	761
China	598
United States	444
Indonesia	223
Pakistan	184
Iran	93
Mexico	87
Philippines	85
Vietnam	82
Japan	81

Source: Worldometers website

▲ **Table 3.1** The 10 countries that use the most water every year. Countries with more people use more water.

Most water per capita

Country	Yearly water used per capita (m³)
United States	1206.8
Canada	883.5
Belgium	883.49
Turkey	746.8
Mexico	704
Australia	703.12
Spain	670.3
Japan	623.9
Korea	517.4
China	439.7

Source: Statista website

▲ **Table 3.2** The 10 countries that use the most water per capita each year

ACTIVITY 3.3

Using information from figures and tables

Read the information about water use around the world and answer the following questions.

1. According to Figure 3.21, which continent uses the highest proportion of its water for agriculture? Which continent uses the lowest proportion for agriculture?

2. Suggest a reason for the differences between countries in the use of water for agriculture. Consider the climate, level of wealth and history of the places involved.

3. Refer to Table 3.1. Why do you think India, China and the United States use so much water each year compared to other countries?

4. Refer to Table 3.2. Where are many of the countries that use high amounts of water per capita located?

5. Why do you think the people in the regions identified in Question 4 use so much water?

6. Based on the differences you see in the lists in Tables 3.1 and 3.2, why is it important to always compare places based on per capita use, rather than just the total amounts that are used?

Key concepts: place, space, environment, interconnection

**HASS skills:** analysing, evaluating, communicating and reflecting

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.3

Factors causing a phenomenon

In geography, factors are the causes or reasons why something occurs. Geographers are interested in factors because they can help us to understand why something occurs and to try and predict what might happen in the future.

Factors are often ranked in order of their importance. This helps to determine the primary cause of a change and enables managers to allocate funds or develop strategies to tackle a change that causes a problem.

An example of this approach is bushfire management in Australia. Experts determine the factors that lead to bushfires, the spread of fire and the level of vulnerability for different communities. Governments use this information to determine the best course of action in reducing uncontrolled bushfires.

Figure 3.21 and Tables 3.1 and 3.2 present a variety of information about the use of water resources around the world. Look at this information and then answer the following questions.

1 Choose one of these sources of information as the focus of this activity.
2 List at least three reasons why you think there might be variation between the places listed.
3 Rank these factors in order of importance.
4 Write a short paragraph justifying the reasons for your ranking.
5 Compare your answer with a classmate.

Key concepts: place, space, environment, interconnection, sustainability

HASS skills: analysing, evaluating, communicating and reflecting

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.4

Drawing a bar graph

Bar graphs are a simple way to display and compare quantities. They allow us to see which values are greatest and how much variation there is between quantities.

The information in Tables 3.1 and 3.2 came from Worldometer and Statista. Look online for these websites (you can search for 'water and Worldometer' or 'water and Statista') and gather the data for all the countries in a region of your choice. For example, all of the countries in South America or Europe.

Yearly water use in (insert region)
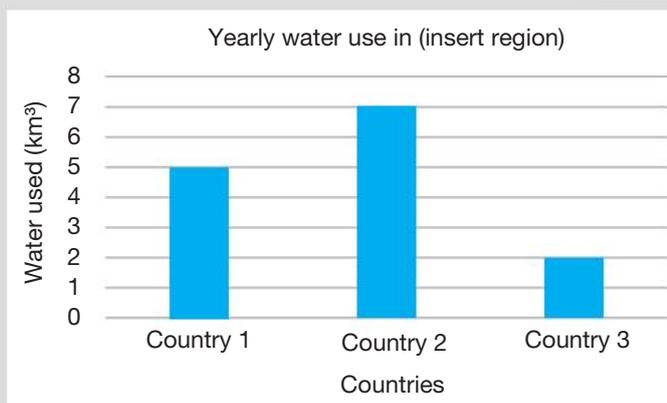
1 Have a look at the range of values. What are the largest and smallest values? This will help you to determine how high your graph axes have to go.
2 Draw a set of axes and label them. Your countries will go on the horizontal axis and the amount of water they use will go on the vertical axis.
3 Divide your vertical axis into even amounts. These should start from below your lowest value and go to above your highest value.
4 Add the names of your countries to the horizontal axis.
5 Draw your bars, ensuring they are an even width and have a gap between them.
6 Add a title and legend to your graph.

Key concepts: place, space, environment

HASS skills: questioning and researching, analysing, evaluating

Agricultural water use

In most parts of the world, agriculture uses the most water resources. This is because water is used to grow all of the fruits, vegetables and grains that we eat. Water is also used to grow the food that is fed to animals, such as cows and sheep, and to domestic pets. Table 3.3 shows the amount of litres needed to grow 1 kilogram of a variety of different foods. Based on this information, it is clear that the food we choose to consume has a very large impact on the amount of water resources that are needed.

Irrigation

Irrigation is defined as the artificial application of water to land for the purpose of agricultural production. In other words, irrigation refers to the watering of crops on a farm. The water used for irrigation is taken from surface water resources, such as rivers, lakes and reservoirs, and groundwater supplies. The benefits of irrigation include the ability to:

- grow a higher quality and greater quantity of crops and **pasture**
- choose when crops are watered and how much water they are given to maximise growth
- grow crops even during periods with low or no rainfall
- use land for agriculture that would have otherwise been too dry or **infertile**
- stimulate local economies by providing jobs in labour, agricultural science, and the processing, packaging and transporting of products.

There are several types of irrigation. Some of these are presented in Table 3.4. The choice of irrigation types will depend on the amount of water available, the amount of water needed, the soil type, the types of crops grown, the shape of the landscape and the local climate. The choice of irrigation type varies considerably across the world because of the **availability** of technology and money to purchase equipment.

> **irrigation** the practice of supplying land with water so that crops and plants will grow
>
> **pasture** grass or similar plants suitable for animals, such as cows and sheep, to eat
>
> **infertile** land or soil that is not good enough for plants or crops to grow well there; barren
>
> **availability** how easily people can access a service or facility

Water to grow one kilo of ...

Food (1 kg)	Water use (litres)
Bread	1608
Chocolate	17 196
Beef	15 415
Chicken	4325
Rice	2497
Apples	822
Cheese	3178
Potatoes	287

▲ **Table 3.3** The amount of water needed to grow 1 kilogram of different types of food

▲ **Figure 3.22** This photograph shows a very labour-intensive form of irrigation in Nha Trang, Vietnam.

Irrigation

Irrigation type	Description
Furrow	A series of small, shallow channels to guide water down a slope across a paddock
Sprinklers	Sprinkler systems that spray water over the crops; some are fixed in position while others are mounted on wheels or a trailer to move across the landscape
Drip	Tubes placed above or below the soil's surface, with holes that frequently drip small amounts of water onto the soil

▲ **Table 3.4** Three of the main types of irrigation

▲ **Figure 3.23** Sprinkler systems moving across a farm in Utah, United States

rural an area in the countryside that is not part of a large town or city

habitat the natural environment where an animal or plant usually lives

Although irrigated farmland covers less than 1 per cent of Australia, it produces 30 per cent of all of our agricultural products. Irrigated farmland also uses 90 per cent of the total amount of water resources used by agriculture. There are 40 000 farmers who use irrigation and many more employed in related industries. Altogether this contributes around $10 billion to the Australian economy each year.

Australia's irrigation industry is highly regulated. Farmers are issued with irrigation licences and are allocated an amount of water that they are able to extract from surface and groundwater supplies. This regulation aims to ensure that irrigation is sustainable.

Impacts of irrigation

Despite the numerous benefits of irrigation and its regulation, there are several negative impacts associated with it. Allocating water resources is a balance between agricultural, domestic and environmental needs. If too much water is extracted for irrigation, less is available for **rural** towns and their domestic needs. Extracting water from river systems can also prevent rivers from supplying water to wetlands, which can lead to the loss of vegetation and damage vital **habitats**.

▲ **Figure 3.24** Irrigation can allow crops to be grown in places that would otherwise b[e] barren, as shown here in Wadi Rum, Jordan.

SHORTLY AFTER CLEARING AND IRRIGATION
Evaporation and the seeping of irrigation
concentrates saline groundwater at the
surface of the soil.

SOME TIME AFTER CLEARING AND IRRIGATION
What would have been protective plant cover
is destroyed by the accumulation of salt
at the surface of the soil. This leaves the
land open to erosion.

BEFORE CLEARING
The system is balanced and most of the rainwater
is used in the spot where it falls.

▲ **Figure 3.25** Excessive irrigation, together with land clearing, can contribute to salinity in the soil.

Another common impact of irrigation is salinity. **Salinity** refers to an increase in the amount of salt that is in soil. Since salt is toxic to most plants, this can kill local vegetation. As shown in Figure 3.25, in a forested area tree roots soak up groundwater supplies, keeping groundwater at a low level. Removing trees and irrigating the land causes the groundwater level to rise. As water rises, it passes through soil and rock, which is a process known as **percolation**. As it does this, salt that is present in lower levels is dissolved in the water and transported to the surface. This increases the amount of salt in the layer of **topsoil** where crops are grown. As the vegetation dies, the topsoil becomes exposed to **erosion** from wind and rainfall, leading to a loss of topsoil. This process in irrigation can turn a thriving farm or forest into a barren wasteland.

Domestic water use

Domestic water use refers to the ways in which we use water in and around our homes. This includes drinking, cooking, flushing toilets, showering

salinity the amount of salt contained in something

percolation the process of a liquid moving slowly through a substance that has very small holes in it

topsoil the soil that forms the top layer of ground where plants grow

erosion a process that gradually wears away and removes rock, soil and sediment by wind or water

▼ **Figure 3.26** The clearing of land to grow wheat has led to salinity in Lake Taarblin in Western Australia.

and watering the garden. Table 3.5 lists some of the common domestic uses of water and the amount of water each activity consumes.

The amount of water used for domestic purposes per person varies significantly across the world. As shown in Figure 3.27, Australia uses more domestic water per person than anywhere else in the world. This is likely to be because Australia is also the driest inhabited continent.

Common dosmetic water use

Domestic water use	Water consumed (litres)
Toilet flush	12
Bath	100
Shower (10 minutes)	200
Dishwasher load	50
Washing machine load	150
Brushing teeth with tap running	5
Drinking, cooking and cleaning per day	10
Hand basin per use	5
Garden sprinkler per hour	1000
Car washing with hose	200
Hosing driveway	100

Source: Riverina Water County Council website

▲ **Table 3.5** Common domestic water uses and the amount of water they consume

ACTIVITY 3.4

Reading information from maps

Refer to Figure 3.27 and answer the questions that follow.

Domestic water use:
- Less than 40 m³/person
- 40–91 m³/person
- 91–159 m³/person
- 159–281 m³/person
- 281–487 m³/person
- No data
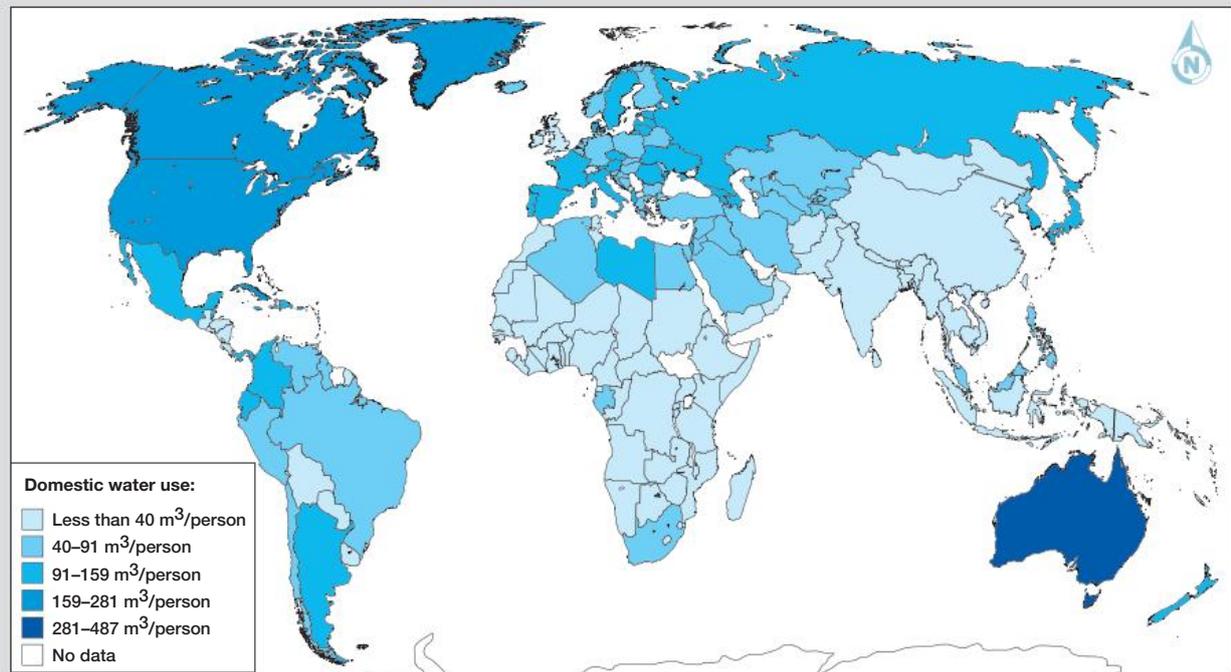
▲ **Figure 3.27** The amount of domestic water use per person across the world by year (shown in cubic metres per person)

1 Besides Australia, which region of the world uses the most amount of water for domestic purposes each year?

2 Which region uses the least amount of water?

3 Suggest a reason for your answers to Questions 1 and 2. Consider the region's access to technology, wealth and lifestyles.

Key concepts: place, space, interconnection, scale   **HASS skills:** analysing, evaluating

Other factors that determine the amount of domestic water use include the efficiency of appliances, such as washing machines and showerheads. Also, whether alternative supplies of water, such as rainwater, **stormwater** and wastewater, are recycled affects the amount of domestic water that is used.

Waterwise

The Water Corporation is a Western Australian Government authority that manages Perth's domestic water supply. The authority also manages wastewater, drainage and bulk irrigation services. Perth's population is growing, so the Water Corporation wants to ensure that the domestic water supply can continue to support the population.

The Water Corporation has developed a program called Waterwise, which encourages residents to limit their water consumption by changing the way they use water at home. As a part of the program, the Water Corporation offers suggestions about how to reduce water consumption in the garden, bathroom,

kitchen and laundry. Since 2007, the program has helped save over 100 billion litres of water. This is more than double the amount of water produced each year by the Perth Seawater Desalination Plant!

▲ **Figure 3.28** The Water Corporation's Waterwise program encourages shorter showers and more efficient showerheads to ensure Perth's water consumption is sustainable.

stormwater excessive water runoff from rain and snow after a storm

43% Desalination   **39%** Groundwater   **15%** Dams   **3%** Groundwater replenishment

▲ **Figure 3.29** 2019–20 – breakdown of Perth's water sources

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ACTIVITY 3.5

How to save water

Read the information about domestic water use (on pages 115–17), then answer the questions that follow.

1 Look at one of the water bills for your household. What is the average water use per person?
2 Visit the Waterwise webpage on the Water Corporation's website and click on 'Waterwise advice'. Which of the suggestions that the Water Corporation gives do you already do in your household? Which of the suggestions do you think you could try in the future?

Key concepts: environment, sustainability   **HASS skills:** analysing, evaluating

Managing water supplies

To ensure there is enough water to meet agricultural, domestic and industrial needs, water resources require careful management. This involves the use of technology to access available and potential sources, as well as the construction of reservoirs and dams to store large quantities of water.

Reservoirs and dams

Reservoirs are large natural or **artificial** lakes that are used to store a large quantity of water. In order to store water, the flow of rivers is stopped using a dam. Dams are barriers that prevent the flow of water downstream through the use of a wall. Dams have gates that can be opened to allow excess water to be released. By controlling the flow of rivers, dams can also be used to stop floods and to generate **hydroelectricity**.

Western Australia's largest reservoir is Lake Argyle, which has a capacity of 10 760 **gigalitres**. This is tiny compared to the Kariba Dam between Zambia and Zimbabwe, which can store 180 000 gigalitres!

Despite their usefulness, dams lead to a number of environmental consequences. They alter the natural flow of rivers and streams, and that impacts on river ecosystems. Fish that need to migrate up and downstream to feed and breed are unable to cross barriers. This has led to the extinction of many species. Altering a river's natural flow can also affect water temperature and water quality. This impacts on food networks, and the growth and reproduction of a variety of plants and animals.

While dams can prevent downstream cities and towns from flooding, they also stop natural flood events, which are an essential process that helps to maintain the health of floodplains, forests and wetlands. Dams also stop small particles known as sediment from flowing downstream, which is needed to maintain downstream habitats.

▼ **Figure 3.30** The Kariba Dam is 128 metres high and 579 metres long.

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.5

Annotating a photo

An annotated photograph is one that has been labelled with names and descriptions. This can be done by hand or digitally. Geographers use annotated photos to demonstrate their observations from photos taken out in the field. They use annotated photographs to demonstrate specific features, processes or impacts. Create your own annotated photograph by following these steps:

1 Find a photograph of a dam using Google Images.
2 Print your photograph or copy it into a graphics editing program.
3 Add lines leading to specific features of the photograph that you wish to describe. Do not use arrows to label features because arrows indicate movement.
4 Add key words and short descriptions to demonstrate the features and purposes of a dam, as well as some of their environmental consequences.
5 Add a title and source to your annotated photograph.
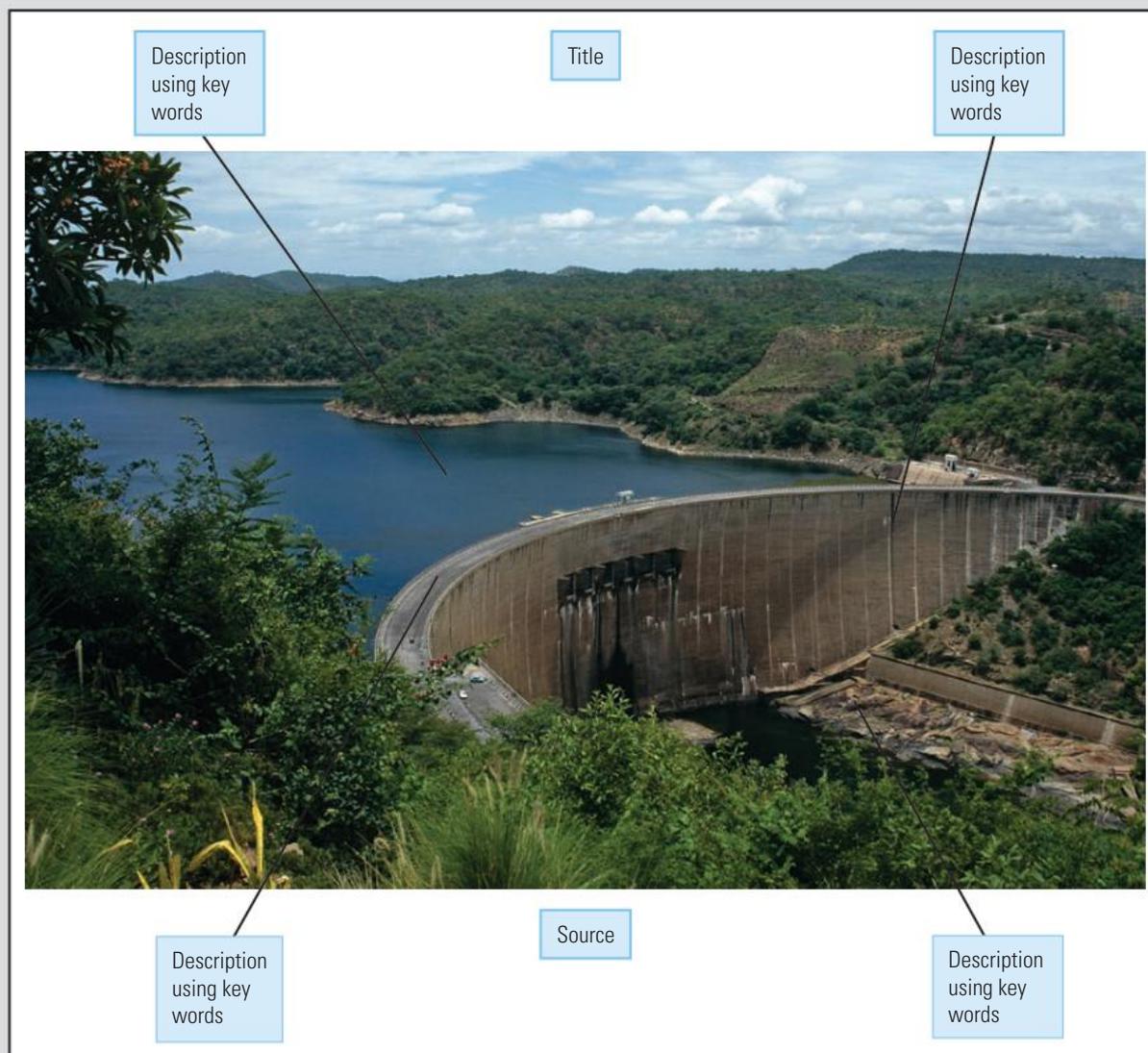
Key concepts: place, space   **HASS skills:** analysing

Water as an interconnection

In geography, **interconnection** refers to the links and relationships between objects and places. People often play an important role in these links as human activities often impact on and change natural processes. As water transforms through the water cycle, it plays a significant role in connecting places and changing an area's characteristics.

interconnection the relationship between places and people, and the ways in which they influence one another

The flow of rivers downstream provides important links between places. These connections vary in scale from small urban creeks to rivers that flow across several countries. The Mekong River is one of the largest rivers in the world and flows 4350 km through China, Myanmar, Thailand, Laos, Cambodia and Vietnam.

Trade and transport

In larger river systems, rivers have been, and still are, a major source of transport and a vehicle for trade. In 1853, paddle steamers became a form of inland transport and trade along the Murray River in south-eastern Australia. While the common cargo was once bales of wool, today these paddle steamers carry tourists up and down the river. The West Australian-built paddle steamer *Decoy* is

▲ **Figure 3.31** Paddle steamer *Decoy*

an iconic entertainment venue that has been steaming along the Swan River for over 30 years. The *Decoy* offers a range of experiences including live music cruises and history tours. The Mississippi River is the second-largest river in the world and is a significant part of trade in the United States. The barges there transport items like petroleum, iron, steel, grain, paper and wood to various ports.

Amazing but true …

In March 2021 the container ship *Ever Given* made world news for blocking the Suez Canal for almost a week. The canal is an important waterway because it is the fastest shipping route between Europe and Asia.

▼ **Figure 3.32** Oil tankers and barges are essential to the local economy in the Mississippi River basin.

Water moving through environments

Water can take many forms as it flows through different environments. In Bhutan, the water source for many villages comes from glaciers located tens or even hundreds of kilometres away. Glaciers are frozen rivers of ice that form when snow accumulates and is compacted. This usually occurs in mountainous regions. When ice from

▲ **Figure 3.33** Northern Bhutan is dominated by tall mountains and glaciers that are part of the Himalayas.

▲ **Figure 3.34** Ice from Bhutan's melting glaciers flows into rivers.

▲ **Figure 3.35** Water from Bhutan's rivers supplies the villages with water to use for agriculture.

Bhutan's glaciers melts, water flows into rivers and downstream to villages. People then use this water for agriculture, which is the main industry in Bhutan.

The amount of water available for people living in downstream regions of a river system depends on the amount extracted from the upstream users. If users upstream withdraw too much water, the quantity of downstream supplies is reduced. Furthermore, if pollution is added to a river upstream, it can damage the quality of downstream supplies. Pollution in this context includes industrial waste from factories or mining operations, and fertilisers and pesticides from farm use, which gets washed into waterways when it rains.

In the case of the Mekong River, the **exploitation** of water resources in upstream countries, such as China and Laos, is causing havoc for Cambodia. Cambodia is heavily reliant on the Mekong River, as it provides 85 per cent of the agricultural water supply. The fishing industry, which makes up 12 per cent of Cambodia's economy, also relies on a healthy river flow to support 500 local species of fish.

> **exploitation** the use of something in order to get an advantage from it
>
> **tributaries** rivers or streams that flow into a larger river or a lake
>
> **nutrients** any substance that plants or animals need in order to live and grow

However, since the 1990s, the river and its **tributaries** have been dammed throughout South-East Asia, largely for the generation of hydropower. These dams have blocked the movement of fish, reduced the amount of **nutrients** in the water, and have made water levels downstream irregular and unnatural. Furthermore, in cases where dams have collapsed, downstream communities have been flooded. Villagers in Cambodia who rely on the Mekong River are losing their livelihoods and are being forced to change their lifestyles due to the actions of people hundreds of kilometres away.

▲ **Figure 3.36** Cambodia's fishing industry is in crisis as water levels in the Mekong River have hit record lows.

▲ **Figure 3.37** In 2018, thousands of villagers in Cambodia were left stranded when a collapsed dam in Laos sent floodwaters hundreds of kilometres downstream.

The urban water cycle

The development of **urban** environments involves the change of a natural environment to one that is artificial. This typically involves the removal of trees and other vegetation, as well as the construction

urban relating to towns and cities

of houses, buildings, roads and footpaths. Although this development is necessary to house a growing population, it can completely transform the way water moves through an environment. In these human environments, rather than following the natural water cycle (see Figure 3.12), water follows the urban water cycle (see Figure 3.38).
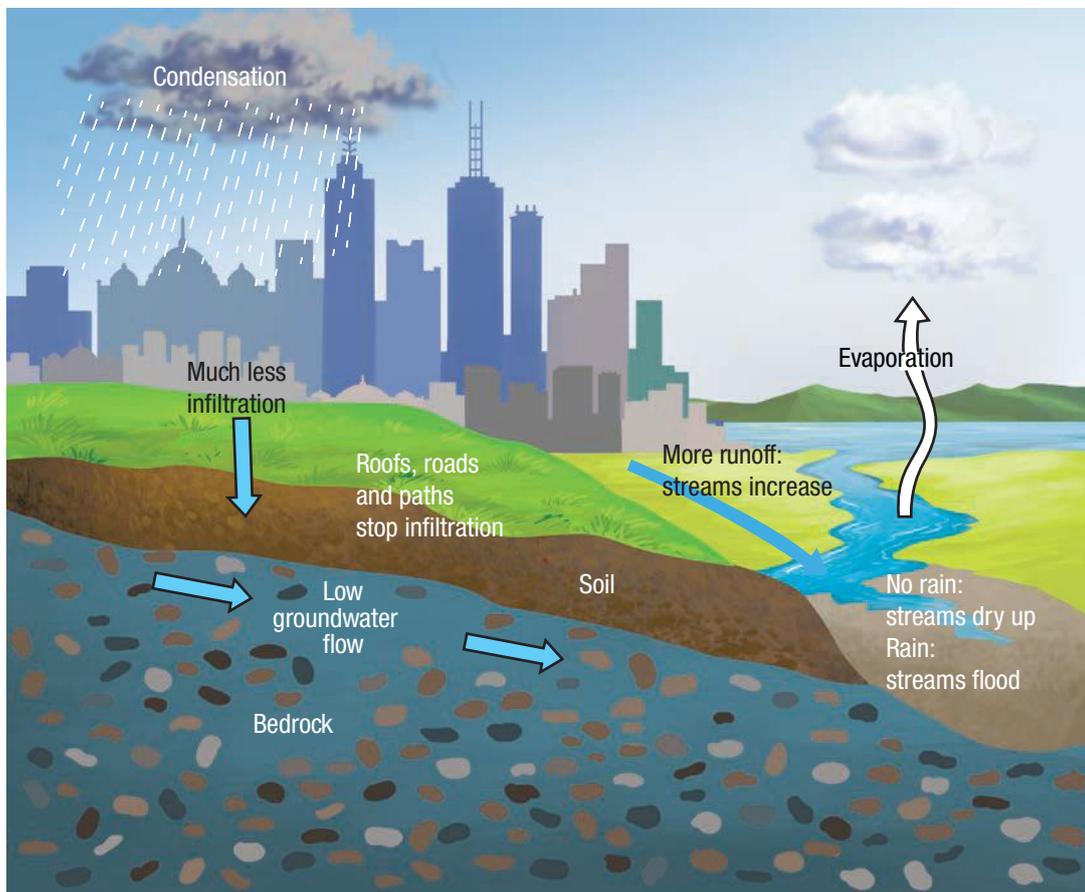
▲ **Figure 3.38** The urban water cycle

In the natural water cycle, water infiltrates the soil and maintains groundwater supplies. In urban areas, there is far less exposed soil. The landscape in an urban environment is dominated by **hard surfaces**. These are surfaces like concrete where no water can penetrate. Therefore, much less water infiltrates into the soil and groundwater in an urban environment, and far more flows as runoff. The runoff can lead to increases in flooding and in the amount of pollutants entering local rivers.

hard surfaces human-made surfaces, such as concrete, that cover the natural ground and limit the amount of water that can infiltrate the soil to become groundwater

ACTIVITY 3.6

The natural water cycle versus the urban water cycle

Compare Figures 3.12 and 3.38, then answer the following questions.

1 What major differences are there between the movement of water in the natural and urban water cycles?

2 What impacts do you think these differences will have on the local environment in an urban area?

3 One way to reduce the impact of urban development on local waterways is to construct raingardens. The Kings Square development in Perth's Central Business District is part of Perth City Link. As part of the development's approach to sustainability and total water cycle management, a network of raingardens was incorporated into the streetscape design to provide stormwater treatment, protect sensitive groundwater systems that flow into the nearby Swan River, improve the long-term health of street trees, and integrate with the surrounding elements of the streetscape. Investigate whether or not a raingarden would be suitable to construct outside your home or school.
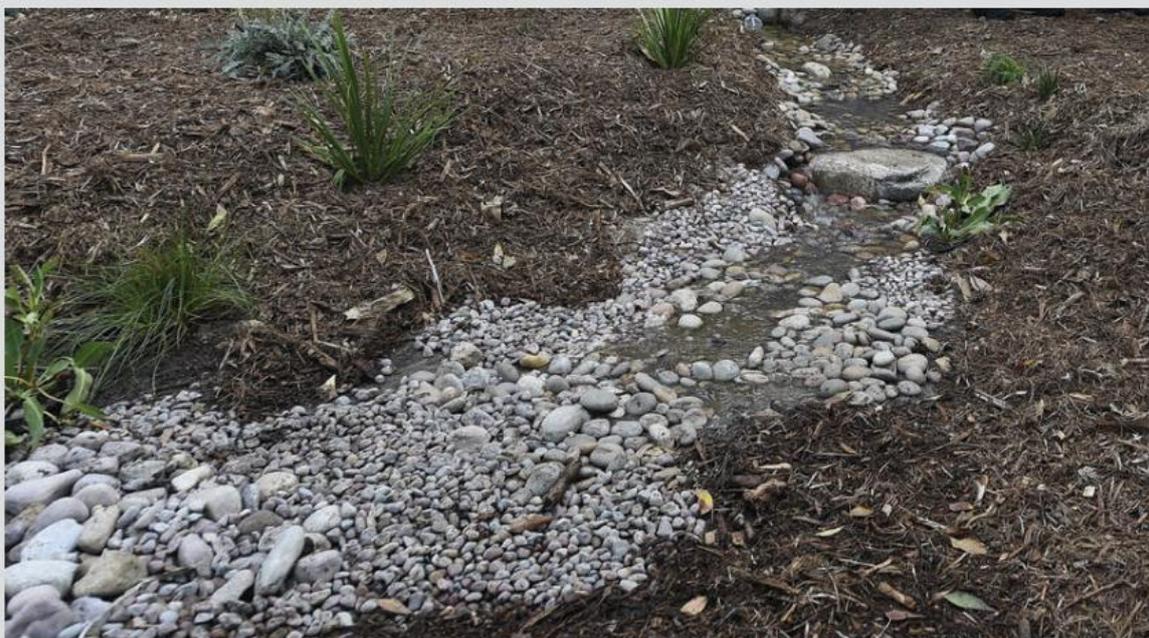
▲ **Figure 3.39** Stormwater runoff is directed into raingardens like this one so that water can filter into the ground rather than flooding local creeks.

Key concepts: place, space, environment, interconnection, sustainability

HASS skills: questioning and researching, evaluating

ACTIVITY 3.7

1 List two examples of how water is or has been used for trade and transport.

2 Describe the way in which water connects villages to the glaciers in Bhutan.

3 State some ways in which water use in the upstream countries of the Mekong River has impacted villages in Cambodia.

4 Explain the difference between agricultural and domestic water use. Provide examples in your explanation.

5 Explain what interconnection means and provide at least two examples in your explanation.

6 Describe how urban development changes the water cycle and how this can impact on water resources.

7 Consider the way water is used in your school and suggest three ways that water could be used more sustainably.

8 Due to their environmental impacts, the construction of dams is often controversial. Summarise in a paragraph the reasons why dams are constructed and their negative impacts. Based on this information, discuss whether you think Australia should construct more dams rather than using alternative water resources. You can refer to Figure 3.30 in your response.

Key concepts: place, space, environment, interconnection, sustainability, change

HASS skills: questioning and researching, evaluating, communicating and reflecting

Water resources around the world

The driest place on earth is the McMurdo Dry Valleys in Antarctica. This region has not had any rainfall for nearly two million years. The Atacama Desert in Peru and Chile is also extremely dry. Some parts of this desert average less than 1 mm of rain each year. In contrast, the wettest place on Earth is Māwsynrām in north-eastern India. The village receives an average of 11 871 mm of rain each year. To put this in perspective, the average annual rainfall in Perth is 807 mm. These differences in rainfall, as well the physical features of a landscape and the ways in which water is managed, lead to a wide variation in the types and number of water resources around the world.

abundance the amount of something that is found in a specific location

The global distribution of water resources

Water resources include all forms of water that can be used by people. This includes surface-water supplies (such as wetlands, rivers, lakes and reservoirs), groundwater supplies and water that melts from glaciers. Figure 3.41 shows the **abundance** of freshwater resources.

▼ **Figure 3.40** The Valley of the Moon in the Atacama Desert in Chile
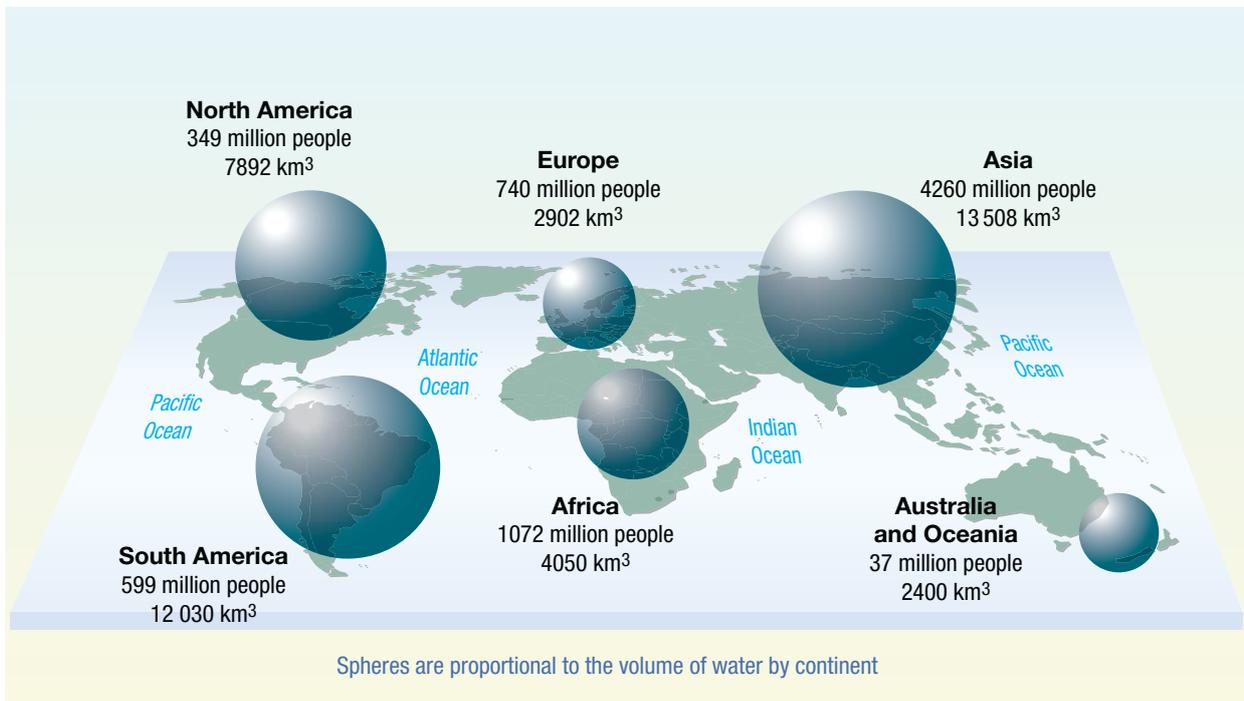
▲ **Figure 3.41** Freshwater resources available in each continent, showing the annual average volume

Approximately 10 per cent of the Earth's land is covered in glaciers and **ice sheets**. Around 96 per cent of this frozen water is located in the **polar regions**, especially in Antarctica. Besides ice, the second largest water resource is groundwater. All continents have a large supply, but there are variations within these regions. Although surface water resources are easy to access, they are in far shorter supply, especially in Australia.

Table 3.6 shows the total amount of renewable freshwater that is added to surface and groundwater supplies each year. As we have seen, it is called renewable because it renews (i.e. adds) to existing supplies.

ice sheet a thick layer of ice covering a large area of land for a long period of time

polar regions areas near the North and South Poles

Freshwater in different regions

Region	Renewable freshwater resources (km³/year)
South America	12 724
North America	6077
Eastern Europe	4448
sub-Saharan Africa	3884
East Asia	3410
Western and Central Europe	2129
South Asia	1935
Oceania*	902
Central America and Caribbean	735
Middle East	484
Central Asia	242
Northern Africa	47
World	42 810

* Australasia, Melanesia, Micronesia and Polynesia

▲ **Table 3.6** The amount of freshwater added to different regions each year

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.6

Representing data on a thematic map

Geographers use maps to represent information spatially. This can highlight trends and reveal connections between the physical and human environments. Thematic maps are used to represent a specific theme or subject area, such as the amount of water available in different regions.

1 Using the data in Table 3.6 and a blank map of the world, create a thematic map showing the amount of renewable freshwater supplies added to different world regions each year. Represent the data using different sized circles, like those shown in Figure 3.41. This presentation will require you to add a legend to your map to show what values the different circles represent.

2 Ensure that your map contains all of the BOLTSS mapping conventions:

- border
- orientation
- legend
- title
- source
- scale.

3 Use your map to describe which parts of the world have a reliable renewable source of water.

Key concepts: place, space, environment, interconnection, sustainability, scale

HASS skills: analysing, evaluating, communicating and reflecting

The amount of renewable freshwater added each year is largely based on the amount of precipitation that falls in a region.

Precipitation recharges rivers, lakes, reservoirs and groundwater. As long as the amount of water used by the population of a region each year is less than the amount of precipitation, water resources will remain stable. This means that the water use is sustainable. If the amount of water withdrawn is greater than the amount of precipitation, then supplies of water will decrease.

sleet rain that also contains some ice

Precipitation

One of the main factors determining the availability of water resources in a location is the amount of precipitation that it receives. As we learned previously, precipitation refers to any form of water that falls from the clouds due to gravity and lands on the Earth's surface. This includes rain, snow, hail and **sleet**. As shown in Figure 3.42, precipitation varies significantly across the globe.
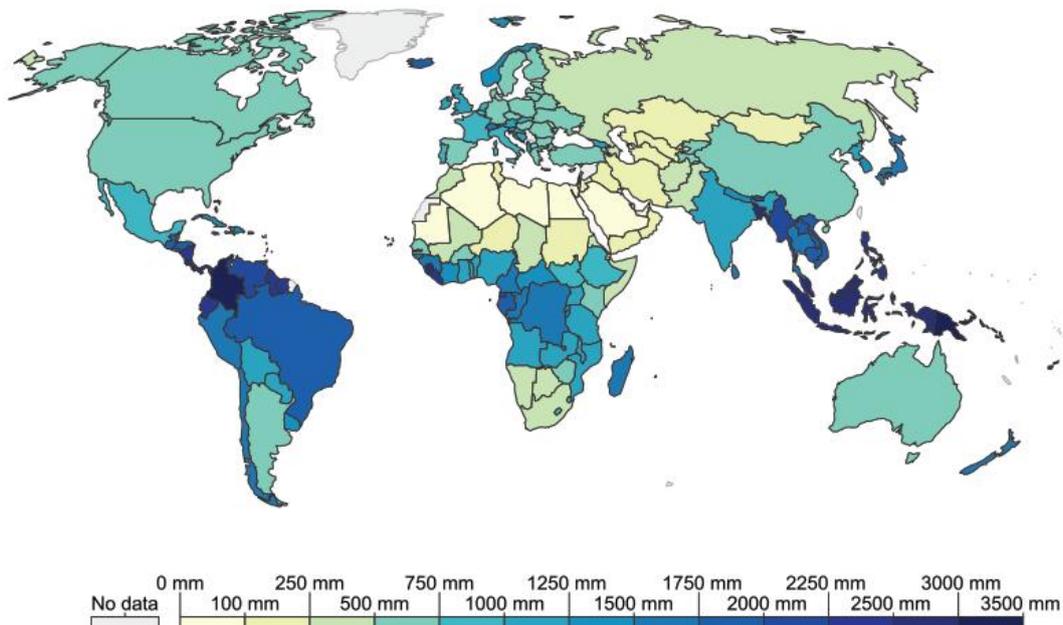
▶ **Figure 3.42** Precipitation in millimetres per year in 2014. You can also look this up online on the World in Data website or create another, updated map by using the National Geographic MapMaker tool.

Source: The World Bank

| No data | 0 mm | 250 mm | 750 mm | 1250 mm | 1750 mm | 2250 mm | 3000 mm |
| | 100 mm | 500 mm | 1000 mm | 1500 mm | 2000 mm | 2500 mm | 3500 mm |

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.7

Using a Geographic Information System

A Geographic Information System (GIS) is a form of spatial technology used to gather, manage and analyse spatial information. This data is organised in layers using an interactive map. National Geographic MapMaker is an example of a GIS where different layers can be added to a global map. Data types include temperature, elevation, population density and precipitation.

Visit National Geographic's MapMaker website, then do the following tasks and answer the questions.

1 Click on the 'Layers' tab and select 'Add layer'.

2 Select the 'Climate and weather' category, and click on 'Precipitation and rainfall'.

3 Once the rainfall data has been added to your map, click on 'Legend' to see what the different colours represent.

   a Name three locations that receive above 1500 mm of rainfall each year.

   b Name three locations that receive less than 200 mm of rainfall each year.

   c Most of South America receives more than 1000 mm of rainfall each year. Does South America add much freshwater to its water supplies each year?

   d The Middle East does not add much freshwater to its supplies each year. Does this region receive a high level of precipitation?

   e Based on your answers to Questions c and d, what can you conclude about the importance of precipitation in recharging water supplies?

Key concepts: place, space, sustainability, scale, change

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

River systems

Another factor relating to water resources is the presence and size of rivers. Many major cities are built near rivers because they provide a reliable water source. In the past, rivers were heavily relied on for transport and as a food supply. The damming of rivers enables water to be stored in reservoirs so that it can be used for irrigation.

▼ **Figure 3.43** The Amazon River in Brazil is the largest river basin in the world.

drainage basin an area of land where precipitation collects and drains into a central point such as a river channel

The size of rivers is linked to precipitation. When precipitation falls, it collects and drains into streams that flow downhill into larger streams, which eventually become a large river channel.

The area of land that collects rainfall is known as a **drainage basin**. The largest river drainage basins are the Amazon, Congo, Nile, Rio de la Plata and Mississippi. The Amazon Basin alone covers over 7 million square kilometres! In contrast, many countries in desert or arid areas have no permanent rivers at all. These countries include Saudi Arabia, Bahrain and Kuwait.

Groundwater

Just like rivers and other forms of surface water, access to groundwater resources varies significantly around the world.

Figure 3.44 shows the distribution of these resources. The places in the map that are coloured in blue are those that have an abundant supply of groundwater. The water in these major basins is relatively easy and cheap to withdraw. Groundwater supplies in the map shown in green are considered complex. The groundwater in these areas is difficult to access as water supplies might be separated by layers of rock or might contain a mixture of both saltwater and freshwater. The areas in yellow on the map have shallow supplies and only a small quantity of water.
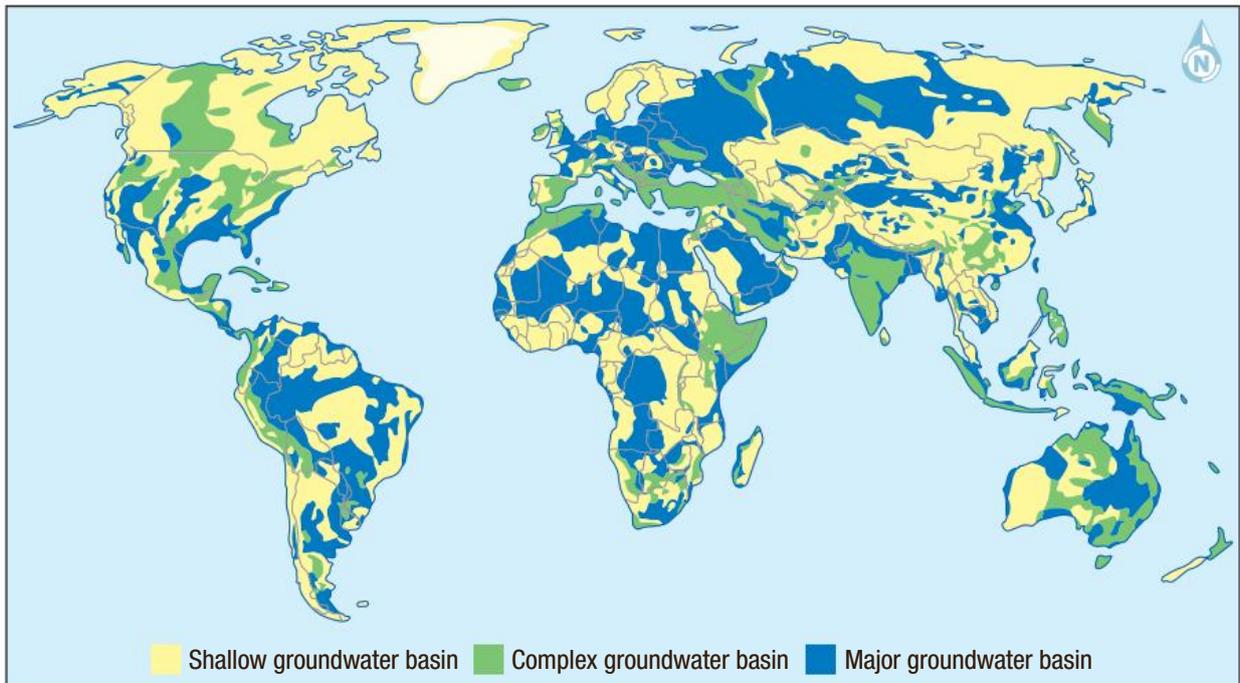
▲ **Figure 3.44** Map showing the global distribution of groundwater resources

ACTIVITY 3.8

Groundwater resources

Refer to Figure 3.44 and an atlas or Google Maps, and then answer the following questions.

1 Estimate the percentages of each type of groundwater resource in Australia.
2 Compare your answer in Question 1 to the United States.
3 Saudi Arabia is the largest country in the world that does not have any permanent rivers. Does it contain any major groundwater basins?

Key concepts: place, space, environment, interconnection, sustainability, scale

HASS skills: questioning and researching, analysing, evaluating

Water resources in Australia

> I love a sunburnt country, a land of sweeping plains, of ragged mountain ranges, of droughts and flooding rains.
>
> **'My Country' – Dorothea Mackellar**

The excerpt from Dorothea Mackellar's poem 'My Country' sums up Australia's water resources perfectly. It is a land of contrast; Australia's climate is prone to extended periods of low rainfall and to floods. While some areas have a very high average rainfall, others are classified as deserts. As such, the availability of water varies considerably.
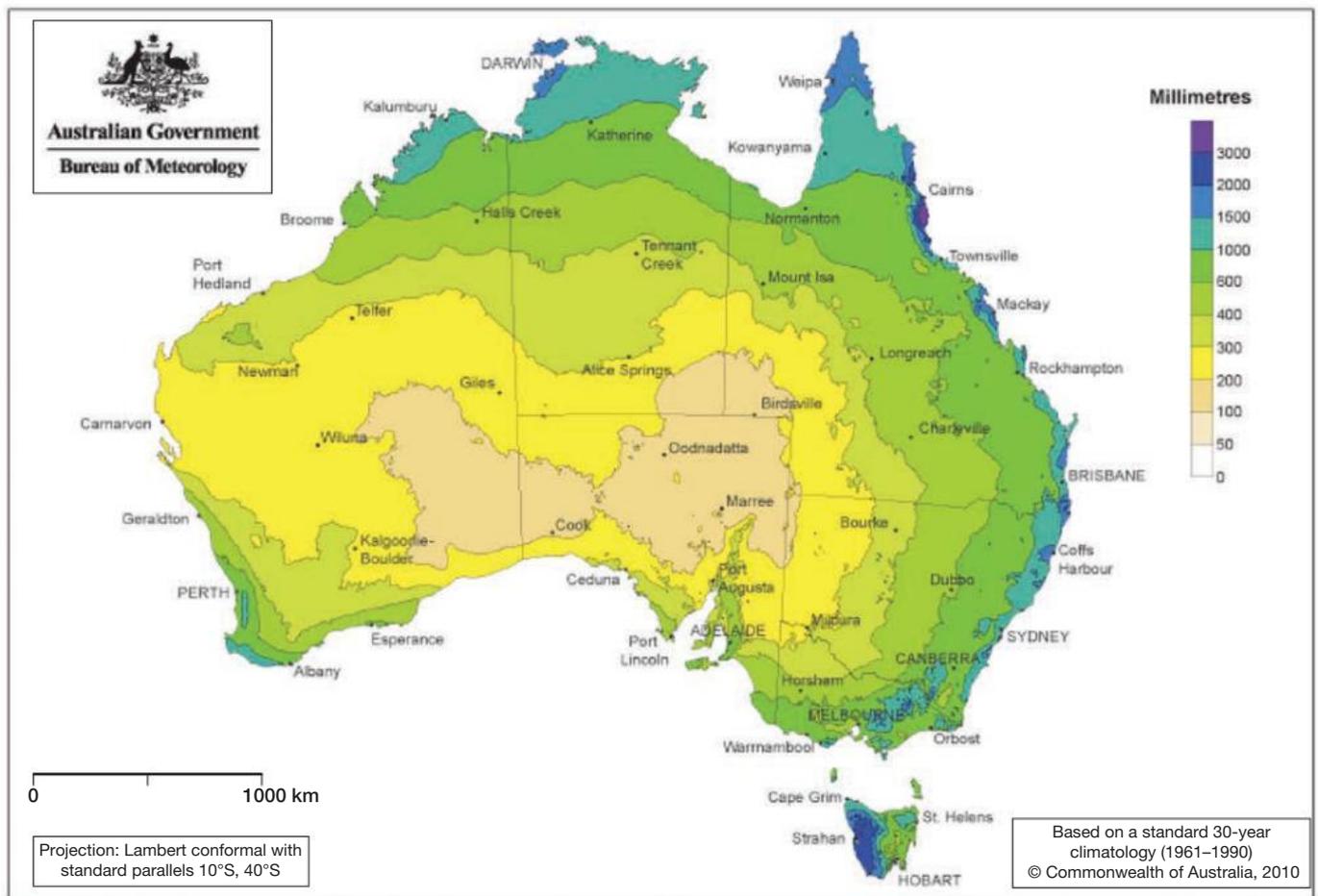
▲ **Figure 3.45** The spatial distribution of average annual rainfall in Australia

Source: Australian Government, the Bureau of Meterology

Australia is the second driest continent on Earth after Antarctica. Although the average annual rainfall in Australia is 417 mm, Figure 3.45 shows that this number varies significantly across Australia. Coastal areas generally receive the most rainfall whereas rainfall decreases towards the centre.

Australia has a large system of groundwater basins under about 60 per cent of the continent (see Figure 3.46). Australia's Great Artesian Basin is the largest and deepest groundwater basin in the world. It covers 1.7 million square kilometres across Queensland and into the surrounding states and territories. The Great Artesian Basin is estimated to hold around 8700 million megalitres of water.

Australians are reliant on groundwater extracted from basins in arid areas where rainfall is erratic and drought conditions are more common. Hundreds of bores are used to pump water out of the ground for use in agriculture and industry, as well as for domestic purposes.
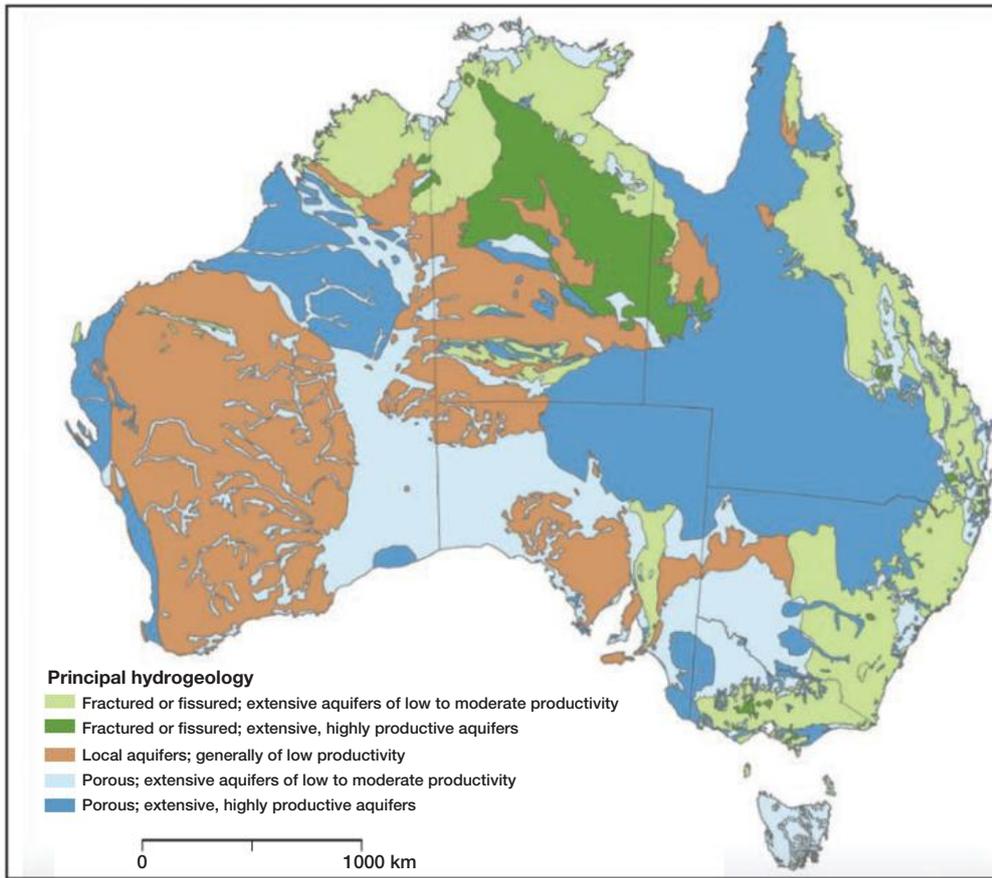
◄ **Figure 3.46** The spatial distribution of Australia's groundwater supplies. The aquifers, in dark blue and dark green, are the largest and highest quality supplies.

Source: Bureau of Meteorology Groundwater Insight

Principal hydrogeology

- Fractured or fissured; extensive aquifers of low to moderate productivity
- Fractured or fissured; extensive, highly productive aquifers
- Local aquifers; generally of low productivity
- Porous; extensive aquifers of low to moderate productivity
- Porous; extensive, highly productive aquifers

People per sq km

- 100 or more
- 10 to 100
- 1 to 10
- 0.1 to 1
- Fewer than 0.1

◄ **Figure 3.47** The spatial distribution of Australia's population

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.8

Describing the spatial association between different features

Describing the spatial association between features on different maps is an important part of understanding the relationship between them. It involves looking at different maps of the same scale and analysing how similar or different their spatial distributions are. In other words, are the features arranged in the same way? A spatial association can be described as strong if the two maps have a very similar distribution or arrangement. A spatial association is moderate if the distribution matches in some regions but not others. And a spatial association is weak if the two maps do not appear to have much of a relationship.

1 Refer to Figures 3.45 and 3.47, and answer the following.

   a Is there a strong, moderate or weak association between average rainfall and population density?

   b Provide examples of places from the maps to support your answer.

   c Are there any exceptions to this relationship?

   d Suggest a reason for the relationship you see between rainfall and population.

2 Refer to Figures 3.46 and 3.47, and answer the following.

   a Is there a clear relationship between groundwater supplies and population density?

   b Suggest a reason for your answer.

Key concepts: place, space, environment, interconnection, sustainability, scale, change

HASS skills: questioning and researching, analysing, evaluating

END OF SECTION REVIEW 3.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Additional content available: Chennai

Recall

1 Name the three main types of freshwater resources from the largest supply to the smallest.

2 Where is most of the Earth's freshwater located?

3 What is a GIS?

4 Describe the way in which water connects villages to the glaciers in Bhutan.

5 State some ways in which water use in the upstream countries of the Mekong River has impacted villages in Cambodia.

Interpret

6 Describe how urban development changes the water cycle and how this can impact on water resources.

7 Why is water use sustainable when the amount used is less than the amount added through precipitation?

8 Explain why groundwater is such a significant water resource for Australians.

9 Describe how rainfall varies spatially across Australia. In your answer, refer to specific regions and places.

Argue

10 Discuss whether there is a spatial relationship between rainfall, groundwater and population in Australia.

Key concepts: place, space, environment, interconnection, sustainability, scale, change

HASS skills: questioning and researching, analysing, evaluating

3.5   Water scarcity

FOCUS QUESTIONS

- What is water scarcity and what factors lead to it?
- How is water scarcity managed?

water scarcity a lack of freshwater resources to meet the demands of water usage within a region

infrastructure the physical structures and facilities needed within a community, such as roads, buildings and pipelines

Booming populations, lack of rainfall, unchecked urban development and unsustainable water use are all factors that contribute to disasters such as water scarcity and drought. However, if we look closely at the factors that cause water scarcity, we can find ways to manage and reduce the impacts of water shortages.

What is water scarcity?

Water scarcity is when there is a lack of freshwater resources to meet the demands of water usage within a region. This occurs when the amount of water needed for agricultural, industrial and domestic uses is greater than the amount of water available. When the amount of water naturally replenishing supplies is insufficient to meet demands, this is known as physical water scarcity. In some cases, although there is enough water available, the **infrastructure** needed to access it does not exist because it is too expensive to build. This is known as economic water scarcity.

Water scarcity affects people on every continent. Over 1.2 billion people lack access to clean drinking water and 2.8 billion people experience water scarcity for at least one month each year. As shown in Figure 3.48, countries in the Middle East and North Africa are facing the highest levels of water scarcity.

4 JORDAN
7 KUWAIT
3 LEBANON
15 TURKMENISTAN
12 BAHRAIN
11 SAN MARINO
5 IRAN
14 PAKISTAN
6 LIBYA
13 INDIA
16 OMAN
2 ISRAEL
10 UAE
9 ERITREA
1 QATAR
8 SAUDI ARABIA
17 BOTSWANA

Risk of water crisis
Low — Extremely high
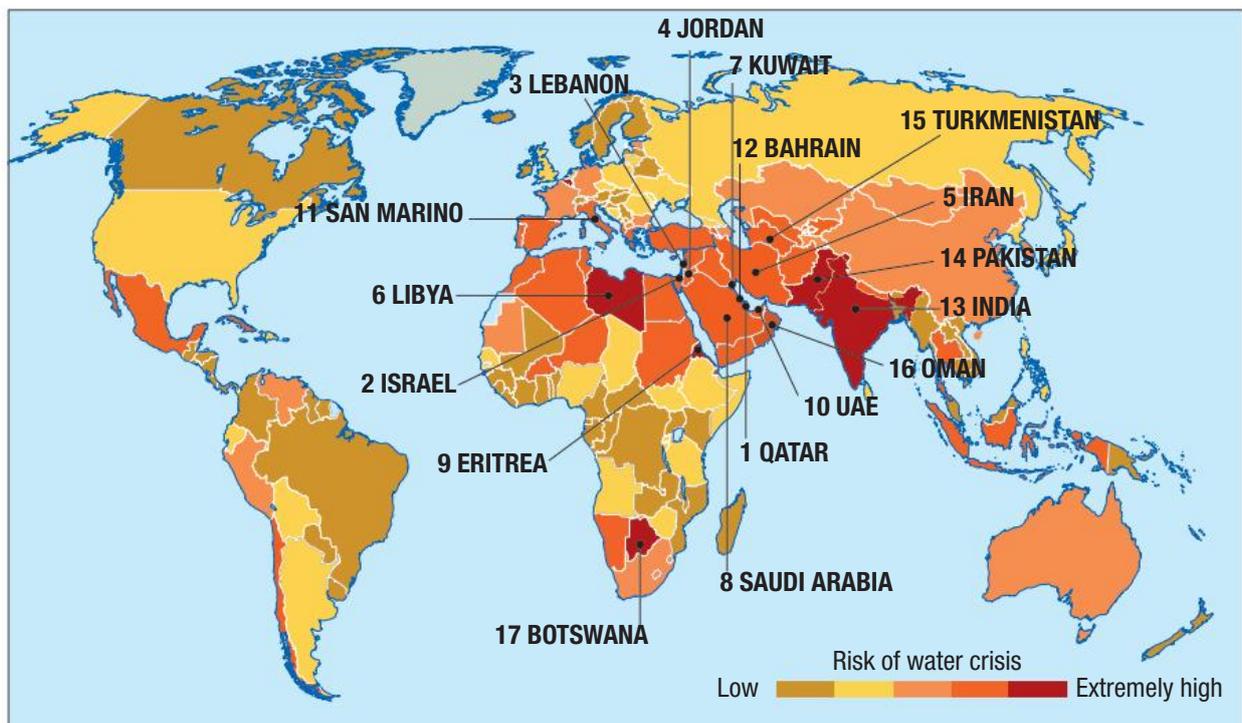
▲ **Figure 3.48** The 17 countries shown in this map are facing water scarcity and are at risk of having ongoing water crises.
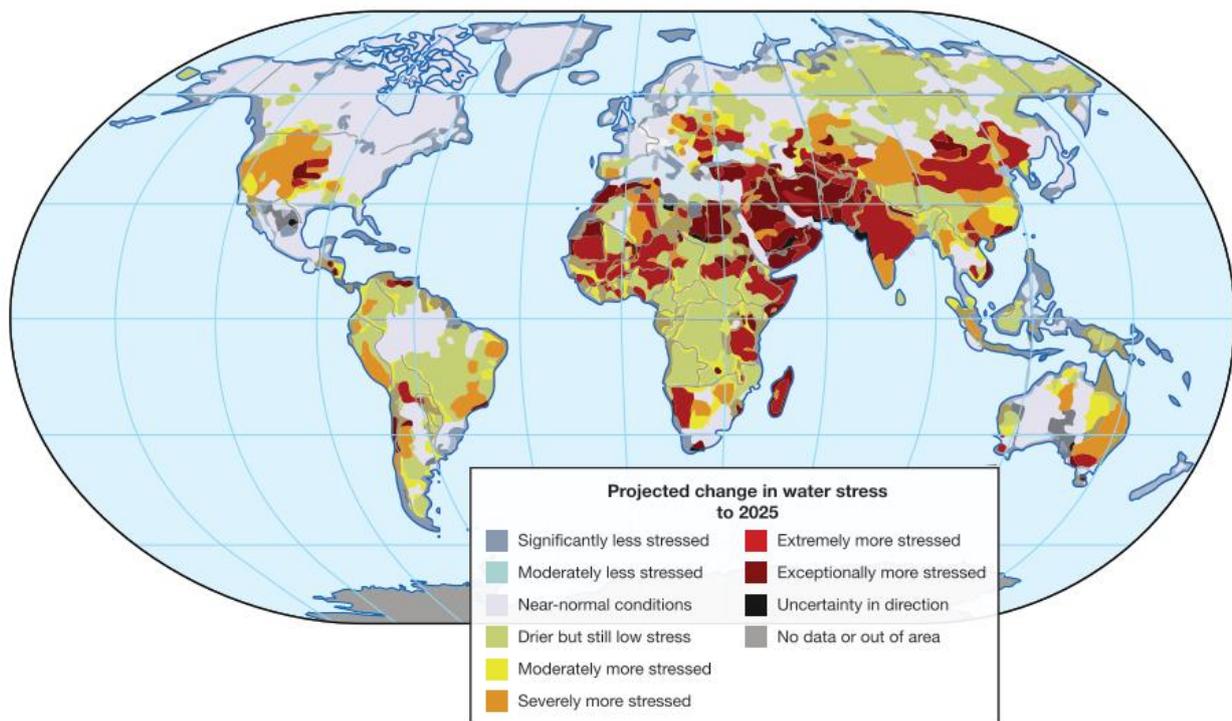
▲ **Figure 3.49** Levels of water stress in 2025, as predicted by the National Intelligence Council

Source: National Intelligence Council

If current trends continue, water scarcity is likely to become an increasing problem. According to the National Intelligence Council in the United States, two-thirds of the world's population may face water shortages by 2025. As shown in Figure 3.49, the problem is expected to get worse for many of the regions that are already at risk.

ACTIVITY 3.9

Future water scarcity

Refer to Figure 3.49, then answer the following questions.

1 Name three countries or regions that are likely to face higher levels of water scarcity by 2025.
2 What factors do you think will be responsible for these increases in water scarcity?

Key concepts: place, space, environment, sustainability, scale, change

HASS skills: analysing, evaluating

Causes of water scarcity

There are several factors that lead to water scarcity, including:

- decreases in rainfall, which lead to a reduction in water-replenishing supplies
- increases in population, which lead to an increase in demand for water
- rapid urban development, which spreads out onto wetlands and pollutes waterways
- increased poverty, which stops countries from being able to purchase or construct water-management infrastructure (such as desalination or water-recycling plants)
- unsustainable allocation of water withdrawals for purposes like irrigation.

Figure 3.50 shows a change in the amount of renewable freshwater resources per capita in selected countries since the 1960s. Over this period, the populations of these countries have also increased (see Figure 3.51). This means that the amount of water available has to be shared between more people, which gives each person a smaller share.

Renewable freshwater resources per capita
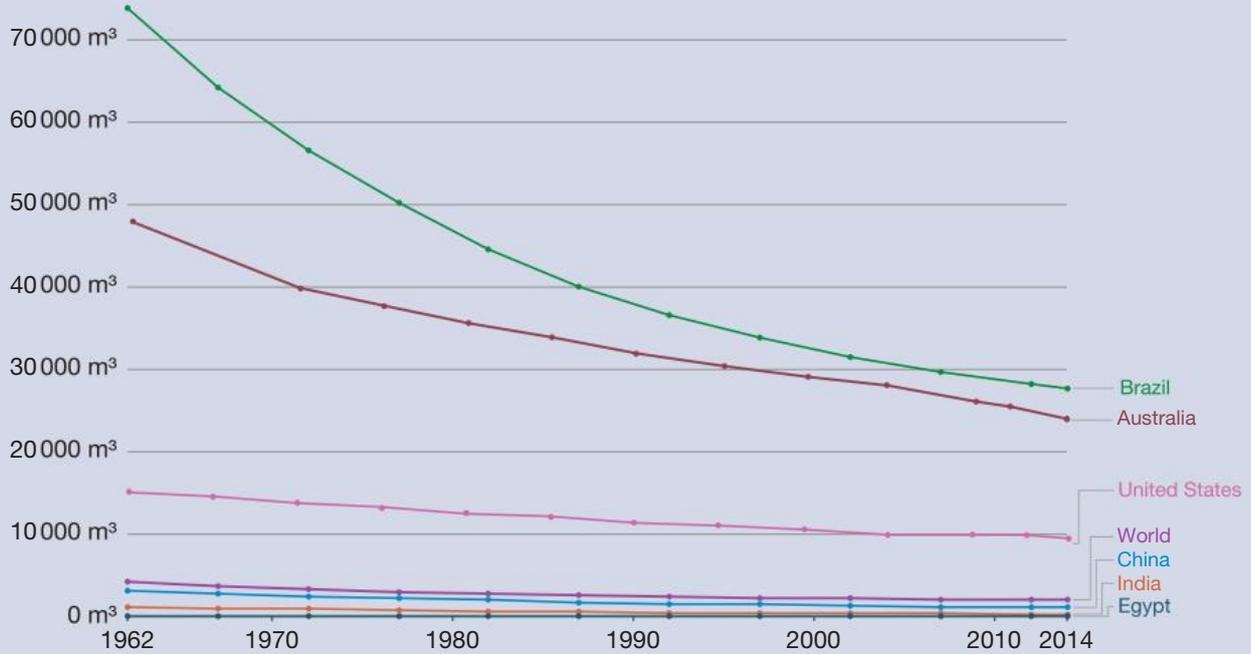
▲ **Figure 3.50** The change in the amount of freshwater from 1962

Source: Our World in Data and World Bank

Population, 1962 to 2019
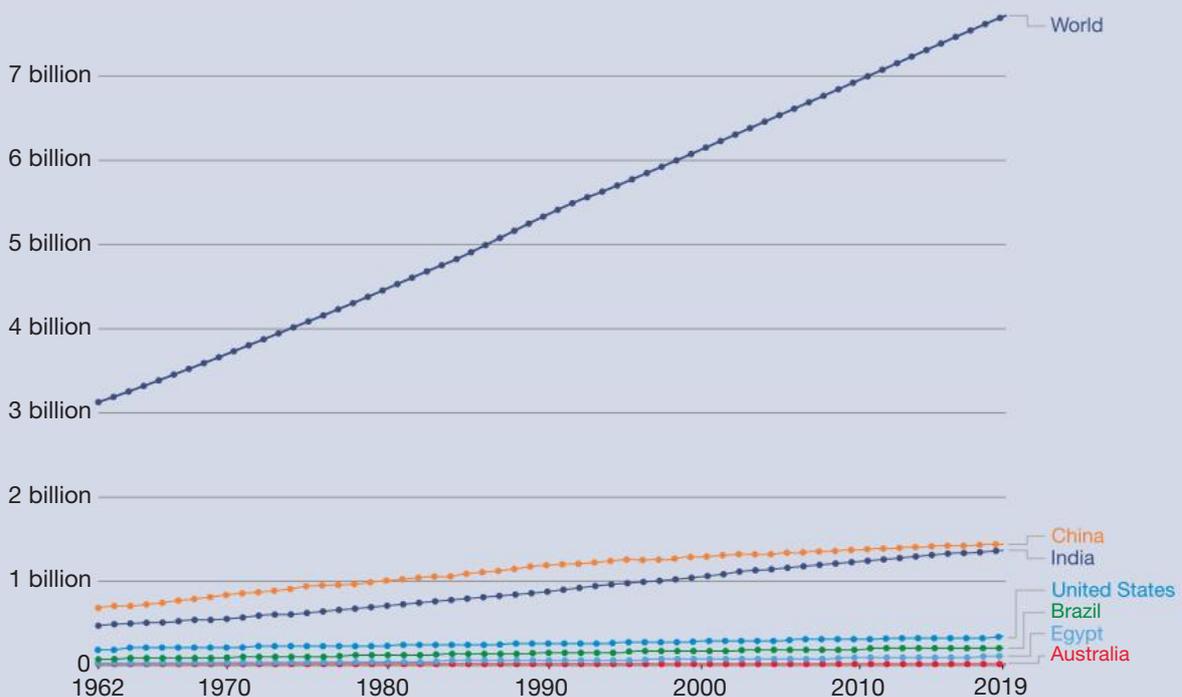
▲ **Figure 3.51** The change in the population from 1962

Source: Our World in Data and Gapminder: HYDE & UN Population Division (2019)

ACTIVITY 3.10

Factors that lead to water scarcity

Read the information about factors that cause water scarcity, then answer the following questions.

1 Rank the factors leading to water scarcity from the most significant to the least significant. Write a paragraph justifying your ranking and compare your choices with a classmate.

2 Refer to Figures 3.50 and 3.51.

   a List the countries that have had a significant decrease in the amount of water available per capita since 1962.

   b List the countries that have had a significant increase in their population since 1962.

   c Compare your answers for Questions a and b. Discuss whether population growth alone appears to have a large or small impact on water resources per capita.

   d Suggest why population growth does not always have a significant impact on water resources per capita.

Key concepts: place, space, environment, interconnection, sustainability, scale, change

HASS skills: analysing, evaluating

Impacts of water scarcity

There are several serious problems associated with water scarcity, including **drought**, loss of jobs, economic issues and environmental damage.

Drought

When there are extended periods of low rainfall, there is often a shortage of water. This means that there is not enough water to meet the needs of people or the environment. This includes domestic supplies for people living in urban areas and agricultural supplies for farmers living in rural areas. The period is called a drought.

Australia has experienced several severe droughts throughout its modern history. These include the Federation Drought (1895–1903), the World War II drought (1937–47) and the Millennium Drought (1997–2009). A recent drought began in 2017 and affected large parts of the country. It contributed to the dry conditions that fuelled disastrous bushfires during the 2019–20 summer season and left many towns without water. In January 2020, Stanthorpe in southern Queensland had to truck in water daily to supply its 5000 residents. Local residents had to shower in plastic tubs, then use that water to flush the toilet and wash clothes.

drought a long period of water shortage, usually as a result of low rainfall

agricultural industry the business involved in cultivating plants and livestock

For people living in drought-affected regions, water scarcity is not just about having shorter showers or not being able to water the garden. Instead, water shortages in these regions can mean the destruction of the environment and the local **agricultural industry**.

▲ **Figure 3.52** Fourteen trucks transported 1.3 million litres of water to Stanthorpe from Connolly Dam in Warwick during 2020.

cull the selective slaughter of animals to reduce their population

water crisis occurs when the amount of freshwater that is easily available within a region is less than what the region needs

projections estimated forecasts based on current trends

This leads to the loss of jobs and a severe drop in the local economy. Crops fail during a drought and farmers are usually forced to sell or **cull** livestock as they do not have enough feed to keep them alive. Farmers are often left feeling helpless, which can lead to depression and other mental health issues.

Water crises

A **water crisis** is defined as a situation where the amount of freshwater that is easily available within a region is less than what the region needs. This means that each year the amount of stored water decreases. If this situation continues for an extended period of time, supplies can eventually run out.

Between 2017 and 2018, Cape Town in South Africa faced a severe water crisis. Water storage levels had been declining steadily since 2015, and were sitting at between 15 and 30 per cent of dams' total capacity. **Projections** showed that Cape Town was heading towards 'day zero', which is when all water for domestic use would be shut down and residents instead have to queue for daily water rations.

To stop day zero from happening in Cape Town, strict water restrictions were put in place. This forced the residents to limit their use of water to just 50 litres per day. The national government also diverted water that was normally used for agriculture and instead allocated it to urban supplies. Education campaigns helped people to understand the potential impacts of the water crisis. Water maps were also used to show people how much water they used compared to their neighbours. The reductions in usage, combined with heavy rains in the middle of 2018, meant that day zero was avoided in Cape Town.

▲ **Figure 3.53** This farmer is hand feeding sheep on his drought-affected property in Coonabarabran in New South Wales.

▲ **Figure 3.54** This farmer in Boggabri is driving across the dry landscape of his farm to feed his sheep. The feed is usually grown locally, but the farmer needed to purchase feed from elsewhere at $1000 per day to keep his stock alive.

▲ **Figure 3.55** A sheep drinks from what remains of a dried up freshwater dam at a farm in Wandandian in New South Wales

▲ **Figure 3.56** Cape Town's main dam was at only 10 per cent capacity in April 2018.

ACTIVITY 3.11

Cape Town's recent water crises

Refer to the graph in Figure 3.57, then answer the questions that follow.

Water storage in Cape Town

▲ **Figure 3.57** Variation in Cape Town's water storage supply between July 2013 and January 2019 measured in gigalitres (one gigalitre is a million litres)

1 Describe the overall trend in water supply over the time period shown.

2 What do you think is the cause for peaks (maximums) and troughs (minimums) that regularly occur at a similar time each year?

3 Look up Cape Town's current water storage level. Is it at a safe level? How does it compare to the level in Perth or in your local city or town?

Key concepts: place, environment, interconnection, scale, change

HASS skills: questioning and researching, analysing, evaluating

Environmental impacts

As well as affecting people, water scarcity can lead to a variety of negative environmental impacts. When water is scarce and needed to support a growing population, more is withdrawn from natural sources and less remains to support the natural environment. This can affect environments containing rivers, lakes and wetlands. The amount of water in these environments is reduced and many of the natural processes that are needed to maintain the health of local ecosystems, like floods, are not able to occur.

During 2019, the Macquarie Marshes in the western region of New South Wales suffered environmental damage due to long-term drought conditions. This wetland is one of the largest remaining wetland systems in Australia. The area is an essential habitat for mammals, birds, fish and **invertebrates**. However, the Macquarie River, which transports water to the wetland, ran dry for the first time in over 50 years. Combined with the region's lack of rainfall, this turned the wetland's lush, green environment into a dry and dusty wasteland. A reason for this change was that any water that was available had to be given to towns such as Warren, Cobar and Nyngan. Although this event led to the loss of many species, wetlands are adaptable to extreme weather events and so the Macquarie Marshes will flourish again once water returns to the region.

invertebrates animals that do not have backbones

Water scarcity management

Although water scarcity is often caused by factors that are beyond the control of people, such as extended dry periods, in many cases the impacts can be managed and reduced. Some management strategies include:

- redistributing water supplies from a nearby area temporarily
- reallocating water from different sectors, such as agriculture, to be used for domestic purposes

- accessing water from alternative supplies using methods such as desalination and water recycling
- reducing water consumption by educating the public, implementing water restrictions and using technology, such as water-efficient appliances and showerheads
- providing financial aid to poor and vulnerable communities.

▲ **Figure 3.58** The Macquarie Marshes are a series of wetlands along the Macquarie River and a significant habitat for a range of species.

▼ **Figure 3.59** Several years of drought conditions have turned the Macquarie Marshes into a dust bowl.

Water resources in Israel: a nation of extreme water scarcity

Today, nearly 90 per cent of our wastewater is recycled … That's around four times higher than any other country in the world. It is a remarkable achievement and this benefits not only Israel. Israeli companies are helping save water around the world, from Africa to California to India.

Gilad Erdan, Israeli Minister of Strategic Affairs and Public Diplomacy, 2017

Some of the places mentioned in this section are territories whose control is disputed by Israel and Palestine. No disrespect is intended.

The next section of this chapter investigates the following question: how can desalination, water recycling and efficient irrigation help to manage water scarcity? We examine the water-saving practices of Israel as a case study.

Israel is a small country located in the Middle East (also known as West Asia) at the eastern end of the Mediterranean Sea. Over 60 per cent of the country is classified as a desert. Much of the rest of the land is arid, but the climate in some northern regions is classified as **temperate**. Rainfall occurs predominantly in the winter months, with some regions receiving over 1000 mm per year. However, towards the south, some areas in Israel get as little as 25 mm.

temperate a climate that has four distinct seasons: summer, autumn, winter and spring

▲ **Figure 3.60** Israel is located in the Middle East, or West Asia.

▲ **Figure 3.61**   Israel has a diverse climate. Some regions in the north receive reasonable levels of rainfall (top). Other regions in the south receive very little (bottom). This can make it challenging for Israel to manage its water for agricultural and domestic uses.

Mean annual rainfall (mm)

- 1–100
- 100–200
- 201–300
- 301–400
- 401–500
- 501–600
- 601–700
- 701–800
- 801–900
- 901–1000
- 1001–1100
- 1101–1200
- 1201–1300
- 1301–1400

Jordan

Israel

Egypt

0   50 km
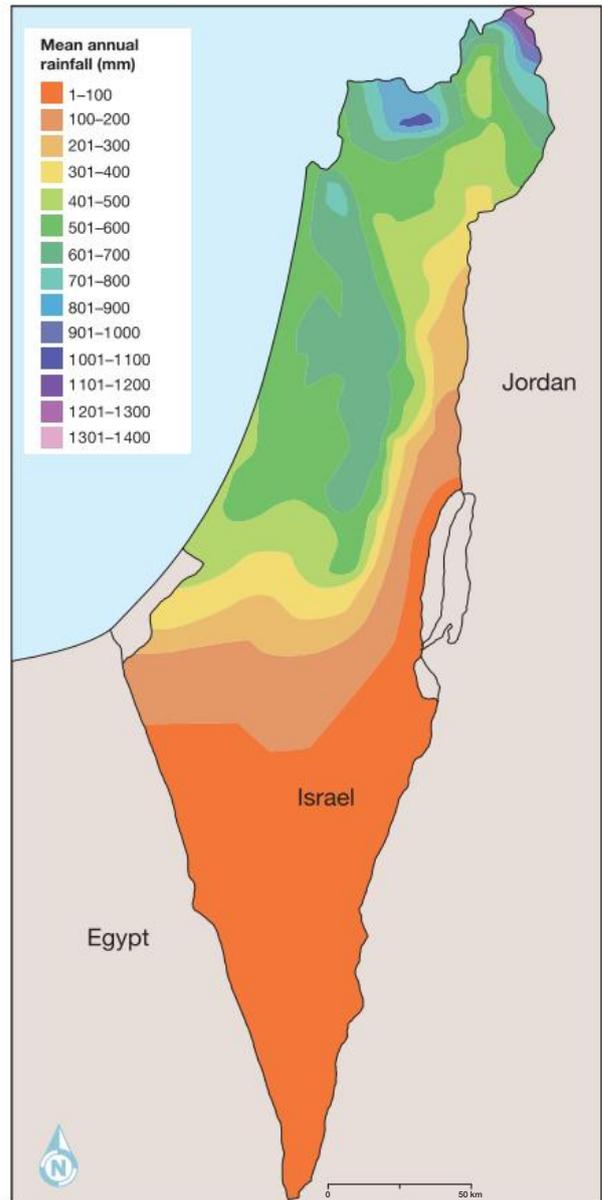
▲ **Figure 3.62**   The average annual rainfall of Israel varies considerably between the north and south of the country.

Average rainfall

▲ **Figure 3.63**   Graph showing the average rainfall each month in Jerusalem, Israel/Palestine
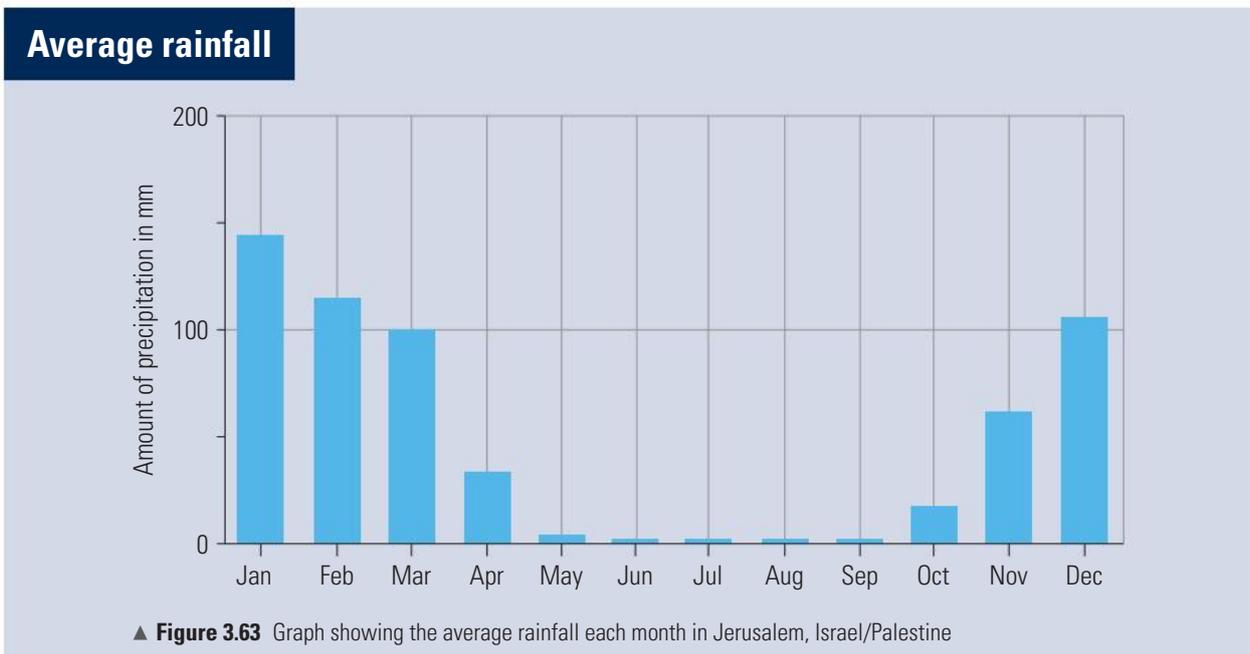
The water challenge

During the late twentieth century and early twenty-first century, Israel's population grew rapidly from four million in 1980 to nearly nine million in 2019. Over this time, the average rainfall each year decreased and it is expected to drop by a further 15 to 25 per cent by the end of the century. A growing population, together with a reduction in rainfall, means that less water is available for each person in Israel. While this ordinarily would be a recipe for extreme water scarcity, careful management and technological innovation have meant that Israel has been able to maintain a sustainable water supply for the population.

Population growth
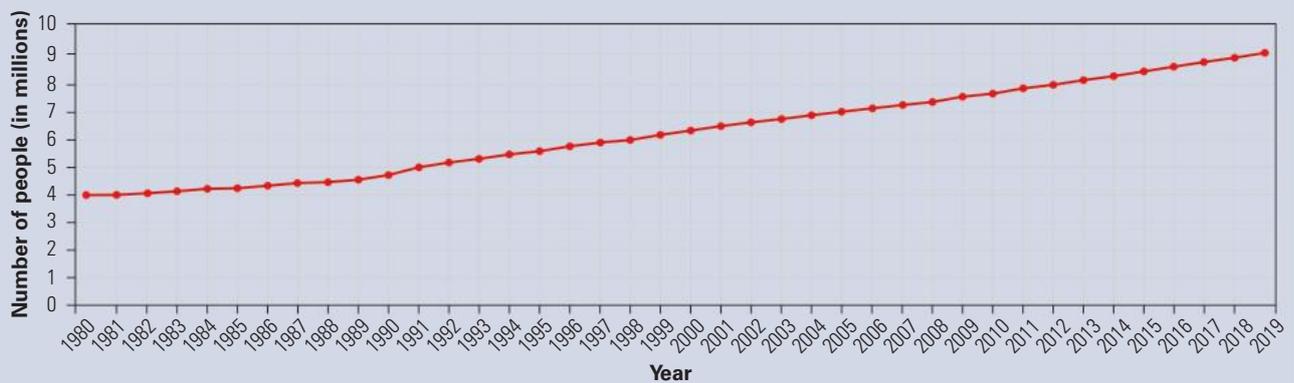
▲ **Figure 3.64** The population growth of Israel between 1980 and 2019

ACTIVITY 3.12

Rainfall and population growth in Israel

Look at the data in Figures 3.62, 3.63 and 3.64, then answer the following questions.

1 Refer to Figure 3.62.

  a Which colour covers the largest area and how much yearly rainfall does this region receive?

  b Describe how the average annual rainfall varies across Israel. Refer to specific regions and the amounts of rainfall using the legend.

2 Refer to Figure 3.63.

  a Describe how the monthly rainfall in Jerusalem varies across the year.

  b Find a rainfall graph for your local area. Compare it to the rainfall in Israel.

3 Refer to Figure 3.64.

  a Describe how Israel's population has grown between 1980 and 2019. Refer to specific years and population totals.

  b Suggest how population growth might contribute to water scarcity and other management issues.

Key concepts: place, space, interconnection, change   **HASS skills:** analysing, communicating and reflecting

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Managing water scarcity

Israel has implemented a number of strategies to manage its water resources. A critical step was an education campaign aimed at teaching Israel's population about water scarcity, and the ways in which water can be conserved in and around the home. 'Israel is drying' was a commercial featuring celebrities showing their skin drying out to resemble a parched landscape. The education campaign is estimated to have reduced domestic water use by 18 per cent.

▲ **Figure 3.65** Drip irrigation pipes in a flower bed at Ramat Hanadiv Gardens in Israel. Drip irrigation is one way to conserve water. It has the potential to save water by allowing water to drip slowly to the roots of plants directly.

Israel also improved its water infrastructure (such as leaking pipes) to reduce its domestic water loss by 9 per cent. The country further reduced household water use by making dual flush toilets and efficient showerheads mandatory.

Water used for agriculture in Israel became far more efficient due to the development of drip irrigation. This technique uses less water than more intensive forms of irrigation such as sprinkler systems.

However, the greatest achievement in Israel's water management has been increasing its water supply through water recycling and desalination. This means that Israel has a stable water resource that is no longer reliant on rainfall.

Wastewater recycling

Israel has become a world leader in the recycling of wastewater. It went from recycling just 5 per cent of its wastewater in 1985 to 85 per cent in 2015. Sewage water is treated at several water-recycling plants and supplied in reservoirs to be used for agriculture. Because this water resource does not vary based on rainfall, farmers can rely on a similar supply each year.

Excess recycled water is used to increase river flows such as in the Jordan River. Experts hope that these flows will help to increase the health of the river environments and surrounding landscapes, restoring these areas to how they were before they were damaged by water withdrawals.

▼ **Figure 3.66** There are more than 240 reservoirs in Israel. They are used to supply water for agriculture and to farm fish.

Desalination

Israel has five desalination plants, which treat water from the Mediterranean Sea. All of them are among the largest in the world. The Sorek desalination plant is the biggest and treats 600 000 cubic metres of water each day. This is enough to supply water for 1.5 million people, which is roughly one-fifth of Israel's total population. Thirty smaller desalination plants in Israel treat **brackish** groundwater.

brackish water that is slightly salty

Altogether, the desalination plants provide 650 million cubic metres of potable water each year. This is roughly 35 per cent of Israel's water supply.

Despite Israel's success with desalination, there are drawbacks to using desalination plants. For example:

- Each desalination plant costs approximately $400 million to build.
- Desalination plants require a lot of energy to run and consume a total of 3 per cent of Israel's total electricity supply.
- Desalination plants are owned by private companies and there are concerns that they might raise prices, which will make water less affordable.
- Once saltwater has been treated, very salty water is released back into the Mediterranean Sea, which environmentalists are concerned might cause damage to the local sea life.

▼ **Figure 3.67** Ambassador Daniel Shapiro tours the Hadera Desalination Plant in 2012, which a desalination facility in Israel and the leading desalination plant in the world. After the tour, the Ambassador drank a glass of water that had been salty sea-water only 90 minutes previously.

Wastewater recycling
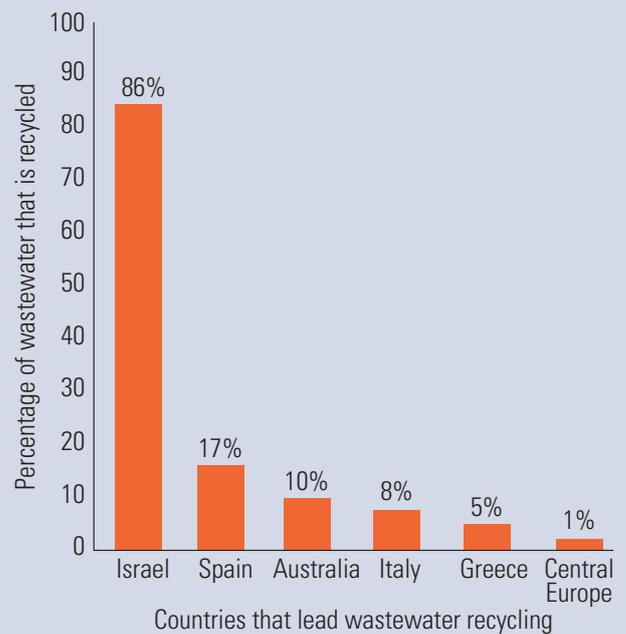
▲ **Figure 3.68** Israel is a world leader in wastewater recycling.
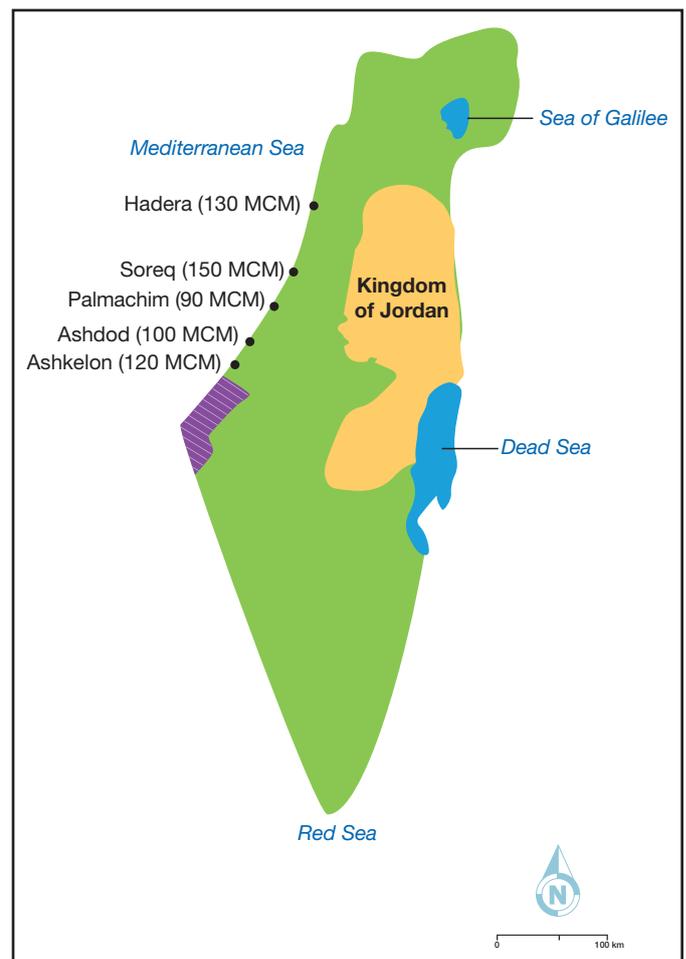
▲ **Figure 3.69** The location of Israel's five main desalination plants and their production capacities, in million cubic metres (MCM) per year

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 3.9

Stacked line graphs

Stacked or compound-line graphs are made up of several line graphs stacked on top of each other. The top line of the graph shows the total or overall quantity, and the thickness of each colour in the graph shows the proportion that each segment makes of the total. As with a normal line graph, the change in the total and the change in these proportions can be analysed.

In Figure 3.70, the top line of the graph shows how the total water consumption in Israel is changing over time. Changes in the thickness of each colour show how much water comes from each of the different water resources. For example, in 2010, approximately 1200 MCM/year came from natural potable water, 300 MCM/year came from desalinated seawater, 200 MCM/year came from brackish water and 400 MCM/year came from recycled effluent water or wastewater.

Answer the questions below using the information in Figure 3.70.

Total national water consumption

▲ **Figure 3.70** Graph showing the change in the amount of water consumed in Israel and the proportion of where it comes from. It is measured in million cubic metres (MCM) per year.
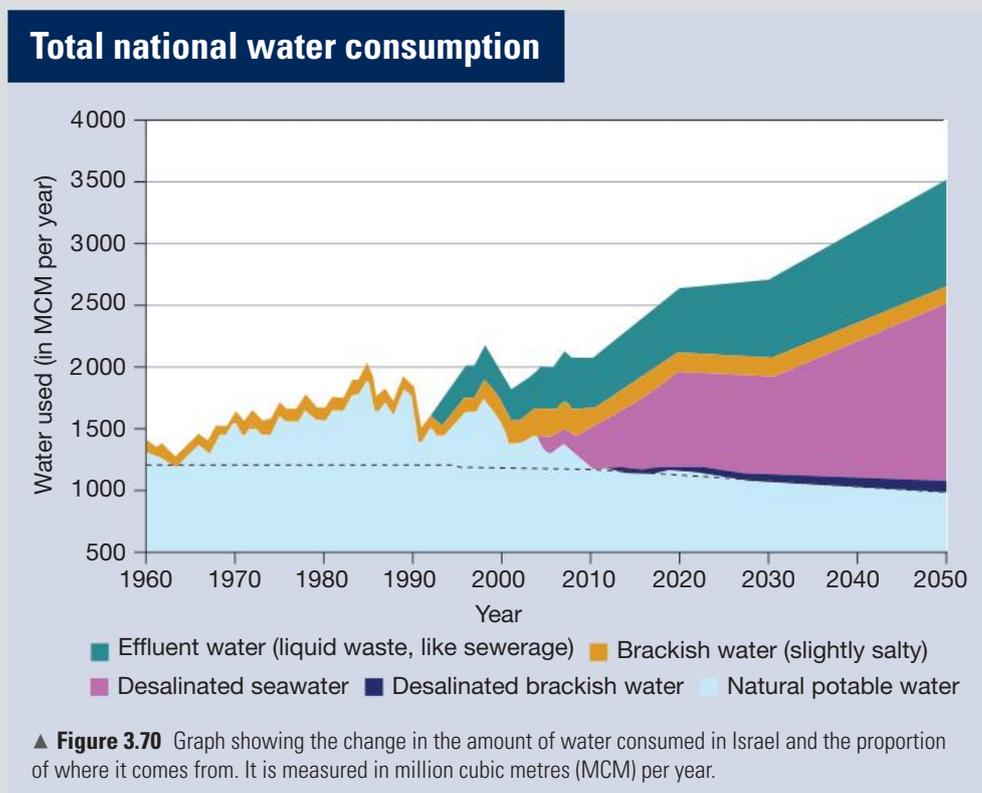
1 Describe how the total water consumption in Israel changed between 1960 and 2020.

2 Describe how water consumption is expected to change from 2020 to 2050.

3 Suggest a reason for the changes you have described in Questions 1 and 2.

4 Based on the information in the graph, in roughly what year did Israel start recycling its wastewater and desalinating seawater?

5 How have the amounts used of each type of water resource changed over time and how are these expected to change in the future?

6 Suggest a benefit that will come from the predicted reduction in the use of natural potable water.

Key concepts: interconnection, change, sustainability

HASS skills: analysing, communicating and reflecting, evaluating

▲ **Figure 3.71** A drip-irrigation system used to irrigate olive trees in Jerusalem

Drip irrigation

In traditional forms of irrigation, farmland is flooded with water or sprayed with large sprinkler systems. A large amount of water is wasted as it evaporates or runs off the land. As a result the water does not seep into the soil or it infiltrates too rapidly for plant roots to absorb it. Drip irrigation involves the slow dripping of water directly onto the plant's **root zone**. The result is a higher **crop yield** and a higher-quality product. Israel's shift towards drip irrigation has decreased the amount of water needed for agriculture by 30 per cent.

The future

Even though Israel is using desalination and water recycling to secure a reliable water supply, its challenge is not over. Israel's population is growing at a very rapid rate and is expected to double by 2050. Meanwhile, rainfall is still far lower than average. Sustainable management and continued technological innovations will be needed to ensure that Israel's water resources can support its population and industries. However, the lessons Israel has learned in managing its water supply have important consequences. Many of the innovations Israel has made, such as drip irrigation, are being implemented across the world in countries like India, Kenya and the United States.

> **root zone** the area of soil surrounding the roots of a plant
>
> **crop yield** the size of a crop grown within an area

Amazing but true …

Drip irrigation was invented in Israel in the twentieth century. The idea began in 1930 when a young water engineer, Simcha Blass, noticed a row of trees on a farm. One tree was twice as tall as the others. He noticed a water pipe had leaked and was regularly dripping water onto the tree's root zone. Blass patented his idea in 1959 and created the first drip irrigation company in 1964.

ACTIVITY 3.13

1 State two reasons why Israel has to manage its water resources carefully.

2 List and describe three ways that Israel has managed to reduce its water scarcity.

3 How much of Israel's wastewater is recycled?

4 Describe how recycling water can benefit both society and the natural environment.

5 Discuss why education was an essential part of Israel's water management strategy.

6 Compare and contrast Australia's water management to Israel's.

   a Discuss how Australians could adopt innovations from Israel that might help us to deal with our own water scarcity more effectively. (You can use Figure 3.72 to help you with your answer.)

   b Consider the possible negative consequences of adopting these ideas.

▲ **Figure 3.72** Water purification plants are becoming more common around the world in an effort to maintain the sustainability of water resources. This is an aerial view of a plant similar to those used in Israel to purify brackish water and wastewater.

Key concepts: environment, interconnection, sustainability, change

HASS skills: analysing, evaluating, communicating and reflecting

The significance of water for different peoples

Water is and always has been essential to all aspects of life. In fact, recent evidence from NASA suggests that liquid is likely to exist on Mars, which could be a hint of current or previous signs of life! Not only does water sustain life, but it is also a significant part of diverse ancient and modern cultures around the world. Water is culturally and spiritually important to many societies, including ancient civilisations.

Ancient beliefs and cultures

Since ancient times, water has been a significant part of cultures around the world. Many civilisations made water an important part of their religious rituals and beliefs.

▲ **Figure 3.73** This bas-relief from the Temple of Khnum in Egypt shows an offering of water to Khnum from a pharaoh.

The ancient Egyptians called the Nile River the 'father of life'. They believed that the god Khnum controlled the flow of the Nile and sent the floods each year. To keep this god happy and ensure the Nile River continued to flow, the ancient Egyptians built shrines and temples honouring Khnum. They also threw food and statues into the Nile River as offerings to the god.

Ancient Greeks had a similar connection with water through their god, Poseidon, who was the god of the sea and water, as well as earthquakes, storms and horses. The ancient Greeks relied heavily on the sea for trading and transport between the mainland and the Greek islands. There are ancient temples dedicated to the worship of Poseidon in Greece.

Archaeological evidence shows that Aboriginal peoples lived along the river banks in places throughout mainland Australia. They managed these waterways to ensure they could use the fish and plant life to feed themselves.

The connection between Aboriginal peoples and water was recognised in 2019 when the Budj Bim cultural landscape was added to UNESCO's World Heritage Site list. This site in southwestern Victoria is an **aquaculture** system containing **weirs**, channels and holding ponds to trap fish. The system supplied the ancient Gunditjmara people with a reliable food source to consume and trade.

aquaculture the breeding and harvesting of fish and other freshwater organisms

weir a small dam or barrier stopping the flow of a river

▲ **Figure 3.74** The ruins of the Temple of Poseidon, believed to date back to the fifth century BCE, at Cape Sounion in Greece. This is one of many temples dedicated to Poseidon, the ancient Greek god of water and the sea.
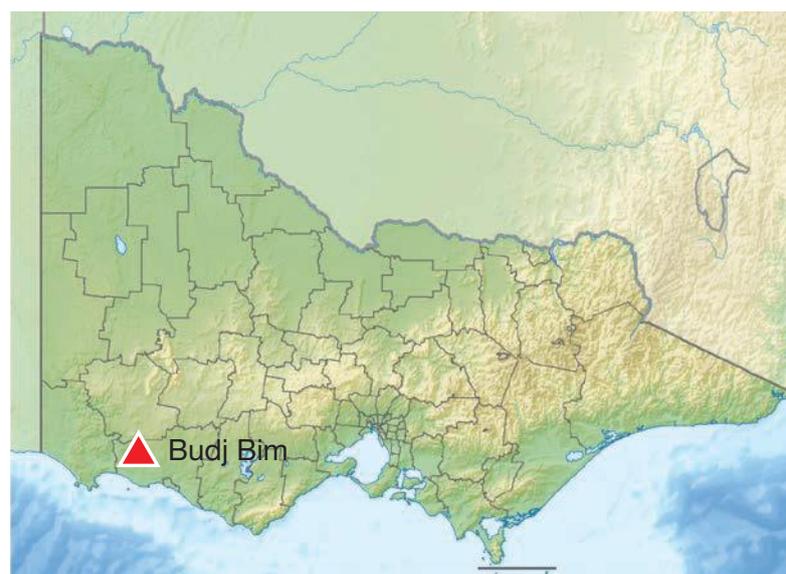
▲ **Figure 3.75** Budj Bim is located in southwestern Victoria, within Budj Bim National Park. Stone traps were used by the Gunditjmara people to trap eels for food.

Beliefs and cultures today

Hindus believe that large rivers are sacred and provide a connection with the gods. The Ganges River is one of the most significant rivers in Asia. It is over 2500 km long and flows through some of the most populated places in India and Bangladesh. Four hundred million people rely on it for drinking, bathing and irrigation.

The Ganges River is sacred for Hindus as it is considered to be a form of the goddess Ganga. Many Hindus believe that if they bathe in the Ganges River they will be cleansed of their impurities and negative actions. Millions of people make pilgrimages to the Ganges River to bathe in its waters. Many people also scatter the ashes of their deceased loved ones on holy rivers like the Ganges River. Hundreds of Hindu festivals and celebrations are held on the banks of the river each year.

Water has been and still is a significant part of the culture of Aboriginal and Torres Strait Islander peoples. Water is a symbol of life and has been a central part of Indigenous lifestyles for tens of thousands of years.

> Water is the life for us all … If that water go away, everything will die. That's the power of water. He connect with the land.
>
> **John 'Dudu' Nangkiriyn, Bidyadanga, Western Australia**

Amazing but true …

Although the Ganges River is believed to be sacred and spiritually pure, it is one of the most polluted rivers on Earth.

▶ **Figure 3.76** Rapid population growth and urban development in India have led to the widespread pollution of the Ganges River and surrounding regions.

In modern Australia, Aboriginal and Torres Strait Islander peoples living in remote communities in the Northern Territory see water management as a high priority. Due to a lack of permanent rivers in desert areas, many of these communities rely heavily on accessing bore water from groundwater supplies. The people in these remote communities are forced to compete with mining, livestock and urban areas to access their share of a limited water supply.

ACTIVITY 3.14

First Australian history

Research the history of a large river or coastal region in your local area. Write a paragraph summarising:

- who the traditional owners of the land are
- the history of what the area was used for
- current links with Aboriginal and/or Torres Strait Islander peoples.

Key concepts: place, space, interconnection   **HASS skills:** questioning and researching, evaluating

Aesthetic and recreational value

Many people might not have a deep spiritual connection to water, but it is still a significant part of their culture. For example, water activities are enormously popular in Australia and around the world. These activities include water-based sports such as swimming and waterskiing, and hobbies such as fishing.

The beauty of coastal and river environments, alongside the recreational opportunities that water provides, means that places near water are popular choices for holidays. Water also plays a big part in increasing the prices of real estate. Waterfront properties in capital cities or in places that have easy access to the beach, such as the Gold Coast, usually have higher prices than properties that are inland.

Amazing but true …

A study in 2015 found that 13 per cent of Australians, that is a total of 2.7 million people, live in a house that has a swimming pool. Those of us who have a swimming pool, or regularly go swimming in one, know how fantastic they are for relaxing, exercising and spending time with friends or family. Australia is well known for its swimming athletes, many of whom have won Olympic medals. Ian Thorpe and Leisel Jones have won nine Olympic gold medals each.

FIELDWORK 3.1

Exploring the significance of a local water resource

Fieldwork is an essential part of studying geography. It enables you to investigate many of the concepts studied in the classroom by collecting data out in the real world. In this investigation, your aim is to explore a water resource close to your school or home, determine the ways it is used as well as its significance for the surrounding region.

First, choose a local resource and develop a plan for a fieldwork investigation.

Use the following structure to plan your investigation and present your results.

>>

Title and introduction

Introduce your study by providing some context. This should include the location of your chosen water resource and what aspects you will be investigating.

Aim

Write an aim for your fieldwork that is achievable based on the data that you intend to collect.

Research question

Write a research question that you intend to answer using the data that you collect. Examples include:

- What are the different ways this resource is used by people?
- What role does this resource play in the local water supply and the surrounding environment?
- How is this resource managed?

Hypothesis

Write a clear and concise hypothesis. This is a testable statement that provides a prediction prior to collecting the primary data. It should relate to the research question.

Primary data collection

Consider the types of primary data that you will need to test your hypothesis and answer your research question. Examples include:

- Observations, annotated photos and field sketches showing the interconnection with the surrounding landscape
- Water quality samples
- Analysis of the quality and species of vegetation surrounding water bodies
- Interviews and surveys of local residents about how they use the resource
- An interview with a group that manages the water supply such as the Water Corporation, a catchment management authority or a local community group.

Secondary data collection

Use a range of secondary sources to supplement your primary data. Examples include:

- Satellite images and elevation data gathered using Google Earth
- Previous studies and management information from the websites of management groups and government authorities.

Presenting and analysing your data

Summarise your data using tables, graphs and maps where appropriate. Analyse your data to draw conclusions, answer your research questions and state whether your hypothesis has been supported or disproven.

Conclusion and evaluation

Summarise your findings and evaluate the success of the field trip. What were the positives and negatives of your data collection? What could be done differently next time? What additional data could be collected to extend this investigation?

References

Always ensure you keep a record of any sources used and present these in a bibliography.

END OF SECTION REVIEW 3.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Describe an example of an ancient civilisation having a spiritual or cultural link with water.
2 Define the following terms:
   a water scarcity
   b physical water scarcity
   c economic water scarcity
   d drought.
3 List three impacts of a drought.

Interpret

4 Outline and describe one factor that leads to water scarcity.
5 Explain how water scarcity can impact both the natural environment and people in rural and urban areas.

Argue

6 'The history of water management by Aboriginal and Torres Strait Islander peoples is valuable and should be a primary concern when managing water resources.' Discuss whether you agree with this statement. Refer to specific examples to justify your opinion.

Key concepts: environment, interconnection, sustainability

HASS skills: evaluating, communicating and reflecting

3.6 Conclusion: why does it matter?

Water is a precious resource and is essential to life on our planet. It is so important that scientists are looking for it on nearby planets because where there is water, there is also the possibility of life.

As this chapter has explained, freshwater is not evenly distributed across the world and the number of people who struggle to access it is going to increase. Geography is not just the study of what is, but also of what could be. How will you help address water scarcity in your local area, in your state or on the Earth? Water connects us all. The future of water resources is everyone's problem. So be a part of the solution!

3.7 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Making thinking visible

Circle of viewpoints

Turning wastewater into potable water is seen by some as a necessity and by others as an absolute last resort. Consider a situation where the Western Australian Government decided to start recycling Perth's wastewater. Choose a perspective from the following list:

- The premier of Western Australia
- A government authority, such as the Water Corporation
- The owner of a Perth business that needs a large water supply
- A local resident.

Use the following sentence stems to explore this topic.

I am thinking of turning wastewater into potable water from the point of view of …

I think turning wastewater into potable water is …

A question I have from this viewpoint is …

Inquiry

Research tasks

Choose one of the examples provided in this chapter to study water as an environmental resource more thoroughly. Develop a research question, and research additional detail and statistics to answer the question. Then, present your findings in a report.

Some ideas are given here:

- Is solar, wind, fossil fuel or nuclear energy a sustainable option for the future of energy production?
- What are the impacts of salinity in Australia? Find out how much of Australia is affected, the main causes of the problem and the ways that Australians are trying to reduce the impacts.
- To what extent are dams in Australia or elsewhere in the world impacting the environment, people and local economies?
- What are some of the specific impacts of the management of the Mekong River in downstream communities? Is this likely to change in the future? How could the river system be managed more sustainably?

Problem-solving task

As the global population continues to grow, domestic water use places an increased pressure on water supplies. Either research a modern technology that reduces domestic water use or design your own. Discuss how this technology works and how it could be incorporated into existing houses in Australia.

Writing

Extended-response question

Claim: *Water resources are renewable yet finite. Sustainable management of this environmental resource is needed to ensure that people, the environment and the economy are not negatively impacted.*

Discuss whether you agree with the above statement. In your response, refer to the types of water resources in specific places, the impacts associated with water supplies and the ways that water is managed in the area.

Key concepts: place, space, environment, interconnection, sustainability, scale, change

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

▲ **Figure 3.77** A dam built in Laos in 2019 reduced the flow of the Mekong River in downstream regions, which impacted the lives of local villagers and destroyed the river's diverse ecosystems.

Place and liveability

Overview

The *places* we call home look and feel different to each of us. Factors such as our location, income and connections to the community and the natural environment all play a role in how we experience our neighbourhoods, towns, cities and suburbs. To live well in a place, we need access to basic necessities. We also need to be able to enjoy the culture, entertainment and activities that make a place feel safe and fun. So, liveability not only means surviving in a place but thriving there, too.

Places are always changing. Figures A to D show the changes that have occurred in Perth from 1934 to 2019. Soon, streets could be dominated by driverless cars, while farms may be perched on city rooftops.

How you feel about a place can also change as your needs alter over time. For instance, growing up in a rural region might be great when you are young because you can enjoy the open space and freedom. However, later you may decide to move to a city to go to university.

In this Geography unit, you will investigate what places mean to Australians and people around the world, as well as what services and facilities make a place liveable. This will help you to recognise key characteristics of our built environments, and understand the human activities and beliefs that have helped to shape them. You will also learn to see places from the perspectives of different groups of people. Understanding the characteristics of built environments and others' perspectives can help you be more connected to your own environment and community. You may even want a career as a town planner or an architect!

Video
Unit
overview

Learning goals

After completing this unit, you should be able to answer these questions.

- What is place and liveability?
- Which factors influence where people live and what they think about their place?

▼ **Figure A** A group of onlookers at the scene of an accident, Perth, 6 December 1934

▼ **Figure B** This is a postcard from the 1970s. Research online to find out more about postcards.

▲ **Figure C** Queen's Gardens, Perth, 1990s

▲ **Figure D** Aerial view of Elizabeth Quay waterfront, Perth, 2019

- How do we measure the liveability of a place?
- How does the accessibility of facilities and services affect the liveability of places?
- How does environmental quality influence the liveability of places?
- How have people improved the liveability of places in Europe and Australia?

Introducing geographical concepts

In this unit, you will have many opportunities to practise geographical concepts.

The concept of **place** involves the physical location of an area, and the meaning that the location has for individuals, communities and cultures.

Space refers to the spatial distribution of places and their characteristics. We use maps and spatial technology to examine, monitor and compare spatial distributions so that we can assess and manage changes.

The **environment** in Geography refers to the characteristics of an environment, how an environment supports life, and the connections between an environment and people.

Interconnection involves the links between places and the ways that people influence or are influenced by the characteristics of places.

Sustainability is both a goal and a way of thinking. It is about the ability of the environment to continue to support present and future life.

Geographers investigate the world around us at many levels, and this is called **scale**. We can observe places at the local, national and even global scale.

When geographers look at **change**, they investigate the types of changes that have occurred. They also look at when, where and why change has happened.

Geographical concepts

Where is it located, what are its geographic characteristics and how is it significant to different people?

How are the features distributed and how has the distribution changed over time?

Is it economically, socially and environmentally sustainable?

What type of change has occurred and what are the consequences?

Place

Space

Sustainability

Change

Environment

Scale

Interconnection

What are the components of this environment and what processes have formed it?

Does it occur at a local, national or global scale?

How is it linked with other places and with other people?

CHAPTER 4

Place and liveability

4.1 Setting the scene: urban planning and the distribution of streets in Perth

Perth often ranks as one of the world's most liveable cities. But what is it about our city that makes it so popular for residents and visitors alike? Have you ever wondered how Perth was first designed? Or how the city keeps evolving to meet our changing needs?

central business district (CBD) the centre of business in a town or city

pedestrian people who are walking rather than travelling in a vehicle

urban planning the process of planning the layout and infrastructure of a place

accessibility resources or services are available and affordable for all people to use

Perth's rating as a highly liveable city is due to its stability, education, health care, infrastructure and employment. Perth's **central business district (CBD)** is an important part of its infrastructure. The CBD's grid system makes the city easy to navigate and the open green spaces along the foreshore display Perth's iconic Swan River. **Pedestrian** access is ensured because of the city's walkways, arcades and little streets. All these features are not accidental; they exist because of **urban planning**.

Urban planners shape the world we live in because they design our cities and plan our infrastructure. However, over time, urban planning designs have changed. A grid system was a common design feature

a couple of centuries ago. The use of a grid for urban design was popular from the seventeenth to nineteenth centuries when new cities were forming. Since the 1900s, urban planners have created designs for cities to accommodate cars. Now, modern designs focus on sustainability and **accessibility**. Figure 4.1 shows the evolution of street design in the twentieth century.

Perth's CBD in its initial plan resembled a grid pattern parallel to the river. Its designer was John Septimus Roe, the first Surveyor General to the Swan River colony, who planned the streets and parklands. He is considered responsible for the presence of windy conditions in the city as he chose to run the main streets parallel to the river for the views, instead of towards the cardinal points of the compass. Today, Perth's CBD is a major economic and cultural hub for over two million people.

The grid system was a standard feature of urban planning practice in the 1800s. But

Grid (c. 1900)	Fragmented parallel (c. 1950)	Warped parallel (c. 1960)	Loops and lollipops (c. 1970)	Lollipops on a stick (c. 1980)
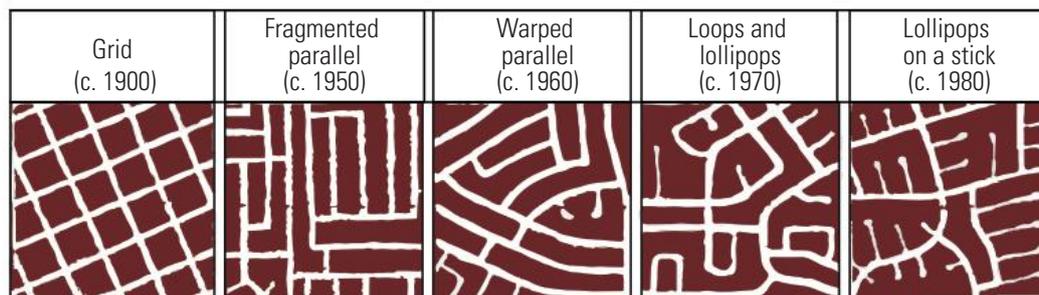
▲ **Figure 4.1** Types of street patterns in urban planning during the twentieth century

Roe's design of the Perth grid was unique for his achievement in setting aside the land at Mount Eliza for public use. Today, residents and visitors to Perth know this area as Kings Park.

While the layout of Perth's CBD has not changed much since the nineteenth century, the use of space and **sense of place** has evolved. Transport has continued to improve and serve the growing population, and streets have become more accessible for pedestrians. The value and meaning of various places in the CBD have also changed over time. While some buildings have gained **heritage status**, others have been replaced with modern redevelopments. Perth has a blend of historical architecture and modern design on each street.

The Hay Street Mall is also an important pedestrian space in Perth's CBD. Vehicle traffic was banned in 1972 between William and Barrack Streets so that the space could only be used by pedestrians. Many of Perth's arcades connect Hay Street Mall to Murray Street Mall today.

There has been a recent move to reclaim more of Perth's CBD for pedestrians and public transport. This urban plan aims to improve safety and **amenity** in the city. It also reflects the current trends in other liveable cities around the world.

▲ **Figure 4.2** Expanded town plan for Perth completed by John Septimus Roe in 1833

sense of place the meaning that a person or group attaches to a specific area or space

heritage status a status given to a building or area to protect it from future development and preserve its past

amenity a feature that is desirable, useful or aesthetically pleasing

Key concepts for your memory bank

Place refers to both the physical location of an area, and the meaning that the location has for individuals, communities and cultures. Places range in size from a suburban backyard to a major world region, like Asia. *Pop this concept into your memory bank – at the end of this book is an activity which will test your understanding of this, and other key HASS concepts!*

▼ **Figure 4.3** Perth's CBD
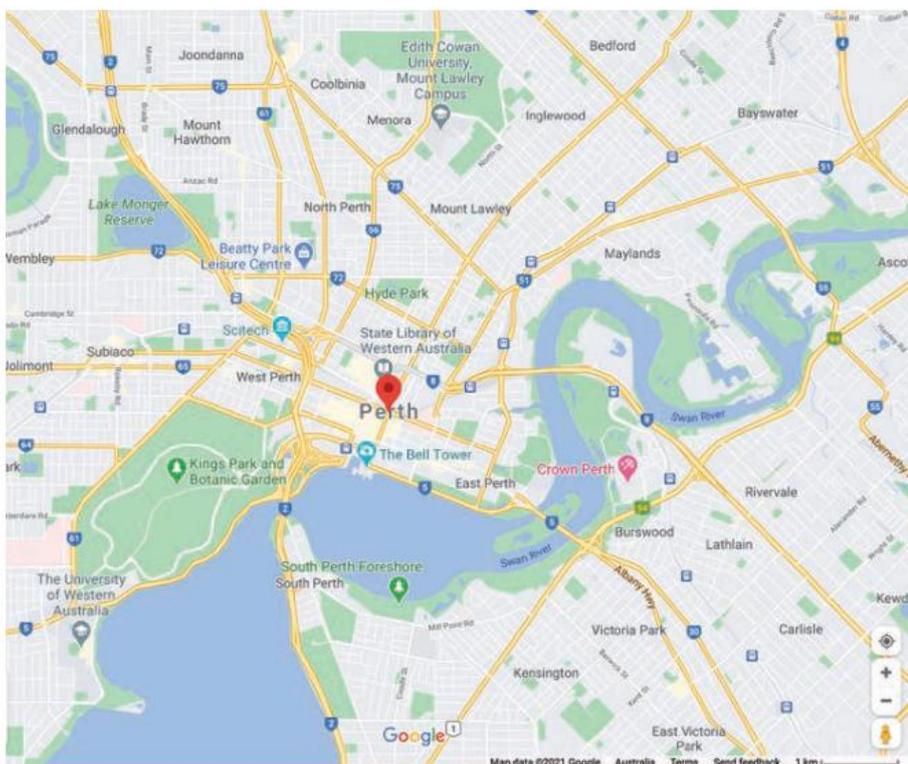
See, think, wonder

Copy the following table onto a piece of paper.

	See *What are the things you see, observe or notice in this image?*	Think *What do you think about the liveability and sense of place in this image? Why?*	Wonder *What does it make you wonder about the space?*
Figure 4.4			
Figure 4.5			
Figure 4.6			

With a partner, use Figures 4.4, 4.5 and 4.6, which show different places in Perth, to complete the table.

▲ **Figure 4.4** Elizabeth Quay Bridge

▲ **Figure 4.5** The Supreme Court of Western Australia

▲ **Figure 4.6** Forrest Place

Key concepts: place, space   **HASS skills:** evaluating

4.2 Chapter overview

Introduction

In this chapter, you will explore the concepts of liveability and sustainability in different parts of the world. You will complete various fieldwork activities and conduct research to find out about a range of developments throughout the world, including Perth. You will work through a range of activities and case studies to build your skills and to encourage you to think like a geographer.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What is liveability?
- What factors affect liveability?
- What does liveability mean to you?
- How do we measure liveability?
- What makes one place more liveable than another?
- How does access to services and facilities affect the liveability of a place?
- How does environmental quality affect the liveability of a place?
- How does a feeling of social connectedness affect the liveability of a place?
- How does a feeling of community identity affect the liveability of a place?
- How can liveability be increased?

▲ **Figure 4.7** Perth is a beautiful, vibrant city.

Geographic skills

After completing this chapter, you should be able to:

- conduct a survey and review your findings
- complete a field sketch with annotations
- read a topographic map
- create a mind map to brainstorm ideas
- create a line graph to illustrate data over time.

Digital resources

Visit the Interactive Textbook to access:

- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video

Five interesting facts about liveability

4.3   The factors that influence the decisions people make about where to live and their perceptions of the liveability of places

FOCUS QUESTIONS

- What is liveability?
- What factors affect liveability?
- What does liveability mean to you?

This concept of liveability focuses on why people live where they do. The reasons a person lives in an area or moves to a different area are often based on their perceptions about the liveability of a place.

Where would you prefer to live?

People live in different areas for a variety of reasons. Some people move for employment and education opportunities, some people move seeking safety and security, and some people stay in an area because of their connection to it.

ACTIVITY 4.1

Features of liveability

Examine the places shown in Figures 4.8 to 4.17 and use Google Street View to explore the areas further. Then, answer the questions that follow.

▲ **Figure 4.8** Shaftesbury, Dorset, United Kingdom

▲ **Figure 4.9** Istanbul, Turkey
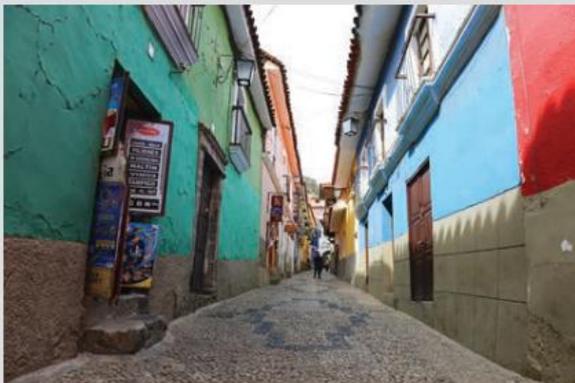
▲ **Figure 4.10** Jaen Street (Calle Jaén), La Paz, Bolivia

▲ **Figure 4.11** Uros Islands, Puno, Peru

»

▲ **Figure 4.12** Black Creek Pioneer Village, Toronto, Canada

▲ **Figure 4.13** Chefchaouen, Morocco

▲ **Figure 4.14** Brooklyn, New York City, United States

▲ **Figure 4.15** Siem Reap, Cambodia

▲ **Figure 4.16** An unnamed islet, Queensland, Australia

▲ **Figure 4.17** Mumbai, India

1 Identify the features that affect the liveability of each area shown. Consider both the positive and negative features of living in each place.

2 Which place, or places, could you see yourself living in?

Key concepts: place, space, sustainability, scale, change   **HASS skills:** questioning and researching, evaluating

What is liveability?

Liveability is a measure of the living conditions of a certain place. To measure whether a place has a high or low level of livability, we look at the quality of economic, environmental and social living conditions in that place. The features of a place are often perceived differently because

> **liveability** the qualities of a place that enable a person to live there with a good standard of living. To work out whether a place has a high or low level of liveability, we consider the quality of economic, environmental and social living conditions in that place.

perception the way something is viewed or understood

space how different places, and the features within places, are distributed

scale the size of an area and how it is viewed in relation to another area

they depend on a person's background, age and culture. This **perception** of a space means that different people value diverse features and experience those features in unique ways. Their perception is what creates a sense of place. In other words, your experiences in a space and the meaning you attach to it make up your 'sense of place'.

The concept of space

In geography, the term **space** refers to a physical area. This includes all the area's objects or physical features. Spaces often relate to a point of latitude and longitude, and vary in their **scale**. They can be small, like a room, or large like a city, country or region. How each physical feature is distributed in a space is an important consideration because it contributes to how that space is used. For example, a city or town that is spread out with limited public transport will usually have high use of private vehicles.

ACTIVITY 4.2

Ranking task

Use the content you have read so far to answer the following questions.

1 With a partner, brainstorm features that make a place liveable.
2 Choose five factors that you consider to be the most important and create a concept map like the one shown here. For each factor, you should also provide a reason for why you think it is significant.
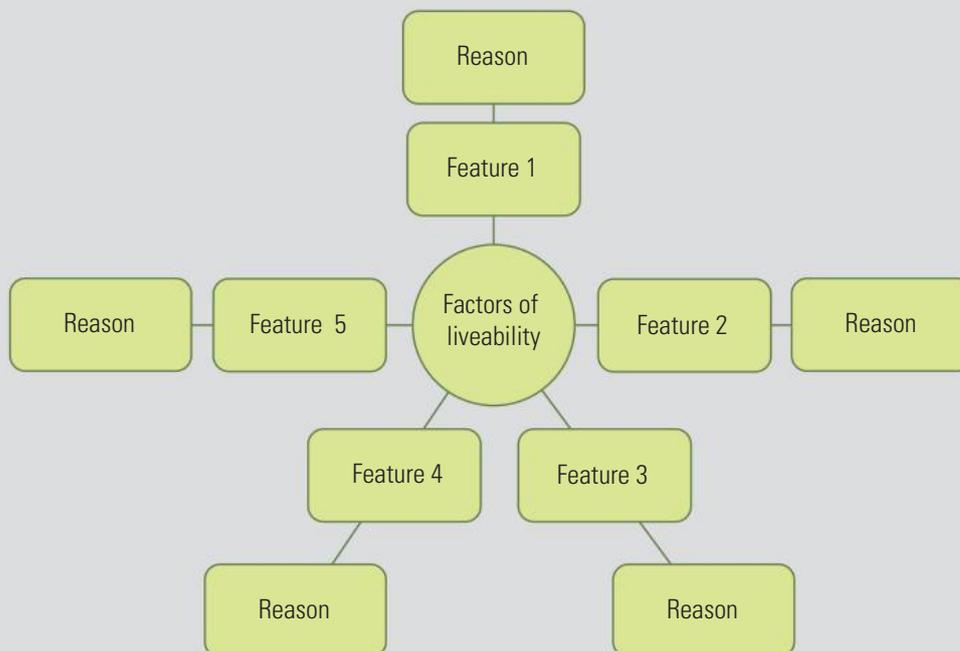
3 Share your mind-map work with the class and explain why you think each factor you chose is important.

Key concepts: place, space, environment, sustainability, change

HASS skills: analysing, evaluating, communicating and reflecting

Why do people live where they do?

The choices people make about where they live are often based on push factors and pull factors. A **push factor** is a reason that causes a person to leave an area, such as unemployment, poverty, lack of access to services and limited opportunities for education. A **pull factor** is a reason a person moves to or is drawn to an area. These are positive motivations that will benefit the person who is moving to a place, such as better job opportunities, accessible services, education and living conditions.

Forced migration is a push factor. In times of conflict, many people are forced to leave their homes due to fears about their safety and security. These people do not have a choice about where they live and they simply have to go somewhere so they can be safe. According to the United Nations High Commissioner for Refugees, approximately 70.7 million people around the world were forced to leave their homes due to violent conflict in 2019.

> **push factor** the reasons people move away from an area
>
> **pull factor** the reasons people move in to an area

CASE STUDY 4.1

Understanding different perceptions of place

Simon is a refugee who came to Australia from Syria to escape the civil war. Read what Simon says about Australia, then answer the questions that follow.

I have a lot of precious memories from Syria, especially from my first year at university, which was wonderful and eye opening. I was following my passion in environmental science in Damascus and my life was going well. But that year, the war broke out. At first, my family was anxious, but we were still hopeful that nothing would change for us. However, in the second year, the situation started to escalate quite rapidly and brutally. Soon, there were car explosions and mortar shelling on a daily basis, as well as electricity blackouts, water scarcity and food shortages.

I was desperate to flee, but my parents were reluctant for me to travel alone or illegally. So, I started applying to universities around the world and I was actually accepted to many of them. Unfortunately, I was constantly rejected in my applications for a student visa. In this time, my family started moving backward and forward from Syria to Lebanon. For years we had to flee from Syria when things got too dangerous and leave Lebanon when our money ran out. It was a stressful time, as we lived very close to the terrorist line in Syria.

Finally, we were approved to come to Australia as refugees. We were very fortunate to have an aunt here, and if it wasn't for that we might never have been given the visas that would change our lives forever. When we landed in this new place and they said, 'Welcome to Australia,' that was just an incredible moment that no words can describe. But the closest word I can use was that of relief.

▲ **Figure 4.18** Simon
Source: New Humans of Australia website

Source: Simon, 'I have a lot of precious memories of Syria', New Humans of Australia website, 14 July 2018

ANALYSIS QUESTIONS

1 Make a list of the push factors that forced Simon to leave his home.

2 Make a list of the pull factors that brought Simon to Australia.

3 Compare the liveability of Simon's homeland, Syria, to his new home of Australia. What are the benefits of this new home for Simon and his family? (It might help to think about the access to services and new opportunities.)

Key concepts: place, environment, interconnection, sustainability, change

HASS skills: evaluating

ACTIVITY 4.3

Analysing spatial patterns

In this activity, you will explore the concepts of space and **change**.

change the ways in which something is different to the past

Go to the BBC's website and search for 'Syria from space: Three cities in darkness and light'. You will see three sets of satellite images that show the impact of the Syrian war over time in the country's major cities. Spend some time looking at these images and then answer the following questions.

1 Describe the changes you see for Damascus over time.

2 Why do you think different regions lost their lights? When do you think this happened?

3 Identify the impacts of what you see for the people who live in these cities in terms of their safety, health, connectedness and access to services.

4 Compare the two daytime, aerial images of Raqqa in 2012 and 2017. What do you notice?

Key concepts: place, space, environment, interconnection, scale, change

HASS skills: questioning and researching, analysing, evaluating

CASE STUDY 4.2

A comparison between Brisbane and Vienna

Read the information provided to you about Brisbane and Vienna, and then answer the questions that follow.

Brisbane

Brisbane is the capital city of the Australian state of Queensland. It is located on the eastern coast of Australia and is in the lands of the Turrbal (Jagera) people. The metropolitan area of Brisbane has 2.5 million residents.

▲ **Figure 4.19** Brisbane is located on Australia's east coast.

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The city is built on the floodplains of the Brisbane River, 14 kilometres from Moreton Bay. This has meant that Brisbane has experienced many flooding events, including major weather events in 1974 and 2011. The city has a humid, subtropical climate and has regular storms over the summer months. It is a hub for business and education in Queensland.

▲ **Figure 4.20** The Brisbane River flows through Brisbane.

Transport

Public transport in Brisbane consists of trains, buses and ferries. As the city is expected to grow, the public transport system is planned to grow with it. This growth will include a rail network that crosses the Brisbane River and a high-frequency bus-transit system. These rail and bus networks will link together to provide the city with stronger options in public transport.

▲ **Figure 4.21** A typical Brisbane bus

▲ **Figure 4.22** Ferries are part of Brisbane's network of public transport.

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Housing

Homes in Brisbane are more affordable than those in Sydney and Melbourne. This is an economic factor that helps to make Brisbane liveable. Many people have moved from Sydney and Melbourne to Brisbane because of this economic pull factor. High-rise apartment buildings are increasingly common in the suburbs close to the CBD. Suburbs further away from the CBD tend to have low-density houses and townhouses. Queenslander-style homes in Brisbane are common. These homes are timber with a corrugated iron roof. They are high set, meaning they have elevated foundations, to allow for ventilation and typically have a surrounding veranda. The Queenslanders were designed and built specifically for Brisbane's subtropical climate.

Lifestyle

The people of Brisbane embrace an outdoor and active lifestyle. The city is located within an hour's drive of both the Gold Coast and the Sunshine Coast. These are frequent weekend destinations for people who live in Brisbane. Brisbane's suburbs have high levels of access to services such as schools and health care. Crime rates are relatively low and the city is generally considered to be safe.

Vienna

Vienna is often listed as one of the world's most liveable cities. It is the capital of Austria and has a population of 1.9 million people (2.6 million within the metropolitan area). The city is located on the banks of the Danube River. The city has an oceanic climate with warm summers and cold, dry winters. Humans have occupied the land as far back as the Stone Age. The bubonic plague (Black Death) struck in 1679, killing one-third of the city's population. The city was also deeply affected by the world wars. Vienna was bombed 52 times and 20 per cent of the buildings were destroyed during World War II. This long history has shaped a unique city.

▲ **Figure 4.23** Traditional Queenslander houses are built raised from the ground to counteract flooding and encourage a cooling airflow.

▲ **Figure 4.24** This surfer is catching waves in front of the high-rise buildings on the Gold Coast.
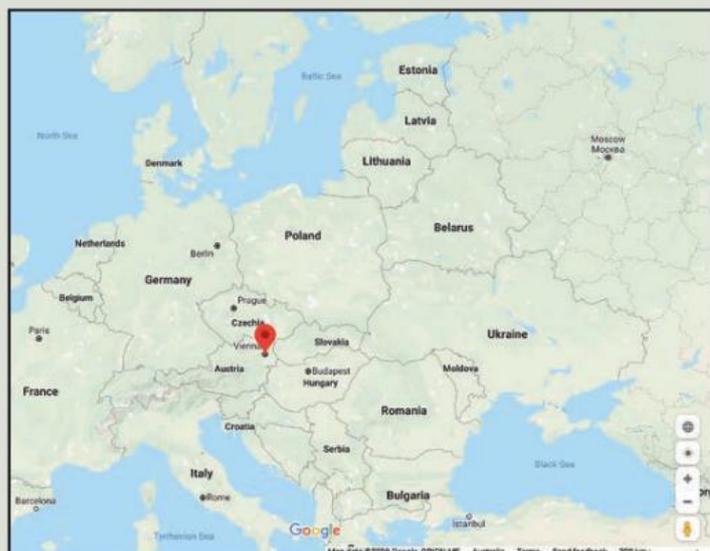
▲ **Figure 4.25** Vienna is in Austria.

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Design

The centre of Vienna is on UNESCO's World Heritage List. For this reason, there are no high-rise buildings within the area. The buildings in the historic city centre have a wide variety of historic design features. The centre includes castles, gardens and monuments.

▲ **Figure 4.26** Schönbrunn Palace is Vienna's best-known tourist attraction.

Economy and education

Vienna is one the wealthiest regions within the European Union. The city is Austria's main centre for tertiary education; it has many universities and professional colleges. The Viennese value education and their city has been home to some of the great thinkers of history, such as the founder of psychoanalysis, Sigmund Freud.

▲ **Figure 4.27** Vienna University is one of the oldest universities in Europe.

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Transport

Vienna has four main forms of public transport. There is a subway (U-Bahn), a local train system (S-Bahn), a tram system and a bus network. The public transport system in Vienna is extensive and frequent. It is also less expensive than other major cities in Europe. A yearly public transport ticket costs only one euro per day. These low costs and the high levels of service that accompany them enhance the city's liveability.

▲ **Figure 4.28** Trams on Vienna's majestic boulevard, the Ringstrasse

Lifestyle and culture

Vienna has a long and proud history of art and culture. Some of the most celebrated composers and musicians are associated with Vienna, including Mozart and Beethoven. The city is home to many theatres and opera houses. Vienna is also home to many sporting teams who compete nationally and internationally. The long history, cultural pride and relaxed atmosphere of Vienna make it one of the most liveable cities in the world.

▲ **Figure 4.29** Vienna's State Opera House, on the Ringstrasse

ANALYSIS QUESTIONS

1 Create a Venn diagram so that you can see the similarities and differences between Brisbane and Vienna. You can use the information in this case study and your own online research.

2 Which features of liveability in Vienna could be used to improve the liveability in Brisbane?

Key concepts: place, space, environment, interconnection, sustainability, scale, change

HASS skills: questioning and researching, analysing, evaluating

What is a Venn diagram?

A Venn diagram is a great way to show similarities and differences between concepts. It usually has two or three circles that overlap each other. In the overlapping area, the similarities appear. In the separate areas, the differences are shown.

Unique to Brisbane

Common to both cities

Unique to Vienna
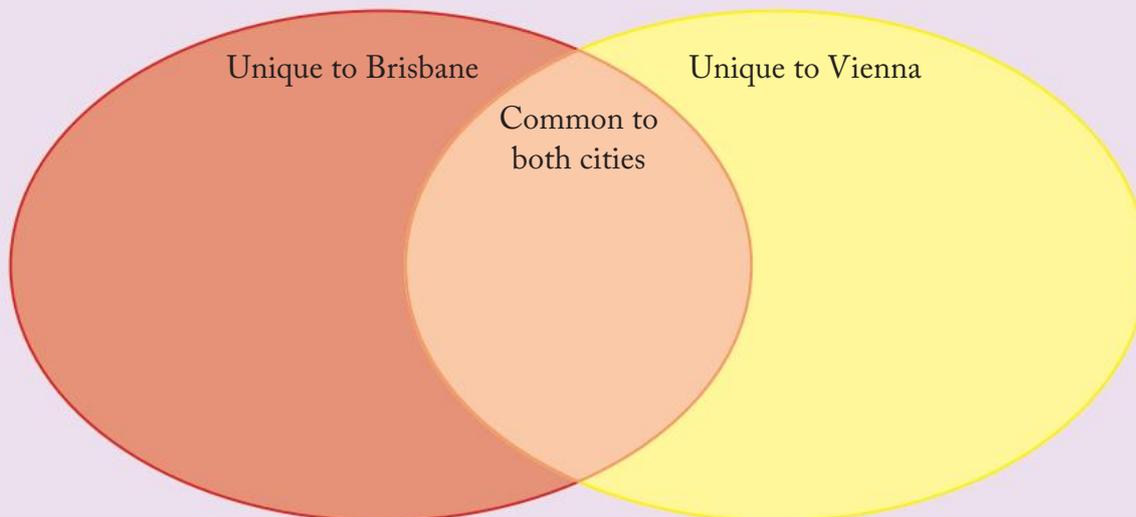
ACTIVITY 4.4

Mapping my local area

1 Using Google Earth, create an annotated map of your local area. Mark points of interest and features of liveability in the area.

2 Describe the distribution of your area's features. (Where are these features located? What does the space look like?)

Key concepts: place, space, scale   **HASS skills:** analysing

FIELDWORK 4.1

Conducting a survey of the local neighbourhood

Fieldwork in Geography consists of practical activities that are done away from your classroom at school. It can involve a range of activities, including: observing, questioning, planning, collecting, recording, evaluating, representing, analysing, concluding, communicating, reflecting and responding.

In this fieldwork task, you will visit your neighbourhood and answer some questions. These questions will form a class survey about the local neighbourhood. Here are the steps to take.

1 As a class, discuss the criteria to make sure that you understand what each criterion is asking you to look for.

2 Complete the survey form, based on the suburb you live in.

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3 Compare your completed survey with people in your class who live in the same area as you.
4 Compile your survey results for your suburb and identify the top five features of liveability in your area.
5 In a small group, make a poster that advertises these features of liveability for your local area.

Criteria	Score: 1 Very poor 2 Poor 3 Satisfactory 4 Good 5 Very good				
Environment					
• Average temperature	1	2	3	4	5
• Quality of town planning and design	1	2	3	4	5
• Availability of parks, gardens and green space	1	2	3	4	5
• Access to sports and entertainment facilities	1	2	3	4	5
• Landscaping and appearance of streets	1	2	3	4	5
Culture					
• Quality of recreational facilities	1	2	3	4	5
• Access to places of worship	1	2	3	4	5
• Diversity of restaurants and shopping	1	2	3	4	5
• Access to libraries and historical sites	1	2	3	4	5
Economy					
• Employment opportunities	1	2	3	4	5
• Affordable housing	1	2	3	4	5
• Access to goods and services	1	2	3	4	5
Infrastructure					
• Quality of roads	1	2	3	4	5
• Quality and availability of public transport	1	2	3	4	5
• Telephone and internet coverage	1	2	3	4	5
• Quality of housing	1	2	3	4	5
• Water, sewage and electricity availability	1	2	3	4	5
Education					
• Quality and availability of public schools	1	2	3	4	5
• Quality and availability of private schools	1	2	3	4	5
• Access to vocational and higher education facilities	1	2	3	4	5
Health care					
• Quality and availability of public health care	1	2	3	4	5
• Quality and availability of private health care	1	2	3	4	5
• Quality and availability of aged care facilities	1	2	3	4	5
Law and order					
Lack of petty crime (theft)	1	2	3	4	5
Lack of violent crime	1	2	3	4	5
Level of vandalism	1	2	3	4	5
Sense of personal security	1	2	3	4	5

▲ **Figure 4.30** Singapore has beautiful gardens and parks. Gardens by the Bay has large metal structures covered with greenery that connect a 'sky' path. Visitors can walk this path to gain a bird's-eye view of the surrounding trees.

Measures to evaluate a place's liveability

Several organisations conduct research on the liveability of cities throughout the world. Each year, these organisations rank cities based on set criteria. Some of the measures relate to physical infrastructure and features like transport, while other measures are more subjective and relate to people's perceptions, such as whether an area is safe. Geographers and urban planners use the data to evaluate the features of a place that enhance or degrade its liveability. This evaluation is then used in their planning decisions so that they can make changes to other towns and cities to improve their liveability.

How is liveability judged?

Judgements about a place's liveability are based on perceptions. A person's perception comes from their personal experiences, background and values.

Different people value different features of a space and are drawn to those features based on their preferences and values. This attraction to a feature is a pull factor. For example, young adults may be drawn to the bright lights and buzz of the city, and therefore choose to live and work there. They can then easily access the features of the city they like. Other age groups or families may value more space. They might choose to live further away from the city

▼ **Figure 4.31** Vancouver, in British Columbia, Canada, has frequently been ranked North America's most liveable city.

▲ **Figure 4.32** Santiago, Chile, with the Andes mountains visible in the background

> **tangible** things that you can physically see and touch
>
> **intangible** something that exists but you cannot see or touch it

so that they can access more open areas, such as parks, bush walks and other natural features. While these people's daily travel to their jobs may be longer, they have the space and the lifestyle that they value. People judge the liveability of a place based on **tangible** factors like infrastructure and services, as well as **intangible** factors like safety and culture.

How is liveability measured?

Environmental, social and economic factors influence the liveability of a place. Liveability, or quality of life, is often measured by factors like access to freshwater, food, housing, transport, health care, education, and a safe and stable environment.

Mercer, one of several organisations that measures liveability, uses the following criteria to measure liveability in the Mercer Quality of Living Survey:

- stable and reliable government, legal and law-enforcement services
- economic and business environment
- availability and quality of medical services, health and hygiene (including sewage, waste disposal and levels of air pollution)
- education
- public services and transportation (including electricity, water, public transportation and traffic congestion)
- recreation, such as restaurants, theatres, cinemas, sports and leisure
- consumer goods, such as the availability of food and a range of other items
- housing, including rental housing, household appliances, furniture and maintenance services
- natural environment, including climate and records of natural disasters.

Mercer's 21st annual Quality of Living Survey in 2019 used this criteria to rank 231 cities. The cities in Europe, Oceania and North America generally ranked highly.

Cities were separately ranked according to personal safety, which included crime levels, law enforcement, personal freedom and media freedom. Australian cities all ranked within the top 50 for personal safety. Cities that ranked at the lowest in this area are in parts of the world that have ongoing violent conflict, such as Syria and Iraq.

Another organisation that studies liveability around the world is the Economic Intelligence Unit (EIU).

Every year, the EIU ranks 140 cities around the world. It measures over 30 different factors about each city, such as how good the education and health care are, how clean the water is, and if there is a lot of crime. Each city is then given a score out of 100, with a score of 1 being completely horrible to live in and 100 considered as being as good as it gets.

According to the EIU, the most liveable city in 2019 was Vienna. Vienna received a score of 99.1, while Damascus was the lowest-scoring city, with a score of just 30.7. Australia had three cities inside the top 10, including Melbourne (second, with 98.4), Sydney (third) and Adelaide (10th). Perth tied with Geneva in Switzerland for its number 14 ranking, scoring an overall liveability rating of 95.9 out of 100.

ACTIVITY 4.5

Research task

Do some online research to find the most recent reports from Mercer and the EIU on liveability. Then, follow these steps.

1. Select a liveability report.
2. Choose two environmental, economic and social measures used in the index.
3. Conduct research to compare a city in the top five with a city from the bottom five of your chosen index. Use the criteria that you selected in step two to make your comparison.
4. Create a presentation of your findings.

Key concepts: place, space, environment, change

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

▼ **Figure 4.33** Damascus is Syria's capital and largest city. The Syrian civil war threatens the safety of those who live there, as well as their access to essential services.

END OF SECTION REVIEW 4.3

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What were the highest- and lowest-ranking cities in the world in 2019 according to EIU?
2 Write the definition of a tangible liveability factor and an intangible liveability factor. Give one example of each.
3 How many of Australia's cities ranked in the world's top 10? Which cities were they?
4 Why do geographers and urban planners use data to evaluate the features of a place?

Interpret

5 What features make Perth number 14 of the most liveable cities?
6 Why is Damascus one of the world's least liveable cities?

Argue

7 What do you think we can learn from looking at the liveability of cities from around the world?

▲ **Figure 4.34** Do you think low traffic is a tangible or intangible liveability factor? What about well-maintained and safe roads?

Key concepts: place, space, environment, interconnection, sustainability, scale, change

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

4.4 The influence of accessibility to services and facilities on the liveability of places

FOCUS QUESTION

How does access to services and facilities affect the liveability of a place?

Access to facilities and services affects the liveability of a place. Adequate access needs to be available and affordable, and facilities and services need to be environmentally, socially and economically sustainable. This is so future generations can continue to live in the area. The quality of the environment also affects the liveability of a place.

Accessible facilities and services

Sustainable access to facilities and services enhances the liveability of an area for its residents. The availability and **affordability** of services and facilities acts as a pull factor by attracting more people to a place. This attraction leads to population growth.

Over time, Western Australia's population has grown, partially due to its pull factors. However, a lack of accessibility to services in rural and remote areas has often led to **rural–urban migration**. This means that people move from rural areas to live in cities.

To sustain regional centres, state governments are giving more power to local governments to run local services. This makes it easier for people in rural areas to access the services that they need, so that they don't feel the need to move to cities.

According to the *WA Tomorrow Population Report No. 11*, the population of Western Australia is predicted to increase by 2031. The forecast population could range between 3.1 million and 3.4 million even if the rates of mortality, fertility and migration were perfectly predicted. Moderate population growth was forecast to 2021, after which it was expected to increase to 1.61 per cent by 2031.

The increasing growth rate is due to a forecast increase in overseas migration.

Amazing but true …

In May 2004, the Australian Government announced a new maternity payment. This universal cash payment, which became known as the baby bonus, offered parents $3000 on the birth of a child.

This amount was subsequently increased in July 2006 and July 2008 to $4000 and $5000, respectively. However, the payment was eventually reduced to $3000 for a second or further birth from July 2013 and finally was removed altogether in 2014.

Overseas migration is currently below average for Western Australia after the mining boom. It is assumed that overseas migration rates will return to average levels in 2021. Past trends have shown fluctuating population growth in Western Australia. Births and net overseas migration indicated a positive effect on population change in the mid-1980s and the mid-2000s to 2013 when migration was strong. The increase in the baby bonus in 2006, which temporarily boosted the number of births, together with strong migration, saw population growth increase to 2.79 per cent during the last economic boom. Prior to this, from 1991 to 2006, there was a sustained period of lower growth of 1.5 per cent, attributable to lower levels of migration and births over that time.

affordability the ability to afford a service or attendance of a facility; for example, going to the doctor

rural–urban migration when people move from rural areas to urban areas, usually for better opportunities such as employment and education

Population change

	Population at 31 March 2020 ('000)	Change over previous year ('000)	Change over previous year (%)
New South Wales	8157.7	87.8	1.1
Victoria	6689.4	116.5	1.8
Queensland	5160.0	85.0	1.7
South Australia	1767.2	17.9	1.0
Western Australia	2656.2	39.6	1.5
Tasmania	539.6	6.0	1.1
Northern Territory	245.4	−0.4	−0.2
Australian Capital Territory	429.8	4.6	1.1
Australiaª	25 650.0	357.0	1.4

▲ **Table 4.1**   Annual population change by state and territory

a. Includes Other Territories comprising Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island.

ACTIVITY 4.6

Representing data in a line graph

Simple line graphs provide an effective way to show change over time. The graph here is an example of a line graph showing population change over time for Australia.

Population of Australia
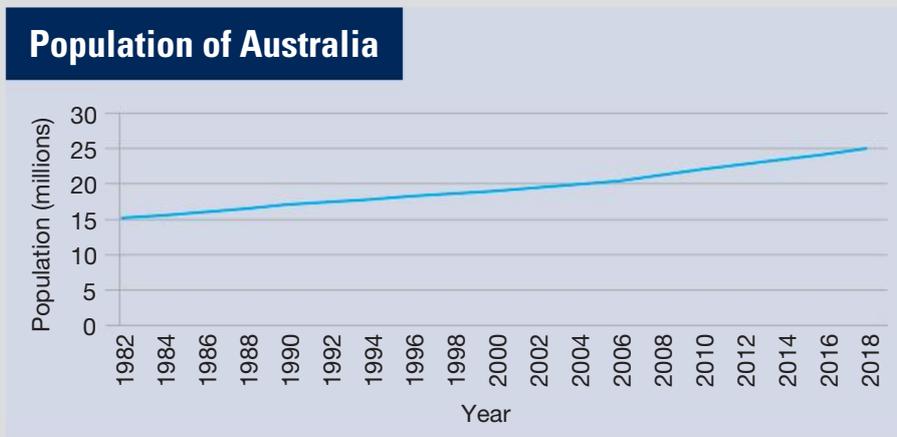
Create a line graph that shows Perth's population growth from 1984 to 2020, using the data in Table 4.2.

Resident population of Perth

Year	Estimated resident population (millions)
1984	1 020 000
1986	1 076 000
1988	1 134 000
1990	1 195 000
1992	1 249 000
1994	1 295 000
1996	1 343 000
1998	1 375 000

▲ **Table 4.2**   Estimated resident population in Perth from 1984 to 2020

Year	Estimated resident population (millions)
2000	1 407 000
2002	1 445 000
2004	1 488 000
2006	1 534 000
2008	1 625 000
2010	1 722 000
2012	1 803 000
2014	1 863 000
2016	1 926 000
2018	1 991 000
2020	2 042 000

▲ **Table 4.2** *(Continued)*

Instructions

To construct a line graph, follow these steps:

1 Draw a horizontal line. On the far left of the line, draw a vertical line upwards. The horizontal axis is called the '*x*-axis'. The vertical axis is called the '*y*-axis'. The point where the *x*-axis and *y*-axis intersect is called 'the origin'.

2 Mark in 19 points along the horizontal axis and 13 points along the vertical axis. These points should be equal in scale. Leave the first point (the origin) blank.

3 Below the horizontal *x*-axis, write in the progression of years from the beginning of your data set to the finish. Refer to Table 4.2 for the information you need.

4 To the left of the vertical *y*-axis, write zero at the origin and then work your way up each of the 13 points by 0.5 until you reach 2.5. This is enough to cover your smallest and largest *y*-values.

5 Neatly label each axis and give the graph a title.

6 Plot each value on the graph by creating a dot where the population data meets the year. For example, where the data on the left meets 1.2, measure across to where this lines up with 1984 and mark the spot with a small dot.

7 When all the data have been marked on the graph, join the points with a continuous hand-drawn curve.

8 Now stand back and examine your line graph. What does it tell you about population growth in Perth?

Key concepts: place, space, scale, change

HASS skills: analysing, evaluating

Classifying settlements

Settlements are usually classified as either *rural* or *urban*. Rural settlements are found in the countryside and have fewer than 10 000 residents. They are often spread out. This geographic distance and low population often makes it difficult for governments and businesses to provide services and facilities. Urban settlements have more than 10 000 residents and are often more compact. There is usually better access to services and infrastructure in urban areas.

What settlements need

For a settlement to function effectively, residents need access to services like clean, fresh water. Water is vital to a settlement, which is why so many cities are located close to major rivers. As modern cities grow, the people that live in them need access to a variety of services and infrastructure. This includes **sanitation**, housing, adequate and affordable food, employment and health care. Residents also need to feel connected. Transport plays a vital role in connecting people and places. Public transport gives people the ability to go to different places and access services, which is especially important for those who do not have access to private vehicles.

sanitation the system for taking dirty water and other waste products away from buildings to keep places clean and protect people's health

urban sprawl the gradual spread of cities into previously rural areas due to population growth

Urban sprawl

As more and more people move to cities, **urban sprawl** often occurs. This is where a city starts to spread outwards. The outskirts of cities usually have low-density housing. These areas of lower-density buildings often have design features that encourage car dependency, which limits access for those without vehicles.

ACTIVITY 4.7

Spatial data interpretation activity

This activity explores the concept of urban sprawl and the growth of cities.

1 Review the maps and the changes that have occurred in some of the world's megacities by searching online for 'The age of megacities ArcGIS' and clicking on the link.

2 Choose one location and explain how the distribution of the city has changed over time.

Key concepts: place, space, scale, change   **HASS skills:** analysing, evaluating

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population density a standard measurement of people per square kilometre, which can be calculated at different scales (suburbs, cities, countries, regions)

megacity a city with 10 million or more residents

Population density

Population density refers to the number of people per square kilometre. This can be calculated for a small space, a city, a country or a region. Population density is one of the most important aspects of urban planning. Urban planners use information about a population to make decisions on future services and infrastructure. Population density determines the types of dwellings that can be constructed in an area and the services that are provided. If density is low, then services are sparse and less efficient. If density is too high, an area can become overcrowded and uncomfortable. A well-planned urban area usually has a mixture of housing, commercial and industrial uses.

High-population densities are a major feature of megacities. A **megacity** is a city with a population of 10 million people or more. Megacities often have major social and economic pull factors, such as housing, education and employment. These factors have led to rural-urban migration, which is also a phenomenon known as urbanisation. Currently, more than half of the world's population lives in an urban area. This urbanisation can sometimes lead to improvised settlements, known as slums. Services can become difficult to deliver in these areas and so living standards are often poor.

ACTIVITY 4.8

Comparing images

Look at Figures 4.35 to 4.38 and choose which images are good examples of:

1 high-density living

2 low-density living

3 a slum

4 a megacity.

Some pictures may fit into more than one category.

▲ **Figure 4.35** Shanghai, China

▲ **Figure 4.36** New York City, the United States

▲ **Figure 4.37** Rio de Janeiro's Rocinha, the largest shanty town in South America

▲ **Figure 4.38** Húsavík, Norway

Key concepts: place, space, scale   **HASS skills:** analysing, evaluating

ACTIVITY 4.9

Calculating population density and interpreting data

The population density of an area is calculated by dividing the total population by the total land area. Use the equation here to calculate the population densities for the countries provided in Table 4.3. Copy and complete the table with your calculations. Then, answer the questions that follow.

$$Population\ density = \frac{Total\ population}{Area\ in\ square\ kilometres}$$

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Calculating population density

Country	Population	Land area	Population density
Spain	46 723 749	499 564	
Brazil	209 469 333	8 358 140	
India	1 352 617 328	2 973 190	
Bangladesh	161 356 039	130 170	
Australia	24 992 369	7 692 020	
United Arab Emirates	9 630 959	71 020	
Mexico	126 190 788	1 943 950	
Iran	81 800 269	1 628 760	
United Kingdom	66 488 991	241 930	

▲ **Table 4.3** Population and land area of selected countries

1 Which country has the highest population density?

2 Compare Australia's population density to other countries listed here. Why is Australia's population density so low?

3 Calculate the population density of your classroom by using the following steps.

   a Measure the dimensions of your classroom using a tape measure and determine the number of square metres of the room. (For example, if a room is 6 metres wide and 6 metres long, it is 36 square metres.)

   b Count the number of people in the class.

   c Divide the number of people by the size of the classroom to get the classroom population density.

Key concepts: place, space, interconnection, scale   **HASS skills:** analysing, evaluating

CASE STUDY 4.3

Mumbai's population density

Read the information about Mumbai provided to you and then answer the questions that follow.

Mumbai is a city of extremes. It is ranked as the 12th-richest city in the world and there is a large billionaire population. At the other extreme, however, more than half of the city's population lives in improvised settlements (slums) that lack clean air and water, as well as basic electricity and transport.

Mumbai has the largest slum population in the world. This has created a unique economy. The wealthy own prosperous businesses and live in high-rise apartments, but the poor are often craftspeople and artisans, who live in one-storey buildings that are poorly maintained and built closely together. This means that adequate services are difficult to provide to those living in these slum areas and they have a lower standard of living.

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▲ **Figure 4.39** An aerial view of Mumbai and the Dharavi slums seen from a plane

▲ **Figure 4.40** A street view of the Dharavi slums

ANALYSIS QUESTIONS

1 Examine the image of the slums shown in Figure 4.39.

   a What do you notice about the population density?

   b How do you think the slums and the CBD are interconnected?

2 Examine the poverty shown in the street view of the Dharavi slums (Figure 4.40).

   a What do you *notice* about the sustainability and liveability of living in a Mumbai slum?

   b What do you *think* about the sustainability and liveability of living in a Mumbai slum?

   c What do you *wonder* about the sustainability and liveability of living in a Mumbai slum?

Key concepts: place, space, interconnection, sustainability

HASS skills: evaluating

Urban modes of transport

To enhance the liveability of an area, accessibility to other locations, services and facilities is vital. Accessibility is often best provided through roads and public transport. Sometimes the cost of a car can be unaffordable and, at other times, people make the choice not to have a car. Some social groups, such as migrants, international students, the elderly and younger people, rely heavily on public transport to feel connected and to move around.

To ensure sustainability and **equity**, large settlements need to provide public transport options, such as buses, trains, ferries and trams.

▲ **Figure 4.41** This photograph from 1901 shows a steam tram in Sydney.

▲ **Figure 4.42** A tram moves along George Street towards Randwick on 14 December 2019. Restoring trams to Sydney has been a controversial project with the projected costs in late 2019 estimated to be A$2.9 billion.
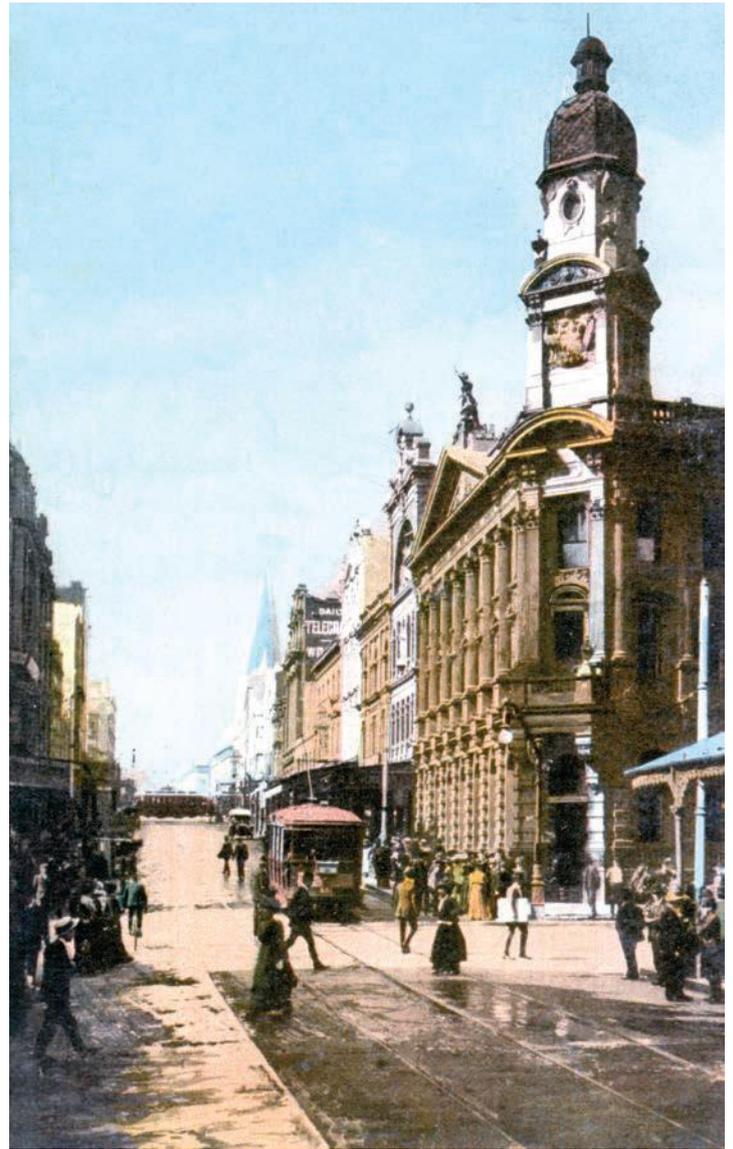
▲ **Figure 4.43** Sydney used trams until the early 1960s, and reintroduced them in 2019.

Trams are an iconic feature of Melbourne. Some cities in Australia have recently begun introducing or reintroducing the use of trams or similar transportation. For example, Brisbane stopped its tram service in 1969 amid much public outcry, but a new rapid transit system is planned to open in 2023. The Gold Coast introduced a new light-rail system to service the city in 2014. And Sydney halted its use of trams in 1961, but as of 2019, the city has reintroduced them by using the old tram network. These enhancements of the public transport infrastructure demonstrate change over time.

equity all people have equal access to resources that meet their basic needs

Rural health care and education

Large-scale services are sometimes difficult to provide to rural communities because these areas are often geographically spread out and the populations are small. However, advancements in technology have improved the effectiveness of providing services to rural areas. For example, health-care providers are improving health care in these locations through technology. Increasingly, doctors are consulting with patients in rural and regional areas through electronic communications. Some rural and regional hospitals are also using nurses and other health-care professionals to consult with patients rather than doctors. For more critical cases, transport and accommodation are provided at a very low cost to rural and regional residents so that they can access the treatment services in larger urban areas.

Rural areas have also seen improvements in accessing educational services. Because of digital technology, students who live in rural and regional areas now can access distance education. Previously, students accessed lessons via radio communication. But, as technology improves, students are increasingly able to access their lessons online and interact with their teachers using live streaming. Students are also better able to share their work with their teacher and collaborate online with other students.

Additional content available: Recognising spacial patterns – public transport in Melbourne

CASE STUDY 4.4

Vanuatu

Read the information about sanitation in Vanuatu and then answer the questions that follow.

Sometimes, international groups help developing countries increase their liveability. For example, the United Nations, World Health Organization and international aid agencies are working to improve the sanitation in rural and regional areas in less economically developed countries.

In the Ambae Island communities of Vanuatu, a project has been set up to help community-based businesses produce and sell sanitation products. The businesses create products like toilets and hand basins to sell to people in the community. Not only is this improving the sanitation and health of local communities on Ambae Island, it is also creating jobs and economic growth. In turn, this is leading to the improved liveability of the people who live on Ambae Island because they have increased access to sanitation.

ANALYSIS QUESTIONS

1 Name some of the organisations that are helping people on Ambae Island increase their standard of living.
2 How are these organisations assisting Vanuatu? Explain the effects of this help by using information from the case study.

Key concepts: environment, sustainability, change

HASS skills: questioning and researching, evaluating

END OF SECTION REVIEW 4.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What is urban sprawl? How have urban planners tried to reduce this?

2 Define population density. Why is it important?

3 How are health care and education becoming more accessible to people living in rural areas?

4 What is equity? How does it apply to urban planning?

Interpret

5 Mumbai is the Indian city with the most 'high net worth individuals' (HNWIs). A HNWI is a person who has assets over US$1 million. Refer to Figure 4.44, which shows the neighbourhoods in Mumbai with a high concentration of HNWI, then answer the following questions.

   a Describe the distribution of HNWI concentration in Mumbai. To answer this, make sure that you identify which neighbourhoods have high and low concentrations of HNWI and describe where these are located.

▲ **Figure 4.44** Concentration of HNWI in Mumbai

   b Based on the map, why do you think many millionaires choose to live where they do in Mumbai?

   c Choose one of the wealthy neighbourhoods and research what makes this neighbourhood appealing to millionaires.

Argue

6 'Accessibility needs to be considered by urban planners.' Do you agree with this statement? Give your reasons for your point of view.

HASS concepts: place, space, interconnection, change

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

4.5 The influence of environmental quality on the liveability of places

FOCUS QUESTION

How does environmental quality affect the liveability of a place?

Quality of the environment

Water and air quality are essential factors in determining the liveability of a place. Access to clean water and air improves the health of a population as well as the natural environment. Water and air pollution can severely impact the health of residents.

Many cities are built close to river systems to take advantage of the resources of the natural environment. This proximity to a river system means that there is consistent access to fresh flowing water for the population. The river is also useful for transportation to ship people and goods.

Sustainable environments

Designing a place to maximise the use of renewable resources is important. If this is done, the sustainability and liveability of a place increases.

The energy and structures used in cities tend to attract and produce heat. This

▲ **Figure 4.45** An example of urban agriculture in Paris, France, where the rooftop is being used to grow vegetables

generation in heat is known as a heat island. To reduce the effects of heat islands, major cities in Germany have introduced green roofs. A green roof involves partially or completely covering a roof with vegetation. A green roof creates insulation, provides habitats for local species, absorbs carbon dioxide and helps to cool air temperatures. In 2014, Germany had 86 million square metres of rooftop vegetation. The use of green roofs in Germany has been so successful that they are now being used in designs in other parts of the world.

In Santander, Spain, smart technology is already making the city more efficient: rubbish bins send alerts when they are ready to be emptied and streetlights automatically dim when no one is on the street.

Air pollution has become a larger problem as cities become more busy. This has severe impacts on people's health, causing more premature deaths than smoking cigarettes. In Oslo, the capital of Norway, many initiatives are reducing air pollution. 'CityTrees', which are park benches covered in a living wall of moss, absorb pollution. One CityTree cleans the air more effectively than 275 real trees. Oslo has also added 1000 charging stations to encourage electric vehicle use, and its buses are powered by biogas, which is produced from city sewage.

In this topic, we have examined some of the ways that environmental quality, as well as access to services and facilities, affect the liveability of a place.

In the next activity, we use a topographic map to examine the distribution of human features (such as services and facilities) and natural features (such as vegetation) in a town.

We can then use this information to think about how the distribution of characteristics in a space can influence the liveability of a place and consider how liveable this town would be for the local residents.

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 4.1

Reading and interpreting topographic maps

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You can also refer to the 'Guide to using topographic maps' in the Interactive Textbook.

In this activity, you will practise the geographic skill of reading a topographic map, as well as look closely at the interconnection of human-made and natural environments. Look at the topographic map for the Western Australian city of Albany (Figure 4.46 on page 188) and answer the queries that follow. You can also go to the digital versions of the book to zoom in on the image.

Topographic maps use *contour lines* to show the shape of the Earth's surface. Contour lines allow us to know the heights of mountains, the ocean's depths and how steep an area is, just by reading a map. Contour lines are often represented on a map by thin brown lines that join points of equal elevation. Some of the lines have a number written on them. These numbers represent the metres (or feet) above or below a certain point (usually sea level). The closer the contour lines on a map, the steeper the terrain. This is because the elevation is changing a lot in a short distance. The contour *interval* is what we call the difference in elevation from one contour line to the next. Because not all contour lines have the elevation written on them, we can use the contour interval to work out the elevation of the unnumbered lines.

Topographic maps also have grid lines. These grid lines can help us locate and explain where different features of the map are found.

We can find larger features, such as Lake Seppings, by finding its area reference (AR). An AR is made up of four numbers. The first two numbers are called eastings. These numbers run along the top and bottom of the map. The numbers increase in an easterly direction along the map. The following two numbers are called northings. We find these numbers along the side of the map. These numbers increase in a northerly direction along the map. To find the AR of Lake Seppings, we first look to the easting number to the left of the lake. In this case the number is 60. We then find the northing number directly below the majority of the lake. This makes up our second two-digit number, 64. The AR for Lake Seppings is therefore 6064.

To find smaller features, we need to be more specific and use grid references (GR). A GR has six numbers. The first three numbers of a GR identify the easting, and the following three identify the northing. The first two numbers of the easting and northing are easy to determine as they are the same as the AR. For instance, the AR of the brewery on Brunswick Road is 5762.

To determine the numbers of a GR, imagine that each AR square has 10 equally spaced horizontal lines and 10 vertical lines running through it. Each imaginary line is numbered 1 to 10. If you want to pinpoint something in an AR, you use the imaginary numbers of

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the horizontal and vertical lines to indicate where the feature is. For example, the brewery on Brunswick Road at AR 5762 is about 8 imaginary lines across and 5 upwards, which means its GR is 578625. Notice that the GR is the third and last numbers.

Symbols are often used on maps to represent the features of a map. These symbols are found in the *legend*. They often try to look similar to the feature that they are trying to represent. For example, can you find the symbol for a lake in the legend? Can you find a lake on the topographic map? What is the AR or GR of this lake?

1 Identify one natural characteristic located at AR 6164.

2 Identify the type of community facility located at AR 6064.

3 Identify the natural characteristics located at:

   a GR 586628

   b GR 605623

   c GR 607627.

4 Identify the human characteristics located at:

   a GR 584634

   b GR 606633

   c GR 574625.

5 Choose one of the natural and one of the human characteristics that you identified above and explain how each of these might improve or reduce the liveability of Albany.

6 a Using the scale on the map, determine roughly how large the city of Albany is (as shown on the map).

   b The population of Albany is approximately 38 000 people. Do you think this is likely to be a high- or low-density place?

7 What assumptions could you make about the liveability of this city, based on the services and infrastructure this location has to offer? What may be some of the benefits and drawbacks of living here?

8 Use the contour lines in and surrounding Albany to read the topography. Is the topography of the city relatively flat or hilly?

9 What is the elevation of the highest point that you can find in this city?

10 Identify one benefit and one drawback of living in a place with this type of topography.

11 The closer the contour lines on a map, the steeper the terrain. Explain why this is the case.

Landgate Topographic Map Series - 2014

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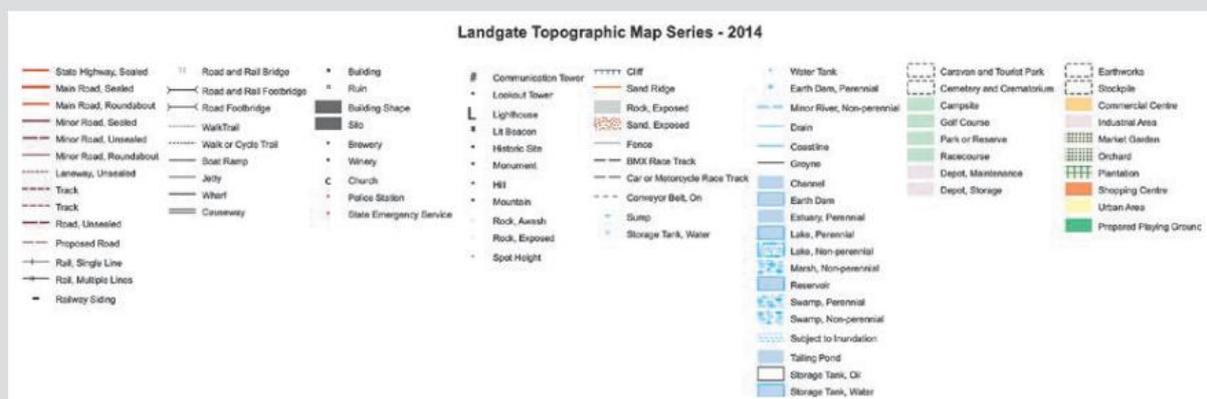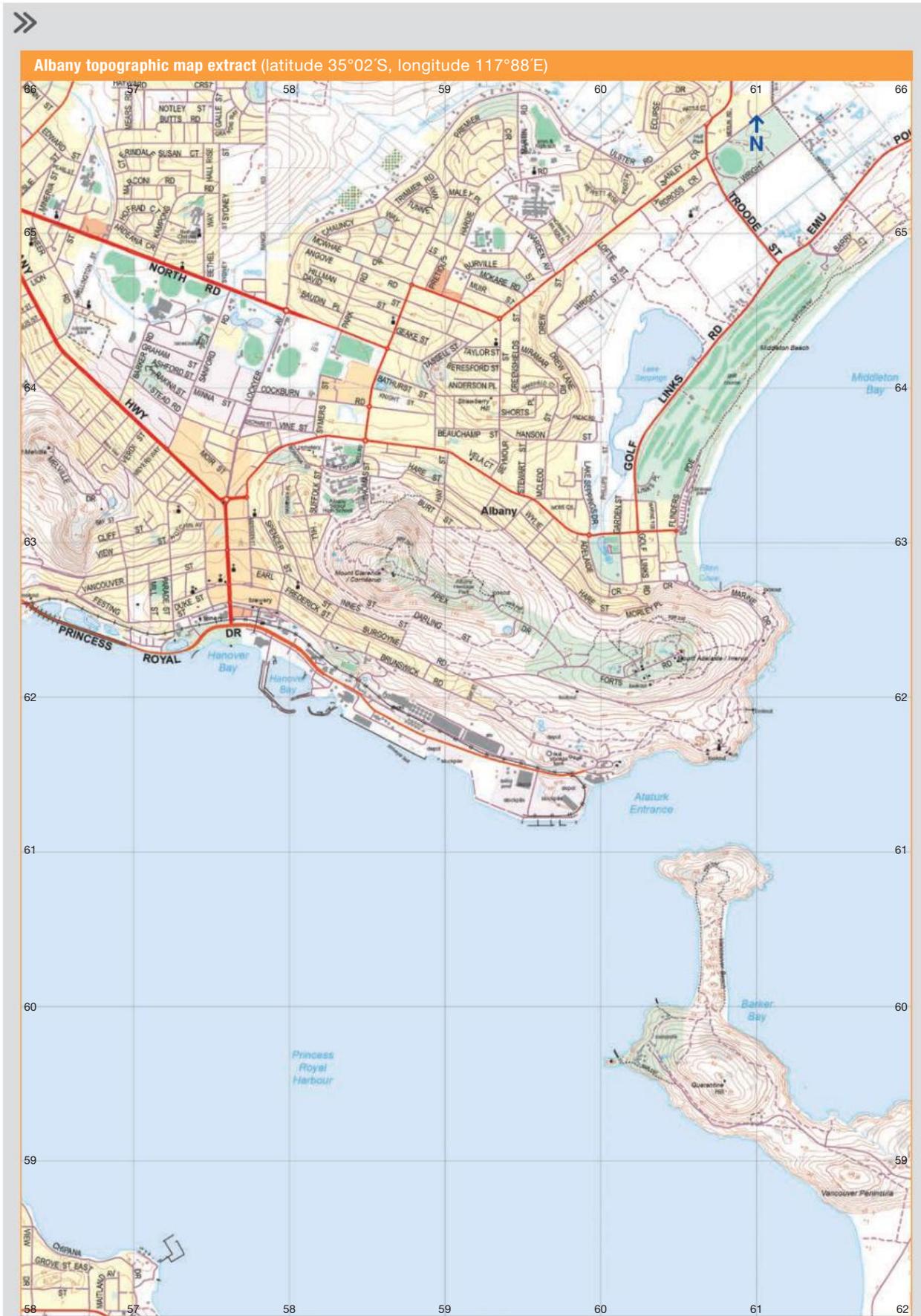
▲ **Figure 4.46** A topographic map of Albany, Western Australia (legend on previous page)

Key concepts: place, space, environment, scale, change

HASS skills: analysing, evaluating

END OF SECTION REVIEW 4.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Why is the quality of the environment an essential factor for determining liveability?

2 What is sustainability?

3 How are sustainability and liveability complementary concepts in urban planning?

Interpret

5 How do green roofs reduce the effect of heat islands?

6 Observe Figure 4.47 showing a current section of the A7 Motorway in Hamburg, Germany.

   a Compare and contrast the features of the urban environment shown.

   b Predict what might become of the motorway.

   c Research 'Covering the A7 in Hamburg'. Outline how this initiative will improve the liveability of the area.

▲ **Figure 4.47** Hamburg's A7 motorway, showing the plan to build a green canopy over sections of it

Argue

7 'Innovation is the key to designing sustainable and liveable cities.' Do you agree with this statement? Give your reasons for your point of view.

⚙️ **Key concepts:** place, environment, interconnection, sustainability, change

📋 **HASS skills:** questioning and researching, analysing, evaluating, communicating and reflecting

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4.6   The strategies used to enhance the liveability of places, especially for young people

FOCUS QUESTION

How can the liveability of a place be increased?

Additional content available: Social connection and community identity

Sustainability and interconnections are increasingly important features of liveability. Urban planners are developing innovative ways to improve the liveability of local areas. This section contains case studies of innovations that show what types of factors enhance the liveability of a place.

CASE STUDY 4.5

Enhancing liveability for young people in Western Australia

Read the information here and then answer the questions that follow.

According to its website, the Youth Affairs Council of Western Australia (YACWA) is the peak non-government youth organisation in Western Australia. It operates primarily as a human rights organisation that seeks to address the exclusion of young people in a rapidly changing society.

Its continued vision for Western Australia is one that celebrates and engages young people in all aspects of the community. Its role is to strengthen the trust, cooperation, collaboration, professionalism and voice of the non-government youth service sector to better serve the young people of Western Australia.

YACWA aims to provide a united, independent and active advocate for the non-government youth sector and young people that is both supported and respected by the sector and the wider community. Focusing on young people's varied needs at local, state and federal government level, YACWA works to engender and enhance positive community attitudes towards young people.

YACWA provides a voice and acts as a role model for the definition and demonstration of youth participation. Its work is governed by four guiding principles – respect, equity, integrity and the celebration of diversity.

ANALYSIS QUESTIONS

Visit the YACWA website and answer the following questions.

1   Identify an issue related to liveability for young people in Western Australia. (For example, an issue in education, mental health or political participation.) Read through the information provided on the website and find further information from other sources about the issue.

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2 Design an advertising or awareness-raising campaign for young people in Western Australia about the issue you have identified. Make sure you answer the following questions:

   a What is the issue?

   b Why is it an issue?

   c What can be done about it?

   d What message would you like to send in your campaign?

   e How would you communicate your message (print advertising, radio, social media)?

3 Create a presentation that explains your campaign.

Key concepts: place, interconnection, change

HASS skills: questioning and researching, evaluating, communicating and reflecting

CASE STUDY 4.6

Pontevedra

Read the information about Pontevedra and then complete the questions that follow.

▲ **Figure 4.48** The city of Pontevedra

Pontevedra is a city in the north-west of Spain in a province known as Galicia. The city has a long history, stretching back to the Roman Empire. During the medieval period, Pontevedra became an important trading hub in the region. The city boasted a large and secure seaport. During the sixteenth century, sediment from the river began to build up along the harbour, making it unusable for large ships. When this industry declined, so did the population. In 1833, Pontevedra became the capital of its province. This revived the city, which currently has a population of approximately 83 000 people.

▲ **Figure 4.49** Pontevedra, Spain

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walkability a measure of how easy it is for a pedestrian to walk around

commercial building a building that is used for business activities

residential building a building that is used for private activities

The city banned all non-essential motor vehicles in its medieval centre in 1999. Pontevedra is known as one of the most pedestrianised cities in Spain and has won international awards. The city has a plan called the Metrominuto. The Metrominuto is a map that marks the distances between key locations in the city and the pedestrian travel-time between them. This pedestrian-friendly environment follows the examples of Bruges, Copenhagen and Amsterdam. The Metrominuto, combined with the vehicle ban in the centre of the city, has drastically improved the **walkability** of the city.

▲ **Figure 4.50** The old town of Pontevedra has many narrow streets.

Before the ban in 1999, the city centre was in decline because there was crime and antisocial behaviour, pollution and traffic. However, since the vehicle ban, the city centre has been revived. Crime has declined, and air and noise pollution are no longer a problem. Businesses within the area have benefited from more pedestrians and it is a more friendly environment. Therefore, the vehicle ban has improved liveability in the city.

ANALYSIS QUESTIONS

Use Google Earth or Google Maps to conduct a virtual field trip around Pontevedra. Then, answer the following questions.

1 Open Google Earth or Google Maps and search for the following location: Ponte do Burgo. Use Street View to explore the area around this intersection and create a field sketch of the bridge from Avenue de Buenos Aires.

2 Search for Praza Ourense, Pontevedra, and use Street View to explore the area. Describe the types of built features that are in the location. Are there mostly **commercial buildings** or **residential buildings**, or a mix of the two? Are the buildings high, medium or low density? What social, economic and environmental features are there?

Key concepts: place, space, scale, change   **HASS skills:** analysing, evaluating

DEVELOPING GEOGRAPHICAL CONCEPTS AND SKILLS 4.2

Creating a field sketch

To construct a field sketch, follow these steps.

1 Study the scene or photograph you want to draw and select the features to be sketched. It may be helpful to use a viewing frame.

2 Using a soft pencil (it makes it easier to erase mistakes), draw a frame the same shape as the scene you wish to sketch on a blank piece of paper.

3 Divide the scene you wish to sketch into three parts: the foreground, middle distance and background as shown in the figure.

> Background
>
> Middle distance
>
> Foreground

4 Sketch in the main features or lines of the scene. This may include the horizon and other prominent landform features.

5 Mark in other prominent features or lines, such as roads, railway lines, rivers or powerlines. These will provide reference points for the addition of detailed features.

6 Add detail if appropriate. Details may include buildings, trees and fences.

7 Use shading and colour to highlight the key features of your field sketch. Avoid making your sketch too cluttered.

8 Label the main features shown in your sketch.

9 Give your field sketch a heading and note the date of the observation.

10 Highlight your frame with a black felt-tipped pen.

Key concepts: place, space, scale   **HASS skills:** analysing

Urban consolidation and renewal

To improve sustainability and reduce urban sprawl, many cities are turning to **urban consolidation** and **urban renewal**. Urban consolidation is the idea that if planners increase the density of housing within a metropolitan area, the fringe areas of the city will not continue to sprawl as quickly. This can be achieved by subdividing established blocks of land – for example, knocking one home down and replacing it with three units or building multi-storey apartment buildings. Urban renewal is often large-scale redevelopment projects carried out by either government or private businesses. These projects often address areas that are heavily run-down or require rejuvenation in order to be more sustainable. One major example of these urban processes in Western Australia is the development at Elizabeth Quay.

Additional content available: Case study: Fishermans Bend, Melbourne

urban consolidation keeping residential development and population growth restricted to the urban areas that already exist

urban renewal the improvement, or sometimes the replacement, of buildings in a city

▲ **Figure 4.51** Elizabeth Quay

CASE STUDY 4.7

Elizabeth Quay, Perth

Read the information about Elizabeth Quay. Then, carry out further online research to answer the questions that follow.

Elizabeth Quay is a major project for urban renewal and urban consolidation in Perth. The development is expected to be completed in 2026 and is set around a 2.7-hectare inlet. At completion, the area will create a new entertainment and leisure precinct for Perth city containing new multi-storey hotels, apartments and office spaces. The construction sites at present guarantee an average of 500 jobs across Western Australia each year. After completion it will provide further jobs in industries such as transportation, hospitality and tourism. Elizabeth Quay is located on the foreshore of the Swan River and will connect the Perth CBD to the riverfront.

ANALYSIS QUESTIONS

1 Explain where Elizabeth Quay is in relation to the Perth CBD.

2 What are the aims of the Elizabeth Quay development?

3 How will Elizabeth Quay be sustainable? Create a table to identify features that are economic, social and environmental.

4 Explain the positive and negative impacts the design of Elizabeth Quay will have on its liveability.

Key concepts: place, space, environment, sustainability   **HASS skills:** analysing, evaluating

END OF SECTION REVIEW 4.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What does it mean for an area to be pedestrian friendly?
2 What sorts of services does YACWA offer?
3 What is urban consolidation?
4 How is Elizabeth Quay an example of urban renewal?

Interpret

5 Why do you think crime decreased when vehicles were banned in Pontevedra?
6 To what extent do you think Elizabeth Quay is sustainable?

Argue

7 Identify and evaluate the features of liveability in Elizabeth Quay. Justify your argument.

Key concepts: place, space, environment, sustainability, scale, change

HASS skills: analysing, evaluating

4.7 Conclusion: why does it matter?

People are on the move and will always be on the move. One day, you may find yourself moving to a new house, to another town or even abroad. We must understand the motivations of movement – economic, environmental, political or social – because it will always be a topical issue. Even as you read this, there will be people applying for a visa to enter Australia or braving the open sea to come to a better life here. Our understanding of this topic allows us to be more tolerant of and respectful to migrants who add value to our multicultural society.

If people are generally seeking more liveable places, this identifies a common problem for the world. How can we design future places to accommodate these growing levels of migration without compromising the sustainability of the location? Perhaps you can think of ways to design future liveable cities. Geography is a field of action, not just study.

4.8 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online, or via a downloadable checklist.

Analysis

Making thinking visible

I used to think that place and liveability meant …
Now I think that place and liveability means …

This exercise in visible thinking asks you to connect, extend and challenge the knowledge you had prior to reading this chapter with what you have learned.

How does what you know about place and liveability *connect* to what you have learned in this chapter?

Which new ideas in the chapter *extend* or push your thinking in new directions?

What concepts in the chapter *challenge* or confuse what you used to think about place and liveability? Do you have any questions about what you have learned?

Inquiry

Research task

A tale of two cities: Masdar and Melbourne

Visit the Interactive Textbook to access a detailed research task that compares two different places and their approaches to enhancing liveability.

Problem-solving task

Create a liveable community

A new community is being developed. It is your task to plan this new community using the knowledge you have gained from this chapter.

Search for 'If the World Was Only 100 People' on YouTube and watch the video to understand the characteristics of the community you are creating.

With a partner or a group, design a community that will accommodate these people. What you create should consider the following key concepts:

- liveability
- accessibility
- walkability
- sustainability

- community
- place
- social connection
- safety.

You should ensure that you include infrastructure that supports health care, schools, roads, recreation, open spaces and anything else you think is essential for liveability.

After you have designed your liveable area, create an aerial view of the place on an A3 paper and label the key features.

Key concepts: place, space, environment, interconnection, sustainability, scale, change

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

▲ **Figure 4.52** Extreme poverty and extreme wealth live side by side in Mumbai.

Making connections: Geography and the other HASS topics

Geography has many connections with other subjects in the Humanities. Have you considered how what you have learned about water in the world and place and liveability relates to the other topics you will cover this year? Here's a sample:
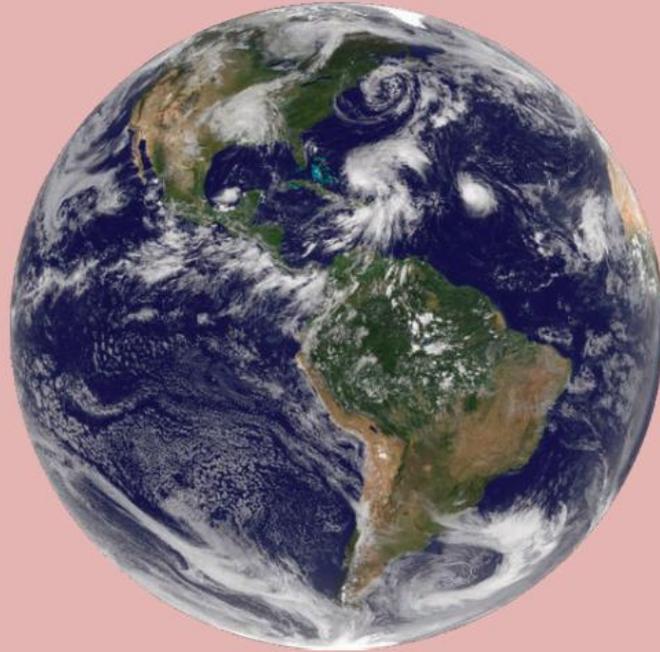
Civics and Citizenship

Water and the government

Which level of government is responsible for the management of water? Investigate the possibility that all levels manage water resources to some degree.

- Local city council or shire: Is stormwater managed in your area? Are there specific guidelines for rainwater or bore water use? Are there safety requirements for recreational water use? Visit your local government website to find out.
- State: Identify the state government department responsible for managing water in Western Australia. How does this department manage water in urban, rural and remote areas? Visit https://water.wa.gov.au to find out.
- Federal: Why would the federal government provide leadership in the management of the Murray-Darling Basin? Investigate the location using a map or research the Water Act 2007 for further information.

Planning liveable places

Government plays an important role in the planning of places. It does this through town planning. Visit your local city council or shire website to see if your area has plans for new housing estates, renewal of streetscapes or consolidation projects, etc. Can you identify how these plans may improve the liveability of the area? Perhaps you can draw your own city plan to suggest changes to address liveability issues in your local area.

Economics and Business

The business of water

Bottled water is a lucrative business with increasing environmental ramifications. How has the bottled water industry responded to the demands of consumers in relation to:

- preferences for healthy and/or sports options
- environmentally friendly packaging
- being ethically sourced?

FIFO phenomena

The phenomena of FIFO (fly-in fly-out) workers in the mining industry have changed some remote and rural places. Consider the costs and benefits of using this type of work for the individual, the mining company and the mining towns.

The housing market

Real estate agents set an initial price for a property when it is placed on the market for sale. What factors determine the initial price of a property? How might the initial price change if demand does? Identify potential reasons for demand going up or down.

History

Water and ancient civilisations

Ancient civilisations often grew along water sources. Identify the major water body that these civilisations developed near: Egyptian, Greek, Roman, Indian and Chinese. How did each civilisation move water from the river to homes? Investigate whether any innovations were made.

Ancient civilisations valued water as it often represented life. Select one ancient civilisation and research whether there were significant beliefs, values or practices related to water. Summarise your findings as a fact sheet.

A sense of place – the Agora, Athens

The Agora in Athens is today an archaeological site, yet it was used for about 5000 years as an assembly, commercial and residential area. Many artist impressions exist of what it may have looked like. Research and investigate the purpose and design of the Agora. Create and annotate your own sketch of the Agora of Athens to identify the features that create a sense of place for the Greeks.
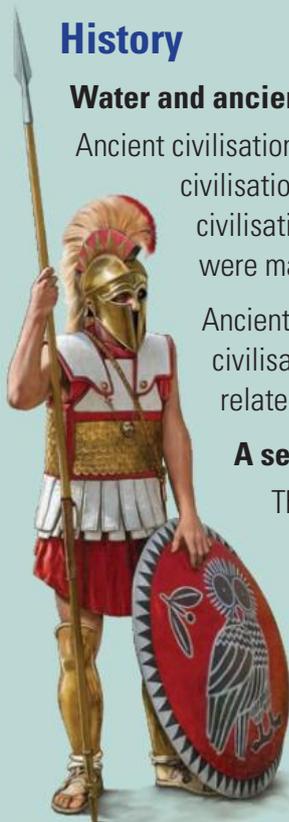
Part 4

History

What is History?

Have you ever wished that you could build a time machine and explore the glory of ancient Greece or the grandeur of ancient Rome? Well, in history, you can explore these ancient civilisations!

History is the study of the past. We study the past so we can better understand the present, and today's issues. History can answer questions like: Where did the first humans come from? What is the ancient past? What do historians and archaeologists do? What were the earliest human civilisations like? How did our ideas of government and democracy come about?

Events in the past may not be as simple as they seem. This is because events can be understood from different perspectives.

In fact, people often argue about what an event means. New discoveries are made all the time and can change what we know about the past. We will never know the 'truth' about what happened, but each new finding helps us get a better understanding.

The skills and knowledge that you gain in history will give you a new understanding of the world. You will learn how to find and understand historical sources. You will learn to think creatively and critically about information that you study. And you will come to your own conclusions about historical issues based on the evidence available. In the Western Australian Curriculum for Year 7 History, the ancient period covers history from the development of early human communities (from 60 000 BCE) to the end of late antiquity (around 650 CE).

Introducing historical concepts and skills

Historians study the past in order to discover and understand the lives of people who lived in civilisations that came before our own. They aim to get a picture of what everyday life was like, what the traditions, beliefs, values and customs of the time were and how those things impacted the operation of society on a social, political and economic level. In order to work effectively, an historian must make use of specific concepts to assist in gaining an understanding of the past and making connections to the world we live in today. The eight historical concepts are:

- **Sources** – refers to any written or non-written materials that can be used to investigate and provide information about the past.

- **Evidence** – is about the information obtained from sources that is valuable for a particular inquiry. Evidence can be used to help construct a historical narrative, to support a hypothesis or to prove or disprove a conclusion.

- **Continuity and Change** – refers to aspects of life or society that have remained the same or changed over a period of time.

- **Cause and Effect** – is used to examine the relationship between historical events or actions, where one event or action occurs as a result of the other.

- **Perspective** – is a person's point of view, the position from which they see and understand events going on around them.

- **Empathy** – is an understanding of the past from the point of view of a particular individual or group, including an appreciation of the circumstances they faced, and the motivations, values and attitudes behind their actions.

- **Significance** – is the importance that is assigned to particular aspects of the past (e.g. events, developments, individuals, groups, movements and historical sites).

- **Contestability** – occurs when particular interpretations about the past are open to debate, for example, as a result of a lack of evidence or different perspectives.

The different types of sources used in the study of history

A good detective is always looking for clues and historians do the same thing.

> **artefact** an object that is made by a person, such as a tool or a decoration; it is usually of historical interest

A historian's favourite kind of clue is a *primary source*. Sometimes these primary sources are **artefacts** (something you can touch, like a vase), sometimes they are documents (like a letter), and sometimes they are stories that have been handed down and told from generation to generation.

Secondary sources are also very useful to a historian. Secondary sources are things that were created after the event to help us to understand it, like a textbook, a book or a webpage. These sources can give us the opinions of other experts who have studied the same topic and what they think about events or peoples from that time.

People often have very different views of the same events, so primary and secondary sources are useful tools to help us form our own opinions. When we explain what we think happened in the past, we need to use primary and secondary sources to support our argument.
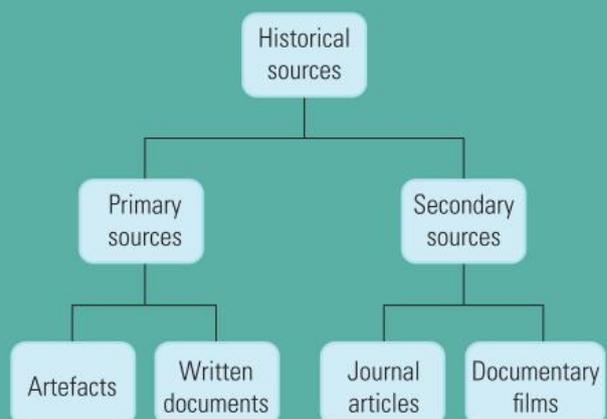
Historical overview: the ancient world

Out of Africa

Although there are different theories put forward by historians, fossil evidence suggests that the earliest humans (*Homo sapiens*) lived and evolved in Africa between 400 000 and 130 000 BCE. *Homo sapiens* migrated from Africa to Europe and Asia more than 100 000 years ago.

Stone Age cave painting of a horse, Lascaux, France

EUROPE

ASIA

AFRICA

INDIAN OCEAN

AUSTRALIA
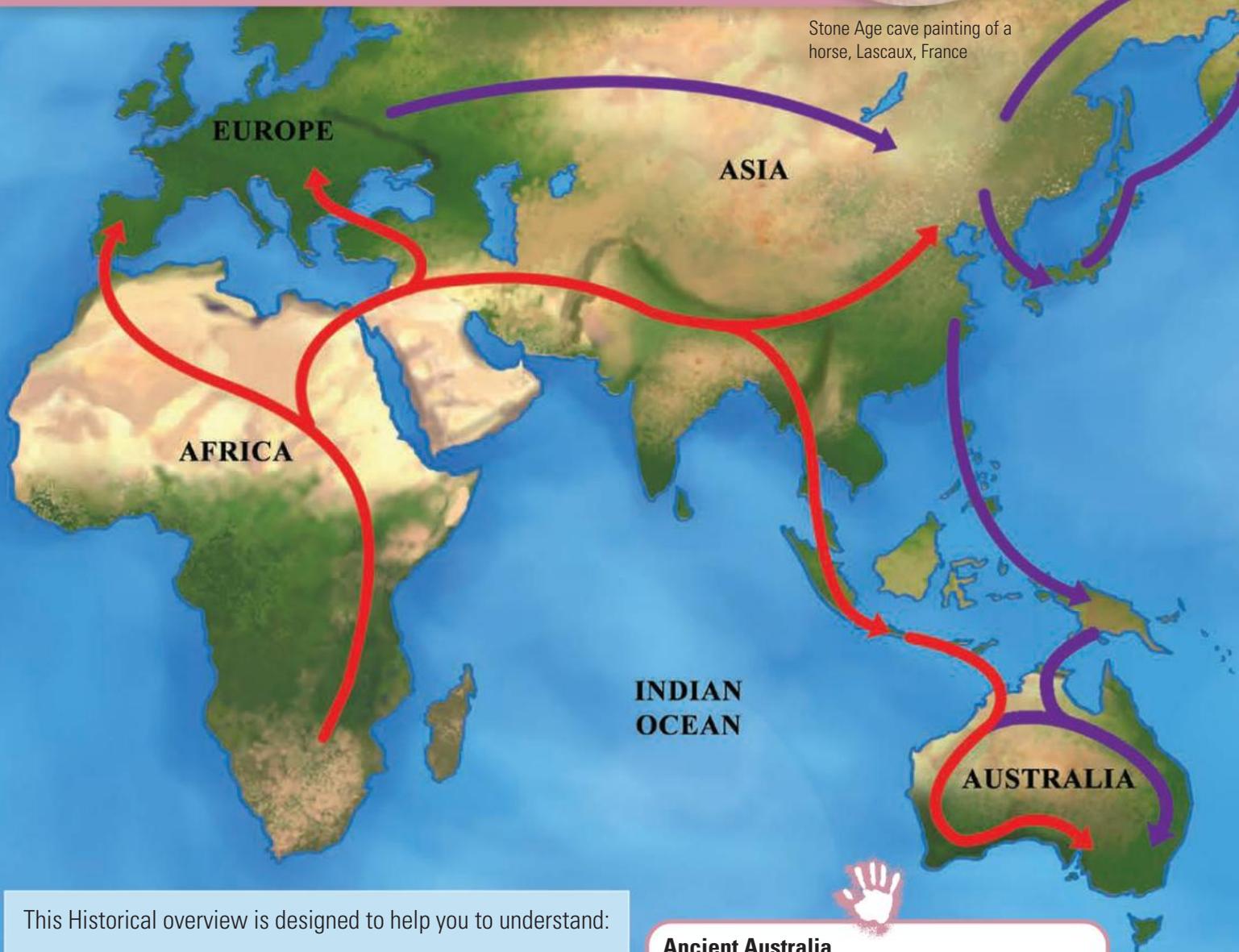
This Historical overview is designed to help you to understand:

- the location of the ancient civilisations
- the timeframe of the ancient civilisations.

You should read all the text closely in the Historical overview, watch the video, then complete the activities that follow.

Ancient Australia

Humans reached Australia more than 60 000 years ago, perhaps as much as 120 000 years ago. They probably arrived by sea during a period of glaciation, when ice connected New Guinea and Tasmania to the Australian continent, which made the crossing shorter and safer.

BCE stands for 'Before the Common Era' (sometimes, 'Before the Current Era') and CE stands for 'Common Era'. There is also a calendar known as the 'Gregorian calendar' that uses BC instead of BCE and AD instead of CE. BC stands for 'Before Christ' and AD stands for 'Anno Domini', which is the Latin for 'the year of our lord' (meaning from the time Jesus was born).

NORTH AMERICA

ATLANTIC OCEAN

The Americas
A land bridge connecting Alaska to the North American continent, combined with boats, allowed humans to cross from Europe to North America and spread down to South America between 40 000 BCE and 20 000 BCE.

PACIFIC OCEAN

The South Pacific
Humans reached and spread across the South Pacific somewhere between 1100 BCE and 1300 CE. There is still debate among historians as to whether the first humans to reach the South Pacific islands migrated from Asia or from South America.

SOUTH AMERICA

Probable migration routes

→ Before 100 000 years ago

→ From 100 000 to 10 000 years ago

Key features of ancient societies

Across much of the world, the Neolithic period (later Stone Age) saw the development of more settled societies. As people learned how to domesticate animals and plants, hunter-gatherer tribes gave way to larger communities, ultimately leading to the development of cities.

Farming scene from an ancient Egyptian tomb

Farming
Different forms of farming evolved, depending on the types of animals and crops suited to the area. Different agricultural techniques also developed.

Trade
Ancient societies developed Stone Age barter systems between different groups into networks of trade across much of the world. From 130 BCE, China, India, Persia and Europe established the trade routes known as the Silk Road.

40 000 BCE
Construction of the Brewarrina fish traps, Australia

10 000 BCE
Neolithic period begins (New Stone Age)

100 000 BCE
Homo sapiens have begun to migrate from Africa

6500–4000 BCE
Beginning of agriculture in Europe and Egypt

4000–2500 BCE
Farming and villages in western India

2 000 000 BCE
Palaeolithic period begins (Old Stone Age)

5000 BCE
Farmers in the Andes in South America begin to domesticate potatoes

63 000 BCE
Humans living at Madjedbebe, Australia

8000–4000 BCE
Development of agriculture and silk weaving in China

Social classes
The wealth created by agriculture and trade led to specialised jobs such as craftspeople, artists, scribes and priests, as well as leaders. Most ancient societies were hierarchical, with their leaders at the top and warriors, priests, scholars and peasants below them.

15 000–10 000 BCE
Painting of the Lascaux caves in France

Religion
From the gods and goddesses of ancient Egypt and Greece to the Aboriginal Dreaming, detailed systems of belief developed in all ancient societies. These beliefs determined laws, social organisation, marriage and rituals associated with death, fertility and crop production.

Rule of law
Written laws, such as the Code of Ur-Nammu (c. 2100–2050 BCE) and the Code of Hammurabi (c. 1700 BCE), developed in many ancient societies. In other societies, laws were remembered and taught via song, story and art.

Video
Key features of ancient societies

Evidence for the development of ancient societies

Historians who study ancient societies often work alongside archaeologists and scientists who find and analyse sources for evidence about the development of ancient societies across the world. Because many organic everyday objects – including clothing, timber and paper – decay over time, the types of artefacts used by historians to learn about ancient societies are usually made of stone, pottery or metal.

A terracotta warrior from the tomb of Chinese emperor Qin Shi Huangdi

Activity: Historical overview

1 Using the map, list the two continents humans first settled in after they moved out of Africa.

2 Identify two examples of evidence supporting the idea that humans have lived in Australia for at least 40 000 years.

3 What challenges might historians face when analysing ancient written sources as evidence about the past?

4 Why might the rulers of ancient societies such as Sumer and Babylon have written down their laws and displayed them in public spaces?

Art
Artworks, including statues, architecture and paintings on rock, papyrus and paper, can provide evidence of daily life, religious beliefs and the environments and politics of ancient societies.

Iconography
Iconography refers to the symbols used to represent the beliefs and values of a society. Studying these symbols, such as the scarab beetle in Egyptian artefacts or the yin-yang from ancient China, provides historians with evidence about the values of ancient societies.

Writing
Writing was first developed in ancient Sumer (cuneiform script) and Egypt (hieroglyphs), emerging from 3400 to 3200 BCE. Writing developed in India around 2600 BCE and in China between 1500 and 1000 BCE. Translating ancient texts and inscriptions can provide important evidence for historians.

2700–2200 BCE
Pyramids built in Egypt

800–700 BCE
Rise of the Greek *poleis* (city-states)

58–50 BCE
Roman conquest of Gaul, led by Julius Caesar

166 CE
Roman merchants reach China by sea

3180–1500 BCE
Neolithic settlements (e.g. Skara Brae) and megaliths (e.g. Stonehenge) built across Europe

79 CE
The Roman cities of Pompeii and Herculaneum are destroyed by a volcanic eruption

Pottery
Ancient pottery has been found across Africa, Europe, Central and South America, and Asia. Pottery enabled humans to store or transport food, allowing them to remain in one place rather than following food sources. Ancient pottery gives evidence of the food eaten by people in ancient societies, as well as the goods traded between different settlements.

Tools
The earliest human tools were made from stone or animal bone. Metal tools were used from around 4000 BCE, made first from copper, then bronze and finally iron from around 1500 BCE. From tools, historians can learn about farming, hunting, housing and clothing, as well as weapons, used by ancient peoples across the world.

Video
Evidence of ancient societies

Depth study 1

Investigating the ancient past

Overview

Without our memories, we would quickly become helpless. Our memories do many things for us, nearly all of which help us learn in some way, like becoming better at kicking a football, learning better words to explain ourselves, or improving our skills to make a great cup of coffee. But memory also helps us do even more important things like make decisions, find objects or places, develop relationships with other people and understand things from different points of view. Without memory, we would be lost; literally, we wouldn't even be able to find our way home every day!

History is the way that we remember as a community and society, rather than as individuals. Understanding history helps whole societies do important things like make government policies, plan trading arrangements with allies or decide what to do about global warming – in short, to decide what needs to be supported, changed or redirected in the societies we all live in and love. Studying history, therefore, offers us insights into what it means to be human.

The past is everything from the very beginning of the universe up until today. It includes billions of events, most of them lost to us forever. Studying the ancient past is very worthwhile because it is both amazing and scary to think about just how similar to our own ideas and values those of the people of the ancient world actually were. This helps us see clearly that people and societies have not changed in a great many ways, even over thousands of years. This lets us learn from the successes and mistakes that were made by people in the ancient past, and helps us plan more effectively for our own future.

The ancient past is also fascinating because many things were so different. Because it all happened such a long time ago, there is much information that is missing, and this makes ancient history full of mysteries. This depth study is about how historians find and use information to fill those information gaps, which helps them to solve history mysteries.

As you work through this depth study, think about what skills a historian has to use. What do you think these skills might be useful for, other than being a historian? For instance, developing empathy with people in the past can help us become more tolerant of people we don't get along with or don't understand. Also think about the fact that 'what we know' changes over time – think about why this happens.

Introducing historical concepts and skills: *significance, perspective* and *contestability*

In this depth study, there will be a particular focus on the concept of **significance**. The Western Australian Curriculum defines significance in the study of History as 'the importance that is assigned to an issue or site, or a particular aspect of the past, for example an event, or the contribution of an individual'. As we will see, deciding on significance involves making judgements. This depth study will also include opportunities to learn about perspective and contestability. You will be given the chance to see the perspectives of different people who lived in the ancient past, and decide what you think when presented with a clash of different interpretations of the same event. Such a clash is known as 'contestability'.

Video
Depth study overview

Source A Artist's impression of the lost city of Atlantis, one of the great history mysteries of all time. There are lots of theories, and some evidence that the myths about it are based on a real place. *Terror Antiquus* was painted by Russian artist Leon Bakst in 1908. It is an imagined depiction of the destruction of Atlantis.

CHAPTER 5

Investigating the ancient past

5.1 Setting the scene: investigating a historical mystery: the myth of Atlantis

History is full of mysteries and controversies. They exist because history is not an exact science, and much of what we know about the past is fragmented and incomplete. Gaps in our evidence mean that the past can be interpreted in different ways, sometimes creating myths that continue for centuries.

Some of the more extreme stories, such as the idea that the pyramids were built by aliens, can easily be dismissed by examining the evidence, which shows the pyramids were built by a human workforce around 4500 years ago. Other debated topics, such as whether King Arthur was a real person, or the purpose of ancient sites like Stonehenge, are impossible to determine with certainty because of a lack of evidence. Historians can make educated guesses, but they may not ever be able to fully resolve such mysteries.

The story of Atlantis is an example of a myth that has persisted for thousands of years. It was first mentioned by Plato, an ancient Greek philosopher, writing more than 2300 years ago. He told of a glorious city which sank into the sea around 9000 years before his time. He wrote of an advanced civilisation that inhabited an enormous island located in the Atlantic Ocean. The civilisation was founded by the children of the Greek god of the sea and earthquakes, Poseidon.

According to Plato's description, Atlantis was a paradise. It had a series of canals, laid out in a circle with bridges connecting the strips of land. The island was said to have had both hot and cold springs, and an abundance of food and exotic animals. The Atlanteans built beautiful temples and palaces out of coloured stone and gold. Despite living in a paradise, they sought to conquer the people of the Mediterranean and enslave them. They attacked Athens but were repelled and fell out of favour with the gods, who sent earthquakes that sunk their island into the sea.

Impact of the myth

Even though it was part of a philosophical work, the idea of Atlantis has fascinated people for centuries. It has had a major influence on art and literature, inspiring famous works such as Thomas More's 1516 book *Utopia*, which describes a perfect society. A search for books on Atlantis today reveals thousands more titles, both historical and fictional. Atlantis has even been linked with the origins of the Mayan civilisation of Central America, although there is absolutely no evidence for these claims.
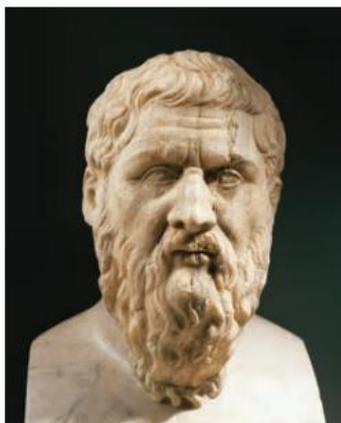
◄ **Source 5.1**
A sculpture of Plato from ancient Greece
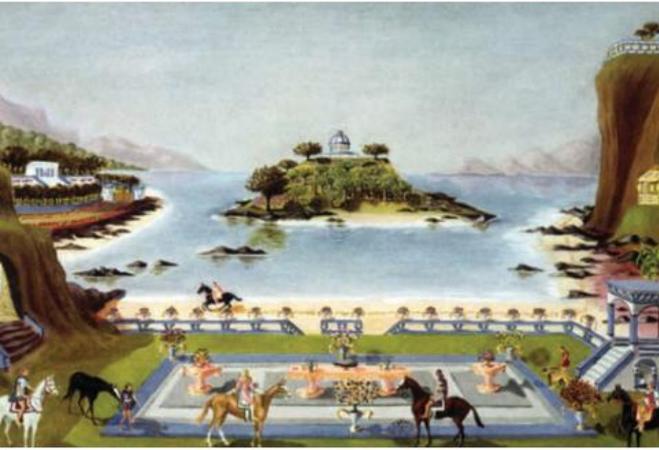
▲ **Source 5.2** An illustration by Sir Gerald Hargreaves, from his 1948 play, *Atalanta: A Story of Atlantis: A Fantasy with Music*, depicting the mythical land of Atlantis as a paradise
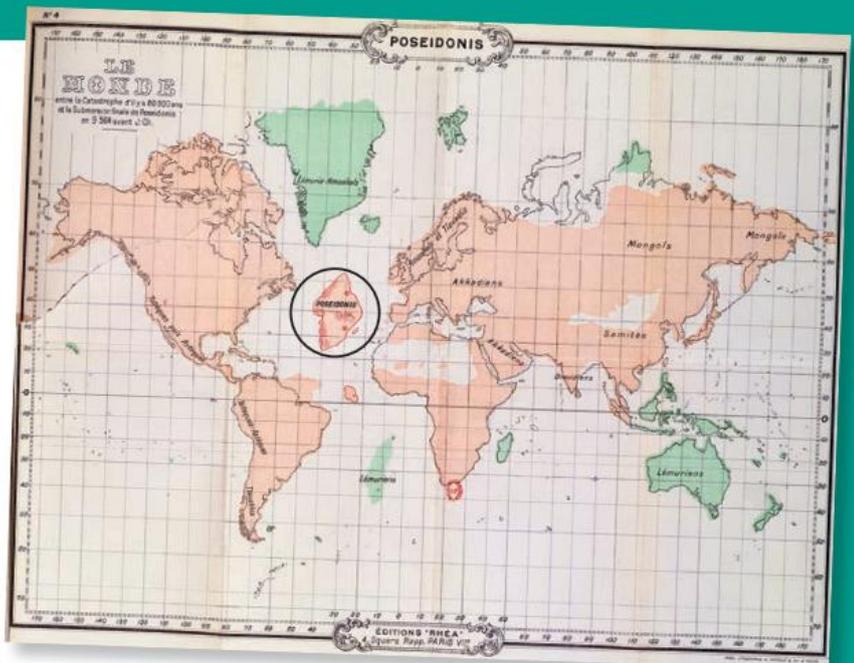
▲ **Source 5.3** Map of the world, W. Scott-Elliott, *Histoire de L'Atlantide (History of Atlantis)*, 1896. Circled is the supposed location of Atlantis, in the middle of the Atlantic Ocean between the American and African continents.

The myth has been the focus of comics, movies and TV shows. A hotel in Dubai named Atlantis has, according to its website, suites that look out over the breathtaking views 'of the ancient ruins of the mythical lost city of Atlantis'.

The search for Atlantis

People who thought Plato was writing actual history have looked for traces of this advanced society that fell into the ocean. They have scoured the sea and land for evidence, and a wide range of theories about who the Atlanteans were, and what happened to them, have developed. Some archaeologists have looked for a historical event or place that the story is based on.

▶ **Sources 5.4 and 5.5** Room of Lilies at Akrotiri, Thera, alongside an interior view of the site. Destroyed by a volcanic eruption in the sixteenth century BCE, the site has revealed a technologically advanced society that included three-storey buildings and a complex drainage system.

One of the most interesting of these theories is that the Bronze Age Minoan civilisation on the island of Thera (also known as Santorini) was the basis for the Atlantis myth. The civilisation was destroyed around 1600 BCE by the eruption of a volcano. Archaeological evidence from Akrotiri, on the island of Thera, shows an advanced seafaring civilisation. Other historians reject these claims, saying there are too many inconsistencies, the foremost being that Thera is in the Mediterranean Sea, not the Atlantic Ocean.

Why is Atlantis considered a controversy?

Plato is the only source for the story of Atlantis. Ancient writers like Aristotle, who was taught by Plato, said it was only a story, designed to show how great the Athenian state was because it defeated the Atlanteans and freed the people who had been conquered. Essentially, the story was used to show how the Athenians were strong and represented a morally upright society. Some non-professional historians, such as the nineteenth-century writer Ignatius Donnelly, insisted that Plato was recording actual history and that Atlantis did exist. Present-day historians and archaeologists mostly agree that it was a fictional account, although some have argued that it was based on real events.

MAKING THINKING VISIBLE 5.1

Think, pair, share

Read the following sources on Atlantis, then complete the activities that follow with a partner.

> Many great and wonderful deeds are recorded of your state in our histories. But one of them exceeds all the rest … For these histories tell of a mighty power which unprovoked made an expedition against the whole of Europe and Asia, and to which your city [Athens] put an end. This power came forth out of the Atlantic Ocean … there was an island situated in front of the straits which are by you called the Pillars of Heracles; [strait of Gibraltar] the island was larger than Libya [Africa] and Asia put together.
>
> Plato, *Timeus*

▲ **Source 5.6** In a work by Plato written 360 BCE, the character Timeus explains how the Athenians defeated the people of Atlantis.

> There are in Plato's narrative no marvels; no myths; no tales of gods, gorgons, hobgoblins, or giants. It is a plain and reasonable history of a people who built temples, ships, and canals; who lived by agriculture and commerce; who, in pursuit of trade, reached out to all the countries around them.
>
> Donnelly, I.L., 1882, *Atlantis: The Antediluvian World*, Part I, Chapter 3

▲ **Source 5.7** In 1882, US Congressman Ignatius Donnelly argued that Plato was writing history.

> A theory has been proposed by Professor Angelos Galanopoulos of Athens University that the Aegean island of Thera is the lost continent of Atlantis. Thera is north of Crete, where the Minoan civilisation flourished.
>
> Poulianos, A., 1972, 'The Discovery of the First Known Victim of Thera's Bronze Age Eruption', *Archaeology*, p. 229

▲ **Source 5.8** Twentieth-century archaeologist Aris Poulianos suggested a possible link between Thera and Atlantis.

»

> Only those who … are willing to 'believe six impossible things before breakfast' can take Plato's description literally. In addition to the internal inconsistencies and obvious exaggerations there is the now well-established geological fact that no sizeable landmass has been submerged in the Atlantic Ocean as recently as 11 500 years ago, if ever.
>
> Vitaliano, D.B., 1971, 'Atlantis: A Review Essay*', Journal of the Folklore Institute*, 8:1, p. 66

▲ **Source 5.9** Twentieth-century geologist Dorothy B. Vitaliano suggested there is no geological evidence of a continent in the Atlantic.

> The continuing industry of discovering Atlantis illustrates the dangers of reading Plato … The idea is that we should use the story to examine our ideas of government and power. We have missed the point if instead of thinking about these issues we go off exploring the sea bed.
>
> Annas, J., 2003, *Plato: A Very Short Introduction,* Oxford University Press, p. 42

▲ **Source 5.10** Philosopher Julia Annas, writing about Plato, says that his tales of Atlantis are solely to teach philosophy.

Think about the sources you have read. Attempt to answer these questions and then *pair* up with a partner and compare your responses. Then as a class, *share* your thoughts about the myth of Atlantis.

1 Explain what Source 5.6 reveals about Atlantis. List the details.
2 What is the argument being made by Donnelly in Source 5.7?
3 Does Source 5.8 support the existence of Atlantis? Explain your answer.
4 With reference to Sources 5.9 and 5.10, outline the arguments against Atlantis being a real place.
5 Research Plato, and explain whether or not you think he is a reliable historical source for Atlantis.
6 Sources 5.7 and 5.8 support the notion that Plato's writing has a historical basis, while Sources 5.9 and 5.10 say that Plato's story is fiction. Weigh up the evidence and decide whether you think Atlantis existed.
7 Based on the differences in the sources, why do you think there is disagreement about Atlantis?

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

ACTIVITY 5.1

Research the archaeological site and ancient civilisation of Thera. Do you think this could be the basis for Plato's story? Write a report arguing your case for or against this point of view.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, reflecting

Additional content available: The ancient civilisations of Thera and Ötzi the Iceman

5.2 Chapter overview

Introduction

The past is everything from the very beginning of the universe up until today. It includes billions of events, most of them lost to us forever. Studying history, which is the story of the past, tells us how we became who we are today. It helps us better understand the development of our species and its many cultures over tens of thousands of years. The ancient past is particularly interesting, because it allows us to see how we are similar to our distant ancestors and how we are different, and to see what lessons we have learned and what we have forgotten.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What is history?
- How do historians and archaeologists investigate the past?
- What types of sources do they use?
- How do historians measure time?
- What is known about ancient Australia?
- Why do people disagree about what happened in the past?
- How can science help us understand what happened in the past?
- How can we conserve the remains of the past?

Historical skills

After completing this chapter, you should be able to:

- Explain what significance means in the study of history
- Understand the role of historians and archaeologists in uncovering the past
- Develop historical empathy with people in the past
- Interpret primary sources in both print and visual form
- Evaluate the reliability of primary sources
- Correctly use special terms specific to the topic under study
- Use evidence (dates, statistics, examples) to substantiate an argument.

Digital resources

Visit the Interactive Textbook to access:

- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video

Five interesting facts about First Australians

▶ **Source 5.11** Archaeologists working at a ninth-century BCE Scythian burial mound in Southern Siberia, Russia

5.3 Timeline of key events

c. 63 000 BCE
Human habitation
at Madjedbebe

c. 40 000 BCE
Burial of Mungo
Man and Mungo Lady

c. 3300 BCE
Death of Ötzi

c. 2000 BCE
Death of
Narrabeen Man

c. 1324 BCE
Death of
Tutankhamun

c. 1200 BCE
Trojan War
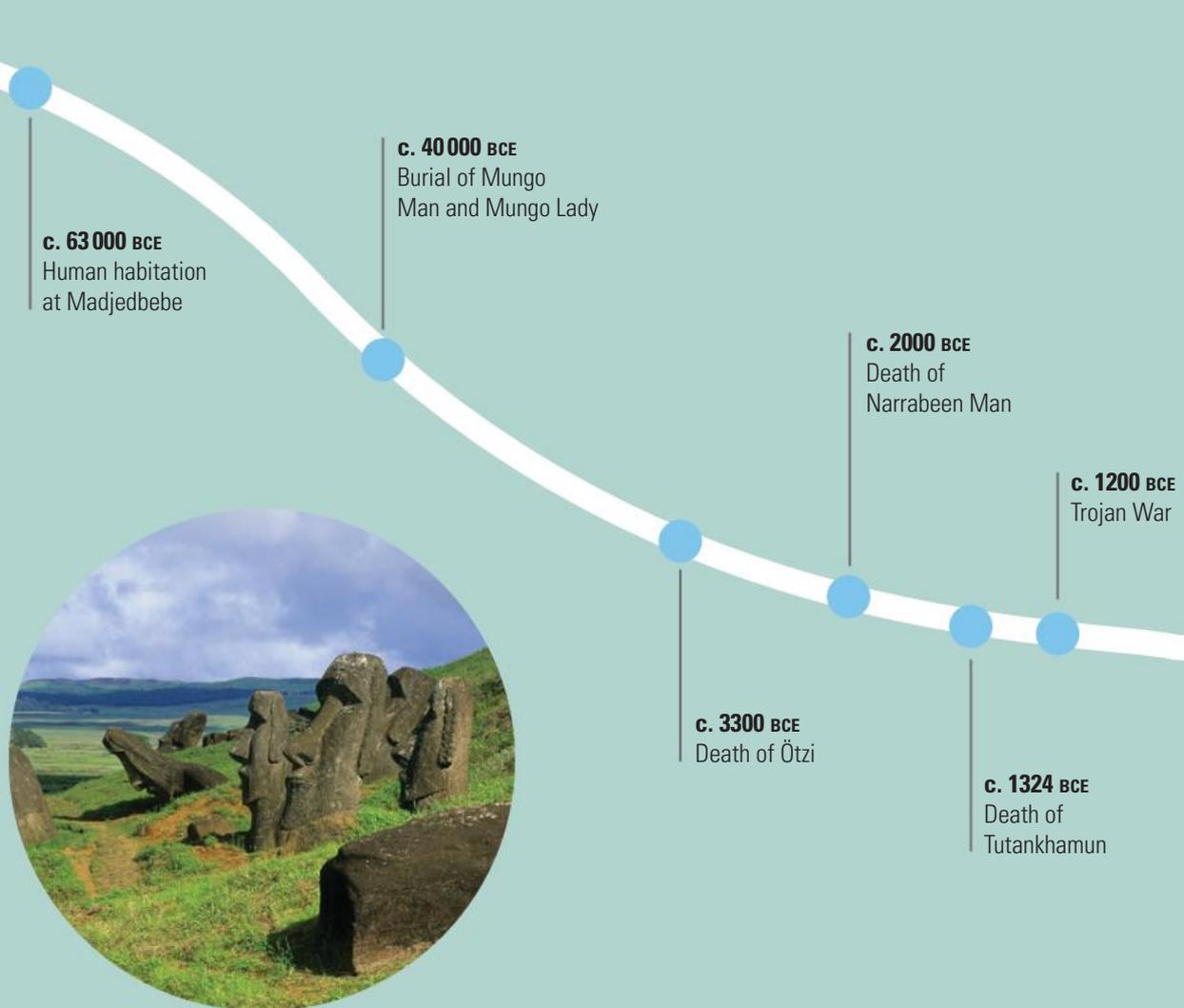
The mysterious head statues of Easter Island

Timeline activity

1   Use the timeline to identify some of the famous events in ancient history. Which events have you heard about before now?
2   Research and write a paragraph explaining the story of Ötzi the Iceman. (Hint: more information about Ötzi can be found in the Interactive Textbook.) Why is he significant?

Key concepts: sources, evidence, significance, perspectives

HASS skills: questioning and researching, communicating and reflecting

▲ **Source 5.12** World map showing the sites and artefacts mentioned in this chapter

c. 428 BCE
Birth of Plato

79 CE
Destruction of
Pompeii

c. 440 BCE
Herodotus' *Histories*
is finished

c. 200 BCE
Antikythera mechanism
constructed
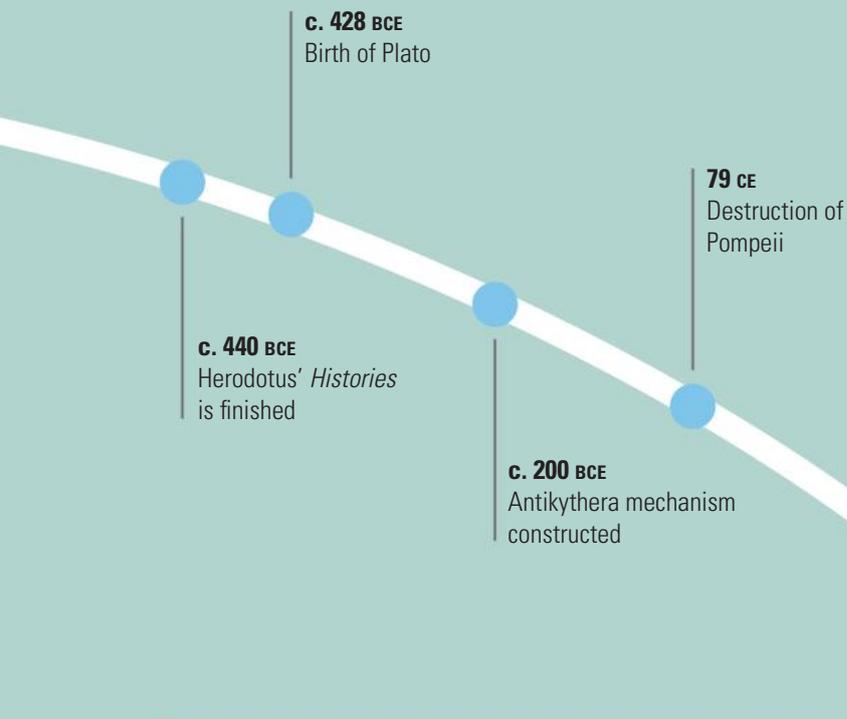
A modern artist's intepretation of
what Ötzi may have looked like

MAKING THINKING VISIBLE 5.2

See, think, wonder

Based on the image in Source 5.11, consider the following questions.

- What can you *see* in this image? *(I can see …)*
- What do you *think* about this image? *(I think …)*
- What does it make you *wonder* about studying the ancient past? *(I wonder…)*

Key concepts: continuity and change, cause and effect   **HASS skills:** reflecting

5.4   How historians and archaeologists investigate history

FOCUS QUESTION

How do we find information about the past? What kind of information is useful in helping us understand the past?

History and historians

hypothesis an idea or explanation for something that is based on known facts but has not yet been proved

Key concepts for your memory bank

A **source** is any written or non-written material that can be used to investigate and provide information about the past. Primary sources were created or written during the time being investigated. Secondary sources are accounts that are developed after the time period being studied. **Evidence** is the information obtained from sources that is valuable for research or inquiry. Sources become evidence when information contained in them is used to support or dispel a claim. *Pop this concept into your memory bank – at the end of this book is an activity which will test your understanding of this, and other key HASS concepts!*

History is the study of what happened in the past. The term history comes from the Greek word *historia*, which means 'inquiry' or 'research'. Historical inquiry is about working out what happened in the past through a process of investigation. This is done by asking questions and using evidence to answer those questions. The purpose of this process is to develop our understanding of what happened and what previous periods were like. History may focus on different areas such as military battles, or the lives of powerful or famous people, as well as the everyday lives of ordinary people. History also includes our own family stories, passed on from one generation to the next.

Early historians writing thousands of years ago relied on stories passed down by word of mouth. They collected these oral accounts from people to write their histories. Writers like Herodotus, who lived in the ancient Greek world approximately 2500 years ago, were interested in the great deeds of great men. Although he did not practise the same methods used by historians today, he is considered the 'father of history' in the Western world.

▲ **Source 5.13** Bust of Herodotus of Halicarnassus, who was often called the 'father of history'

> Here are presented the results of the enquiry carried out by Herodotus of Halicarnassus. The purpose is to prevent the traces of human events from being erased from time, and to preserve the fame of the important and remarkable achievements produced by both Greeks and non-Greeks.
>
> Herodotus, *The Histories*, Book I

▲ **Source 5.14** Extract from Herodotus outlining the purpose of his work

Modern-day historians work with different types of evidence, depending on what they are investigating. These may include written, oral and archaeological sources. Historians are like detectives trying to solve a case. They focus on a particular area of interest, develop a **hypothesis** about what happened and search for evidence. As they find sources, they

question their usefulness and reliability. This is because some sources might be misleading, lack detail or be incomplete. Historians must think critically about the sources they are using to ensure that the version of the past they are reporting is as accurate as possible.

After they have collected evidence from a range of different sources, historians use that evidence to construct an account of the past. These accounts are then published in books, textbooks, podcasts, newspapers, journals or documentaries. Once these accounts have been published, other historians respond to this view of the past and agree or disagree with what has been said. The conversation about what happened in the past is an ongoing process, as new evidence comes to light, different ways of thinking about evidence occur, and **perspectives** change.

Let us look at an example of this process of how history is reported. Tutankhamun died more than 3000 years ago and his tomb was discovered in 1922. New evidence and theories about the pharaoh have developed since the discovery of his tomb and many books have been published about the cause of Tutankhamun's death. Early theories argued that he was killed by a blow to the head, which were subsequently proven to be incorrect by medical scans. Later investigations suggested that he died as a result of a chariot accident which crushed his rib cage. More recently, it has been suggested that he had chronic diseases that weakened his immune system and he died of complications from a fractured bone in his leg. These changing theories show that no historical account is final and history will always be rewritten, in this case due to advances in technology and ongoing conversation around this famous historical figure. Historians may disagree about what caused a war to happen or what the use was for a particular artefact, but they need to remain open to new points of view and must always support their version of the past with evidence.

> **perspectives** different attitudes or ways of thinking about something, such as an issue, person or event

MAKING THINKING VISIBLE 5.3

Compass points

If what happened in the past cannot change, we may ask:

Why does our understanding of history change?

On a large piece of paper or cardboard, or using a digital application, draw a compass with N, E, S and W around the edges. On each compass point respond to the questions below by considering:

Need to know: What else do you need to know or access to help you answer the question?

Excited: What do you find exciting or interesting about investigating this idea?

Stance: What is your current stance (position) on this question? How might you move forward to evaluate how accurate your position is?

Worrisome: What are you worried about when thinking about how to research this question?

Brainstorm all of your ideas about the question.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 5.1

Analysing sources and evidence and significance

'The Museum of Myself'

Become a museum curator for your own life. Collect evidence and artefacts and explain the importance of each piece that you have collected, just like a museum would. To help you complete this task, you might need to visit your local museum or go to the WA Museum to do some research about how museum exhibits are set out so that you can see what kind of information is included with each exhibit, or you might research online what format and structure museum exhibits use.

- Use the following five focus points (categories) to help you get started:
  1. A day in the life – design a Greek-style vase to describe a day (can be an average or a very special day)
  2. Adventures – what, where, when, who, why, how?
  3. Pets – past, present, future
  4. Music – themes, songs of your life (title, artist, reason chosen)
  5. Friends and family – curate a gallery of images
- Now create five (or more) other categories that would be important for your museum and curate the evidence/artefacts to support each category.

When your museum collection is complete, do some reflection. Write your answers to the following questions:

a Why did you choose the evidence/artefacts you chose? What was *significant* about them?

b What categories were easy to find evidence and artefacts for, and which were difficult? Why do think this was?

c Which categories show you changing? Describe the changes you presented and explain why these were important to you.

d Which of your artefacts are concerned with people events and ideas? Go back and label them clearly. Is there more about people, events or ideas? What do you think this says about you?

What you did for your 'Museum of Myself' was to find sources and make decisions about what is important to remember and record in your life, and to then explain why each thing you chose is important. This is what historians do when they collect evidence and try to make sense of events, people and ideas from the past; but while you did this for one person, historians try to do this for whole societies and cultures.

Key concepts: sources, evidence, significance, empathy   **HASS skills:** analysing, communicating and reflecting

Archaeology and archaeologists

Much of what we know about ancient peoples comes from the work of archaeologists, who dig up ancient sites to study traces of the past. The word archaeology comes from the Greek words *archaios*, meaning 'ancient' or 'old', and *logos*, which means 'study'. There have been historians since ancient times, but archaeology as a recognised area of study only developed in the nineteenth century. While historians focus on written records, archaeologists deal with the physical remains of earlier eras, called artefacts. Artefacts can range from small pottery shards to large buildings such as the pyramids of Giza.

Archaeology involves finding, excavating and interpreting archaeological sites. Archaeologists are assisted in their investigation by experts who specialise in areas such as geology, human anatomy, biology, botany and physics. This specialist knowledge helps us to understand the lives of the people who occupied the site being studied, revealing information about when they lived, how they died, what they ate and what they believed.

Early archaeology

Early archaeologists are often criticised for being treasure hunters because their focus was on finding valuable objects which would bring them wealth and fame.

One important early archaeologist of the nineteenth century was wealthy German businessman, Heinrich Schliemann. Schliemann is best known for finding the site of the Trojan war: the city of Troy, made famous by Homer's epic poem, *The Iliad*. Schliemann carried out excavations at the site, in modern-day Turkey, and found some amazing objects, including Priam's Treasure – a collection of gold and treasure – though he was later accused of falsifying the events around the discovery of the treasure. Schliemann was also criticised for his destructive methods of excavation, including his use of dynamite, and his failure to properly record what he found. Despite these criticisms, Schliemann made important discoveries and was instrumental in promoting the development of archaeology as a field of study.

Over time, archaeology has become more professional and is carried out primarily by people working with academic institutions such as universities. Modern archaeology is more closely tied to science than treasure hunting.

▲ **Source 5.15** Heinrich Schliemann, an early archaeologist who has been accused of using destructive methods and misrepresenting his finds

▲ **Source 5.16** Heinrich Schliemann's wife Sophie, wearing the gold jewellery that Schliemann claimed was the treasure of Priam, who was the king of Troy

How sites are found

Sites can be revealed accidentally. This may happen when new construction takes place or as a result of natural processes, such as erosion and landslides. An example of this happened in Australia in 2005 when an almost complete skeleton of a man was discovered at Narrabeen in Sydney, when workers were digging a gas pipeline. The body turned out to be approximately 4000 years old. Examination of his remains revealed he had most likely been killed by a spear.

Other important sites are discovered when archaeologists go looking for them. They may know a site exists before they start looking, or they could be searching for evidence that might reveal a new site. This search may involve aerial surveys, ground-penetrating radar and even satellites fitted with special cameras that can detect sites from space.

The excavation process

Once a site has been found, and the dig team has been organised, the excavation will commence. Excavators will start by mapping the site using technology, such as ground-penetrating radar. Once they have mapped the site, excavators start slowly uncovering the site layer by layer. Different tools are used when excavating, ranging from heavy machine diggers to small hand trowels and brushes. It is important that people working on the dig are systematic in their approach and do not damage the material they are uncovering.

▼ **Source 5.17** Satellite image of an archaeological site in Tanis, Egypt

▲ **Source 5.18** Survey of a site using a ground-penetrating radar

ACTIVITY 5.2

Research task

Investigate the Narrabeen Man.

1 Outline how he was discovered.

2 Explain what the study of his remains revealed about Australia's ancient past.
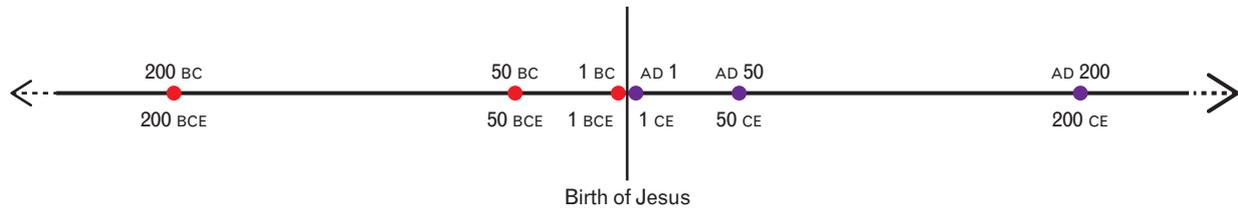
⚙️ **Key concepts:** continuity and change, cause and effect, significance

📋 **HASS skills:** questioning and researching, communicating and reflecting

Stratigraphy

When excavating a site, layers called **strata** help archaeologists determine the history of the site. Archaeologists uncover a dig carefully, layer by layer, because each layer represents a different time period. The deeper we dig, the further back in time we go. Sometimes the strata are disturbed by human activity. People digging pits into lower strata or natural events such as landslides disturb the layers, which makes identifying and dating different layers difficult.

strata layers of material in the ground deposited one upon another (*singular: stratum*)

▼ **Source 5.19** A wall cross-section displaying the archaeological strata and artefacts discovered in 2003 during construction of the Syntagma Square Metro Station, Athens, Greece

ACTIVITY 5.3

Using historical sources as evidence
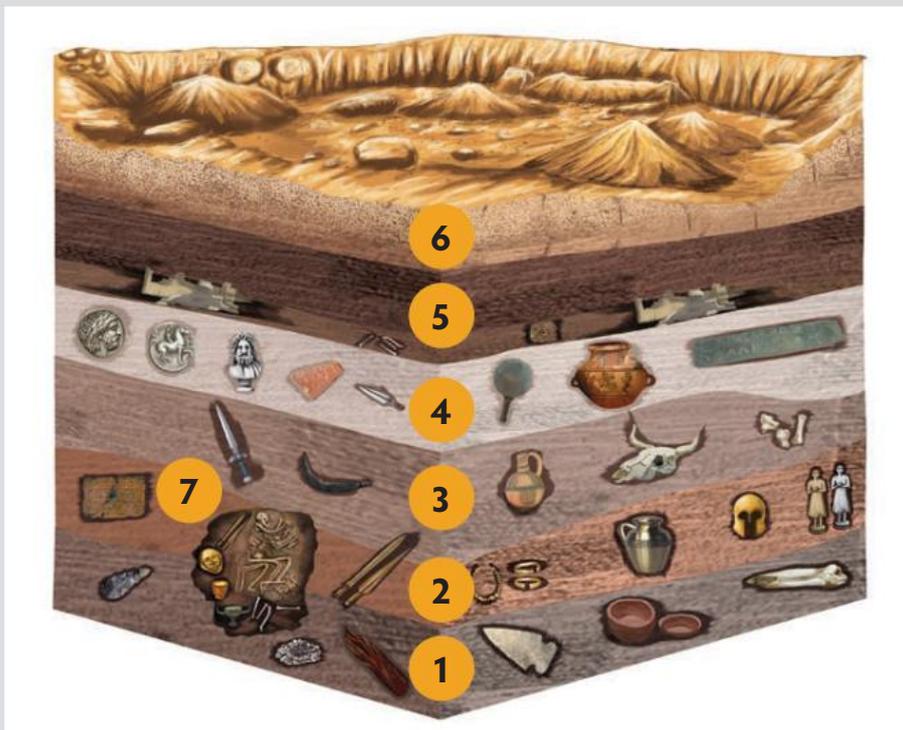
▲ **Source 5.20** Recreation of an archaeological dig

Feature 7 Shaft burial with skeleton in crouch position, funerary offerings

Layer 6 No significant finds

Layer 5 Layer of ash, collapsed buildings, human remains

Layer 4 Coins, stone statue of Zeus, pottery shard with Greek script, spearhead, hand mirror, black figure pottery, bronze tablet with Greek script

Layer 3 Iron sword, iron scythe, foreign pottery, cattle bones

Layer 2 Tablet with Linear B writing, bronze weapons, gold jewellery, local painted pottery, bronze helmet, small clay and bone votive figurines

Layer 1 Stone bowl, flint spear head, early simple pottery, animal bone used as a tool

1 Which layer is the oldest?
2 The burial pit (feature 7) was dug by the people from which layer? Explain your answer.
3 Outline the technological developments between layers 1 and 2.
4 Identify the most significant development of layer 2. Explain why you think this.
5 Identify what kind of catastrophe may have occurred in layer 5.
6 Identify the objects that show development in technology at this site.
7 Why might the inhabitants of layers 2 and 4 have used different written scripts (Linear B/Greek)?
8 Explain what the presence of foreign pottery in layer 3 suggests.
9 Explain why the site may have been abandoned.
10 Identify what type of person you think was buried in feature 7. Explain your answer with reference to the goods found with the body.
11 Write a historical account explaining what you think occurred at this site. When you have finished, share your story with a partner.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

Collecting, recording and interpreting evidence from the site

As a site is uncovered, workers focus on recording everything they find in each strata. The **conservation** of any artefacts they uncover is of great importance. The artefacts are photographed **in situ**, the find location is recorded, and then the artefacts are carefully removed. Some objects need to be specially treated so they do not fall apart. The layout of the site is mapped, and finds are catalogued. This allows a detailed picture of the evidence at the site to be constructed.

Archaeologists may use Computer Assisted Design (CAD) to recreate a digital view of the site they are excavating. Once the excavation has been completed, researchers interpret what they have discovered and publish their findings. Other historians read and comment on the findings, and there is a continuing discussion of what the site reveals.

> **conservation** ensuring that artefacts are able to last well into the future
>
> **in situ** in the original position

▲ **Source 5.21** 2003 reconstruction of the Villa of the Papyri, alongside a photo of the partially excavated villa, taken in 2004 in Herculaneum, Italy

END OF SECTION REVIEW 5.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Define what history is.
2 Look at Source 5.14. Summarise the purpose of history according to Herodotus.
3 Explain the principles of stratigraphy.
4 Explain the differences between how historians and archaeologists study the ancient past.
5 Outline the process used by archaeologists to excavate a site.

Interpret

6 How would virtual 3D models help archaeologists and historians study the past?

Argue

7 Study Sources 5.17, 5.18 and 5.21. With direct reference to the sources, explain how technology has changed how the ancient past is studied.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

5.5 Historical time

FOCUS QUESTION

How do historians record and measure time?

Measuring time is very important for the study of history, but it is not always a straightforward process, particularly when dealing with the ancient past. To study history we need agreed-upon methods of working out when things happened, how old artefacts are and how long societies existed for. There are different ways by which historians can determine when things occurred.

Measuring time in the ancient world

Humankind has always been interested in time. Ancient people marked time for many reasons, from knowing when to eat and sleep, to determining when to plant crops and when to observe important dates, such as religious holidays. People in the ancient world used a variety of methods for calculating time. One of the most common involved tracking the movement of celestial bodies such as the moon, planets and stars. This process is still used today to determine important dates. For example, the lunar months are used to find out when Easter and Ramadan are to be held for Christians and Muslims, respectively. Other methods of measuring time included calendars, sundials and water clocks.

The Antikythera mechanism is an ancient analogue computer, discovered in a ship that sank near Greece more than 2000 years ago. It measured the relative position of the planets and stars, allowing the user to determine key dates, such as the Olympic games.

Additional content available: The Antikythera mechanism

▲ **Source 5.22** A reconstruction of the Antikythera mechanism

ACTIVITY 5.4

Research task

Research an ancient calendar or time-measuring device such as a water clock. Write a paragraph outlining how it worked and who used it. Include an image if you can find one.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

Calendar dating

Different societies in the ancient world dated time differently. For example, the ancient Egyptians, during the New Kingdom period, had three seasons that revolved around the flooding of the Nile and each of their weeks lasted 10 days. The way they noted the passing of the years was also very different because they dated them by the reign of the pharaohs and began again at year one for each new ruler.

In the modern world, time is divided into seconds, minutes, hours, weeks, days, months and years. In Australia we follow the Gregorian calendar, named after Pope Gregory XIII, who

introduced it in 1582. This calendar is adapted from the Julian calendar implemented by the famous Roman, Julius Caesar.

The Gregorian calendar is the most widely used today, and enables international communication and trade. In this calendar, a year of 365 days is divided into 12 months, and each month has between 28 and 31 days. Every four years there is a leap year, which adds an extra day to February to account for the fact that a full revolution around the sun takes 365.2422 days (so, slightly more than an even 365 days). If an extra day was not added every four years, the calendar would not match the Earth's orbit around the sun.

The Gregorian calendar is not the only calendar used today. Islamic, Buddhist and Jewish calendars are still used around the world to determine key religious holidays in these religions.

Amazing but true …

Intercalary months were added to the calendar by many ancient cultures, which used the addition of an extra month every two to three years as a way of correcting the shortfall between the lunar and solar calendars.

Timelines

Timelines are a useful tool for historians. They show the order in which things happened. They can be used to show the **chronology** of a person's life, the development of a society or battles in a war. Timelines show the relationship between events and time, demonstrating cause and effect. This helps historians interpret how and why things happened.

BC/AD

You have probably heard the terms BC and AD before. They are based on the Gregorian calendar, which dates events from the birth of Jesus. The term BC means Before Christ, and is placed after the date: 100 BC is 100 years Before Christ. Because it counts backwards, 200 BC is older than 100 BC. The term AD comes from the Latin term *anno Domini*, which means 'in the year of our Lord'. It counts forward from the year of Jesus' birth. Correctly, the AD should be placed before the year: AD 100 (in the year of our Lord 100) rather than 100 AD (100 in the year of our Lord). However, it has become broadly acceptable to place it after the year, for consistency with BC. Using this system, the year AD 1 follows the year 1 BC.

Interestingly, we cannot be sure that the year that BC/AD are based on was actually the year of Jesus' birth. Many modern historians and theologians think that Jesus was born a number of years earlier, between 6 BC and 4 BC. The reason the date is not exact is because the texts that are written about Jesus were not dated, so historical information in the gospels (the stories about Jesus in the Bible) needed to be cross-referenced with other historical information.

BCE/CE

The Gregorian calendar is now the most commonly used method for dating time, but as many people in the world are not Christians, the terms Before the Common Era (BCE) and Common Era (CE) were developed to replace BC and AD. The dates remain the same, with AD 1 being simply called 1 CE (in this

> **chronology** arrangement of dates in the order in which they occur

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ACTIVITY 5.5

Creative task

Create a timeline of your own life, with each two centimetres equalling one year.

1 Highlight key events on the timeline such as your birth, your first day of school, the birth of siblings.
2 Try to include at least five events.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

system, both BCE and CE are placed after the year). It was developed with the intention of being more neutral and inclusive of all people

In this textbook, we use BCE and CE.

c.

There are times when historians do not know the exact date of something. In this case, the abbreviation c. (*circa*) is used to show that a date is approximate. For example, the Great Pyramid of Giza was built in c. 2560 BCE.

▲ **Source 5.23** Calendar dating on a timeline

Historical dating

Three-age system: Stone, Bronze and Iron Ages

The three-age system of dating time has been widely used by historians. It was developed by Danish scholar C.J. Thomsen in the nineteenth century when he worked as director of the Royal Museum of Nordic Antiquities. Thomsen divided the collection of the museum into different periods, depending on the technology people used. His system created the terms Stone Age, Bronze Age and Iron Age. This method of dividing the past creates a timeline of ancient people based on the types of materials they used to make their tools. These terms are still in common usage, despite being inexact. Other periods, based on the principles of the three-age system, such as Copper Age, Steam Age and Digital Age, have become common historical terms.

> **typology** using the characteristics of an object to classify them over time. It helps in showing how an object has changed over time.

Periodisation

Historians have also sought to divide history into blocks of time based on periods of human history. Examples of periods include the Dark Ages, Middle Ages, the Renaissance and the Enlightenment. These terms refer to broad blocks of time with no clear beginning or end dates. The primary reasons these terms are used is to allow historical analysis of human development. We also group history into ancient, medieval and modern periods to denote when significant changes in culture occurred.

Relative dating

Relative dating is the practice of determining the date of artefacts in relation to each other without working out their exact age. Stratigraphy is an example of relative dating as things found in the same strata are assumed to be from the same time period. Another method is comparing artefacts to other objects with similar features (such as artistic style, size or materials used). As technologies and artistic styles evolve over time, they can be used to groups things on a timeline: this is called **typology** dating. Although relative dating does not provide an exact date, it is fast and cost-effective and helpful in understanding what things, people and events came first, what ocurred at roughly the same time, and what came after.

▲ **Source 5.24** The evolution of lighting, demonstrating the principles of typology dating

ACTIVITY 5.6

Creative task

Look at Source 5.24.

1 Apply the principles of typology to create your own sequence of drawings showing the development of a technology over time.

- You could draw different versions of a computer from an ancient abacus or the Antikythera mechanism, to the latest laptops and super computers.
- You could also look at other areas of technological developments such as aeroplanes, trains or cars.

2 Choose five different examples and explain how your sequence shows the principles of typology dating.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

Scientific (absolute) dating

As science and technology have advanced, new methods of dating archaeological evidence have become available. These methods, known as absolute or scientific dating, provide much more exact dates. It is important to acknowledge that even though these methods are called absolute dating, they really provide date ranges. It is still impossible at this stage to provide exact dates down to a year using these techniques. They work best when they are used together with other dating techniques to create a fuller picture of when things occurred.

Radiocarbon dating

Radiocarbon was one of the earliest methods of scientific dating, developed in the 1940s. It is used to date organic material like hair, bones, papyrus and wood. It is based on the principle that all living things absorb the radioactive isotope carbon-14 while they are alive. Once they die, the carbon-14 starts to decrease at a steady rate. The date of the material is determined by how much carbon-14 is left.

Thermoluminescence dating

Thermoluminescence dating measures how long it has been since an object has been heated. Only objects that have been heated to

▲ **Source 5.25** An accelerator mass spectrometer (AMS), used for radiocarbon dating

over 500°C can be dated using this method. It is used on materials like pottery or stones heated by campfire. Reheating the sample to over 500°C shows the amount of radiation trapped in an object since it was last heated, creating a flash of light that is measured. There are some problems with this method because it can be inaccurate. One of the major uses for this technique is in determining if artefacts are genuinely ancient rather than forgeries.

Dendrochronology

Dendrochronology involves dating tree rings. Trees grow at different rates each

year depending on environmental factors such as rain, sun and temperature. During good years, trees grow faster and the rings are thicker. During poor years, trees do not grow as quickly and the rings are thinner. The differing sizes of the growth-rings act like a barcode, revealing when the tree was alive. By comparing different samples, dendrochronologists can build up a detailed database for a region that goes back thousands of years. The sample can then be used to date wooden objects found at archaeological sites, such as wooden beams from an ancient building.

1. Sample from living tree
2. Sample from standing dead tree
3. Sample from a beam of a house
n. Chronology extended with samples from historic buildings or sub-fossil wood

Schematic representation of cross-dating in dendrochronology
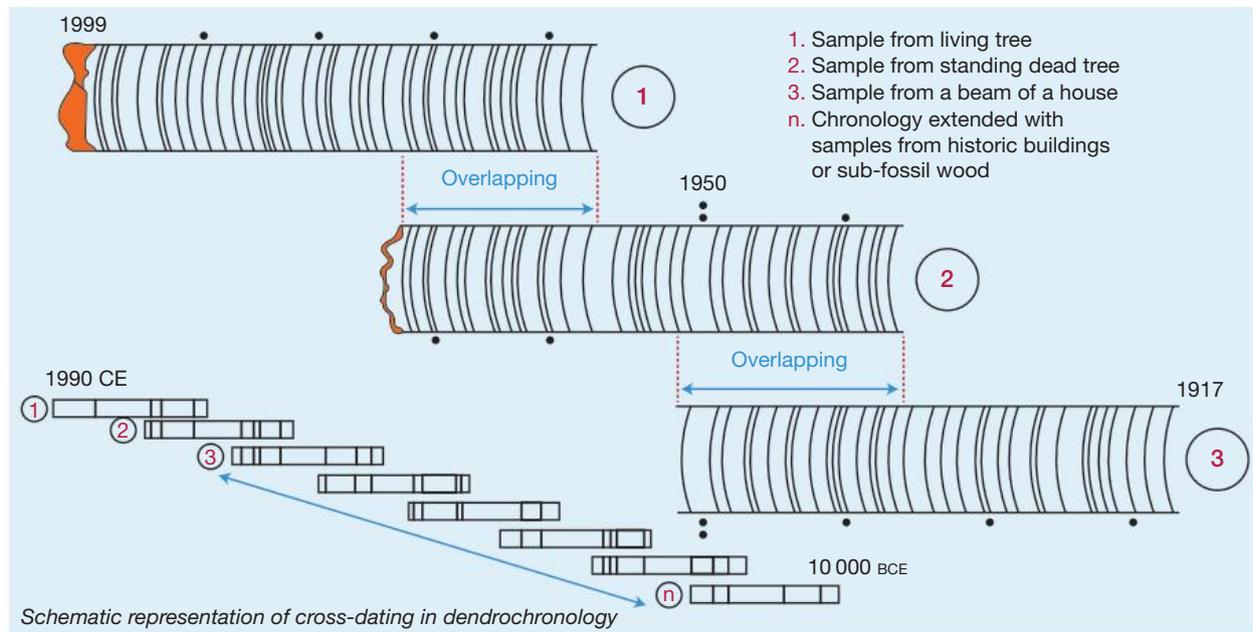
▲ **Source 5.26** Dendrochronology uses different samples to build up a sequence, which allows the samples to be cross-dated.

END OF SECTION REVIEW 5.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 List some of the methods used in the ancient world to measure time.

2 Define BC/AD and BCE/CE.

3 Define radiocarbon dating.

Interpret

4 Identify the difference between relative dating and absolute dating.

5 Look at Source 5.26, the illustration of cross-dating using dendrochronology. Describe how dendrochronology works.

6 Why is accurately measuring time important to the study of history?

Argue

7 Apply the principles of periodisation to think of a term that describes the current period of human history. Explain your choice in a paragraph.

8 Explain why dating the ancient past is challenging for historians and archaeologists.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

5.6 The range of sources that can be used in a historical investigation

FOCUS QUESTION

What information and evidence is available to help historians find out about the past?

Historians are like detectives, and sources contain the clues they use to solve their cases. There are many different types of sources that can be used to understand history. Sources are anything that has survived from the past and may include pottery shards, government records, written accounts, buried artefacts or preserved human remains. Without these traces of earlier eras, studying history would be impossible.

It is important to realise that evidence is different to sources. Sources are the raw material that historians use, while evidence is what the sources tell us about what is being investigated. For example, this ancient Roman coin (Source 5.27) is a *source* for ancient Rome. Given the image and writing, it could be used by a historian as *evidence* for the rule of Augustus.

Primary and secondary sources

There are two main types of sources in history: primary and secondary. *Primary sources* are sources created during the time period the historian is studying. *Secondary sources* are all sources created after the period being studied. For example, the Colosseum in Rome is a primary source for studying ancient Rome, but a textbook written about the Colosseum is a secondary source.

It is important to note that primary sources are not always better than secondary sources for helping us to understand history.

The defining feature of primary sources is that they are from the period for which they are being used as evidence. Secondary sources are usually based on evidence collected from primary sources, and they may contain insights not available at the time.

▲ **Source 5.27** A Roman coin from 10 BCE. The head is that of Emperor Augustus, with most of his name visible on the left.

ACTIVITY 5.7

Using historical sources as evidence

1 Research an event from the last 50 years. The choice of event is up to you, but could be, for example, the COVID-19 pandemic, the 2000 Sydney Olympics, the Vietnam veterans Welcome Home march in 1987, Kevin Rudd's 'Apology to Australia's Indigenous People' in 2008. Find a primary source (such as a written account from the time, or ask a family member to recall the event if they were alive at the time) and a secondary source (e.g. a textbook or newspaper article created after the period you are researching).

2 Write a short paragraph for each source that:

   a identifies if it is a primary or secondary source

   b outlines the evidence the source provides.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

How do historians use sources?

Historians collect sources for what they are studying, and then determine what the evidence from these sources reveal. A good historian uses a range of different sources in their inquiry, so they can form the most complete picture possible. There are a range of important questions that historians ask when analysing what evidence can be taken from a source. These include:

biased one-sided, unfairly shows only one point of view or is prejudiced

- What is the source?
- Where is it from?
- When was it created?
- Who created it?

For a written source, these questions help a historian work out how the background of the author has influenced what they have written. If someone was an eyewitness, they may be more reliable than if they are reporting an event second-hand. If the author of a text is writing about an opponent, they may be unreliable because they might be overly critical. The same principle applies if they are writing about themselves, or someone they admire, because they may exaggerate their achievements or leave out negative details. The political or religious beliefs of an author can also affect a source's trustworthiness.

This type of information is important for working out what a source is really saying. For an archaeological source, these questions are often harder to answer. Archaeological sources can be compared to other finds to determine what evidence they reveal.

Evaluating sources

Once historians have analysed a source's background, they can evaluate how relevant the source is for the topic they are investigating by asking:

- Is it useful?
- Is it reliable?

Just because a source may be one-sided or untruthful does not necessarily mean that it is not useful. The usefulness of a source is directly related to how much information it reveals about what is being studied, or the site that is being excavated. As an example, a gold mask might be a very impressive find, but a piece of written text from the same site may provide more useful information.

Some sources might be **biased**, meaning they only tell history from one point of view. The Roman historian Tacitus is famous for his bias. He wrote very negative, critical things about the imperial family who ruled Rome at the time. He did this because he thought that Rome should be ruled by the politicians in the senate, rather than being controlled by one influential family. But Tacitus was one of the politicians in the senate, so what he actually believed was that real power should belong to himself and his peers. This belief made him, and what he wrote, biased. Even though Tacitus' works are one-sided, they are still important to the study of this period. Historians need to take account of bias when they are assessing reliability.
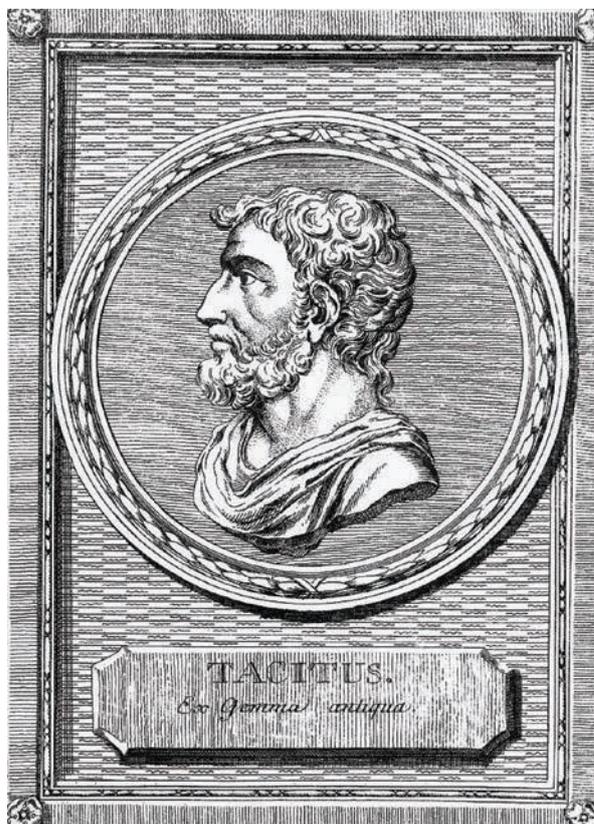
▲ **Source 5.28** The Roman historian Tacitus was very biased, so this needs to be taken into account when using his work as a source.

Facts and opinions

A major problem with history is that we can never fully understand everything that happened in earlier times. Most of what occurred has not been recorded, and what remains is often incomplete or only reveals one side of the story. Historians need to be careful to note the difference between what is fact and what is opinion.

- Facts are things that are well supported by evidence and generally accepted by historians. An example of a historical fact would be that Julius Caesar was assassinated in Rome on the Ides of March in 44 BCE.
- Opinions are a person's ideas about what happened in the past; they cannot be proved to be correct. For example, any theory about why Caesar was assassinated is an opinion.

Like detectives, when historians have collected enough evidence, and assessed the reliability of the evidence, they present their case, outlining their view of what happened.

In Activity 5.8, you will look at a number of sources relating to Augustus, the first emperor of Rome. Under his rule, the Roman world changed from the Republic (in which the Senate and people ruled) to a new political system called the *principate*. Although Augustus attained almost complete power over the Roman world, he argued at the time, and wrote a lot about, how he had saved the Republic and handed power back to the senate and people of Rome.

ACTIVITY 5.8

Using historical sources as evidence

Source A

▲ **Source 5.29** Larger than life-size bronze head of Augustus, created during his lifetime, discovered in Meroe, Sudan

Source B

> After I had extinguished civil wars, and at a time when … I was in complete control of affairs I transferred the Republic from my own control to the will of the Senate and the Roman people.
>
> *Res Gestae Divi Augusti*, 34

▲ **Source 5.30** An extract from the inscription on Augustus' tomb, in which he describes handing power back to the Roman people. This text was written before his death.

Source C

> He [Augustus] gradually pushed ahead and absorbed the function [power] of the senate, the officials and even the law. Opposition did not exist … Political equality was a thing of the past; all eyes watched for imperial commands.
>
> Tacitus, *Annals,* Book 1

▲ **Source 5.31** Roman historian Tacitus, writing approximately 100 years after Augustus' death

Source D

> Augustus was a Roman statesman and military leader who was the first emperor of the Roman Empire, reigning from 27 BC until his death in AD 14. His status as the founder of the Roman Principate has consolidated an enduring legacy as one of the most effective and controversial leaders in human history.
>
> https://en.wikipedia.org/wiki/Augustus, accessed 8 November 2019

▲ **Source 5.32** Modern-day Wikipedia article on Augustus

»

1   Which sources are primary sources?

2   Which sources are secondary sources?

3   What historical facts can you find in the sources? Write a dot point list.

4   What opinions can you find in the sources? Write a dot point list.

5   Wikipedia is an online encyclopedia, where entries are written by volunteers from a variety of backgrounds. The entries do not go through the same rigorous checking process that most other published information must undergo. With this in mind, explain the pros and cons of using Wikipedia as a source.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 5.2

Perspective and contestability

The concept of perspective is a person's point of view, the position from which they see and understand events going on around them. The concept of contestability occurs when particular interpretations about the past are open to debate, as a result of a lack of evidence or different perspectives, for example.

The following questions refer to perspectives and contestability found in Activity 5.8.

1   Which sources show bias? Bias is another word for 'perspective'. Explain why you think these sources have this perspective.

2   Which source/s are the most useful for understanding Augustus role in the Roman government? Explain your answer, using the information you gathered to answer Question 1.

3   Re-read the description of 'Contestability' above. Using this description and using your answer for Question 2, identify clearly in a list what parts of the evidence from these sources about Augustus is contestable.

Key concepts: continuity and change, significance

HASS skills: questioning and researching, communicating and reflecting

END OF SECTION REVIEW 5.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1   Explain the difference between a primary and a secondary source.

2   Outline the difference between a source and evidence.

3   Explain the difference between a fact and an opinion.

Interpret

4   Why is the study of history like being a detective?

5   Why is it important to know where a source comes from and who created it?

Argue

6   Explain what determines the usefulness of a source.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

5.7 Sources for ancient Australia

FOCUS QUESTIONS

What information and evidence is available to help us find out about ancient Australia?

How can we use this information and evidence to help us understand the past better?

Aboriginal people have of course, been saying we have always been here.

Pascoe, B., 2014, *Dark Emu*,
Magabala Books, p. 41

▲ **Source 5.33** Bruce Pascoe, who is of mixed Bunurong, Yuin and Palawa heritage, examines colonial accounts of ancient Australia

The Dreaming

The **Dreaming** refers to the worldview of many Aboriginal peoples. It encompasses everything from the past to the present, explaining how the world was formed and how life should be lived. It is directly linked to the land, which is the total environment, including the sky, the earth, people, animals and plants. For Aboriginal peoples, The Dreaming is concentrated on sacred sites throughout Australia. There are different Dreaming stories and rituals depending on where people are from. You may have heard Dreaming stories that tell of how the world was created and given shape by ancestor beings as they moved through it. For Aboriginal peoples, these stories explain how humans came to be in Australia and how they should live their lives – where to find resources, how to manage fisheries and farm the land, and what laws and rituals they need to observe.

Ancient Australia

Australia had a long history of human settlement prior to colonisation by the British. It is believed that the first settlers of Australia migrated south from Asia during the **Pleistocene Epoch**, when the sea levels were up to 100 metres lower than they are now. At this time, Australia was connected to New Guinea, and Tasmania was also part of the mainland, forming a larger continent called Sahul. How people got to Australia is not exactly clear, but it probably involved island hopping and open sea navigation. Some waves of migration may have also occurred when sea

> **Dreaming** a term for the spiritual, legal and ritual beliefs of Aboriginal peoples
>
> **Pleistocene Epoch** a long period of geological time that includes the last glacial period, when temperatures were cooler and sea levels lower
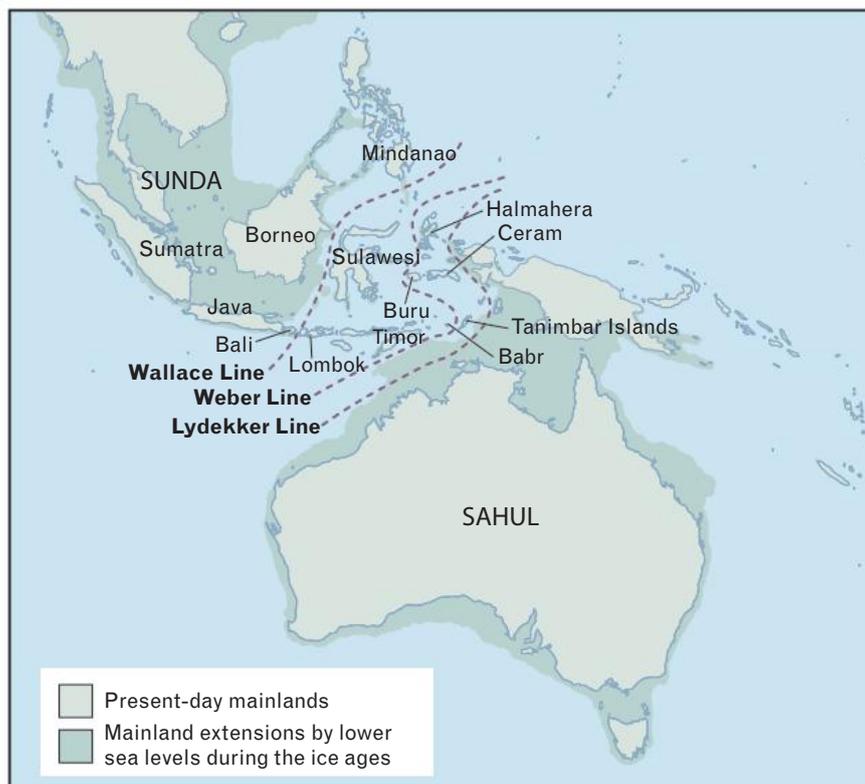
▲ **Source 5.34** The continent of Australia was joined to New Guinea during the Pleistocene Epoch.

levels were lower. The exact length of time that people have lived in Australia has also been hard to determine with certainty as our understanding is limited by the evidence available. The generally accepted date was 40 000 years ago, but this has been pushed back by recent archaeological finds such as those at Madjedbebe, a rock shelter in Arnhem land in the Northern Territory.

Evidence from Madjedbebe showed signs of human life as far back as 65 000 years, although the actual date that people arrived may be much earlier. Many of the earliest settlements, made on the coast when the sea was lower, would be underwater now because the coastline has moved inland since the Pleistocene Epoch. Even though it is impossible to know exactly when and where the first people arrived, the evidence shows that they prospered, spreading out across the continent. Archaeological finds at Parramatta, in Sydney, show people were there at least 30 000 years ago. There is other evidence of stone tools found near Penrith, in Sydney's west, dating as far back as 40 000 years.

ACTIVITY 5.9

Research task

Research the movement of people to Australia using the internet or your school library.

1 Outline the key theories of how people migrated to the Australian continent in the ancient past.

2 Identify some evidence of early human habitation of the Australian continent.

3 Does this archaeological evidence found in Australia support the theory that all modern humans evolved in Africa before spreading out across the globe?

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

Sources for understanding ancient Australia

When Australia was first colonised by the British Government, it was argued that Australia had not been truly settled prior to British arrival. As Britain wanted to use the land, it justified taking it by declaring the land *terra nullius*. The early British colonisers did not recognise the complex farming and fishing practices of the Indigenous inhabitants or their tribal boundaries: they were seen as people who simply moved from place to place.

Although these ideas have persisted in Australian popular history, archaeology, particularly in the last 50 years, has played a huge role in reshaping what is known about Australia's ancient past. Finds such as those at Madjedbebe have demonstrated that Australia was settled tens of thousands of years ago. Other finds have revealed the cultural practices of ancient Australians and how they lived day to day, demonstrating that Aboriginal and Torres Strait Islander peoples practised farming, had fixed settlements and helped manage the environment they lived in.

Tools, middens and fishing traps

Archaeologists studying ancient Australia have based their understanding of what life was like on the remains of campfires, stone tools, **middens** and geographical features like fish traps. These sources can be found all over Australia and reveal peoples who were well in tune with their environment through hunting, farming and practising **aquaculture**. Aboriginal and Torres Strait Islander peoples lived differently throughout the continent depending on what the local environment was like.

terra nullius a Latin term that translates as 'land belonging to no one', meaning free to be claimed

middens the rubbish piles of early settlement sites, often containing shells, bones, botanical materials, and the workings from ceramics and stone tool-making

aquaculture farming of animals and plants that live in water, such as fish

▲ **Source 5.35** Professor of Archaeology, Ben Marwick, shows the Madjedbebe site to visitors and young Mirarr Traditional Owners
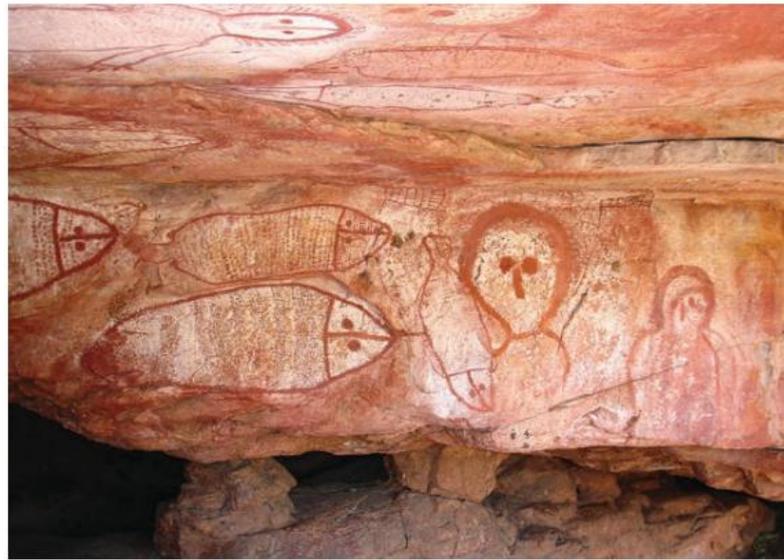
▲ **Source 5.36** Aboriginal cave paintings depicting a fish hunt in a rock shelter, Gwion Gwion, Kimberley Region, Western Australia

ACTIVITY 5.10

Using historical sources as evidence

Source A

▲ **Source 5.37** Brewarrina Aboriginal Fish Traps. A complex system of channels built on the Barwon River in northern New South Wales. These ingenious traps along 500 metres of the river herd the fish so they can be easily caught. They also encourage sustainable fishing, allowing the small fish to pass through, and have been managed by Aboriginal peoples for many thousands of years – some estimates put the age of the traps at 40 000 years.

Source B

The science of baking developed alongside seed harvests. Richard Fullagar, at the Australian Museum, and Judith Field, at the University of New South Wales, found grindstones at Cudie Springs, near Walgett, in western New South Wales, which had been used to grind seeds more than 30 000 years ago. This makes these the world's oldest bakers by almost 15 000 years.

Pascoe, B., 2014, *Dark Emu,* Magabala Books, p. 30

▲ **Source 5.38** Bruce Pascoe writes about early grain harvesting and baking in Australia.

Explain what Sources A and B reveal about how Aboriginal peoples in ancient Australia used the land. Write a paragraph, making reference to the sources in your response.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

Carvings and rock paintings

Examples of carvings and rock paintings, many dating back many thousands of years, are found all across Australia. These carvings and paintings are thought to have had both ritual and non-ritual purposes. Their meaning can be hard to determine, as even apparently simple images have multiple layers of meaning for initiated Aboriginal and Torres Strait Islander peoples. The images connect information about the law, land, resources, animals and ancestors.

Lake Mungo

Some of the oldest human remains to have been ritually buried were discovered in the dry dunes of Lake Mungo, in the Willandra Lakes region of western New South Wales. The remains revealed that the Aboriginal peoples who lived there tens of thousands of years ago had a complex culture that flourished in the formerly rich lands around the now mostly dry Willandra Lakes. Around 50 000 years ago during the Pleistocene Epoch this region was cooler, and these lakes were full of water and surrounded by vegetation. This provided abundant fish and crayfish and attracted

▼ **Source 5.39** The eroded dunes or lunette formations seen from the sky. Mungo Lady and Mungo Man were found near the end of the thicker section of white sand in the bottom right of the photo.

animals that could be hunted. The long history of human inhabitation has combined with dry climatic conditions to create a remarkably rich archaeological site.

Discovery of human remains

In 1968, geologist Jim Bowler discovered evidence of human occupation in the dry dunes of Lake Mungo. As well as finding campfires, tools, middens and other artefacts, two ancient human remains were found. The first remains discovered were of a woman, commonly called Mungo Lady (Mungo I). She was a young woman of about 19 who had been cremated (burned) beside the lake. Her bones were then crushed.

Working with an archaeological team from the Australian National University (ANU) the body was carefully excavated. Over the next few months a physical anthropologist, Alan Thorne, painstakingly pieced together the skeleton and skull. The site was dated by examining the stratigraphy and dating the layers using luminescence dating. This revealed they had found a body that was at least 25 000 years old. More modern dating work in 2003 suggested that Mungo Lady is probably 40 000 years old, making her burial the earliest human cremation yet discovered.

▲ **Source 5.40** The Willandra Lakes region

Legend:

- **- - -** World Heritage Area
- Creek channels and associated floodplains (Shepparton FM)
- Dry lakes (mostly vegetated)
- Lunette
- Lowan Sands (dune fields)
- Woorien Formation (fossil dune fields) Sandsheet plains

0   25 km

Map labels: Lake Mulurulu, Willandra Creek, Lake Garnpung, Lake Leagher, Lake Durthong, Lake Mungo, Lake Arumpo, Chibnalwood Lake, Willandra Creek, Prungle Lakes

Six years later, Bowler found Mungo Man, another well-preserved skeleton that was covered with red ochre, a stone-based pigment. The way the body was prepared and laid out was further evidence of ritual burial, showing the care with which he was buried and the complex beliefs about life and death that his people held. These finds not only rewrote our understanding of Australian history, but also of human development.

> The anointing of the body in that nature is the sort of ritual that would be acceptable in any cathedral today. And there you've got the fire – think the smoke and the incense … so to have that in our backyard 40 000 years ago, there's nowhere else in the world that happens … think of it in the context of cultural continuity of the present Aboriginal people.
>
> Bowler, J., 14 November 2017, quoted in Daly, P., 'Finding Mungo Man: the moment Australia's story suddenly changed', *The Guardian*

▲ **Source 5.41** In a 2017 interview with *The Guardian*, Jim Bowler talked about Mungo Man

Other evidence from Lake Mungo

As well as human remains, other important evidence of human activity has been found at Lake Mungo. This includes the remains of ancient campfires, middens, stone tools and a series of well-preserved human footprints that have been dated to 20 000 years ago.

▲ **Source 5.42** The skeleton of Mungo Man as it appeared during the excavation in 1974. The bones spent the next 43 years at the ANU in Canberra, until the remains were returned to Country in 2017.

ACTIVITY 5.11

Check your understanding

1 How was the site discovered?
2 Identify the types of artefacts found at the site.
3 Explain how the environment has helped preserve a record of human activity at the site.
4 Outline what the human remains reveal about the people who lived around Lake Mungo 40 000 years ago.
5 Identify why Lake Mungo is a significant archaeological site for human history, not just for the history of Australia.

▲ **Source 5.43** Stone and bone tools from Lake Mungo, New South Wales

Key concepts: continuity and change, cause and effect, significance

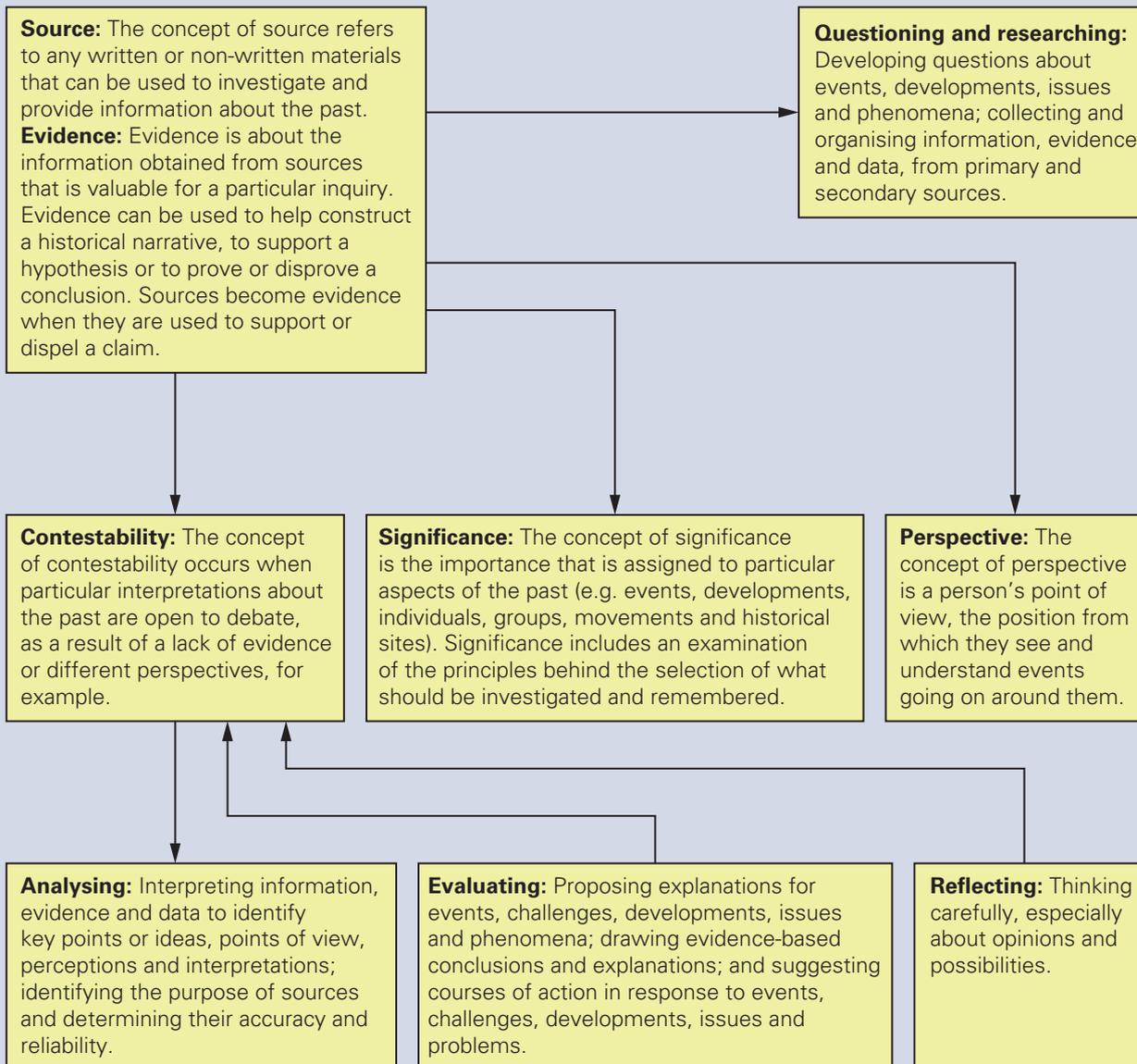**HASS skills:** questioning and researching, communicating and reflecting

ACTIVITY 5.12

Research activity

The Dreaming is a complex cultural concept, world view and system of laws that explains the creation of everything and the purpose of life. Different Aboriginal peoples and cultures have different Dreamings with their own name in the local language. Use reliable resources to research the Dreamings and worldviews of different Aboriginal peoples, such as the Tjukurpa of the Anangu peoples of the Western Desert.

- Outline what the Dreaming is.
- Choose a Dreaming story and explain where the story comes from.
- Summarise the Dreaming story and explain its purpose.

Key concepts: significance, perspective   **HASS skills:** questioning and research, communicating

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 5.3

Determining historical significance

Significance may vary over time and from group to group. What was seen as significant in the past may not be considered important today, and what is significant for one group today may not be significant for other groups.

1 Why are middens useful to archaeologists?
2 Do you think a midden was significant in the past?
3 What significance does a midden have today?

Key concepts: sources and evidence, significance, continuity and change   **HASS skills:** analysing, communicating and reflecting

END OF SECTION REVIEW 5.7

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 How did the first human inhabitants get to Australia?
2 Explain what middens are.

Interpret

3 Identify the types of archaeological sources that can be used to understand ancient Australia.
4 Outline how archaeology has changed our understanding of ancient Australia.

Argue

5 Explain why it is difficult to determine exactly when humans arrived in Australia.
6 Why are the discoveries of Australian archaeology such as those at Lake Mungo so significant for our understanding of Australian history?

Key concepts: continuity and change, cause and effect, significance   **HASS skills:** questioning and researching, communicating and reflecting

5.8 The importance of conserving the remains of the ancient past

FOCUS QUESTION

How can we, and why should we, protect what remains of the past?

Conserving the traces of our past is important for us as a species, because the remains of our ancestors shed light on who we are now – they are our collective heritage. Unfortunately, the past leaves only traces for us to study and these traces are fragile. Once a site or artefact is uncovered, special care needs to be taken to protect it. Rather than conserving the past, early archaeologists like Heinrich Schliemann focused mostly on making great finds and promoting what they had found. Modern archaeologists are much more mindful of conserving the traces of the past they discover. They incorporate conservation into all aspects of a dig.

Other factors like tourism and natural erosion can also destroy the evidence, removing opportunities for further study. Ancient sites like Pompeii have suffered these effects, and special steps are now taken to ensure that the site at Pompeii is better managed.

Threats to remains of the ancient past

Natural threats

Once a site is uncovered and exposed to the elements it starts to decay. Normal weather, including rain, wind and heat, erodes objects that are left exposed to the elements. As well as damage from normal weather patterns, natural disasters such as cyclones, landslides, volcanoes and floods can hugely affect, and even completely destroy, archaeological artefacts. Living things also pose a threat to ancient evidence. Bacteria, fungi and plants can grow over ancient frescoes and through excavated buildings. Animals like birds and insects make nests in ancient buildings and eat through organic material like wood. The threat of climate change is also posing a challenge to archaeological sites across the world, particularly in low-lying areas such as Easter Island in the Pacific Ocean.

Human threats

Human activity also threatens evidence from the ancient past. By-products of our modern way of living, such as pollution and urbanisation (the growing size of towns and cities), have huge negative effects. Tourism also damages what remains of ancient sites like Pompeii, which attracts millions of visitors every year. The large number of tourists degrade the pavements and moisture in their breath

▲ **Video Source 5.45a** Destruction in Palmyra

▲ **Source 5.44** *Moai* statues at Rano Raraku quarry, Easter Island

▲ **Source 5.45** A BBC reporter stands in front of the ruined Temple of Bel, holding a photo taken before the conflict in which it was destroyed in 2015.

in enclosed spaces eats away at painted plaster walls. Looting of precious artefacts as well as warfare and terrorism have also destroyed many remnants of the past. The recent wars in Iraq and Syria against ISIS led to significant destruction of cultural material, such as the Temple of Bel at Palmyra.

Preserving and conserving archaeological and historical remains

As well as incorporating conservation methods from the outset of new excavations, there are an ever-increasing array of techniques that are used to save what has been excavated. At sites like Pompeii, simple things like capping the number of tourists that visit each year, roping off sensitive areas, creating more walkways and restoring water drainage have made a huge difference. Conservation work has also been undertaken to prop up walls and repair paintings that are decaying through exposure. In recent years in Egypt, the tomb of Nefertari (wife of Ramses II) is a good example of conservation. Much work has gone into repairing and preserving the images painted on the plaster walls of the tomb. Improved science and technology has led to new methods of conservation. Techniques such as 3D laser scanning and ultrasonic surface measurements have helped conservators better map buildings they are seeking to preserve and improved understanding of the materials used on the site.

▲ **Source 5.46** Ultrasonic surface measurements (left) and lasers (right) are used to assess and clean the frescoes of the Villa of the Mysteries, Pompeii.

ACTIVITY 5.13

Research task

Research conservation at Pompeii. Write a conservation report on the site explaining:

- the natural threats to the site from things such as weather and animals
- what impact tourism and other human activities have had on the site
- what steps are being taken by authorities to limit the damaging effects of natural forces and human impacts on the site.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

UNESCO

Arguably the most important international body for protecting the world's cultural and historical heritage is the United Nations Educational, Scientific and Cultural Organization (UNESCO). It manages the World Heritage List, which was established in 1972 to protect important sites across the globe. UNESCO works in partnership with governments and other groups to identify, protect and preserve cultural and natural heritage that is considered to be of outstanding value to humanity. World Heritage sites include the pyramids and the Sphinx in Egypt, the Acropolis in Greece and the Great Barrier Reef in Australia.

For a site to be considered for World Heritage listing as a historical site, it needs to meet at least one of six cultural criteria.

Selection criteria for World Heritage listing applied to historical sites:

i   to represent a masterpiece of human creative genius

ii to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design

iii to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living, or which has disappeared

iv to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history

v   to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change

vi to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.

The Criteria for Selection, UNESCO

▲ **Source 5.47** Selection criteria for inclusion on the World Heritage List

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ACTIVITY 5.14

Research task

Go online and look at the UNESCO World Heritage List and complete the following activities.

1 Choose an archaeological/historically significant site from the list.

2 Explain why it is considered a World Heritage site. Make direct reference to the six criteria listed.

3 Outline any threats to the site and steps being taken to manage those threats.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

Kakadu National Park

Kakadu National Park was declared a UNESCO World Heritage site in 1981, not only because of its natural beauty and biodiversity, but also because of its cultural and historical significance. Kakadu is home to numerous cave paintings, rock carvings and archaeological sites. These sites record the way of life of the area's inhabitants dating back tens of thousands of years.

The images found at a number of sites in the park show human figures, spirit beings and long-extinct animals. They demonstrate the artistic style and beliefs of ancient Aboriginal peoples. They also document how life has changed since colonisation, with some images depicting ships and firearms from more modern times, showing the continuing and unbroken connection of Indigenous people to this land.

Conservation at Kakadu National Park

These sites are of incredible ritual significance to the Aboriginal peoples of Kakadu, who maintain a link to their ancestors and culture through these sites. The Bininj/Mungguy peoples manage the national park as the traditional owners with the assistance of the government and other national park managers. Together they deal with the risks to the archaeological sites in the park posed by both natural elements and human activities.

Threats to the site

Tourism, crocodile hunting, mining and pest species like the water buffalo threaten Kakadu. Crocodile hunting was banned in 1972 and since then crocodile numbers have rebounded, but water buffalo still pose a threat. There is only one operational mine on the site and there are strict environmental controls on its operation. Tourism is arguably one of the biggest threats because the large volume of people and the roads, toilets and accommodation provided for them all affect Kakadu. Fees collected from visitors are used to care for the site. Combined with a management plan, this helps reduce the impact of tourism.

▲ **Video Source 5.47a** Kakadu National Park

▲ **Source 5.48** Aboriginal cave paintings, Kakadu National Park, Northern Territory
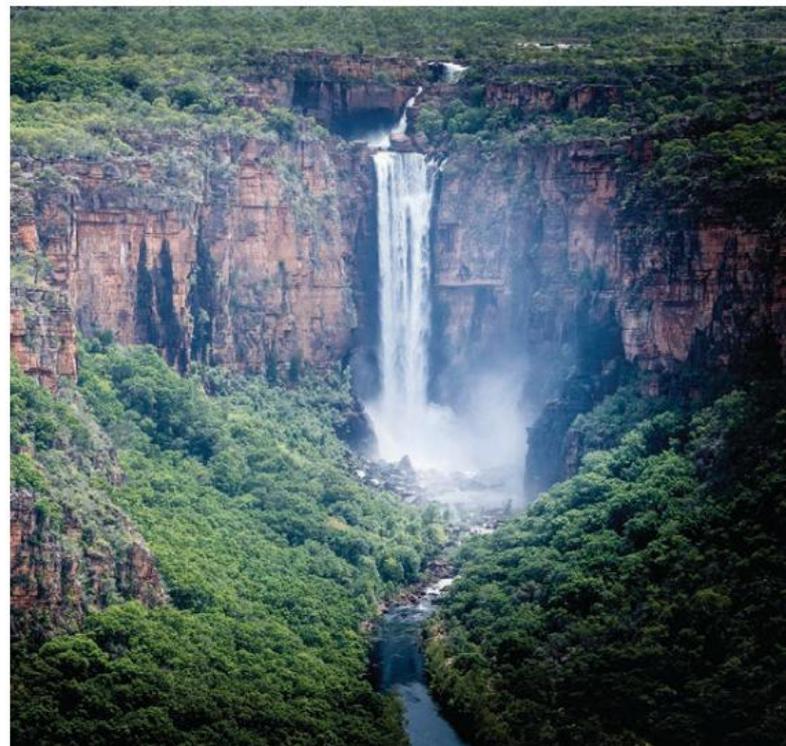
▲ **Source 5.49** Jim Jim Waterfall, Kakadu National Park

END OF SECTION REVIEW 5.8

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Why is conserving the past important?
2 Outline the natural threats to ancient sites and artefacts.
3 Outline what UNESCO does.

Interpret

4 Do you think human threats or natural threats are more damaging to ancient evidence? Justify your answer with reference to the threats outlined in this chapter.
5 Explain the significance of Kakadu as a site worthy of conservation.

Argue

6 Should archaeological sites be closed to the public if they are under threat?
7 Whose responsibility is it to conserve the remains of the past?

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

5.9 Conclusion: why does it matter?

It matters because without understanding the past, we put the future in danger. Planning for the future can only be done well by considering all the important things that have happened in the past, and using what has been learned to make a good plan about how to go forward.

It also matters because learning how to think like a detective is an important life skill. Historians are 'time detectives'

– they learn to ask questions about the information they find, and they know how to pull together different pieces of information to make sense of them all. This is an important life skill, because it can help us to make choices, whether we are choosing the phone/car/house we want to buy, or finding out whether we are being told the truth by our boss about how much we were paid.

History concepts and skills

Source: The concept of source refers to any written or non-written materials that can be used to investigate and provide information about the past.
Evidence: Evidence is about the information obtained from sources that is valuable for a particular inquiry. Evidence can be used to help construct a historical narrative, to support a hypothesis or to prove or disprove a conclusion. Sources become evidence when they are used to support or dispel a claim.

Questioning and researching: Developing questions about events, developments, issues and phenomena; collecting and organising information, evidence and data, from primary and secondary sources.

Contestability: The concept of contestability occurs when particular interpretations about the past are open to debate, as a result of a lack of evidence or different perspectives, for example.

Significance: The concept of significance is the importance that is assigned to particular aspects of the past (e.g. events, developments, individuals, groups, movements and historical sites). Significance includes an examination of the principles behind the selection of what should be investigated and remembered.

Perspective: The concept of perspective is a person's point of view, the position from which they see and understand events going on around them.

Analysing: Interpreting information, evidence and data to identify key points or ideas, points of view, perceptions and interpretations; identifying the purpose of sources and determining their accuracy and reliability.

Evaluating: Proposing explanations for events, challenges, developments, issues and phenomena; drawing evidence-based conclusions and explanations; and suggesting courses of action in response to events, challenges, developments, issues and problems.

Reflecting: Thinking carefully, especially about opinions and possibilities.

▲ **Source 5.50** The interconnections between some important history concepts and skills

Thinking about evidence in this way and asking these kinds of questions means learning to think *critically*. This doesn't mean thinking negatively. Instead, it means being able to evaluate, assess and analyse information for strengths and weaknesses, which is necessary for making good decisions. This is why questioning and researching, analysing, evaluating, and communicating and reflecting are key HASS skills. These skills help in developing understanding of the key history concepts of sources, evidence, perspectives, significance, contestability (see Source 5.50).

You don't have to be a historian to see how useful these ways of learning to think and act are. Nor do you need to be a historian to use these skills. You probably already do use them, every single day. Studying History will just make you better at them.

5.10 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Check your understanding

Go back through the chapter and find one example of:
- something that is significant
- something that is contestable, that people have different perspectives about
- something that made you reflect (think carefully)
- something you would like to research more about.

Now write one sentence explaining your reasons for choosing each. Use the following sentence starters to help you:
- *This is significant/contestable because ...*
- *This made me think carefully because ...*
- *This is interesting because ... and I want to know more about ...*

Visible thinking routine

I used to think … now I think …

Reflect on your understanding of history before beginning this chapter and what it is now.

- How and why has your understanding of history changed?
- Divide a piece of paper in two halves under the headings 'I used to think' and 'Now I think'.
- List your ideas before and after completing this unit.

Group work activity

In a group, use a tool of your choice (paper or digital) to draw a time capsule for a historian of the future. Choose things that would help them understand what life was like today.

- For each object, write a few sentences explaining why you have chosen the item.
- When you have finished, try to imagine any problems the future historian may have understanding your world from the objects you have selected.

Inquiry

Creative task

Create an archaeological site in a shoebox using small objects from around the home or classroom. Carefully bury a few small artefacts in layers of different material, like coloured sand and soil.

- Think carefully about the different strata you will lay down and what objects will go in each level.
- Write a short paragraph explaining the history of your site.
- Ask a partner to carefully uncover the site, layer by layer, and write a site report interpreting their finds.
- Compare the two reports and discuss the findings.

Analysis

Work with a partner to find at least two different pieces of information in the news about one important event that has happened recently. This can be on any topic. Your family or teacher might help you find these. Online articles or articles from two different newspapers would work well for this task; for example, an article from *The West Australian* and one from *The Guardian* newspapers. Label one article 'Source 1' and the other 'Source 2'.

- For each piece of information/article/source write down: the key points being made; any evidence or data used; any opinions being given.
- Now write two lists: What things are the same in both of your sources? What things are different?
- Look at what you have written about both of your sources so far. Decide which of the sources you think is more reliable.
- Write down two reasons why you think this.
- Explain your ideas to another pair working in your class.

Writing

Extended-response questions

1 Choose a famous historical figure and explain why studying them is important.
2 Explain the role that sources play in constructing history.
3 Explain how and why our understanding of ancient Australia has changed since colonisation.
4 Summarise how technological and scientific methods have increased our understanding of the past.
5 Why have people measured time differently in human history?
6 Why is conservation important to archaeologists?

Be a detective

Make sure you use at least two pieces of evidence and/or examples to support your ideas when you answer the question below. You will need to write one paragraph (at least four sentences) to answer this question properly.

Question: *Why should we care about the past, and what can we learn from it?*

Key concepts: sources and evidence, continuity and change, sources and evidence, significance, perspective

HASS skills: analysis, questioning and research, communicating and reflecting, evaluating

Depth study 2

Investigating an ancient society

Overview

Have you ever wondered why we vote or where the idea for the Olympics came from? Many of the traditions and cultural norms in Australia come from the ancient civilisations of Europe and the Mediterranean. Our society, languages and values are based on several of the ideas and skills developed in these ancient societies, including democracy, architecture, religion and engineering.

However, powerful ancient societies did not just exist in Europe and the Mediterranean; the Asia-Pacific world was home to the ancient civilisations of India and China during the same period. The cultural beliefs and practices of these unique civilisations have helped shape a region of the world that is close to and important for Australia today. The ancient past of our neighbours has impacted on us in ways we often do not realise.

The chapters in this depth study explore five of the most significant ancient civilisations in world history: Egypt, Greece, Rome, India and China. You will investigate their physical features, key groups and individuals, beliefs and practices, and key historical events. As you investigate this topic, think about what we do today in Australia that originated in these ancient civilisations.

Video
Depth study overview

Learning goals

After completing this unit, you should be able to answer these questions:

- How do we know about the ancient past?
- Why and where did the earliest societies develop?
- What emerged as the defining characteristics of ancient societies?
- What key beliefs and values emerged, and how did they influence societies?
- What were the causes and effects of contact between societies in this period?
- Which significant people, groups and ideas from this period have influenced the world today?

Introducing historical concepts and skills: *cause and effect*

Some of the chapters in this depth study have a special focus on the concept of **cause and effect**. This means you will be developing your ability to explain why things happened in the past and what the results of those events were.

There are many different types of causes and effects. Causes and effects can be political, economic and social. There is also usually more than one cause or effect for an event, so we need to avoid falling into the trap of thinking an event only has one trigger or one result. As you read the chapters in this depth study, you can look for opportunities to build your understanding of cause and effect.

Introducing historical concepts and skills: *continuity and change* and *empathy*

Some chapters in this depth study also have a special focus on the concepts of **continuity and change** and **empathy.** This means you will develop your ability to explain what changed and what stayed the same over time, as well as your understanding of what life was like for people in the past.

Identifying continuity and change is a key skill to have when you are studying history. This depth study will help you to develop your ability to identify when things change and why, which groups were involved, and what types of things in a culture stay the same and are long-lasting. Empathy is an understanding of the past from the point of view of a particular individual or group, including an appreciation of the circumstances they faced, and the motivations, values and attitudes behind their actions. Developing a sense of empathy towards others is a crucial life skill. You can look for opportunities throughout this depth study to develop both of these important skills in history.

▼ **Source A** Temple of Apollo at Delphi in Greece, where, as you will learn in Chapter 7, the Oracle could be found.

CHAPTER 6

Ancient Egypt

6.1 Setting the scene: the mysterious construction of the pyramids at Giza

Did you know that the 'Great Pyramids' of Giza are only three out of 104 pyramids in Egypt in total? How these pyramids were built 4500 years ago is one of the world's biggest historical mysteries. No historian or archaeologist can say for sure how they were made, but they are so large they can be seen from space. The tallest pyramid of Khufu (or Cheops) was originally nearly 150 metres in height and contains 2.3 million stone blocks. The stone blocks are estimated to range in weight between 3 and 54 tonnes each. Each block is cut to fit so precisely together that a razor blade will not fit in the gaps between them. Even with modern technology, building the pyramids would have been a difficult task. In c. 2500 BCE, the workers did not have the help of trucks, cranes, pulleys, electric tools or even wheels to cut and move the huge stones. So, how did the ancient Egyptians organise and construct the pyramids? And why did they do it? The pyramids were tombs, not living spaces like a palace, or spaces to store food, so why did the ancient Egyptians go to all that effort?

▲ **Source 6.1** Pyramids at Giza, Egypt, as they look today

The people of ancient Egypt believed that the **pharaoh** was appointed by God to rule. It was also believed that the Egyptian pharaoh had an important duty to maintain order and balance in this world, and in the afterlife. The pharaoh was seen as the gods' representative on Earth, and the peoples' only link to their gods, so, by supporting the ruler so that he or she could achieve order and balance, the people were also looking after the gods, and, in the process, making sure that the gods gave them a good life and an afterlife too. The pyramids were seen as symbols of the sun. The pyramids are shaped like rays of the sun (see Source 6.2), and the rays were thought to enable the pharaoh to climb up to join the all-powerful sun god. The most likely reason why so much effort went into building the **pyramids** is that the people wanted to work with the pharaoh to build a splendid tomb because they thought that these magnificent tombs were a way to make the pharaoh *and* the gods happy. Another reason may be because the pyramid-building projects would have been big employers. Whole towns grew up next to each pyramid, where workers and their families lived. Therefore, the pyramids also created lots of jobs and opportunities for people to learn new skills.

The Greek historian Herodotus visited Egypt in c. 500 BCE. He claims he was told that the pyramids were built by slaves, and for thousands of years this is what everyone believed. However, because of recent work by famous archaeologist Mark Lehner, we now know that the pyramids were built by **free** men brought in from all over Egypt to work on these huge projects, which probably took decades to complete. This is a good example of how what we 'know' about the past can change as we learn and discover more evidence.

The internal walls of the later pyramids have inscriptions showing ancient Egyptian life and

pharaoh divine ruler of ancient Egypt; the term meant 'the one from the palace'

pyramid a massive monument of ancient Egypt that has a rectangular base and four triangular faces that finish in a single point; they are built over or around a crypt or tomb

free a term used to describe people in ancient times who were not slaves
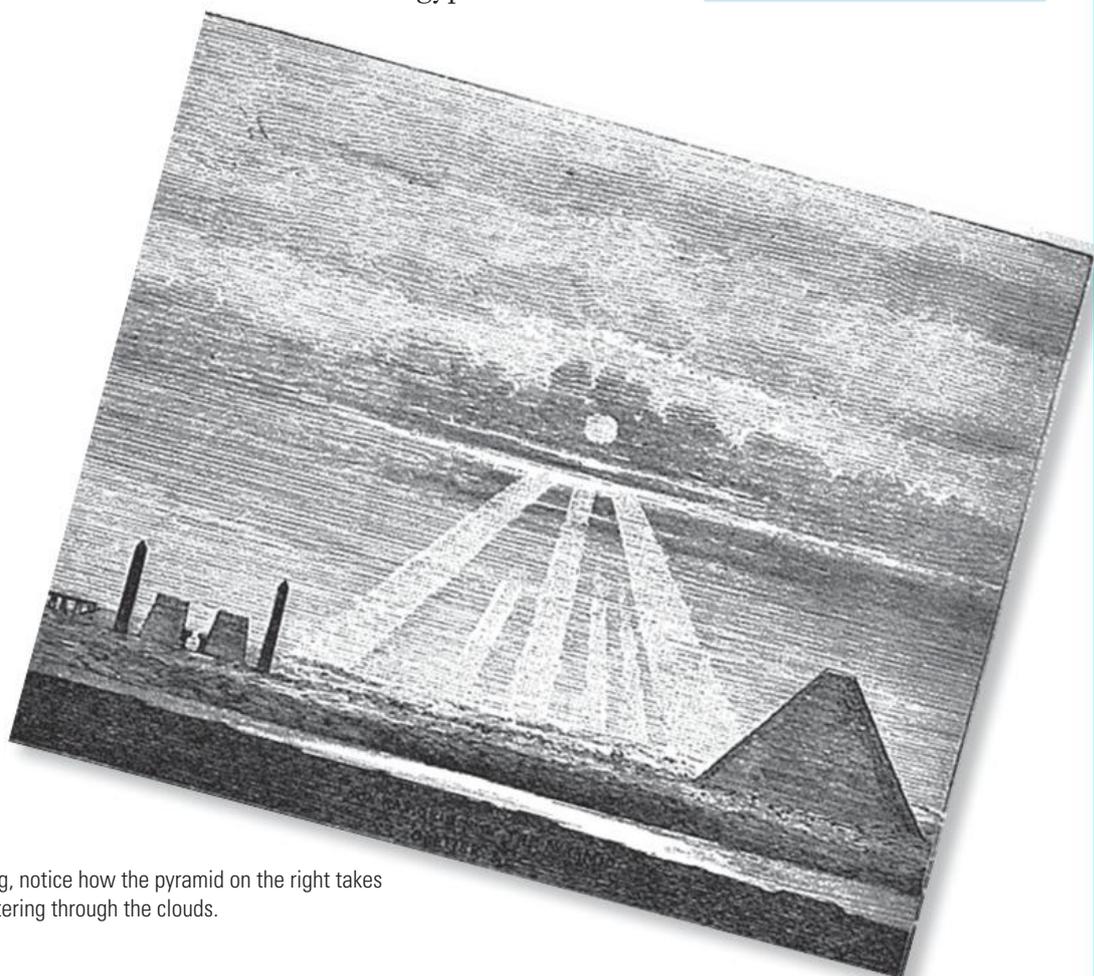
▲ **Source 6.2** In this painting, notice how the pyramid on the right takes the shape of the sun's rays filtering through the clouds.

religious beliefs – many of these inscriptions are prayers and spells to help make sure that the dead have a good afterlife. These prayers and spells later became part of the famous 'Book of the Dead'. These pictures are some of the best sources of information we have about how people lived in ancient Egypt and how they understood the world. For example, the inscriptions include images of pharaohs and their families, important administrators, workers, food, gods, farming, plants and animals, social rules, festivals, clothing, entertainment and rituals.

Every historian and archaeologist would like to know how the ancient Egyptians lifted the stones of the pyramids into their final positions; in some parts of the pyramid the placement of the stones would have been over 140 metres high. Historians and archaeologists have proposed that a ramp of some kind may have been used, but Mark Lehner demonstrated in his NOVA Project (an experiment run by the Oriental Institute of the University of Chicago to try to replicate building the pyramids using the kind of equipment the ancient Egyptians would have used) that ramps and levers may *both* have been used to lift the huge stones into place. While they were able to work out who built the pyramids and how the stones were cut and moved, the NOVA Project was never exactly sure how the enormous stone blocks were lifted into place.

Regardless of how the stones were put into place, we do know that the pyramids required a huge amount of work. Lehner says the pyramid builders may have been working on the pyramids as a way to pay their taxes. He suggests the workers may have arrived to spend a few months working on a pyramid while the Nile flooded, a time when lower-class working people could not do their farming. When it was time to sow crops again, they went home to their farms, having
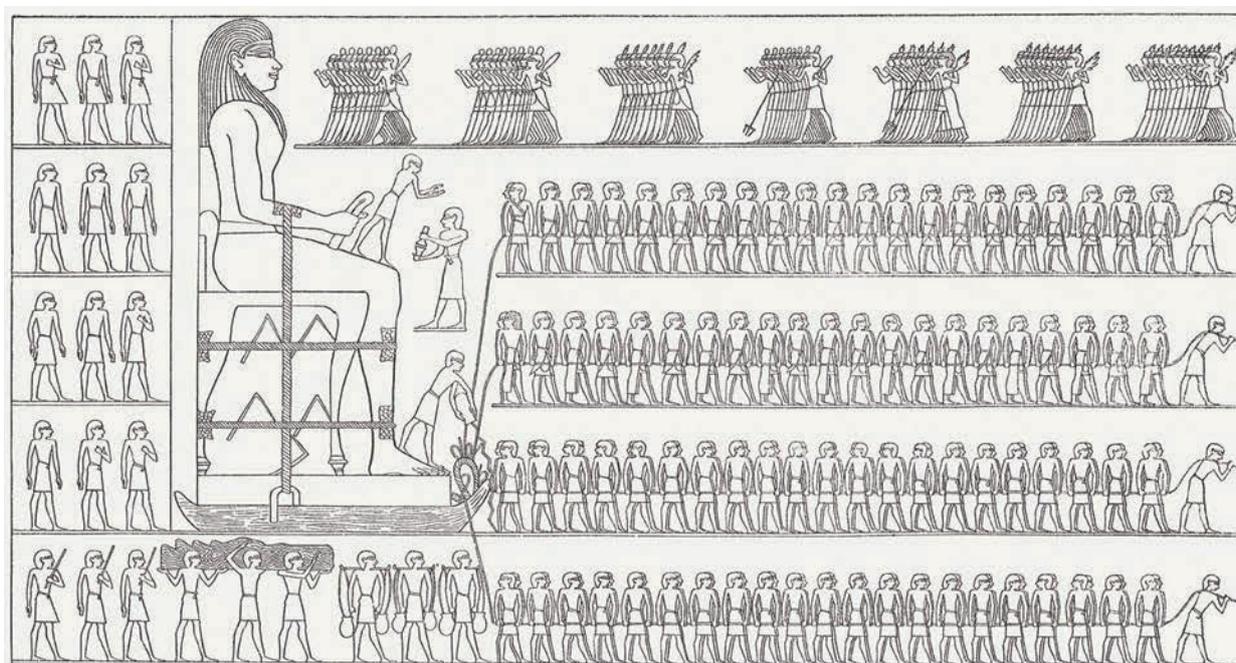
▲ **Source 6.3** A drawing of an engraving from the tomb of Pharaoh Djehutihotep. It shows 172 figures pulling an enormous statue on a sledge. Is this how the Egyptians hauled the stone for the pyramids?

'paid' their taxes in labour for that year. We also know that towns with complex industrial areas were built next to the pyramids to house all the workers, and that specialised training of **artisans** took place to make sure that high-quality work was consistently carried out.

Just looking at the pyramids can raise many other questions.

For example:

- How was ancient Egyptian society organised to make this possible?
- How did the ancient Egyptians develop such advanced mathematics, science and engineering skills?
- How did the rulers wield such power?

artisan someone who does skilled work with their hands
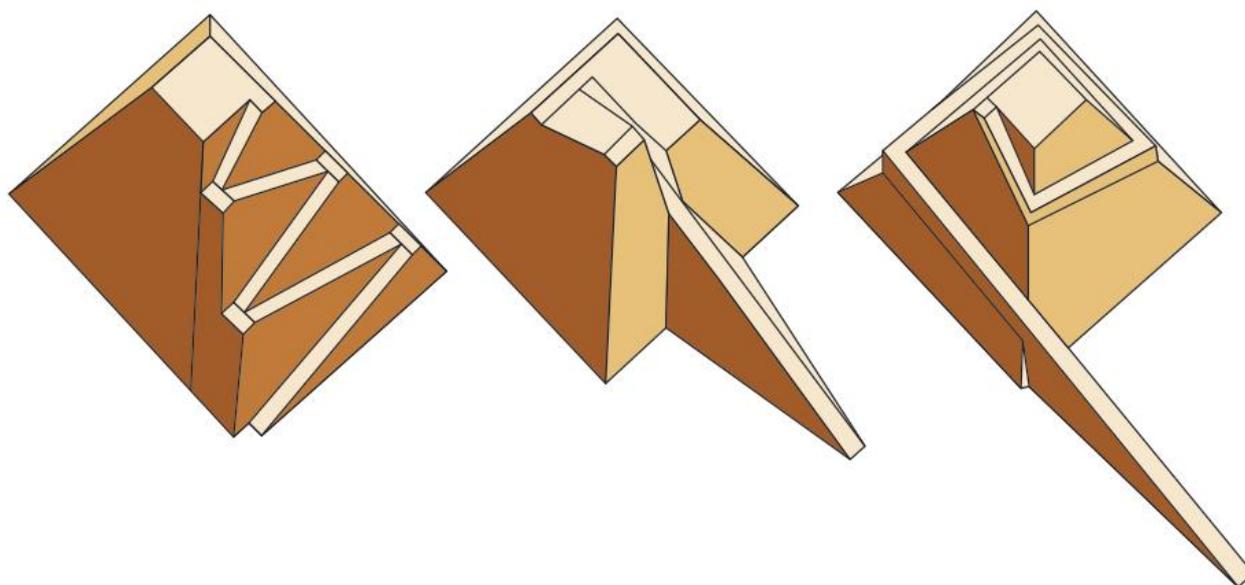
▲ **Source 6.4** This illustration shows the competing theories of ramps in the pyramids' construction. Looking from above, the first drawing shows a ramp zigzagging down the side of the pyramid, the second drawing shows a straight ramp and the third drawing shows a spiralling ramp around the pyramid. Which do you think makes the most sense?

MAKING THINKING VISIBLE 6.1

Think, puzzle, explore

You may already know something about the ancient Egyptians before you read this chapter. Use 'think, puzzle, explore' to put your knowledge to work.

1 What do you *think* you know about ancient Egypt?
2 What question or *puzzle* do you have?
3 What do you want to *explore* about ancient Egypt?

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

6.2 Chapter overview

Introduction

Have you ever wondered what is inside the pyramids or how people were mummified? These are among the many secrets of ancient Egypt. The ancient Egyptians were one of the world's earliest human civilisations. They were among the first people to organise themselves into a large society that included a government, religious beliefs and unique cultural practices.

There are a lot of things about Egypt that are similar to today, but there is also a lot that is very different and unique. Learning about ancient Egypt will help you to gain a better understanding about why Australia, and a lot of the world, works the way it does today.

Learning goals

After completing this chapter, you should be able to answer these questions:

- How did geography affect the development of ancient Egypt?
- How was ancient Egyptian society organised?
- What changes took place in ancient Egyptian society and what impact did these changes have?
- What were the significant beliefs, values and practices of the ancient Egyptians?
- Why was Cleopatra a significant figure in ancient Egypt?
- How do archaeologists and historians uncover information about ancient Egypt?
- Why do we conserve the remains of ancient Egypt and how do we do it?

Historical skills

After completing this chapter, you should be able to:

- Explain what cause and effect means in the study of history
- Understand the role of historians and archaeologists in uncovering the past
- Develop historical empathy with people in the past
- Interpret primary sources in both written and visual form
- Evaluate the reliability of primary sources
- Correctly use special terms specific to the topic under study
- Use factual evidence (dates, statistics, examples) to substantiate an argument
- Reflect on your findings and refine your learning.

Digital resources

Visit the Interactive Textbook to access:

- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video
Five interesting
facts about
ancient Egypt

▶ **Source 6.5** The Great Sphinx of Giza in front of the Great Pyramid

6.3 Timeline of key events

What came before this topic?

- **c. 3500 BCE** People arrived in Egypt and settled along the Nile River valley

Hieroglyphic script from a wall in the Teti pyramid in Giza

Are these people bathing in the Nile River like the ancient Egyptians did?

New Kingdom period

c. 1460 BCE
Tuthmosis III creates the biggest and most powerful empire Egypt ever had

New Kingdom period

c. 1334 BCE
Tutankhamun becomes pharaoh of Egypt

Old Kingdom period

c. 2613–2181 BCE
The great pyramids at Giza are built under the leadership of pharoah Khufu

Early dynastic period

c. 3000 BCE
Hieroglyphic script is developed

c. 3100 BCE
King Narmer becomes the first pharaoh when he unites Upper Egypt and Lower Egypt

Unification period

c. 2670 BCE
The first stone pyramid is built at Saqqara under the leadership of pharoah Djoser

Early dynastic period

c. 2040–1640 BCE
The high point of ancient Egyptian art and architecture

Middle Kingdom period

The step pyramid of Djoser is the oldest Egyptian pyramid and the world's oldest stone building

Timeline questions

1. Use the timeline to list some of the well-known individuals who lived in ancient Egypt. What did these people do?
2. Research and write about one of the significant events shown on the timeline. Describe the *causes* of this event as well as its *effects*.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

What came after this topic?

- **30 BCE** After Queen Cleopatra VII's death, Egypt becomes part of the Roman Empire

The Colosseum is an oval amphitheatre in the centre of Rome.

Ptolemy I ruled Egypt from 305–283 BCE.

Late period

747–332 BCE
The Nubian, Assyrian and Persian armies conquer Egypt

305 BCE
Ptolemy I becomes pharaoh of Egypt

30 BCE
Cleopatra VII, the last pharaoh, commits suicide after failing to prevent a Roman invasion of Egypt

1279 BCE
Ramses II (The Great) becomes pharaoh of Egypt

332 BCE
Alexander the Great conquers Egypt

196 BCE
The Rosetta Stone is carved

New Kingdom period

The Rosetta Stone in the British Museum

Ramses II, who reigned until 1213 BCE

6.4 The physical features of Egypt and how they influenced the civilisation that developed there

FOCUS QUESTION

How did geography affect the development of ancient Egypt?

Climate and geography

Positioned in the north of Africa, Egypt sits along the **Nile River** in the Sahara Desert. The Nile is the longest river in the world and passes through several countries before it winds its way down through the entire length of Egypt. Egypt has two seasons today, but in the ancient world it had three – the annual inundation caused three periods of activity: Akhet (flooding season), Peret (planting season) and Shemu (harvest season), which the local people thought of as 'seasons'. Temperatures range from very hot during the day to very cold at night-time and sometimes it snows in the south nearer the mountains. There is little rainfall for most of the year and people rely on the Nile as a source of freshwater.

Nile River the main river running through Egypt

▲ **Source 6.6** Ancient Egypt (c. 5000–3000 BCE)

► **Source 6.7** The Nile region as it appears today
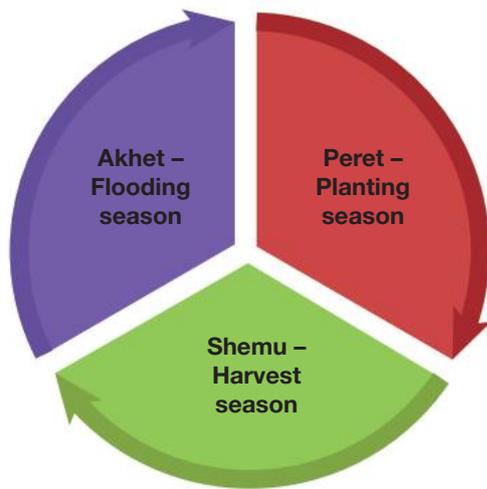
▲ **Source 6.8** Diagram of the seasons of the Nile for ancient Egyptians

When we look at an aerial photograph of Egypt (see Source 6.7), we can see the dark, fertile soil that surrounds the Nile. The lush green stands out next to the harsh yellow sand of the Sahara Desert. As the Nile River flows from the mountains in the south to the Mediterranean in the north, it creates a long, narrow strip of fertile farmland, which weaves through the desert like a ribbon.

Villages on the Nile

The Nile River was central to the development of Egyptian **civilisation**.

Around 8000 years ago, groups of ancient peoples started settling along the Nile, coming from lands to the north-east in search of good land for hunting and farming. The dark soil on the riverbanks supported the villages that were gradually established as the population grew. The people planted crops – mostly grains like wheat and barley – and raised animals along the river. The Greek historian Herodotus called Egypt 'The gift of the Nile' because the river was the source of life for the people who lived along it, allowing them to grow plentiful crops, giving them clean water and providing an excellent 'highway' that allowed people to move resources up and down the entire country.

The farming settlements changed the way these early peoples lived. While hunters had to move around to follow herds of wild animals for food, farmers had to stay where they were to look after their crops. The early villages and cities were very primitive compared to today's villages and cities. The settlements began as small farms, gradually became villages and then turned into towns as the population grew. Around five thousand years ago, the different tribes and villages united to make the city of Memphis their capital. Memphis was not always the capital city. At times other cities became more important. For example, during the New Kingdom the capital was Thebes and then Akhetaten. The capital would move depending on where the pharaoh wanted it to be.

> **civilisation** a society that has developed an organised system of government, social customs and religious beliefs, as well as forms of technology that include writing and the arts

Akhet: July to October

Peret: November to February

Shemu: March to June

▲ **Source 6.9** A modern artist's impression of the cycle of the Nile floods

▲ **Source 6.10** The Nile River, as seen from the space shuttle *Columbia* in 1996. You can see how the regions immediately surrounding the river are a rich and fertile green.

▲ **Source 6.11** This is a sketch of an ancient Nilometer that was drawn by a European visitor to Egypt in 1895 CE. The markings on the shaft indicated how the flood would behave.

▲ **Source 6.12** A common measurement of water levels seen today, based on the design principles of the Nilometer.

Inundation

Following the winter rains each year, the Nile would flood. The water level would begin to rise in June and peak in August, before returning to its lowest point in May. Every year the **inundation** would be slightly different, so Egyptians watched and measured water levels very carefully. Typically, water levels would rise over 12 metres at Thebes and seven metres at Cairo. A large inundation might mean flooding that could destroy whole villages. A small inundation meant there was not enough water for the farms, resulting in failed crops and thirsty animals. Without enough water, people would certainly go hungry. For the best harvest, the water levels would need to rise around seven metres, but no more than eight metres and no less than six metres.

When a river as powerful as the Nile flows down steep mountain slopes, it picks up soil from the entire riverbank and carries it along with it. Towards the bottom of the slope – as the land becomes flatter – the water slows down and spreads out, flooding the land near the riverbanks. The soil and minerals carried by the river settle and leave thick layers of **silt**, which act as a fertiliser.

inundation the yearly flooding of the Nile River

silt rich, fine soil carried in the waters of a river

Black and red lands

Every year when the flood waters receded, a layer of thick black dirt was left behind. The silt carried by the inundation was very fertile – full of rich vitamins and minerals – and blackened the areas near the Nile. The colour difference can be clearly seen in modern satellite images (see Source 6.10). Most people lived near this area, called the Black Land, as it was the best place to grow crops and raise farm animals. The rocky, sandy desert lands further away from the Nile River were known as the Red Land, because of the colour of the soil. There was little rain in the Red Land, making it harder for plants and animals to grow, so fewer people settled there. However, the desert was where the Egyptians built their temples and tombs and buried their dead, so the Red Land also became an incredibly important place for them.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 6.1

Using historical sources as evidence and developing empathy

The writings of the ancient Egyptians help us to understand what they thought and felt, and what their lives were like. Understanding more about how the ancient Egyptians lived helps us develop an empathetic connection with people from the past. These **primary sources** are the first and most important sources of information for historians. The document in Source A is a hymn, or song of praise, which the ancient Egyptians sang to their river when the inundation started. It tells us that they recognised the river as the most important thing in their lives. Examine the two sources here and then answer the questions that follow.

> **primary sources** documents or artefacts that were created at the time of the historical event or era

SOURCE A

Praise to you, O Nile, that comes from the earth, and comes to nourish Egypt. He that spills out, giving the fields water to drink and making the people strong. He makes one man rich and loves the other. He that waters the meadows, he that Ra created to feed all cattle. He that gives drink to desert places which are far from water. He that makes barley and wheat, so that temples can keep festivals. Beloved of the corn god Keb. Helper of Ptah, god of all workshops and craftsmen. He that makes trees grow, so that men may have wood. The ship is built by his power.

If the inundation is poor, then men can no longer live and breathe, and all men are poor. The foods of the gods are short, and millions of men will die. When the river rises, the whole land is joyful, all jaws begin to laugh and every tooth is shown.

When the Nile floods, offerings are made to you, cattle are slaughtered for you, birds are fattened for you, prayers are said for you. You are fruitful, O Nile, you are fruitful, He that makes man to live on his cattle, and his cattle on the meadow. You are fruitful, O Nile, you are fruitful!

▲ **Source 6.13** A plain language adaptation of *The Hymn to the Nile Flood*, 19th dynasty (c. 1292–1190 BCE)

SOURCE B

◄ **Source 6.14** A writing board with lines from *The Hymn to the Nile Flood*, 19th dynasty (c. 1292–1190 BCE). The writing is inscribed in black and red ink on a board created from gesso on linen.

Responding to the sources

1 Who do you think would make a hymn praising the Nile River?
2 How many different types of food are identified in the hymn as being grown with the help of the Nile? List them.
3 How do you think that the Nile helped craftsmen in their workshops?
4 What were the results of a bad year of inundation?
5 How did the ancient Egyptians pay back the Nile for what it gave them?

Key concepts: sources, evidence, cause and effect, empathy   **HASS skills:** analysing, communicating and reflecting

Amazing but true …

Each year, the inundation was measured with specially designed 'Nilometers' that measured the rise and fall of the waters (see Sources 6.11 and 6.12). If the water level was low, there would be **famine**. If it was too high, the flood would be destructive. There was a specific mark that indicated how high the flood should be if the fields were to have good soil. The Nilometer was such a useful, yet simple, device that many variations of it can still be found around the world today.

famine when there is not enough food for everyone in society

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 6.2

Analysing cause and effect

1 Every historian needs to be able to identify chains of cause and effect to examine how and why things happened in the past. *Causes* are events, people or conditions that lead to something happening. *Effects* are the changes that result from that thing happening.

Consider how Egypt's geography allowed civilisation to develop and flourish. Create a diagram that shows the causes of this and why they were significant. You can refer to Source 6.15 to help you get started. You can also refer back to the text you have read, as well as the information in the timeline at the start of the chapter.

▲ **Source 6.15** The Egyptians used the land around the Nile for many agricultural purposes. Pictured is an example of an agricultural scene, chiselled from limestone into a tomb wall, at the Saqqara Necropolis in Memphis, Egypt, discovered in 1979. How did geography shape human development in Egypt?

Use the following example of a graphic organiser to help you.
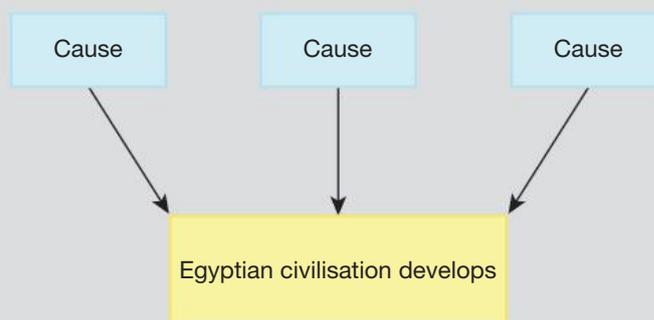
2 Use the knowledge in your graphic organiser to write a paragraph that explains how ancient Egyptian civilisation developed. In your response, be sure to mention cause and effect.

Key concepts: sources, evidence, continuity and change, cause and effect, contestability

HASS skills: communicating and reflecting

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 6.3

Understanding continuity and change

The concept of continuity and change is very important in relation to ancient Egypt. While much of Egyptian culture stayed the same for thousands of years, it also adapted and went through some significant changes. The Egyptians' ideas about their gods are a good example. The ancient beliefs about each god were never discarded, but instead newer ideas were added to the old ones. What historians and archaeologists are left with is a complicated story to unravel, using all the different pieces of information from across a very long period of time.

Choose two gods from the following list and research how beliefs about them and their appearance changed over time. Start with what the gods were originally like in the very early part of the Old Kingdom (or even earlier), and then try to find at least three things that were added to the stories told about them, or what they became associated with, and try to explain why this happened. Also include when these changes occurred.

Construct a timeline to help show this information.

Choose from:

- Amun-Re
- Horus
- Osiris
- Nepthys.

Key concepts: continuity and change   **HASS skills:** researching and questioning, evaluating

END OF SECTION REVIEW 6.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 How long is the Nile River?
2 What kinds of crops did farmers plant along the edge of the Nile River?
3 What term is used to describe the annual flooding of the Nile River, shown in Source 6.16?
4 What device did the ancient Egyptians use to measure the rise and fall of the flood waters of the Nile?
5 Explain what is meant by the terms 'Black Land' and 'Red Land'.
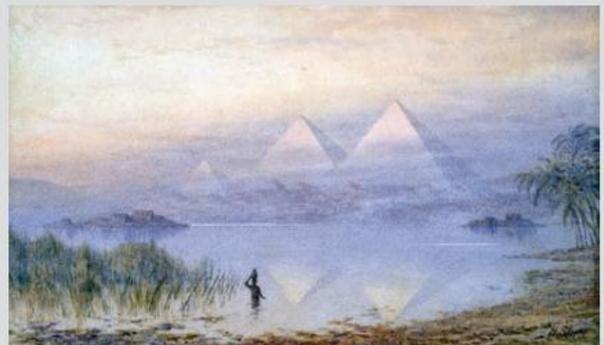
▲ **Source 6.16** Henry Noel Shore painted *The Pyramids During the Nile Flood, Egypt* in 1888 CE.

Interpret

6 Why is the *Hymn to the Nile Flood* an important primary source?

Argue

7 Herodotus was a famous historian from ancient Greece, who visited Egypt in the fifth century BCE and called Egypt the 'gift of the Nile'. Explain why the Nile was important to the development of Egyptian settlement. (Hint: think about why Herodotus called Egypt the 'gift of the Nile'.)

Key concepts: sources, evidence, significance, perspectives   **HASS skills:** analysing, communicating and reflecting

6.5   Roles of key groups in ancient Egypt, and the influence of law and religion

FOCUS QUESTIONS

- How was ancient Egyptian society organised?
- What changes took place in ancient Egyptian society and what were the impacts of those changes?

Unification

Egypt was a large land, and very long in shape. Before 3100 BCE, it consisted of a series of villages along the Nile. As these towns grew, two different cultures developed in the north and in the south, and these areas are known as 'Lower Egypt' and 'Upper Egypt'. These areas are very different places: Lower Egypt was more humid and flatter with fertile soil, whereas Upper Egypt was rockier and much of it was desert. Because of this the people who lived in these areas were different to each other. This meant that sometimes the whole country was divided by conflict between the two groups of people in the north and south, or it was divided because it had been invaded by people from outside Egypt. But, at other times, the people of Upper and Lower Egypt united as one. These times of unity were when Egypt was at its most powerful.

Kingdoms

The **unification** of Egypt under King Narmer is considered the start of ancient Egyptian civilisation. For most of this time, Egypt was ruled by a pharaoh who controlled and organised people all along the Nile River. To understand how society changed over this time, it can be broken down into smaller time periods. In ancient Egypt, we call these periods 'kingdoms'. Kingdoms were longer time periods when Egypt was generally stable and united under a **dynasty** or line of dynasties. The shorter periods of time in between the Old Kingdom, Middle Kingdom and New Kingdom are known as the 'intermediate periods', when Egypt was divided into competing groups with no single powerful ruler.

unification the process of combining things or people

dynasty a succession of rulers from the same family; in ancient Egypt and China some dynasties included rulers that were not related to the ruling family

chariot a two-wheeled vehicle that was used in ancient times for racing and fighting; it was pulled by a horse or horses

Old Kingdom

During the Old Kingdom (3rd–6th dynasties), Egypt was rich and powerful. It traded with neighbouring countries such as Punt and Nubia. This was also the age of the building of the great pyramids at Saqqara and Giza.

Middle Kingdom

During the Middle Kingdom (11th–14th dynasties), the government was strengthened and Egypt became wealthy again. The capital was moved to a new site near the Fayum oasis, where it was possible to control Egypt better. Trade began again and the Egyptians even started to take over Nubia.

New Kingdom

During the New Kingdom (18th–20th dynasties), the ancient Egyptians were confident, and played a greater role in trade and warfare in their region. Armed with a new weapon – the horse-drawn **chariot** – they conquered a large area. This included Nubia in the south, and Syria and Sumer to the north-east. Money flowed into Egypt, which helped to finance the building of many splendid temples.

Amazing but true …

King Narmer's unification of Egypt made it the first example in the world of a **nation-state**. This means that one central government ruled an area of land with clear and fixed boundaries. It also means that the people felt themselves to be a part of the same nation and that they obeyed its rules.

ACTIVITY 6.1

Using historical sources as evidence

What evidence do we have about these changing periods? The Narmer Palette tells the story of King Narmer, who unified Upper Egypt and Lower Egypt. One side shows the gigantic figure of the king in battle, lifting his club to kill an enemy. The other side shows dead soldiers lying on the ground in front of the king.

On the side of the king going to battle, the king wears the high crown of Lower Egypt. The falcon that is shown represents the god Horus. Above this is a cow, the symbol of the goddess Hathor.

On the other side are rows of headless bodies and soldiers carrying military standards. There are two long-necked lions joined together, possibly representing Upper Egypt and Lower Egypt. At the bottom of the scene, the king is shown as a powerful bull attacking a fortress.

Historians say the palette shows King Narmer conquering Lower Egypt and uniting the two lands under one strong ruler. Having one powerful ruler stabilised ancient Egyptian civilisation and ended the warring between the tribes.

▲ **Source 6.17** In this scene on the Narmer Palette, King Narmer wears the crown of Upper Egypt. He holds an enemy by the hair and is about to 'smite' him or strike a blow. The scene is carved on a palette, which was a flat stone sheet used to mix cosmetics. It was probably made about the time of the unification of Upper Egypt and Lower Egypt in about 3100 BCE.

King Narmer was thought to have lived around 3100 BCE. He is sometimes referred to as King Menes. King Narmer ruled the nation-state from the new capital city, Memphis. From there, he created government departments, known as a **bureaucracy**, to help him rule up and down the Nile. Thus, Narmer was the first pharaoh of a unified Egypt.

Examine Source 6.17 showing the Narmer Palette, then answer the questions that follow.

nation-state an area of land ruled by a central government with clear and fixed boundaries

bureaucracy a system for controlling or managing a country, company or organisation that is operated by many officials employed to follow rules carefully

Responding to the source

1 What is a palette?
2 Identify King Narmer's main achievement in unifying ancient Egypt.
3 Describe what is meant by a 'nation-state'. How might it be different to a settlement?
4 What do you think was the overall message of the Narmer Palette? How effective do you think the message was?

⚙️ **Key concepts:** sources, evidence, significance   📋 **HASS skills:** evaluating, communicating and reflecting

How was society organised in ancient Egypt?

From the start of ancient Egyptian civilisation, around 3100 BCE, the people believed their pharaoh was somewhere between a representative of the gods and an actual god. They thought the pharaoh was descended from the great god Amun-Re and, early on, that he was the human form of the god Horus. They believed that the pharaoh had special power because of this connection to the gods, and therefore the pharaoh was responsible for making sure the gods were pleased with the people of Egypt. We have already learned that the concept of balance and order was important in Egypt. This concept was called 'Ma'at', and Ma'at was also an important goddess who is often pictured with the pharaoh. For the pharaoh, this meant that he or she was expected to provide safety, security and enough resources for the Egyptian people to have a good standard of living, now and forever. This was a very big job, and the pharaoh required the help of a large number of people. The most important of these were the priests, who ran the temples for the major gods, and the officials and generals who managed the economy and commanded the military. However, despite an enormous number of staff who assisted in running the country, the organisation of the Egyptian state was centralised around the pharaoh.

Historians know the Egyptians revered the pharaohs because they have found **inscriptions** calling the pharaoh *netjer* (god) and *nefer netjer* (good god). Another title, *aa netjer* (great god), tells us that the

inscription writing that has been carved into a hard surface, such as solid stone, to help people remember a certain person or event

pharaoh had to be a great warrior and to lead the army against enemies.

One of the most important signs of the pharaoh's power was the crown. This was made up of two earlier crowns: the tall, white crown of Upper Egypt and the shorter red crown of Lower Egypt. When the two crowns were put together, they symbolised the union of Egypt under one ruler.

▲ **Source 6.18** The pharaoh Menes combined the white crown of Upper Egypt (far right) and the red crown of Lower Egypt (middle) as a symbol of his rule over a unified Egypt.
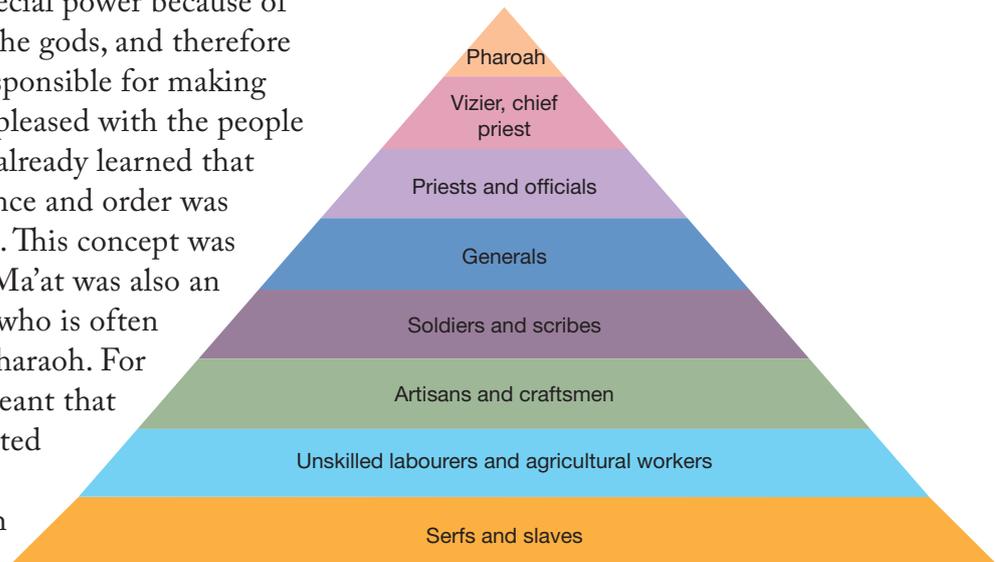
▲ **Source 6.19** How ancient Egyptian society was structured

▶ **Source 6.20** This statue of Hatshepsut (1508–1458 BCE) shows her holding a flail and a crook. Hatshepsut was a female pharaoh during the New Kingdom (18th dynasty). Hatshepsut appears in the form of Osiris (a very important god associated with the afterlife) in this image.

Amazing but true …

No one knows why beards were worn by pharaohs. It might be that it was because it copied the gods, although not all the gods had beards. What is clear is that the beard was part of all formal royal **regalia**. The beard was so important that even female pharaohs wore a beard on formal occasions.

regalia the emblems or insignia of royalty, especially the crown, sceptre and other ornaments used at a coronation

Additional content available: The Battle of Kadesh and the power and authority of the pharaoh

The pharaoh was usually shown with at least two important symbols of power. One was the 'flail', which was copied from a farmer's whip and symbolised the pharaoh's authority to make the people obey him or her. The second was the rounded 'crook', which is used by shepherds to pull sheep back to the herd and symbolised the pharaoh's role in guiding their people. The pharaohs also often wore large, jewelled collars and beautiful headdresses. The headdresses and collars were a sign of great wealth; the gold was valuable as were the semi-precious stones like the brilliant blue lapis lazuli.

As time went on, and the Egyptians extended their boundaries to create an empire by conquering their neighbours and defeating their enemies, the idea of the 'Warrior Pharaoh' became very important. It was typical for Egyptian rulers to show themselves crushing their enemies or demonstrating feats of physical excellence. Being a Warrior Pharaoh was another way for the pharaoh to achieve balance and order. As a warrior, he or she was able to keep Egypt safe from enemies. This became a very important part of the role of the pharaoh in the New Kingdom. This became a very important part of the role of the pharaoh in the New Kingdom, because the Egyptians had used their army to conquer lots of territory and expand their empire. One king, Amenhotep II, stated that he could shoot an arrow through a copper target that was 3 centimetres thick!

▲ **Source 6.21** One of the coffins of Tutankhamun, a New Kingdom pharaoh who ruled c. 1334–1325 BCE

FAMOUS FACE

TUTANKHAMUN

Tutankhamun (c.1343–1325 BCE, New Kingdom) is one of the most well-known pharaohs. His name means 'the living image of Amun'. He is known as the 'boy-king', because he came to the throne at about the age of nine and died at a very young age. He moved the capital of Egypt back to Thebes, away from his father's city of Akhetaten. Tutankhamun restored the temples and statues of the old gods of Egypt. He died quite suddenly, when he was about 19, and for many years archaeologists and other specialists have been trying to find out how. A recent theory is that that he probably died from malaria. Since his mummy was found in 1922 there have been numerous theories about the cause of his death, including that he had been the victim of a stabbing attack from behind and that he had died from wounds to his leg acquired in a chariot accident. A new theory suggests that some of these 'injuries' may actually have been damage done to his mummy after it was discovered by Howard Carter in 1922. The cause of Tutankhamun's death is an ongoing investigation using modern medical and scientific methods (including DNA analysis and CT scans) to try to find out more about the young pharaoh's health. Archaeologist Zawi Hawass, a member of the Cairo Museum, is leading much of this investigation (see Source 6.22).

▲ **Source 6.22** Egyptian archaeologist Dr Zawi Hawass (left) is leading an investigation into the cause of Tutankhamun's death. Dr Hawass is pictured here with then US President Barack Obama in 2009.

Vizier

The **vizier** was among the most powerful and wealthy of all the Egyptians. Viziers were appointed by the pharaoh and were often a member of the royal family. It was the vizier's job to oversee the running of the country (much like a modern-day prime minister).

The vizier's responsibilities included:

- making sure there was enough grain
- supervising **irrigation** projects
- collecting taxation
- keeping the borders of Egypt safe from outsiders
- settling disputes between nobles.

Chief priest

The chief priest was of equal importance to the vizier, though there were times when he was much more powerful than the vizier. The priests controlled the temple bureaucracy for the pharaoh. The chief priest was a very powerful person because, through the temples, his bureaucracy managed the pharaoh's interaction with the gods. Additionally, led by the chief priest, the temple also effectively managed the economy for the pharaoh, because the temple held all the taxes and '**tribute**' that were collected, and stored and distributed all the goods that were traded by the Egyptian state on behalf of the pharaoh. This is why Egypt had what is called a 'temple economy'. The temples also did not have to pay any taxes, and often owned huge amounts of land. They were incredibly wealthy as a result. Perhaps this power and influence is why the chief priest was also sometimes a member of the pharaoh's family.

People such as tax-collectors, judges, scribes and the treasury reported

> **vizier** the most important adviser and helper of the pharaoh
>
> **irrigation** the practice of supplying land with water so that crops and plants will grow
>
> **tribute** goods or services that one group gives to another as a sign of respect or, as was often the case in ancient Egypt, of submission or allegiance
>
> **hieroglyphs** a picture or symbol that represents a word or concept
>
> **hieratic** a simplified version of the hieroglyphic script intended for everyday use

to the vizier and the chief priest, who in turn advised the pharaoh.

— Amazing but true … —

The crocodile was an object of veneration in some ancient Egyptian temples. It was the subject of art (such as in the mosaic shown in Source 6.23) and even the namesake of an entire Egyptian city: Crocodilopolis. Sobek or Sebek was a crocodile god with the characteristics of strength, power and ferociousness. This god was often represented as a patron (supporter) of the army, and was believed to be a defender of the pharaoh and the people.

▲ **Source 6.23** A detail from the Nilotic mosaic of the flooding of the Nile River in Egypt (1 CE)

Writing

Hieroglyphs are the most famous form of Egyptian writing, but they were not used all the time. The simpler **hieratic** script was used more often for everyday writing. Many symbols of the hieratic script are simplified versions of the more complex hieroglyphic script. Very few people learned to read and write, and this became a specialist job of priests and scribes.

▲ **Source 6.24** Here the hieroglyphic script is shown beside the hieratic script. It is clear that hieratic is simplified hieroglyphs.

Scribes

Scribes assisted in the running of the government by keeping written records. Becoming a scribe meant years of training, so the position was highly respected. Scribes were all male and from rich families. The scribe Kheti wrote:

> This is the best of all jobs. There is no other position like it in the land. Every other worker has a boss, but the scribe is his own boss. If you can learn how to write, this will be very good for you.

▲ **Source 6.25** A quote ascribed to Kheti (ancient Egyptian treasurer)

Transport

There were not many roads in ancient Egypt, as the Nile River was the main form of transport. Merchants would travel in large ships, full of goods like grain and linen. Builders had huge barges to carry heavy stones and other materials to and from construction sites. Wealthy Egyptians had pleasure crafts that they could take sightseeing or hunting. Boats going north travelled downstream easily in the currents. In contrast, the wind would usually blow in a southerly direction, helping boats using their sails to travel upstream towards the mountains.

Trade

The Red Land and the Black Land provided the ancient Egyptians with many natural resources. Large amounts of food crops were grown in the Black Land, producing enough food to feed the population and surplus to trade. The flax plant was used to create linen cloth for clothing. Papyrus, which grew along the riverbanks, could be made into paper, boats, shoes, mats and bowls. There was copper, which could be used to make weapons and tools. Knives, axes and other tools could also be made from flint (a sharp stone). There was also gold to be found in the mountains near the source of the Nile, while turquoise and semi-precious stones like lapis lazuli came from the desert, and all of these were used to make jewellery and decorative ornaments. Beautiful stone like basalt, quartzite

▲ **Source 6.26** This frieze on the wall of the Tomb of Menna shows scribes recording information about crops during a harvest. It was painted during the New Kingdom (18th dynasty).
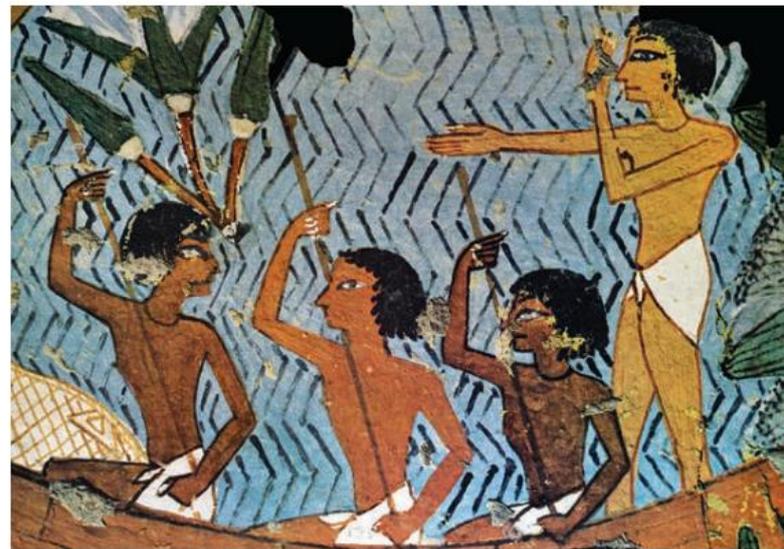
▲ **Source 6.27** This Egyptian tomb wall painting from Thebes (c. 11 BCE) shows rowers on the Nile.

and alabaster could be found across the country. This stone was used to make luxury goods and statues, and was used extensively in the temples and tombs of the wealthy (see Sources 6.28 and 6.29). All of these things were traded along the Nile, allowing Egyptians to sell and obtain items from afar.

▲ **Source 6.28** A basalt small Sphinx statue

Because of the availability of these resources to the Egyptians, their society prospered and trade routes became more sophisticated. This led to the Egyptians trading with places like Punt, where they sourced luxury goods including ostrich feathers and exotic plants and animals – there are inscriptions showing ivory, monkeys, wild dogs and ebony trees being brought into Egypt from Punt. As a result of their own resources and successful trading, Egyptian society became extremely wealthy. Ancient Egypt's prosperity meant that some people were wealthy enough to avoid having to work in the fields growing food. They were able to access education and train to be scribes or builders, and later, to become professional soldiers. Specialist trades developed and the ancient Egyptians became increasingly skilled in science, mathematics and the arts. The cities of Alexandria and Heliopolis were known as centres of learning and wisdom.

> **shaduf** hand-operated device for lifting water from rivers, used in ancient Egypt from 2000 BCE to irrigate the land

Irrigation

As ancient Egyptian civilisation prospered, more and more people relied on access to the water of the Nile. Over time, trenches and dams were built to store and share water across wider tracts of land. Canals allowed them to raise water from the Nile River and increase the amount of land available for farming. Dams allowed the Egyptians to save water for the drier months before inundation.

At first, farmers lifted the water by hand. During the Old Kingdom, they developed the *shaduf*, a wooden arm with a counterweight on one end and a bucket on the other. The *shaduf* was operated by hand to lift water out of the Nile to water crops. Source 6.30 shows a copy of a painting from an ancient Egyptian tomb of a man operating a *shaduf*. Over time, more sophisticated systems were developed by engineers and architects. Their jobs included making predictions about the timing and height of inundation, planning irrigation works, and organising people to work on the land after inundation.

▲ **Source 6.29** Alabaster canopic jars from Tutankhamun's tomb
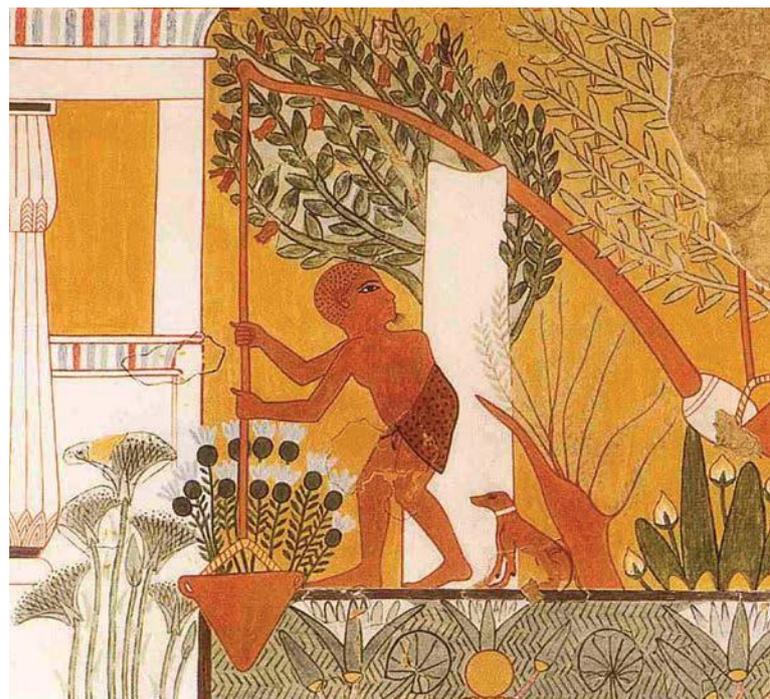
▲ **Source 6.30** A scene of gardener using a *shaduf* from the Tomb of Ipuy at Deir-el-Medina

Food

The main crops were wheat and barley, which were used for making bread and beer. Leeks, garlic, melons, squashes, lettuce, dates, grapes, pomegranates and olives were also grown. As there was only one harvest season, fresh food was only plentiful once a year. For the rest of the year the ancient Egyptians relied on salted or dried food. Animals such as goats, pigs, cattle and sheep were raised, and fish or ducks and geese could be caught in the marshes or bought from fishermen. The average Egyptian could not afford to eat meat, but instead used blood from their animals to thicken their stews and provide some protein. Animals were also kept for their wool, hides or milk.

Clothing

As Egypt was hot and dry, Egyptians generally wore clothes made of linen, which was cool and lightweight. Men wore kilts that went from waist to knee, while women wore shifts from chest to the knee or ankles. Sometimes, farmers are shown wearing loin cloths. In winter, woollen cloaks were worn during the evening for warmth.

Men and women of all classes wore jewellery. Amulets depicting the gods were commonly carried to ward off evil, disease or other undesirable elements. The status of the person determined whether the jewellery was made of gold or bronze and if it contained semi-precious or glass beads. Typical jewellery items were armlets (worn on the upper arms), pectorals (large necklaces worn on the collarbone), earrings or cuff bracelets.

Children were often shown naked and with their heads shaved. Egyptians prized children, and they are often represented in art. Wealthier boys could learn to read and write, while girls would learn to manage the household. Sons of artisans would follow in their fathers' footsteps, while both boys and girls could help run family businesses.

▼ **Source 6.31** Ancient Egyptian clothing from around 2200 BCE (the time of the Old Kingdom). The two figures to the right show the type of clothes Egyptian royalty would have worn, and the two figures to the left show the type of clothes the average Egyptian would have worn.

Housing

Most ancient Egyptian houses, even palaces belonging to the pharaohs, were made of mud brick. The Nile's clay provided the building materials for these brick houses. Such

> **frescoes** pictures painted directly onto fresh plaster

→

There is more on tombs and the afterlife later in the chapter.

constructions were seen as temporary dwellings, as opposed to their tombs, which were built for eternity.

Housing for commoners was often two-roomed dwellings with a roof, on which the family slept at night.

The kitchen was usually a wood fire in the rear yard of the house. Bathrooms, as we know them, did not exist. People used pots as toilets and washed either in rivers or with water channelled from them. Furniture was minimal, except for stools, as wood was scarce. People sat on floor mats woven from papyrus.

Wealthier housing was located close to the floodplain, so that the occupants could enjoy any breeze available from the water. These houses often had water features or ponds containing fish. They were usually decorated with **frescoes**. There would have been more furniture, such as beds with headrests, in the houses of the wealthy.

▼ **Source 6.32** A typical ancient Egyptian family at home
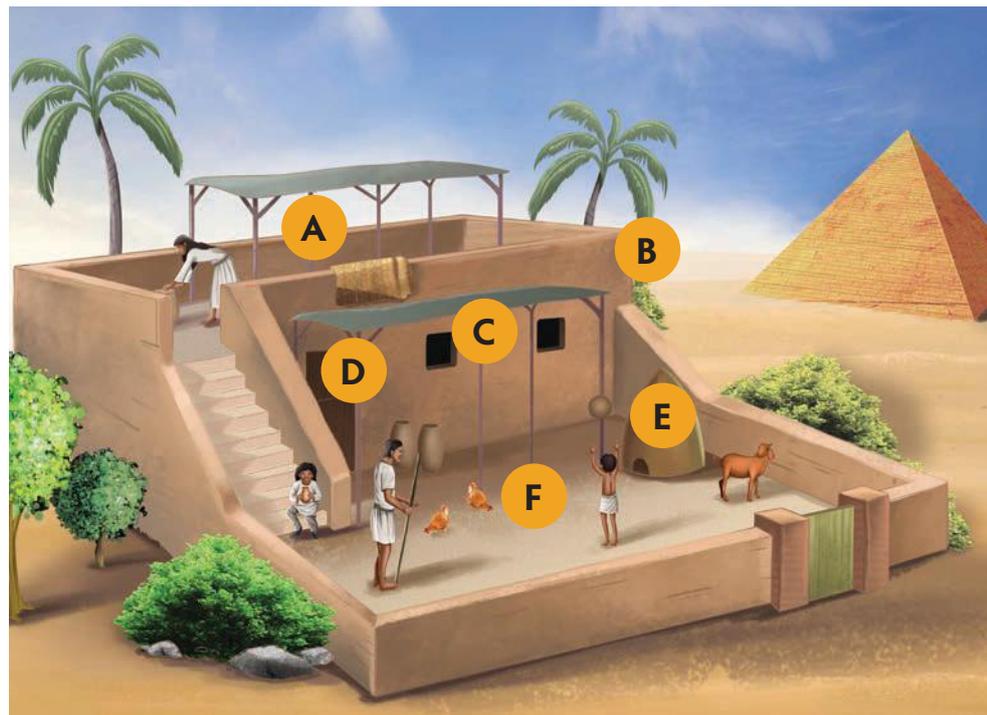
A The flat roof was often used for eating and sleeping.

B Most Egyptians built their homes with bricks made of sun-dried mud from the Nile River.

C Small windows let in little light, keeping the house cool.

D Inside was an entrance hall, a room for social activities, a bedroom, a kitchen and storage space. There was little furniture.

E Grains were stored for making bread and beer.

F Animals were kept in an enclosed yard.

Health and medicine

Human remains from ancient Egypt tell us a lot about the health of the people who lived at the time. A woman who survived childhood could expect to live to the age of 30, unless she died giving birth. Men could expect to live to the age of 34. It was rare to live past 40, and only possible for those

who could afford the best medical treatment. Many ancient Egyptians had ground-down teeth from the sand that got into their food. Artists and craftsmen who worked in the Valley of the Kings had a high rate of arthritis in their knees and ankles from climbing up and down the mountain where the tombs were located.

A papyrus from around 1550 BCE, known as the Ebers Papyrus (after Egyptologist Georg Ebers), contains some medical advice that is quite accurate. It tells people to shave, keep clean, eat carefully and avoid raw fish. There is other evidence that the ancient Egyptians knew how to surgically remove tumours, as well as set broken bones and treat burns.

► **Source 6.33** This papyrus drawing of a fresco from the 14th dynasty shows an eye doctor treating a patient.
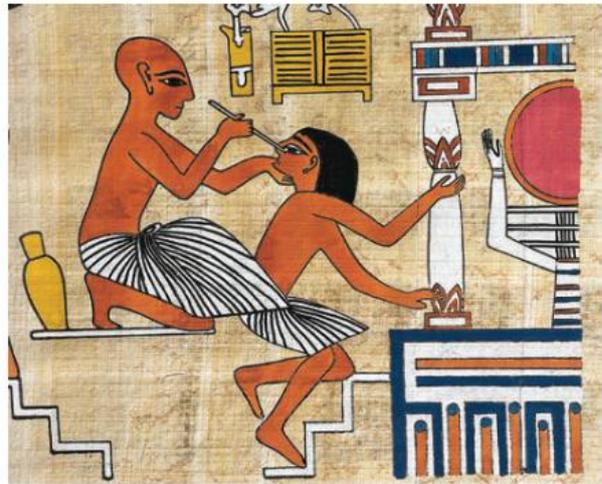
ACTIVITY 6.2

Using historical sources as evidence

Examine Source 6.34 and then answer the questions that follow.

Responding to the source

1   What kinds of resources would be needed to build a statue like this in ancient Egypt? Consider that it weighs approximately 60 tonnes.
2   How is this statue evidence of the power and authority of the pharaoh?

► **Source 6.34** This statue of Pharaoh Ramses II sits in the Luxor temple, which was constructed c. 1400 BCE.

Key concepts: sources, evidence, cause and effect, significance

HASS skills: analysing, communicating and reflecting

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 6.4

Cause and effect in ancient Egyptian culture

In Egypt, the impact of the Nile River is an excellent example of cause and effect. Without the Nile, Egyptian culture would not have developed into one of the richest, most powerful, advanced and complex societies that has ever existed. The rich alluvial soil (full of silt and sand) around the river caused people to settle in the area. This set off a chain of events: the rich soil grew abundant crops; the trade that developed from this made the people of Egypt rich and influential; as their society grew, the Egyptians increased the complexity of their social and economic systems and became increasingly efficient. The effect of the river was multifaceted and meant that life was good in Egypt.

Consider another example of cause and effect in ancient Egypt:

Cause: The ancient Egyptians believed that the sun died in the west every night and was reborn in the east every morning. For this reason, they associated the desert with the afterlife and built their temples and

≫

tombs there. The dry conditions in the Western Desert also preserved the stone temples and tombs built on the West Bank of the Nile River. However, the annual flood have washed away the mud bricks used for homes and daily life by the ordinary people of ancient Egypt, and a lot of the organic materials used in everyday life have decayed and disappeared. This means that much of the evidence for what daily life was like for ordinary people is lost to us. Now most of the evidence that is left about life in ancient Egypt is from buildings that were focused on the dead and the afterlife. This has led to the belief that the ancient Egyptians were obsessed with death. Is this accurate?

Effect: What do you think the effect of losing a lot of evidence about ordinary people's lives has done to our understanding of the past in ancient Egypt?

Write three focus questions that you think would help you research this problem. You might think about:

- who built the temples and tombs that survive today
- what these buildings tell us about daily life
- what we already know about the ordinary people of ancient Egypt
- how we know this
- where we can find evidence
- what kind of evidence we might be looking for.

Key concepts: cause and effect, significance   **HASS skills:** questioning and evaluating

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END OF SECTION REVIEW 6.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What was the name of each period of ancient Egyptian history?
2 Who controlled the large bureaucracy and reported directly to the pharaoh?
3 What was the name of the simpler form of writing?
4 What natural resources were used for trade?
5 What was a *shaduf* used for?
6 What was the average life expectancy for men and women?
7 Why might Egyptians sometimes sleep on the roof of their house?

Interpret

8 How did the Nile River help transportation in ancient Egypt?
9 How did the climate affect food, housing and clothing?
10 How were Egyptian houses built to make the most of the hot climate?

Argue

11 A strong centralised ruler allowed Egypt to build a mighty civilisation. Do you agree? Why or why not?
12 Explain how the features of ancient Egyptian houses reflected the geography and climate.

Key concepts: cause and effect, perspectives   **HASS skills:** analysing, evaluating, communicating and reflecting

6.6 The significant beliefs, values and practices of ancient Egypt

FOCUS QUESTION

What were the significant beliefs, values and practices of the ancient Egyptians?

Egyptian beliefs

Humankind has long used religion to help us understand the mysteries of the world. The geographical features of Egypt were so important that many ancient Egyptian gods were partly inspired by the geography and animals of the region. Numerous gods are represented by some aspect of the environment, such as the rising of the Nile, the dangers of the desert or particular animals.

The topmost god, covered with stars, is Nut. She is the sky god. Here she arches out over the Earth. It was thought that Nut swallowed the sun at the end of each day and it travelled through her body to be reborn at dawn.
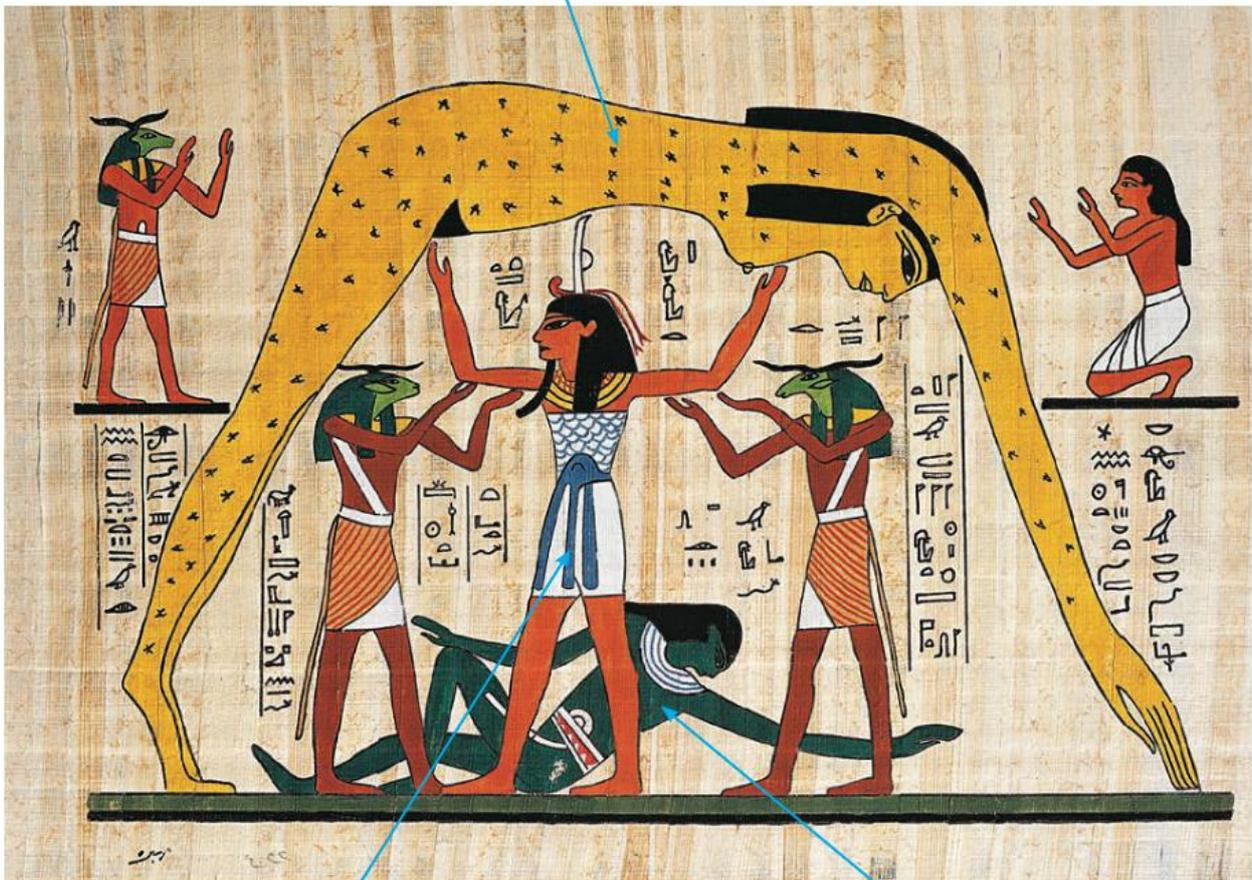
Supporting Nut is the air god, Shu. We can see he is assisted by other deities, one with a ram's head. Shu was said to be Nut's father.

Lounging on the bottom is the Earth god Geb. Geb was thought to cause earthquakes and the growth of crops.

▲ **Source 6.35** A reconstruction of a fresco from a tomb at Thebes. The drawing shows the creation of the world. The sky-goddess Nut, covered with stars, is generated by Geb, god of the Earth.

Gods

The ancient Egyptians were **polytheistic**, and the different gods they believed in had different roles and responsibilities. This made some gods more important than others. The ancient Egyptians worshipped their gods by singing hymns, writing poetry, and making sacrifices to them at temples and in their own homes. Sometimes they would pray to particular gods, depending on their needs, such as praying to the Nile in flood god, **Hapi**, to bring fresh waters for a good harvest. Gods this important were worshipped officially by the pharaoh and by priests in special temples devoted to each, whereas 'local' gods could be worshipped in particular towns and villages.

> **polytheistic** believing in many gods
>
> **Hapi** (or Hapy) the god of the annual flooding of the Nile in ancient Egyptian religion
>
> **bas-relief** a type of art in which shapes are cut from the surrounding stone so that they stand out slightly against a flat surface
>
> **ankh** a symbol like a cross with a loop (an oval shape or circle) at the top, used in ancient Egypt to mean 'life'
>
> **was-sceptre** a stylised animal head at the top of a long, straight staff with a forked end; it was an ancient Egyptian religious symbol

▲ **Video Source 6.36a** The myth of Osiris

Worship

Ordinary ancient Egyptians did not practise their religion in the same way that people today might go to a church or a mosque. The temples were special places where priests took responsibility for praying to the gods and leaving offerings to make them happy. Because of the pharaoh's connection to the gods, the pharaoh could enter temples to talk to the gods who lived there. Ordinary people could give offerings and donations, as well as attend public ceremonies and events for their favourite gods, but they could not enter the temples like we enter religious buildings today. The pharaoh was thought to be somewhere between a representative of the gods and an actual god, and he or she was the key figure in Egyptian religious culture. Therefore, it was important that the pharaohs were in good health, well looked after and replaced quickly when they died, in order that the Egyptian people could maintain a positive relationship with the gods, ensuring them a healthy and prosperous life and afterlife.

▲ **Source 6.36** A **bas-relief** of Hapi, god of the Nile in flood, at the Temple of Khnum in Esna. Hapi can be seen carrying produce such as grain. Why do you think this detail is important?

▲ **Source 6.37** The pharaoh was sometimes considered to be the god Horus on Earth. Horus was the son of Osiris and Isis. He was usually shown as having a male body with a falcon head. As shown here, Horus wore the double crown of Upper Egypt and Lower Egypt. He carried an **ankh**, which is a symbol of eternal life, and the **was-sceptre**, which is a symbol of his power.

The afterlife

Ancient Egyptians believed in a cycle of life, death and rebirth. Every evening, they saw the sun 'die' in the west, go through a period of rejuvenation, to be 'reborn' the following morning in the east. They believed that after death, they would journey through the underworld to be reborn in the afterlife. Many tombs contain everyday items like hairbrushes and water jugs; this suggests that they thought life after death would continue in much the same way as their normal life.

▼ **Source 6.38** The main gods and goddesses of ancient Egypt

Atum God of the sun, who emerged from the sea and created all the other gods.

Tefnut Goddess of rain, often shown as a woman with the head of a lioness and a disc representing the sun.

Osiris God of fertility, agriculture and chief judge in the afterlife. Often shown with green skin to represent vegetation and fertility. He is closely associated with the king because Osiris had been ruler of the gods before becoming an important god in the netherworld.

Nephthys Goddess of death and the home, normally shown with a headdress shaped like a house and a basket.

Shu God of peace, lions, air and wind. Often depicted with feathers on his head, representing dry, warm air.

Geb God of the Earth, vegetation and snakes.

Isis The wife of Osiris, and goddess of motherhood and magic. Sometimes worshipped as a sky goddess as she could transform into a bird. Usually represented as a woman wearing a sheath dress with a throne-style headdress and sometimes shown with wings.

Thoth God of wisdom, writing and medicine. Usually depicted with a male body and the head of an ibis (a sacred bird in Egypt). His long beak resembled the scribe's pen and he recorded judgements of people in the afterlife.

Nut Goddess of the sky, usually depicted with a water pot on her head.
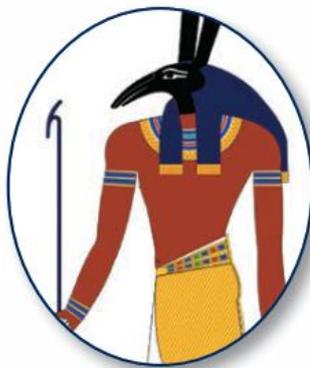
Seth God of chaos, violence, deserts and storms. The Egyptians did not have an idea of good and evil, but rather order versus chaos. Represented as a male body with the head of an unknown animal – a curved snout and blunt ears. It has been argued that he resembles a camel, a donkey or an aardvark.

Amun-Re A god that became popular in the New Kingdom, due to his association with the pharaohs of the 18th and 19th dynasties. Amun was originally the god of air, but he was combined with the sun god, Re. Usually shown as a male wearing a golden double plume headdress.

Anubis God of embalming and the dead. Represented as a male body with a black jackal head, carrying an ankh.

ACTIVITY 6.3

Using historical sources as evidence

The wooden model in Source 6.39 shows a funeral procession bearing gifts. This scene is from the tomb of Ramose, which is near the Valley of the Kings in Thebes. Ramose was an important official who served the pharaoh during the New Kingdom. This scene depicts all the different offerings that were brought for Ramose's funeral. The image shows that the people attending the funeral were equipped with the essentials for a proper burial and funeral ritual. The tomb of Ramose is a very famous tomb, partly because of the detailed information that its decorations give us about life during the New Kingdom.

▲ **Source 6.39** This is a scene from the tomb of Ramose

Examine the source and then answer the questions that follow.

Responding to the source

1 What are the objects being carried?

2 How do we know this is a funeral procession?

3 Why do you think Ramose wanted images of these offerings in his tomb?

Key concepts: sources, evidence

HASS skills: analysing, communicating and reflecting

Burial practices: mummification

Some societies bury their dead in coffins, while others cremate them in fire. The ancient Egyptians did far more. When a person died, their body was taken to an embalmer, who would help to ensure that the body would last forever. They preserved the body so that it would not decay, giving the person somewhere to live in the afterlife. Without an appropriate burial, the ancient Egyptians believed that a person's soul or life force would not reach the afterlife.

Amazing but true …

The ancient Egyptians were some of the earliest people to tame wild cats. Cats were called 'protectors of the grain' because they killed mice and rats. They were also trained to swim so they could pick up any birds that fell into the water during a hunt. Cats were worshipped in ancient Egypt and were even mummified so that they could accompany their owners in the afterlife.

▲ **Source 6.40** A mummified cat from ancient Egypt

▼ **Source 6.41** An ancient drawing of someone who has died being judged in the presence of Osiris. Historians refer to it as the 'Judgement of Hunefer', and this image is from the Book of the Dead.
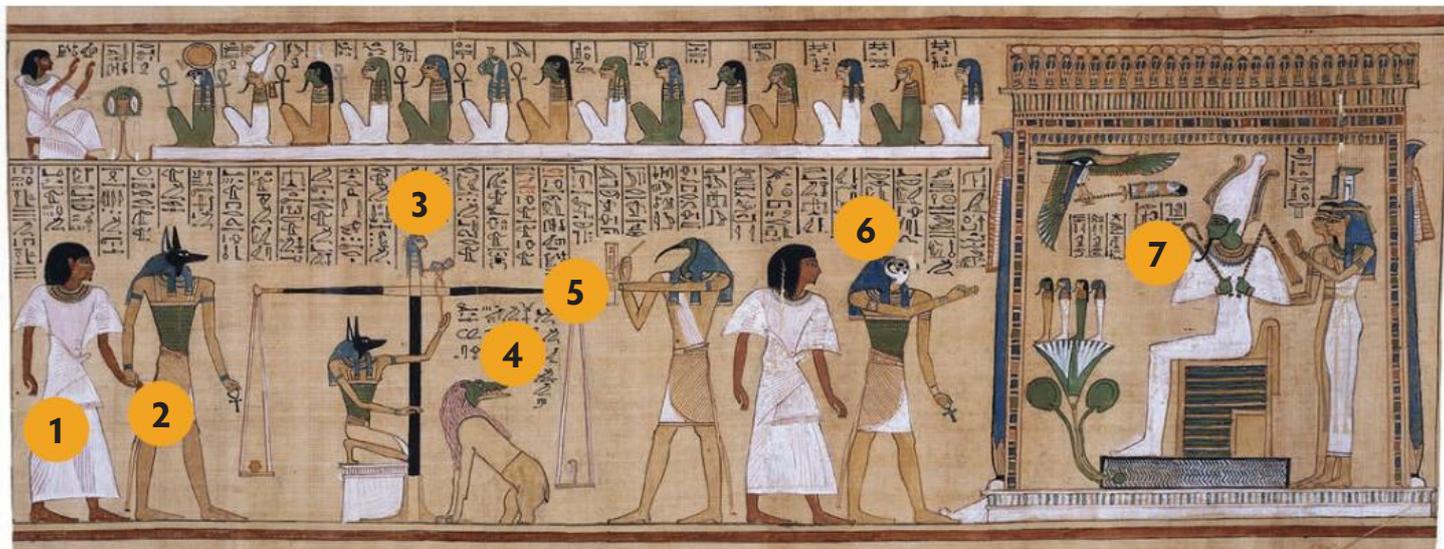
1 **Hunefer** is the person who has recently died in this image. He is being led into the judgement hall by Anubis. Hunefer was a royal scribe and this version of the Book of the Dead was produced for him.

2 **Anubis** leads Hunefer into the hall. This jackal-headed god is the god of embalming and the dead. He was thought to oversee the process of mummification. In fact, many priests would wear a mask of Anubis during mummification ceremonies. A smaller Anubis can be seen weighing the heart.

3 **Ma'at** is the small figure atop the scales. We can recognise her by her ostrich feather, which represents truth. But Ma'at was more than just a god – it was also a concept; Ma'at was the ethical principle that ancient Egyptians lived by, such as honour and truth. Ma'at was also the concept of balance and order – hence her importance to the pharaohs.

4 **Ammit** will consume Hunefer if his heart is too heavy with sin. Ammit, 'the Devourer', is depicted here as a fearsome beast. He is part crocodile, part lion and part hippopotamus. Once consumed by Ammit, the dead cease to exist.

5 **Thoth** is to the right of the scales. Thoth is ibis-headed and records the results of the weighing. It is said that Thoth gave written language to the Egyptians, so many scribes took him as their patron. Thoth is a god of equilibrium and balance, so it is not surprising to see him associated with Ma'at (divine balance). Thoth was the god who recorded how the heart of the deceased had balanced on the scales. Hence he was given the epithet 'master of balance' but he is not the god responsible for achieving cosmic balance; that was the job of Ma'at and the pharaoh.

6 **Horus** is the falcon-headed god and can be seen leading Hunefer. If Hunefer has told the truth, Horus will lead him forward to the throne of Osiris to worship the god of the underworld.

7 **Osiris** is seated under the canopy. He is with his sisters Isis and Nephthys. Among other titles, Osiris is Lord of the Underworld and Judge of the Dead. Once Hunefer has been proven righteous before Osiris, he can pass through to eternity in the Field of Reeds. Osiris was also married to Isis.

MAKING THINKING VISIBLE 6.2

What makes you say that?

Look closely at Source 6.41, then answer the following questions.

1 Who is Hunefer?

2 What is happening in this picture?

3 Why are some people shown twice?

4 Research which gods are depicted at the very top of the image, and also find out why are they included in the ritual of the 'weighing of the heart'.

Key concepts: sources, evidence, cause and effect, significance

HASS skills: questioning and researching, analysing, communicating and reflecting

Many of the Egyptian gods were influenced by their landscape, so it is no surprise that their burial practices were influenced by it too. There is a chance that **mummification** was discovered by accident in the hot Egyptian sun. The ancient Egyptians became so good at their craft that many mummies found today are in excellent condition.

mummification a method of preserving a dead body by removing the internal organs and drying out the body

▼ **Source 6.42** The process of mummification for a wealthy person in ancient Egypt. We know about these processes because Herodotus wrote about them on his visit in the fifth century BCE.

The body is laid out and washed. Any missing body parts are replaced with wooden substitutes.
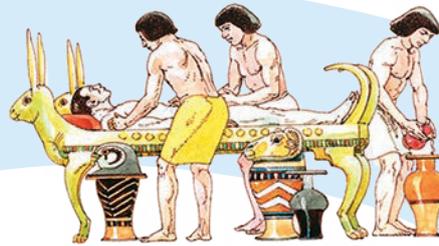
The internal organs, except for the heart and kidneys, are removed. These organs are placed in **canopic jars**. The brain is removed through the nose, using a long hook, and the body is packed with **natron**.

The wrapped body is placed in a decorated wooden coffin. The coffin is then placed in a stone **sarcophagus**, which is depicted in the last image.
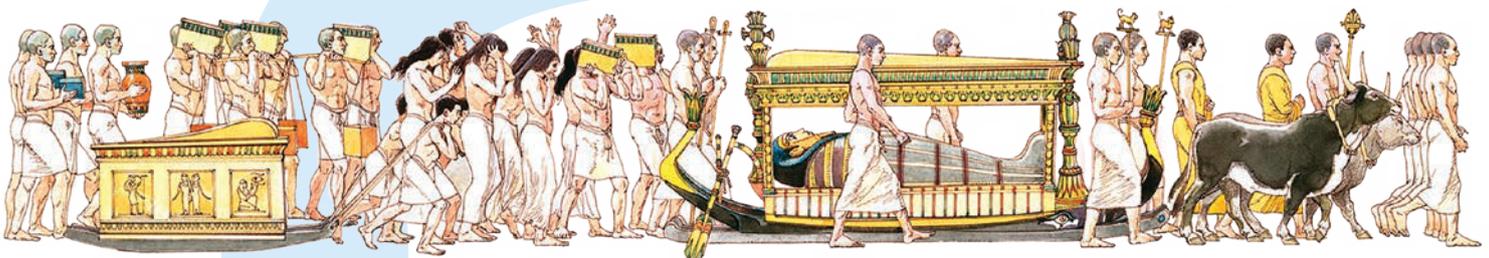
There is a procession led by people wailing and crying (some of them official mourners paid to cry). The body crosses the Nile River in a boat, landing on the western side of the river. This symbolises the journey into the afterlife. Prayers are read by the priest and animals are sacrificed.

canopic jars jars for preserving the internal organs of the deceased, as part of the process of mummification; different jars were made for different organs

natron a salt mixture from dry lake beds in ancient Egypt, it has been used for thousands of years as a cleaning product for both the home and body. It was the mineral used during mummification ceremonies in ancient Egypt because it absorbs water and behaves as a drying agent.

sarcophagus a stone coffin decorated with sculpture or inscriptions

The sarcophagus is taken to the tomb, where the priest performs an important ceremony called 'The Opening of the Mouth'. Offerings are made to the deceased to keep the person nourished in the afterlife. Ancient Egyptians would often mummify animals, such as cats or birds, to protect and comfort the deceased.

Burial practices: tombs

As ancient Egypt became more prosperous, so did the pharaohs. In order to show their respect to the gods, the pharaohs built bigger and more complex tombs. These tombs had features like dead ends to guard against grave robbers, who might try to steal treasure.

The pharaoh Tutankhamun is famous for his tomb because it is the closest we have to a complete royal burial. However, his tomb is small and a different shape to other pharaohs' tombs. This may be because he died so unexpectedly that arrangements had to be made quickly for his burial, including using someone else's tomb. All pharaohs were buried with many treasures so they could use the objects in the afterlife, but most tombs were later robbed. The entrance to Tutankhamun's tomb was hidden by a landslide. This kept the entrance secret until the British archaeologist Howard Carter discovered it in 1922. For the first time, historians could see a complete royal burial. You can see Tutankhamun's treasure in the Egyptian Museum in Cairo, or you might be able to see replicas of the treasure in a travelling exhibition. The actual treasure is too fragile to move, so copies of it have been made by specialists at the museum to enable lots of people to see all the 'wonderful things' (Howard Carter said this when he first peered inside the tomb). Go and see the exhibition if it comes to your local museum; the treasure is extensive (there are over 3000 items) and it is quite breathtaking.

▲ **Source 6.43** This mummy is on display at the Philadelphia Academy of Natural Sciences. You can see the painted sarcophagus in the background.

▲ **Video Source 6.43a** Exploring Tutankhamun's burial chamber

▼ **Source 6.44** This replica of inside Tutankhamun's tomb shows how some of the objects were arranged. We can see the beds and furniture Tutankhamun wanted to take with him into the afterlife!

Amazing but true …

Ancient Egyptian tombs are among the most common examples of tomb or grave robbery. Most of the tombs in Egypt's Valley of the Kings were robbed within one hundred years of their sealing. This includes the tomb of the famous King Tutankhamun, which was raided at least twice before it was discovered in 1922. Luckily for us today, ancient Egyptian pharaohs often kept records of the precious items in their tombs. This is useful because archaeologists can do an inventory check for any missing items from a tomb. Famously, the pharaohs left warnings in the tombs to caution intruders about the calamities and curses that would befall anyone who touched the treasure or the bodies. These warnings did little to deter grave robbers.

▲ **Source 6.45** This illustration from the early twentieth century is an imagined representation of tomb raiders at work.

Pyramids

As you will recall from the start of this chapter, the most famous tombs of ancient Egypt are the pyramids of Giza, but there are many more. Most were built to the west of the Nile River, where the sun sets, as this location was thought to be closer to the resting place of the gods. The most well-known pyramids were all built in the Old Kingdom period. The Middle Kingdom and the New Kingdom did not build pyramids in the same style as the Old Kingdom and they were not as large.

The pyramid of Khufu

The pyramid of Khufu, sometimes referred to as the Great Pyramid of Giza, is the largest pyramid of three built by the pharaohs Khufu, Khafre and Menkaure on the Giza plateau. It was constructed during the Old Kingdom and has three main chambers. Source 6.46 shows the layout of the buildings and the Great Pyramid's interior.
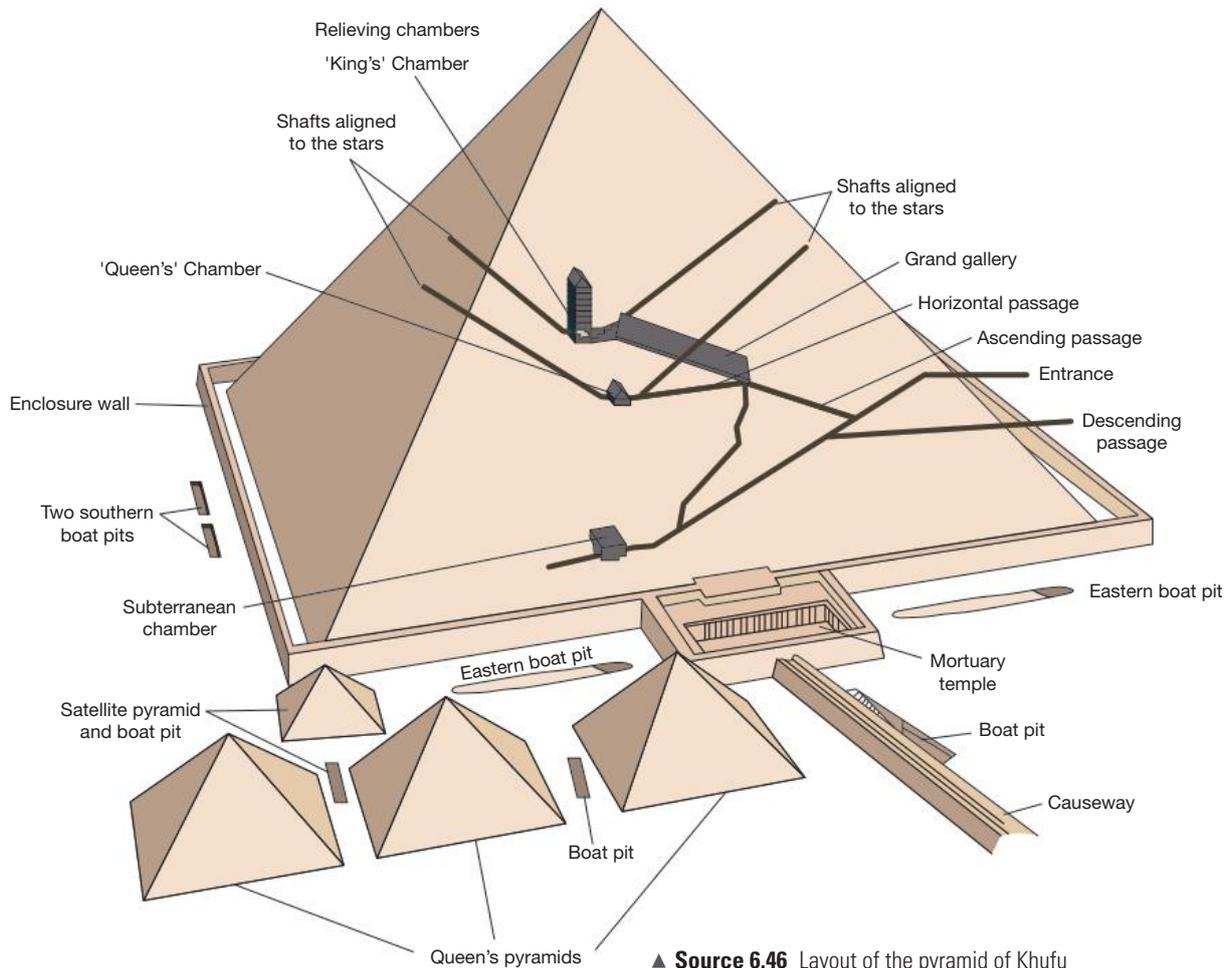
▲ **Source 6.46** Layout of the pyramid of Khufu

END OF SECTION REVIEW 6.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Which ancient Egyptian god was the god of the sky?
2 Which ancient Egyptian god represented the Nile River?
3 Anubis was responsible for what aspect of existence?

Interpret

4 Why did the ancient Egyptians mummify bodies?

Argue

5 What do the ancient Egyptian gods tell us about how the natural world influenced what the people believed? Provide specific examples in your response.

Key concepts: cause and effect, significance   **HASS skills:** analysing, communicating and reflecting

6.7   The role of a significant individual in ancient Egypt: Cleopatra

FOCUS QUESTION

Why was Cleopatra a significant figure in ancient Egypt?

Cleopatra

Cleopatra (69–30 BCE) is one of the most famous historical figures of all time. The last of the pharaohs, Cleopatra VII was the final ruler of the Ptolemaic dynasty and ruled Egypt from 51–30 BCE. She is celebrated because of her success, her power and her influence, and though she was reputed to be beautiful, it is actually unclear if she was in fact very beautiful by any standards (modern or ancient). More likely, her appeal was in her intelligence, influence, power and beguiling nature. Her love affairs with both Julius Caesar and Mark Antony of the Roman Empire are the stuff of legend. However, Cleopatra was a gifted and highly skilled politician, who oversaw a difficult time in Egypt's history, and brought peace and prosperity to her people overall.

> **exile** a forced absence from one's home or country; anyone who was exiled was not permitted to return

A female pharaoh

Cleopatra was born c. 69 BCE. When her father, Ptolemy XII, died in 51 BCE, the 18-year-old Cleopatra became co-regent with her 10-year-old brother Ptolemy XIII. To uphold an Egyptian tradition, Cleopatra was then married to her brother. Though this sounds unusual to us today, in ancient Egypt leaders frequently ruled alongside a sibling or cousin to preserve their bloodline. Sometimes this was complicated, and the couples feuded over who was in charge. Certainly, this was the case with Cleopatra and her brother.

Pharaohs were male descendants, but there were several powerful women who either ruled in their own right, taking the title and power of the pharaoh, or who were influential queens as the wives, mothers, sisters or aunts of pharaohs during the ancient Egyptian period. The most well-known of these women are Hatshepsut, Nefertiti and Cleopatra. Although there were not many female pharaohs, royal and noble upper-class women were often able to exert their influence in the family and religious spheres, taking on important responsibilities and roles in religious practices in the more prominent temples.

Cleopatra and the Romans

In 48 BCE, Egypt became embroiled in the civil war in Rome between Julius Caesar and Pompey. Pompey fled to the Egyptian capital Alexandria, where he was murdered on the orders of Ptolemy. Caesar followed, and he and Cleopatra became lovers. Cleopatra, who had been **exiled** by her brother, was reinstalled as queen because she had Roman military support. Ptolemy was killed in the fighting and another brother was made Pharoah Ptolemy XIV. In 47 BCE, Cleopatra bore Caesar a child called Caesarion – although Caesar never publicly acknowledged the boy as his son. Cleopatra and her brother Ptolemy followed Caesar back to Rome, but soon returned to Egypt. She was not respected in Rome, and as an important queen, and a woman who was used to having her independence, the way the Romans treated her must have been quite frustrating. Caesar was assassinated in 44 BCE. Ptolemy XIV died mysteriously at around this time, but this meant that Cleopatra ruled Egypt. She wanted to make Caesarion her co-regent.

In 41 BCE, Mark Antony, at that time in dispute with Caesar's adopted son Octavian over who should take over the Roman leadership, began both a political and romantic alliance with Cleopatra. They subsequently had three children – two sons and a daughter – and Antony divorced his Roman wife (Octavian's sister) to be with Cleopatra permanently in the east. Antony and Cleopatra seemed to be planning to create an eastern empire that might prove to be a threatening opponent for Rome. Octavian understood very clearly how the wealth and power of Egypt would make Antony and Cleopatra dangerous rivals. Apart from all the resources (gold, ships, food, soldiers) that Egypt could supply, Cleopatra also had many allies in the east who she called on to support her against Octavian. This power and influence made Cleopatra the only woman who was ever a threat to the might of the Roman Empire.

In 31 BCE, Mark Antony and Cleopatra combined armies to take on Octavian's forces in a great sea battle at Actium, which is on the west coast of Greece. Octavian was victorious, and Cleopatra and Mark Antony fled to Egypt. Octavian pursued them and captured Alexandria in 30 BCE. With his soldiers deserting him, Mark Antony took his own life. Cleopatra also committed suicide; she died on 12 August 30 BCE.

There are many different legends about how Cleopatra took her own life, but the most commonly told story is that she arranged for a servant to hide an asp (a poisonous snake) in a bowl of fruit which was brought into her room. She provoked the snake to bite her and died from its venom. Both Antony and Cleopatra chose to commit suicide because the alternative was unthinkable. Romans were fairly brutal to rulers whom they had defeated in battle. It is likely that Octavian would have ordered Antony and Cleopatra to be chained, stripped, starved and tortured before being dragged through the streets of Rome, where they could be pelted with food by the common people of Rome. Both would have eventually

been executed, but this process may have taken several years – one of Caesar's enemies was treated in this way when he was held captive for five years before his execution. Neither Antony nor Cleopatra were prepared to allow this kind of humiliation to happen to them. Caesarion did not do well either, and after his mother's death, he was executed on the orders of Octavian. However, Antony and Cleopatra's children were taken back to Rome and raised by Octavia, Antony's ex-wife, in the imperial household as equals alongside the other children of the imperial family. They had good lives, and were later married to kings and royal women in important eastern families.

After Cleopatra's death, Egypt became a province of the Roman Empire. Cleopatra was the last Egyptian ruler. During later Roman times, Egypt became an area that was under the direct command of the emperor himself. No-one was allowed to enter it without his permission. This was because Octavian, who became the first emperor Augustus, understood that anyone who could control the wealth and resources of Egypt could challenge the supremacy of Rome. Cleopatra had taught him to be afraid of losing control of Egypt, so he made sure that Egypt remained solely under the watchful eye of the emperors.

▼ **Source 6.47** A modern artist's representation of Cleopatra, the last of the Egyptian pharaohs
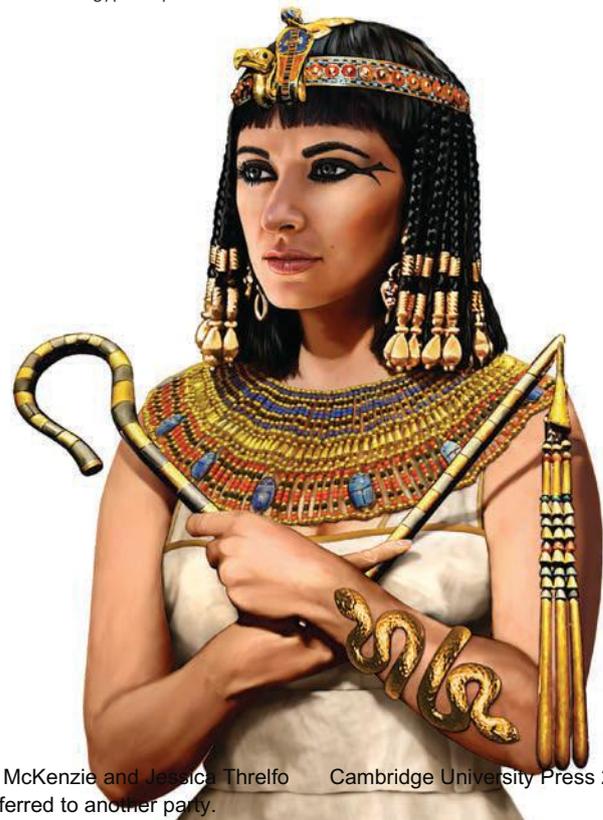
ACTIVITY 6.4

Using historical sources as evidence

Often famous events of the past have been understood differently by different audiences. The legend of Cleopatra has been shown many times in plays, paintings and films over the years. Each **representation** emphasises a different aspect of her rule and actions, according to how the creators of each artwork understood her.

representation the way that someone or something is shown or described

Examine the following sources and then answer the questions that follow.

SOURCE A

◄ **Source 6.48** This statue of Cleopatra from 1 BCE shows her in the Egyptian style. In the power struggle with her brother, she needed to show the ancient Egyptians that she was powerful and the rightful ruler.

SOURCE B

◄ **Source 6.49** This source shows two sides of a Roman coin dated to 32 BCE. One side bears the image of Cleopatra, while the other shows the Roman ruler Mark Antony. Cleopatra was ruler in Egypt just as the Roman Empire was becoming more powerful, and the Egyptian civilisation weaker. Egypt benefited from trade with Rome to survive, and the deals struck by Cleopatra helped the Egyptian people avoid open battle with the Romans. In this image, Cleopatra is shown in the Roman style, to help persuade the people using the coins that she was a friend of Rome.

SOURCE C

◄ **Source 6.50** *The Banquet of Cleopatra*, which was painted in 1743 by Italian artist Giambattista Tiepolo. *The Banquet of Cleopatra* depicts the world's most expensive wager. Located at the National Gallery of Victoria International in Melbourne, it shows Cleopatra and Mark Antony at a banquet in their finest clothes. All of the lines on the floor as well as the eyes of the onlookers point towards the glass she is holding. According to legend, they were having a contest where each tried to have a more lavish and expensive feast than the other. Cleopatra is shown placing a priceless pearl earring into a glass of vinegar to drink, winning the bet.

≫
SOURCE D

◀ **Source 6.51** Actress Elizabeth Taylor portraying Cleopatra in the 1963 Hollywood film, *Cleopatra*

Responding to the sources

1 Describe the way Cleopatra is represented in each of the sources.
2 Explain why Cleopatra is represented the way she is in each source.
3 What do you think would have been the effect of Source A on the ancient Egyptians?
4 What would have been the effect of Source A on the ancient Romans?

Key concepts: cause and effect, perspectives, empathy   **HASS skills:** analysing, communicating and reflecting

END OF SECTION REVIEW 6.7

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Who ruled ancient Egypt at the time of the Roman conquest?
2 What kinds of roles and responsibilities did important royal women have?
3 When was ancient Egypt eventually conquered by the Roman Empire?

Interpret

4 What does Source B (the coin showing Cleopatra and Mark Antony) in Activity 6.4 tell us about Cleopatra's power and influence?
5 Why do you think Cleopatra was represented in different ways during her lifetime?

Argue

6 Why was Cleopatra a significant individual in Egyptian history?

Key concepts: sources, evidence, continuity and change, significance   **HASS skills:** evaluating, communicating and reflecting

6.8   The process and importance of conserving the past

FOCUS QUESTIONS

- How do archaeologists and historians uncover information about ancient Egypt?
- Why do we conserve the remains of ancient Egypt and how do we do it?

Archaeology in Egypt

The ancient Egyptians were very good at keeping records and preserving important information. One of the best sources of information about ancient Egypt is the walls of the temples and tombs. These kinds of sources are known as primary sources, as they were created at the time we are studying.

Not everything is easy to understand right away. The meaning of many hieroglyphs confused historians for a long time. In 332 BCE, Egypt became a part of the empire of Alexander the Great, and Greek became the official language. By 400 CE, the Egyptian language was forgotten and, after several hundred years, the hieroglyphs were a complete mystery to the whole world.

People who visited Egypt were frustrated to see thousands of written signs everywhere, obviously full of information, but they had no idea what they meant. For archaeologists, it was urgent to find the 'key' to unlock the signs.

In 1799, a soldier digging a trench at the town of Rosetta in the Nile delta uncovered a stone engraved with the same text written in three different languages. French leader Napoleon Bonaparte's scholars identified that the Rosetta Stone, as it came to be called, contained Greek and Coptic, which scholars could read, and Egyptian hieroglyphs. Years later, the English archaeologist Thomas Young began to translate the signs, which he passed on to the French historian and scholar Jean-François Champollion.

After years of study, Champollion realised that a hieroglyph could mean either a word, a part of a word or a sound. This created so many possibilities that the case seemed hopeless. However, he guessed that the signs contained in a box (a cartouche, as he called it) might be a name. He looked for a familiar name, and quickly found the pharaoh Ptolemy in the Greek text. Because Champollion also spoke Coptic, he guessed that the Egyptians might have said this name with an 'S' on the end. He looked for the same name in hieroglyphs. He found seven signs and tested whether they could have spelled out 'PTOLMYS'. He then compared this with the known cartouche of the late pharaoh Cleopatra. The hieroglyphs of her name spelt out 'KLIOPADRA'. There were three letters that were the same hieroglyph in both: 'P', 'O' and 'L'.

In guessing how the two names sounded, Champollion had correctly identified 12 hieroglyphs. He then went through hundreds of other names of known pharaohs, and from them he worked out the entire Egyptian alphabet. The alphabet he created was almost completely accurate, although other discoveries have been made since about some of the finer points of hieroglyphic writing.

▲ **Source 6.52** Jean-François Champollion, the French historian who deciphered Egyptian hieroglyphs and unlocked many of ancient Egypt's secrets

In this case, an important archaeological discovery helped to unlock many of the secrets of ancient Egypt. The Rosetta Stone is obviously a very helpful discovery, but every artefact found can ultimately tell us something about life in ancient times.

Recent discoveries

The ancient Egyptians were so good at hiding their secrets that many discoveries are still being made today. For example, in November 2018 archaeologists announced the discovery of a large tomb at the Saqqara **necropolis**. The tomb belonged to a well-connected man named Wahtye whose titles, etched in the stones above the door, included 'royal purification priest', 'royal supervisor' and 'inspector of the sacred boat'. The discovery was significant for its many carvings and etchings, which are extremely well preserved considering the tomb is 4400 years old. Similarly, archaeologist Nicholas Reeves continues to work on the Tomb of Tutankhamen, because he has a theory that there are rooms behind some of the walls in the tomb. He thinks that if we can find out what is in these sealed off rooms, we might be able to find out more about him, including who Tutankhamen's family were.

Methods of conservation

Evidence of the ancient Egyptians can be found in many places around the world, mostly in museums. Their history is so interesting and colourful that artefacts from their world are still very popular in galleries and exhibitions globally. Over time, however, disputes have developed over who has the right to keep and display the objects from ancient Egypt.

We have already looked at the Rosetta Stone, which has been kept at the British Museum in London since 1802. However, many Egyptians are requesting that the stone be returned to its home in Egypt. This raises tricky questions about how we treat discoveries from ancient times.

Do these artefacts belong to the people who found them? Or should they be kept in their countries of origin, out of respect for their heritage and national identity? Who gets to decide these things? These are questions that go far beyond the case of the Rosetta Stone. Many ancient artefacts were given as gifts long ago. Can Egypt reclaim the gifts given by its predecessors? Further, some objects are stolen. Unfortunately, there is a large market for stolen ancient artefacts. In 2010, US customs seized a 3000-year-old sarcophagus at Miami airport. After some debate, the sarcophagus was returned to Egypt.

necropolis an ancient cemetery

▲ **Source 6.53** These photographs give two different views of the Rosetta Stone (196 BCE). If you look carefully, you can make out the hieroglyphic text carved into the stone. You can zoom in on this image in the Interactive Textbook.

▲ **Source 6.54** This recently discovered tomb shows etchings of the priest Wahtye with his family members.

END OF SECTION REVIEW 6.8

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What discovery led to the deciphering of hieroglyphs?
2 What is a necropolis?
3 Who was the main historian who deciphered hieroglyphs?

Interpret

4 Why was the Rosetta Stone such an important discovery?
5 Why are many modern museums hesitant to return artefacts to their original home?

Argue

6 Explain if you think ancient Egyptian artefacts should be returned to Egypt or kept in their current location.

Key concepts: significance, contestability

HASS skills: questioning and researching, analysing, communicating and reflecting

6.9   Conclusion: why does it matter?

Geography has a big influence on history. The nature of any land will affect the society that develops there. In the case of Egypt, most of the land – the desert – worked against human life. Just one aspect, the Nile River, made it possible for humans to survive, and even live very well, in its fertile valley. As they settled down, they were able to build houses, then villages and cities. The rich mud of the river and the burning sun gave them everything they needed to make mud bricks for thousands of buildings.

Settlement in Egypt grew very quickly. Once people had discovered how many resources the river gave, they learned to keep farm animals and to plant crops.

However, the Egyptians quickly found that they only needed some people to grow enough food for everybody. They were the first to use sickle blades and to use oxen to drive ploughs, which revolutionised farming. This meant that others were free to take up other jobs and become expert in them. Some became priests, some architects and builders, some scribes and artists. Others became governmental authorities.

Egypt was unusually big: it covered a vast area and had a large population of five million people. One of the secrets of the Egyptians' success was that they developed a powerful ruler, the pharaoh, who was backed by many officials helping the pharaoh to lead the country.

Initially, the ancient Egyptians were organised in smaller tribes, which then joined together until the country was ruled by a king of Upper Egypt and a king of Lower Egypt. Pharaoh Narmer finally brought them together as one country in about 3100 BCE. To rule Egypt, it was important to have a way of giving people orders, telling them about new laws and recording the taxes they paid. Thus, writing became a crucial tool for organising the country. The Egyptians were probably the first in the world to use paper – an invention still in use today.

Ancient Egypt had a strong social system. People obeyed the laws and knew their place in society. Historians know a lot about groups of people who were rich and powerful, and who could pay for works of art and good tombs. Ancient Egypt is famous for its complicated system of religion. The ancient Egyptians believed that it was possible to survive death and to go on to the afterlife, providing the body was preserved so that the soul could return to it. This belief inspired great buildings, such as the pyramids for the pharaohs, and the many beautiful painted tombs found in the Valley of the Kings and elsewhere.

As with other ancient societies, we owe a debt to the ancient Egyptians. They pioneered revolutionary farming techniques and learned how to organise a large country, using a system that shares similarities with our own today. Their systems of writing and paper production would change the course of history and allow us to learn more about them today. Their achievements in art and metalwork, and their complex understanding of maths and science that led to their engineering and construction skills, still inspire awe – consider how iconic the pyramids are. Ultimately, understanding the origins and cultures of the past helps us to understand the reasons why the world is the way it is today. After all, the present is built on the past.

▼ **Source 6.55** The great carving at the entrance to the Temple at Abu Simbel. Today's societies still create large buildings to celebrate what they think of as important symbols, like the Sydney Harbour Bridge or the Eiffel Tower. What other examples can you think of? What do they represent or celebrate?
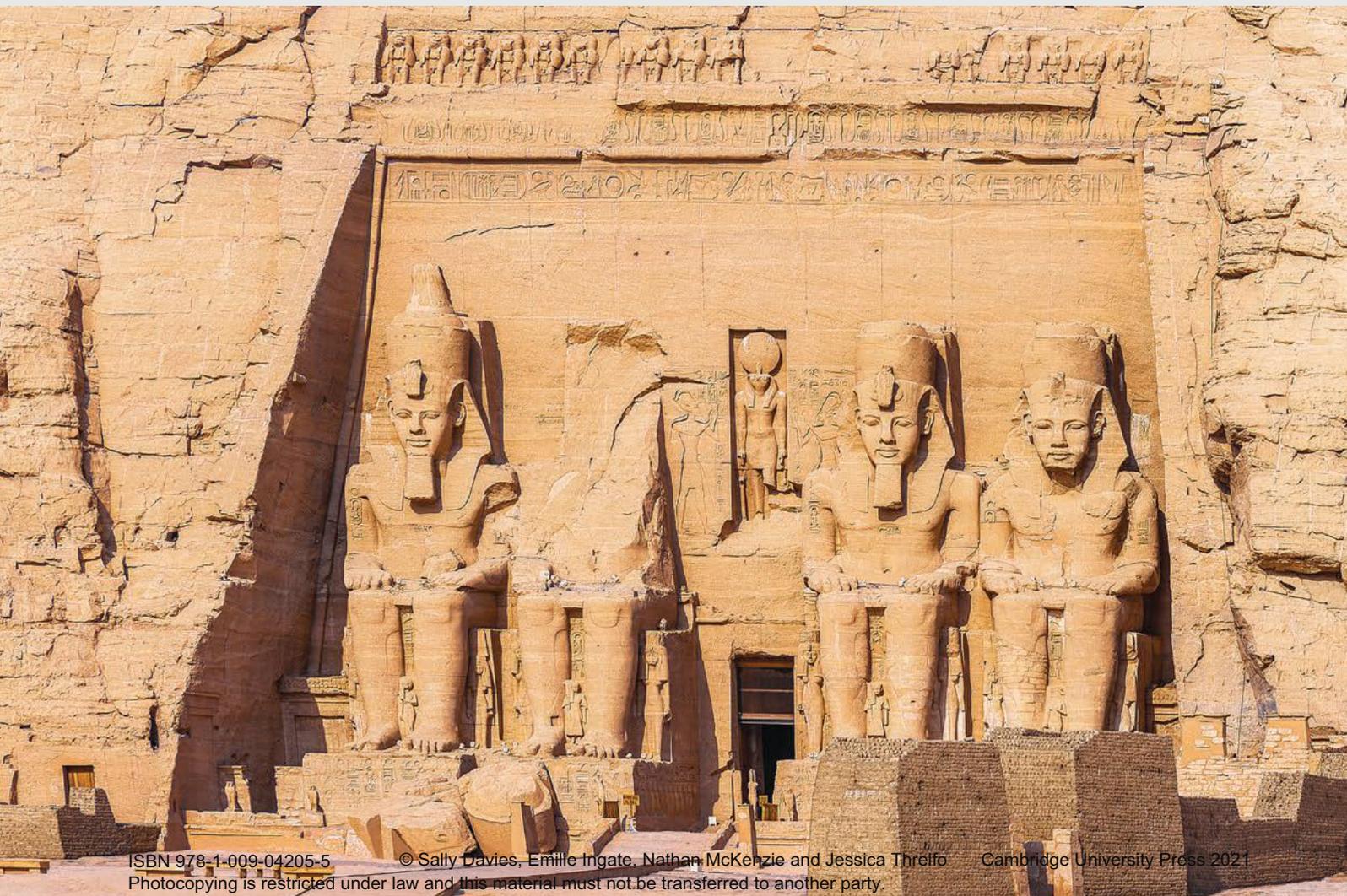
6.10 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Making thinking visible

I used to think that ancient Egypt was …

Now I think that …

This exercise in visible thinking asks you to track the difference between what you knew about ancient Egypt before starting this chapter, and what new understandings you have acquired since reading the chapter.

Using the stem sentences, write a paragraph explaining what you previously knew about the topic. Then write another paragraph explaining what you now understand about the topic.

1A I used to think that the geography of ancient Egypt was important because …

1B Now I understand that the geography of ancient Egypt was important because …

2A I used to think that ancient Egyptian society was organised like …

2B Now I understand that ancient Egyptian society was organised like …

3A I used to think that the ancient Egyptians believed in …

3B Now I understand that the ancient Egyptians believed in …

4A I used to think that ancient Egypt related to its neighbours by …

4B Now I understand that ancient Egypt related to its neighbours by …

Inquiry

Research task

Investigate the different aspects of ancient Egyptian civilisation and identify their key elements. Try to find some historical sources for each topic.

Copy the lotus diagram and fill it in with your research. This will build a complete picture of what you have learned in the different learning areas. One area has been left blank so that you can add a topic of your own choosing.

When you have finished creating your lotus diagram, use it to answer the following question. Your answer needs to be an extended written response.

Explain how different elements of ancient Egyptian society were influenced by the geography of Egypt itself.

Conservation			_____		Geography	
Archaeology	**Conservation**	_____	Geography		Social organisation	
	Archaeology	**Ancient Egypt**	**Social organisation**		
	Significant individuals	**Beliefs**	**Changes in society over time**		
Significant individuals		Beliefs		Changes in society over time		

Analysis

Look back through the chapter and choose three primary sources that you think demonstrate how wealthy and powerful ancient Egypt was. For each source:

1 Identify its meaning or why it is important.
2 Identify what time period it came from (which kingdom it is from or which pharaoh was ruling at the time).
3 Explain why you think each piece of evidence tells us that Egypt was rich and/or powerful.

Writing

Using historical terms meaningfully

As a historian, you will need to confidently and correctly use the terms related to your subject. Write a paragraph in response to the question here using all the key terms listed. Ensure that your use of these terms shows your understanding of what each term means.

Question: *Explain why the Nile River was important to ancient Egypt.*

Use these words correctly in your answer:

- Nile
- Hapi
- inundation
- agriculture
- Pharaoh.
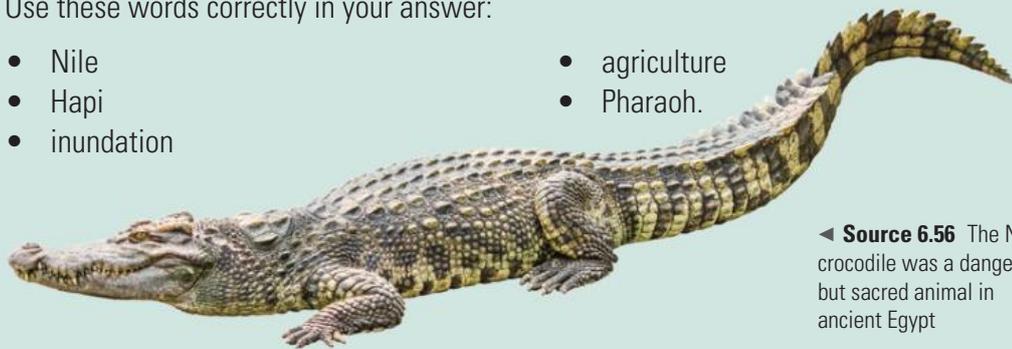
◄ **Source 6.56** The Nile crocodile was a dangerous but sacred animal in ancient Egypt

Key concepts: significance, contestability

HASS skills: questioning and researching, analysing, communicating and reflecting

CHAPTER 7

Ancient Greece

7.1 Setting the scene: the trouble with oracles

Religion was a very important part of culture in the ancient world. All ancient cultures believed that the gods needed to be pleased for humans' lives to be successful. Ancient people would consult the gods, through prayer and offerings, before they made a big decision or started a new project. If it seemed they had the gods' support, they would proceed.

oracle a person who is guided by the gods to answer a question about the future

The **oracle** of Apollo at Delphi was famous throughout the ancient Greek world and even beyond. The oracle was known as the Pythia, which means 'high priestess'. She was thought to have the power to predict the future because she was guided by the gods, who spoke directly to her. Visitors who wanted advice about their future would come to her for guidance. The process of the Pythia's predictions was long, taking a full 24 hours, and was only carried out on specific days of the year.

▼ **Source 7.1** A nineteenth-century representation of the Pythia making a prediction in the Temple of Apollo. The oracle often made her pronouncements in a state of ecstasy, which was caused by a natural gas that acted like a drug.

First, the oracle would perform purifying actions such as burning laurel leaves, washing in a nearby spring and drinking holy water. Next, an animal, such as a goat, was sacrificed. The person seeking advice would offer a gift of pie-like food, known as *pelanos*, before being allowed into the inner temple where the Pythia resided. The oracle would then give her prediction, which was often unclear and cryptic. She freely gave guidance to leaders of city-states and individuals, as the following story shows.

Croesus, King of Lydia, needed advice. He wanted to know if he should go to war with Persia, which was a neighbouring empire quickly rising in power and threatening his lands. Only the oracle of Delphi could give Croesus the advice he needed because only the Pythia could tell the future.

Croesus sent a question to the Pythia, which was read out to her. She was seated on a tripod seat, deliberately breathing in the gases that arose from the earth. The priests and priestesses who served at the temple listened carefully for the oracle's answer to send back to Croesus.

The Pythia said, 'If Croesus goes to war, he will destroy a great empire.'

This message was sent back to Croesus and he confidently declared war on Persia. Croesus believed that the Pythia had predicted his victory in destroying the Persian Empire.

But prophecies are tricky things. Croesus assumed that the great empire to be destroyed would be Persia, not his kingdom. When Croesus went to war, he was defeated by Persia. His great empire was destroyed and

▲ **Source 7.2** *Croesus Receiving a Tribute* was painted in 1629 by the French artist Claude Vignon.

never rose again. The Pythia had predicted accurately, but not in the way Croesus had thought.

Croesus was not the only leader who took the Pythia's predictions seriously. Many leaders from different regions placed great importance on her prophecies. They made their plans according to how she answered their questions, or according to how the priests translated or interpreted the words of the oracle. The toxic gases Pythia inhaled meant her words were often jumbled and confusing, and their meaning unclear. The priests had a big responsibility – to make the words of the god, spoken by the oracle, clear answers to questions received by the oracle. Later, when the Greeks fought the same Persians who had defeated Croesus, the Greek leaders consulted the oracle to help them decide on what to do. They asked the Pythia for advice as they prepared to face the Persians off the island of Salamis.

'Blessed Salamis, you will be the death of mothers' sons,' the oracle replied.

This did not sound like a positive prediction for the Greeks. But the Greek leaders ignored the doubters and decided this was their last chance to beat back the invading Persian forces. Despite being outnumbered and the Pythia promising nothing but death, the Greek navy defeated the Persian forces. This helped them to push the Persians out of Greece and keep the area free from invasion.

The oracle of Apollo at Delphi usually did not give clear answers. Croesus believed that the Pythia promised him victory but he was defeated. The Greeks at Salamis believed that they faced death yet they won.

The trouble with prophecies is that they sometimes do not mean what we think they do!

MAKING THINKING VISIBLE 7.1

Question starts

Based on what you have read so far, brainstorm a list of questions about ancient Greece. You can use some of these question stems to help you.

1 Why …?
2 How would it be different if …?
3 What are the reasons …?
4 Suppose that …?
5 What if …?
6 What if we knew …?
7 What is the purpose of …?
8 What would change if …?

Come back to these questions as you finish each section of the chapter. Which questions can you answer now? Would you update questions based on your new knowledge?

Key concepts: significance

HASS skills: questioning and researching, communicating and reflecting

Contestability

As we saw in Depth Study 1, in the study of history, contestability means that an issue in the study of a topic is debatable and different historians may have very different opinions about the same subject.

In terms of the story about the oracle at Delphi, the priests who interpreted Pythia's words were notorious for accepting bribes. The Spartans are known to have bribed the priests to make sure the oracle said something favourable to them.

Reflect on the story

1 Did the god, speaking through the oracle, give answers to the questions put to the oracle, or were the priests in control of the answers people received?

2 How reliable were the responses to these questions?

3 Why did people consult the oracle if the answers weren't always reliable?

Key concepts: perspectives, contestability   **HASS skills:** analysing

▲ **Source 7.3** The ruins of the Temple of Apollo at Delphi

7.2 Chapter overview

Introduction

The ancient Greeks believed many different things. Some of what they thought is similar to what we believe now, while other beliefs seem strange and even weird. For example, today's leaders do not usually consult oracles before they act, and although we know a lot about ancient Greek gods and goddesses, we do not worship them or believe they exist. Zeus, Athena and Poseidon have inspired modern movies and stories, but no one today goes to a temple to worship them.

Some of the beliefs and traditions of ancient Greece, such as democracy, are part of our everyday life in Australia. But much has changed since the time of ancient Greece. Ancient Greece is therefore both familiar and strange to us, which is one reason why this area of study is so interesting and popular.

Learning goals

After completing this chapter, you should be able to answer these questions:

- How did geography affect how ancient Greece developed?
- How were different Greek city-states organised?
- What were the significant beliefs, values and practices of the ancient Greeks?
- How did ancient Greek city-states interact with other civilisations and one another?
- Why was Pericles a significant individual in ancient Greece?
- How do archaeologists uncover information about ancient Greece?
- Why do we conserve the remains of ancient Greece and how do we do it?

Historical skills

After completing this chapter, you should be able to:

- Explain what cause and effect means in the study of history
- Understand the role of historians and archaeologists in uncovering the past
- Develop historical empathy with people in the past
- Interpret primary sources in both print and visual form
- Evaluate the reliability of primary sources
- Correctly use special terms specific to the topic under study
- Use factual evidence (dates, statistics, examples) to substantiate an argument
- Reflect on your findings and refine your learning.

Digital resources

Visit the Interactive Textbook to access:

- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video

Five interesting facts about ancient Greece

▶ **Source 7.4** Greece is full of ruins from its ancient civilisation. The Parthenon in Athens is one of the most famous ancient buildings in the world. Construction was overseen by the Greek statesman Pericles and began in 447 BCE.

7.3 Timeline of key events

What came before this topic?

c. 4000–3000 BCE Early forms of farming begin in Mesopotamia

c. 3100–2686 BCE Farming societies in early Egypt develop along the Nile River

c. 3000–1450 BCE Greek-speaking tribes enter Greece

Carving from 645 BCE of ancient Mesopotamian irrigation channels for farming

Reconstruction of the 'bull-leaping' fresco from the Minoan royal palace at Knossos

c. 3000–1600 BCE
The Minoan civilisation develops in Crete; it is one of the earliest organised societies in Europe

c. 1400 BCE
The city of Athens is founded

c. 1100–900 BCE
Greece enters a time when written records disappear (little is known about this period). Mycenaean culture is destroyed, possibly by invaders.

c. 2000 BCE
The beginning of the Mycenaean era; organised cities spread across the Greek mainland

c. 1100 BCE
The Trojan War is fought; the city of Troy is destroyed by the Greeks

Timeline activity

1 Use the timeline to identify some of the famous individuals associated with ancient Greece. What are these people known for?

2 Research and write about what happened during the Trojan War. What is the most famous event in this conflict?

Key concepts: cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting
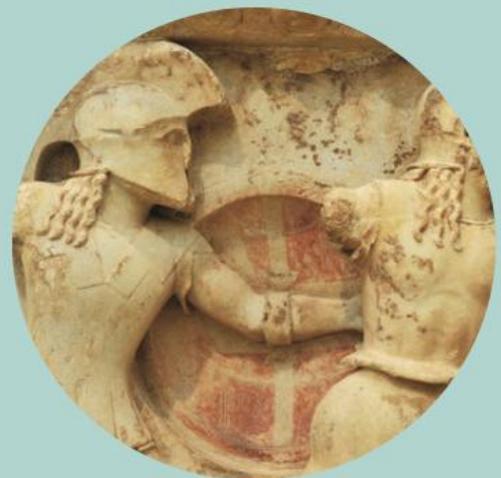
Relief of Trojan and Greek soldiers in the Trojan War

What came after this topic?

c. 336–323 BCE Reign of Alexander the Great

c. 27 BCE Beginning of the Roman Empire

1 CE Birth of Christ

Roman copy from 1 CE of Alexander the Great

The Acropolis of Athens is a symbol of democracy around the world

c. 356 BCE
Alexander III of Macedon, commonly known as Alexander the Great, was born. Alexander was a king of the ancient Greek kingdom of Macedon and introduced a culture of 'Hellenism' which helped to ensure that Greek culture and language continued to diffuse across Europe and the Near East for hundreds of years.

c. 460s BCE
Greece enters a 'classical age' and Pericles implements a radical form of democracy in Athens

c. 750–500 BCE Early forms of democracy emerge throughout Greece

c. 490–479 BCE
The period of the Greco–Persian Wars: Greece prevents Persian invasion at the Battle of Marathon; although the battle of Thermopylae saw setbacks for the Greeks because of the defeat of the 300 Spartiates led by Spartan King Leonidas, the Greeks rallied and followed up with a crushing sea victory at Salamis. The final battle was won by Greece with the Spartans leading the Greeks at Plataea.

c. 431–404 BCE
The Peloponnesian War; Athens and Sparta go to war, which brings the classical age to an end

c. 700 BCE
Homer writes *The Iliad* and *The Odyssey*, two famous stories that survive today
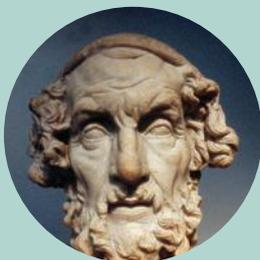
Roman copy of lost Greek bust of Homer, 2 BCE

Statue of Leonidas on a monument for the Battle of Thermopylae

7.4   The physical features of Greece and how they influenced the civilisation that developed there

FOCUS QUESTION

How did geography affect how ancient Greece developed?

city-state a city that rules itself and the area immediately surrounding it

Ancient Greece developed as a series of independent cities called **city-states**. It was not a large kingdom like ancient Egypt or ancient China. Instead, each city-state (called a *polis* by the Greeks) controlled the area that immediately surrounded it. Greece's landscape is very mountainous, so city-states found controlling more than the area directly around them challenging. The geography of Greece influenced how ancient cities like Athens, Sparta and Corinth developed politically, economically and socially.

Location and climate

Greece is in south-eastern Europe. It is surrounded by the Aegean Sea, Mediterranean Sea and Ionian Sea. Africa lies to Greece's south and Asia is to its east. Thousands of small islands exist off the Greek mainland. Many of these were home to Greek communities during ancient times.

The Greek mainland is a rugged, mountainous and rocky environment. The climate changes, depending on the location and the time of year. In the mountains, the winters are cold, while the plains in summer

▼ **Source 7.5** The Mediterranean Sea and the Greek city-states in the ninth to sixth centuries BCE

Key

Phoenicia, c. 750 BCE	Greece, c. 750 BCE	▲ Principal Phoenician colonising city
Phoenician settlement, from the 9th century BCE	Greek settlement, 8th–6th century BCE	■ Principal Greek colonising city
		● Greek or Phoenician colony

are extremely hot. The soil is shallow and not suitable for growing large crops for farming. This meant that the city-states could not easily grow crops like wheat or barley to feed their populations.

Impact of the environment

The rugged environment made transport and trade by road difficult. To overcome this, most communication and transport was done via the sea. The landscape kept city-states separate, which meant they ruled themselves and were independent from one another.

The mountainous **terrain** provided the city-states natural protection and defence. Large armies had difficulty moving across the landscape. An example of this is when a small number of Greeks held off a large Persian army at Thermopylae by fighting in a narrow mountain pass. The separateness of the city-states made their relationships with one another competitive. This sometimes caused conflict and meant that uniting against common enemies, like the Persians, was hard to achieve.

Greece's mountainous terrain had a significant impact on the types of food that could be produced. The Greek mainland was unable to grow large **grain crops**, which is what helped sustain other ancient civilisations. Therefore, the ancient Greeks had to import much of their food from other lands such as Egypt and southern Italy. The ancient Greeks were able to trade the olives and grapes they grew in Greece's rocky soil for the extra grain they needed.

> **terrain** the landforms of a particular area
>
> **grain crops** plants used to grow grain to use in making food like bread

Amazing but true …

The olive was such an important crop for the Greeks that groves of olive trees were sometimes considered sacred, and were associated with the gods (in legend, Athens had olives that the goddess Athena had given to the city, and this is why they chose to name the city after her). The olive was used as a food and trade source and today some of the olives produced, such as kalamata olives from Sparta, are enjoyed everywhere around the world.

The ancient Greek city-states mostly developed along the coastline because of the countryside and their need to trade. These societies were reliant on the sea. As a result, ancient Greeks became expert sailors and navigators. They explored far beyond Greece and developed trade relationships with other ancient civilisations. Despite their lack of accurate navigation tools, like a compass, Greek sailors explored around the eastern Mediterranean. They were able to use the stars to help them navigate across open water. Through their exploration, they developed relationships with ancient Egypt and Asia Minor (modern-day Turkey). The ancient Greeks, particularly the Athenians, also developed large navies that helped them to defend their cities.

▼ **Source 7.6** Olive trees growing in the mountainous Greek terrain
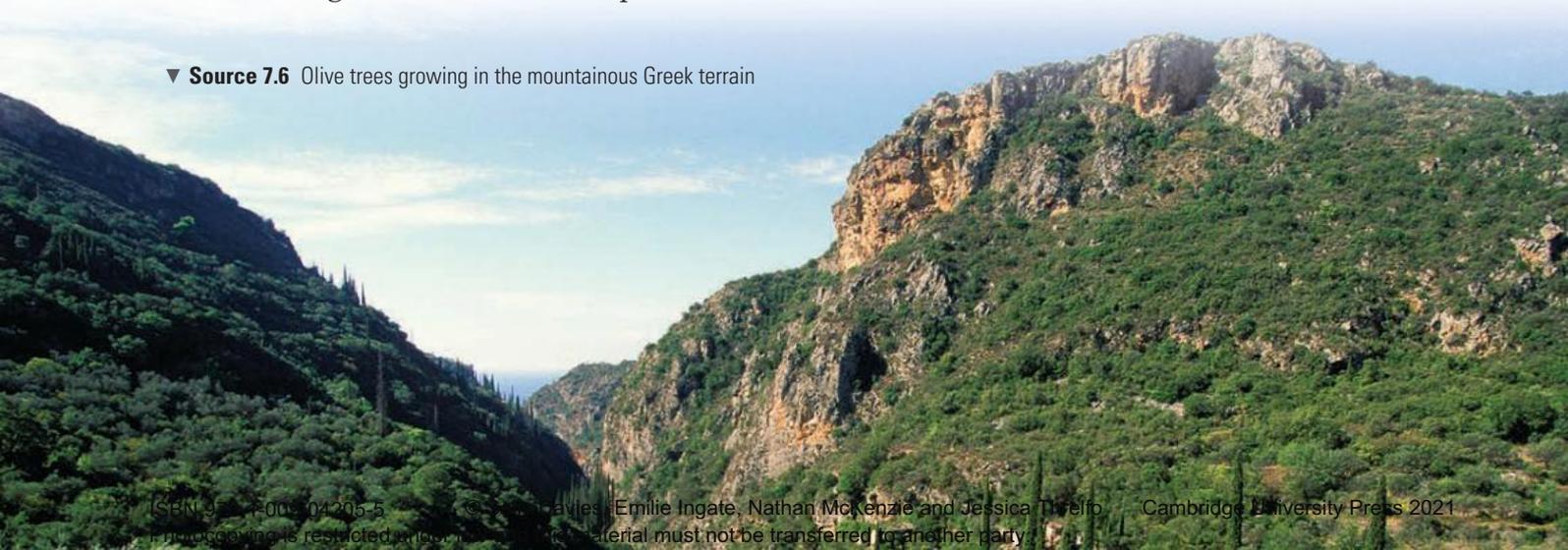
ACTIVITY 7.1

Using historical sources as evidence

Examine the following sources and then answer the questions that follow.

SOURCE A

▲ **Source 7.7** A detail from a painting on a black-figure *krater*, which is a water pot. The detail shows a *trireme* (an ancient Greek battle ship) on its inner rim. When the *krater* was full, it looked like the ship was sailing on the water. The *krater* is from Thira and dates to 6 BCE. It is held at the Archaeological Museum in Santorini, Greece.

SOURCE B

▲ **Source 7.8** The geography in Rethymno, Greece

Responding to the sources

1 Examine Source A.

    a Who created this object?

    b When was it made?

    c What has been painted on the side of the object?

    d How does the source show us the importance of ships and sailing to the Greeks?

2 Examine Source B.

    a Where was this photo taken?

    b What are some key characteristics of the landscape?

3 Use Sources A and B to explain how we know the ancient Greeks were reliant on the sea.

Key concepts: sources, evidence, cause and effect   **HASS skills:** analysing, communicating and reflecting

The geography and climate of Greece affected how the ancient Greeks lived from day to day. Most of the year they spent outdoors because of the warm climate. As a result, Greek cities developed large marketplaces called *agora*. People would meet in the *agora* to enjoy the warm sun and discuss current events. The *agora* was surrounded by long verandas called *stoas*. The *stoas* provided shade, and were places for traders and merchants to set up stalls to sell goods. Unlike people in colder climates, the ancient Greeks did not need to spend a lot of time inside to keep warm. During the winter months, most ancient Greek sailors returned home because of the rough winter seas. Armies would also usually stop fighting.

agora an open public space used for markets or assemblies

▲ **Source 7.9** The archaeological site of Messene gives us an excellent idea of the way of life in an ancient Greek city-state. Shown here are the ruins of the town's *agora*.

Key

1 Parthenon
2 Old Temple of Athene
3 Erechtheum
4 Statue of Athena Promachus
5 Propylaea
6 Temple of Athena Nike
7 Sanctuary of Aegeus

8 Sanctuary of Artemis Brauronia
9 Chalkotheke
10 Pandroseion
11 Arrephorion
12 Altar of Athena
13 Sanctuary of Zeus Polieus
14 Sanctuary of Pandion

15 Odeon of Herodes Atticus
16 Stoa of Eumenes
17 Sanctuary of Asclepius
18 Theatre of Dionysus Eleuthereus
19 Odeum of Pericles
20 Temenos of Dionysus Eleuthereus
21 Aglaureion

▲**Source 7.10** Site plan of the Acropolis, Athens, showing major archaeological remains

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 7.2

Cause and effect

One of the most important ways of thinking in history is to understand *cause and effect*. Events do not happen without a reason. Historians can explain what causes an event and what the effects of an event were. Most historical events have more than one cause and more than one effect.

Based on the reading in this section, create a graphic organiser like the example here to show the causes of ancient Greece's reliance on the sea.

Of the causes you have identified, which do you think was the most significant? Why do you think that?

Key concepts: cause and effect, significance

HASS skills: analysing, evaluating, communicating and reflecting

END OF SECTION REVIEW 7.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What were the small, independent cities called that developed in ancient Greece?
2 The varied climate made it difficult for the ancient Greeks to grow a particular type of crop. What type of crop was difficult to grow?
3 In which regions did the ancient Greeks develop their trading relationships?

Interpret

4 What effect did the climate have on ancient Greek cities and the way they were designed?
5 What caused the ancient Greeks to become expert sailors and navigators of the sea?

Argue

6 Explain the significance of the landscape and climate in influencing how ancient Greece developed as a society.

Key concepts: cause and effect

HASS skills: communicating and reflecting

7.5   Roles of key groups in ancient Greece, and the influence of law and religion

FOCUS QUESTION

How were different Greek city-states organised during the classical age?

Daily life in ancient Greece depended on which city-state people lived in, and we can get a good idea of some of the key aspects of everyday life by looking at Athens and Sparta. Athens and Sparta were the two most important Greek cities of the classical period. These cities show us that life in ancient Greek cities was similar in some ways, but very different in others. Athens and Sparta became fierce rivals, and eventually went to war with each other at the end of the classical era.

FAMOUS FACE
Socrates

Socrates (469–399 BCE) was a Greek philosopher who is considered to be the father of Western philosophy. He taught other famous Greek philosophers like Plato, who would go on to teach Aristotle. When Socrates' friend Chaerephon asked the oracle of Apollo at Delphi if there was anyone wiser than Socrates, her response was, 'None.'

Athens

Athens was one of the leaders of Greece during the **Greco–Persian Wars**. The city also fought against Sparta in the **Peloponnesian War** that followed. Athens is most commonly associated with a form of government known as democracy (although democracy was only used in Athens for a short time, other city-states used it as well). Athenian democracy is the basis for the system of democracy seen in countries like Australia today.

Athens was home to most of the great writers and thinkers of ancient Greece. Aristotle and Socrates came from Athens.

Sparta

Sparta was an interesting and unique city of ancient Greece. Sparta had a different kind of

society to the rest of Greece because it was a **military state**. The city did, however, have some elements of democracy like the other city-states. Sparta had a brutal education system, but it allowed women more freedom and economic power than anywhere else in ancient Greece. Therefore, Sparta was a city of contradictions, which is why it is an interesting example of Greek society.

Greco–Persian Wars a series of conflicts between the ancient Greek city-states and the Persian Empire

Peloponnesian War a series of conflicts between Athens and Sparta, and their allies

military state a society that is organised around the military

How city-states made laws

A significant feature of ancient Greek society was how city-states made their laws. The process differed from city to city. In Athens, each eligible male citizen was able to contribute to making decisions through attending 'the assembly'.

To learn more about democracy, see Chapter 1.

▲ **Source 7.11** The Athenian assembly originally met on the Pnyx, a hill in Athens. Every month the assembly discussed the city's defence and the state of its corn reserves. Meetings of the assembly began early in the morning and could continue until dark. They were often rowdy. Eventually there were three or four meetings a month. Pictured is the Pnyx today.

Around 300 BCE the meetings took place in the Theatre of Dionysus, which could hold around 6000 citizens. Only a small percentage of the total population was eligible to take part because a person had to be male, over 18 and a citizen to participate. This added up to less than 30 per cent of the total population, which is very different from how we think of democracy today.

Sparta also had an assembly to debate and pass laws but, unlike Athens, it also had two kings who oversaw the whole process.

Athenian society vs Spartan society

Looking at a comparison between Athenian society and Spartan society can give us an understanding of daily life in ancient Greece during the classical period. Table 7.1 outlines the structure and features of the two ancient societies. It describes who ruled each society and what their rights were, how women were viewed and how non-citizens were treated.

Social structures in Athens and Sparta

Athens		Sparta	
Who ruled in this society and what rights did they have?			
Citizens	- Only free men - Must be 18 years of age and have served two years in the military - Could speak in the assembly - Gained extra rights after turning 30, including: - Could serve as a magistrate or juror - Free from direct taxation - Had the right to own land - Could bring lawsuits	**Spartiates (*homoioi*)**	- Only free men - Small in number, never more than 10 000 - Full-time soldiers - Held all the political power - All equal under the law - Lived by a strict code of honour

▲ **Table 7.1** Comparison of the social structures in Athens and Sparta

Athens		Sparta	
How were women treated in society?			
Athenian women	• No political rights at all • Legally they were under the control of men • Generally, they had no rights to own property • Expected to spend their time at home managing the household • They were not educated	**Spartan women**	• Mingled freely with men • Legally equal to men • Were not allowed to vote • Did not engage in any economic activity (spinning, weaving, etc.) because it was viewed as work for slaves • They received an education
How were non-citizens treated?			
Metics	• Name means 'one who lives with us' • Foreigners, living in Athens • Needed an Athenian to sponsor them • Expected to fight for Athens in times of war • Were not allowed to own property • Were generally craftsmen, tradesmen or artisans • Could be made a citizen if they did something special for the city	*Perioeci*	• Name means 'the ones who dwell around' • Lived in scattered communities around Sparta • Allowed to run their own communities but had to obey Spartan orders • Were farmers, tradesmen or artisans • Served as soldiers in wartime

		Inferiors	• Neither slaves nor citizens
			• Could be:
			  • Illegitimate offspring
			  • Freed slaves
			  • Spartiates who had lost their citizenship
			  • *Helot* children adopted as playmates of Spartan boys

How were slaves treated?			
Slaves	• Property of citizens • Had no legal or political rights • Could be born a slave or be made one in wartime • Not allowed to marry • Could buy their own freedom in some circumstances	*Helots*	• Slaves owned by the government • Came from lands conquered by Sparta • No legal or political rights • There were 20 times more *helots* than Spartiates • Would act as servants in war (carrying weapons, etc.) • Allowed to live with their families

▲ **Table 7.1** (*Continued*)

ACTIVITY 7.2

Similarities and differences

Use a table like the one here to identify the similarities and differences between Athenian society and Spartan society.

Similarities	Differences

Key concepts: continuity and change, significance   **HASS skills:** analysing, communicating and reflecting

◄ **Source 7.12** A Spartan helmet from the British Museum. The helmet has been damaged and the top has sustained a blow, presumably from a battle.

Athenian government vs Spartan government

Although there were some similarities between the governments of Athens and Sparta, their government structures were also quite different in other ways. Table 7.2 outlines their governments.

Government features in Athens and Sparta

Athens		Sparta	
Ten generals	• Led the Athenian military • Directly elected by the assembly (only area of society where this was possible) • Assembly could fine, exile or execute them	**The dual kings**	• Commanders of the military • If one king was leading an army, the other would stay in Sparta • Religious leaders • Could be deposed by the people

▲ **Table 7.2** Features of the governments in Athens and Sparta

Athens		Sparta	
Council (*boule*)	• Had 500 members chosen by lot (50 members from each tribe) • Any citizen over 30 was eligible • Prepared legislation for the assembly • Supervised magistrates • Responsible for meeting foreign ambassadors • Served for one year • Were paid for service – which meant all levels of society could become involved in public service, not just the rich	Council (*gerousia*)	• Had 28 members in addition to the two kings • Only Spartans over 60 were eligible • Held office for life • Elected by the assembly • Prepared bills for the assembly • Could overrule a vote by the assembly • Also acted as a court for criminal trials
The *Heliaea* (*courts*)	• Juries who served annually in the *Heliaea* were a key component of Athenian democracy because having the lower classes involved in the courts sought to achieve equality before the law (closer to achieving 'a jury of your peers') • It was also paid service, which meant that the middle classes (the *Zeugetai*) could become involved in public service for the first time – up until Pericles' democratic reforms, only the rich participated	Ephorate	• Board of five *ephors* • Administered the city • Any Spartan over 30 could stand for election (the assembly voted) • One-year term
Assembly (*ecclesia*)	• All Athenian male citizens • Met 40 times a year • Voted on legislation • Minimum of 6000 citizens needed to attend for a vote to be valid	Assembly (*ecclesia*)	• All Spartiates over 30 • Met once a month • Voted on legislation

▲ **Table 7.2** (*Continued*)

Amazing but true …

In ancient Greece, salt was so valuable that it was frequently used to make payments. Often, people used salt to buy slaves. This is where the expression 'not worth their salt' comes from.

▶ **Source 7.13** This cup from c. 470–460 BCE shows a slave on the far right carrying offerings for the gods.

ACTIVITY 7.3

Similarities and differences

Use a table like the one here to identify the similarities and differences between the Athenian and Spartan governments.

Similarities	Differences

Key concepts: continuity and change, significance

HASS skills: analysing, communicating and reflecting

Amazing but true …

For many years, historians thought that the ancient Greeks did not like bright colours and preferred their marble statues to be white. However, archaeologists found several ancient Greek statues in the second half of the nineteenth century that had bits of colour left on them. There were traces of red for lips, traces of black for hair and a whole range of colours for clothing, including gold leaf. The spotless, white marble of ancient Greece is a myth – their statues were multicoloured! The colour disappeared because it was exposed to oxygen and weathering, which wore the colour away. Coloured artefacts have been found buried where they were protected from the elements.

▲ **Source 7.14** Ancient Greek horses from c. 570 BCE

ACTIVITY 7.4

Using historical sources as evidence

Ostraka were potsherds used by citizens to vote with – a very early form of ballot papers like those used in modern elections in Western democracies.

1 How does the source help us to understand how democracy worked in Athens?

2 Using the table you created in Activity 7.3, who might have used an ostrakon like the one in the source to vote?

▶ **Source 7.15** This image has a number of ostraka in it, which show the name of Themistocles, a famous Athenian general. Despite being rich and powerful, when his politics became unpopular after the Persian War, Themistocles was exiled by a vote of the people. This shows us the power of democracy.

Key concepts: sources, evidence

HASS skills: analysing, communicating and reflecting

Education in Athens

Education in Athens was only for boys. Learning focused on academic subjects, music and physical education. The discipline in schools was extremely harsh. Students were beaten with a sandal or cane if they lost concentration or made mistakes.

School in ancient Athens did not look like it does today. Boys had only one teacher and they usually learned in a room at the teacher's house. Teachers were not respected and were poorly paid. They were usually foreigners or slaves. The low opinion of teachers is strange considering how important Athenians thought education was. However, this was not always the case. The rich paid for their children to be educated by the famous philosophers. For example, Alexander the Great was educated by Aristotle.

Girls were expected to stay at home and learn the skills of weaving, cooking and managing the household finances.

Education in Sparta

A unique aspect of Spartan society was the city-state's education system. Boys left home when they were seven years old to live in a **barracks** (*agoge*) with other boys the same age. The boys never went home again.

They were subjected to harsh discipline and were whipped if they did not follow instructions. The boys exercised naked, did all their own housekeeping and were given only small amounts of food. They were trained to be expert soldiers and to obey orders without question.

The education of Spartan girls was similar to Spartan boys but with some important differences. Girls stayed at home and their education focused on preparing their bodies for childbirth. At times, girls would exercise with the boys. There was as much rivalry among the girls as there was among the boys.

Girls did not bother training for domestic duties, like weaving, as this was seen as trivial and to be done by slaves. Instead, Spartan girls focused on physical activity to improve their bodies. They were also probably aware of the history of their culture – they were renowned for their ability to sing and dance and knew the same 'choruses' (songs that told stories about heroes and important Spartan cultural and military events) as the men.

The Spartan education system made its citizens very loyal to the city-state. However, some historians have said the system did not allow for Spartans to adapt to change.

> **barracks** a place where soldiers live and train

▼ **Source 7.16** An engraving from 1879 imagining the education and training program for male Spartan citizens
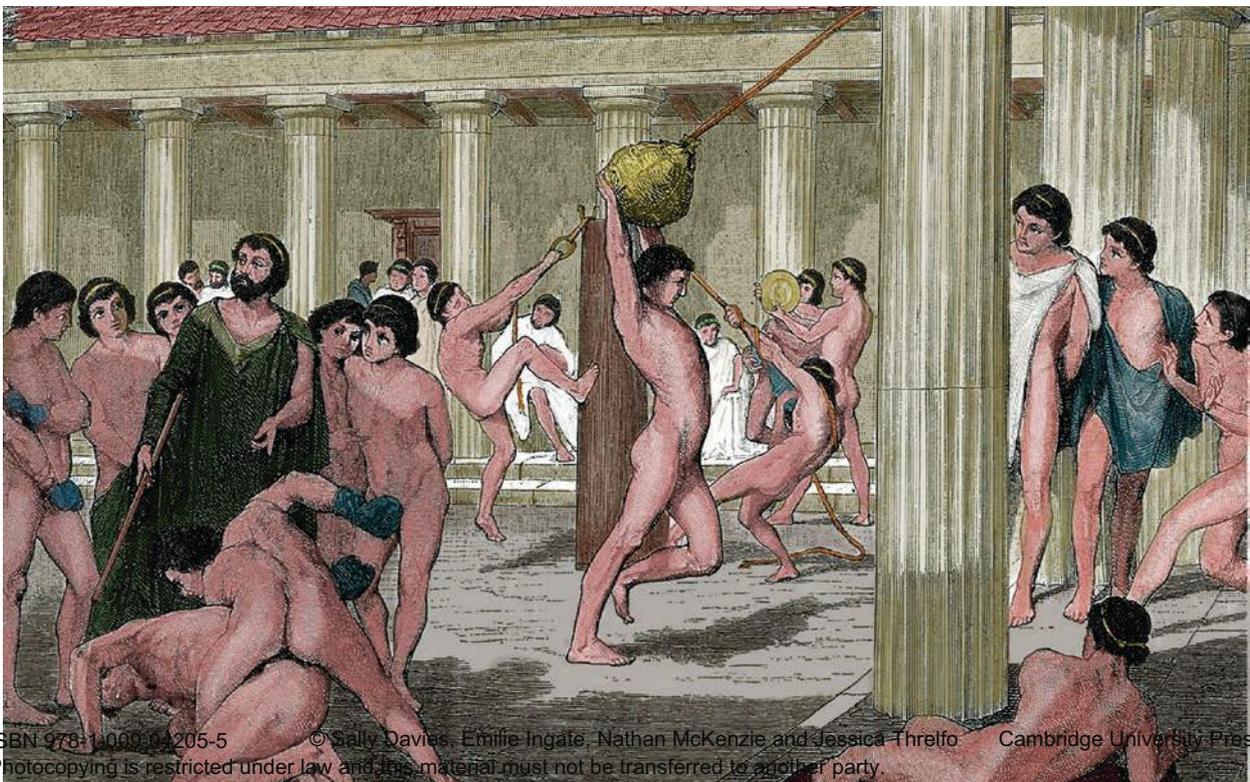
ACTIVITY 7.5

Comparing primary and secondary sources

The famous Greek **playwright** Aristophanes was from Athens. In his play *Lysistrata* he makes fun of Spartan women and their constant physical training:

> **Lysistrata**: Welcome Lampito, my dear. How are things in Sparta? Darling, you look simply beautiful. Such colour, such resilience! Why, I bet you could throttle a bull.
>
> **Lampito**: So could you my dear, if you were in training. Don't you know I practice **rump jumps** every day?

▲ **Source 7.17** Aristophanes, *Lysistrata*, Penguin Classics, 2015, p. 168

Responding to the source

1 How does Lysistrata greet Lampito?
2 What does Lampito say is the reason for her fitness?
3 What kind of evidence does this source provide?

Key concepts: sources, evidence, perspectives, empathy   **HASS skills:** communicating and reflecting

Opinions on Spartan education

Many historians have written about the education system of the Spartans.

Read the opinions provided here and pay attention to when they were written. The first two quotes are **secondary sources**, written centuries after the time of ancient Greece. The third quote is a primary source from the fourth century BCE, written during the time of ancient Greece.

1 Pamela Bradley, *Ancient Greece: Using Evidence*, 2001, p. 66: [The Spartan education system] produced courageous and loyal citizens, but it did not encourage resilience to cope with change.

2 James Renshaw, *In Search of the Greeks*, 2015, p. 373: [The Spartans] introduced a system which would produce outstanding and loyal soldiers … individuality and creativity [were] crushed.

3 Aristotle, *The Politics*, Penguin Classics, 1966, p. 304: The Spartans … **brutalise** their children by **abnormal exertion** which is supposed to **endow** them with courage. In point of fact, however … courage should not be the role or even the principal end of youth training … the Spartans go to work in quite the wrong way.

---

playwright a person who writes plays

rump jumps an exercise that involved the person jumping up and hitting their feet

secondary source a document that provides or discusses information that uses information collected from primary sources

brutalise cause damage to something

abnormal something that is not normal

exertion physical or mental effort

endow to give something to someone

ACTIVITY 7.6

Using historical sources as evidence

1 Create a graphic organiser using the sources in this section as evidence. You can use a system like the one shown here.

Positive element of Spartan education	Evidence from a source	Negative element of Spartan education	Evidence from a source

2 Write a letter using this table and the earlier information you put together in this chapter, and imagine what life would be like in the *agoge*.

Key concepts: sources, evidence, perspectives, empathy   **HASS skills:** communicating and reflecting

Family life in city-states

Ancient Greek families generally centred around the household. A typical household consisted of a husband and wife, their children and any slaves the family owned. Sometimes grandparents also lived in the house. The father oversaw the household and made all the important decisions. He also performed all the religious ceremonies. The mother would manage the running of the household, particularly the slaves. In Athens, women generally spent time weaving to make clothes for the family.

END OF SECTION REVIEW 7.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Who could become citizens in Athens?
2 How were magistrates chosen in ancient Athens?
3 How were children punished in Athens if they did not pay attention during their education?
4 What was expected of women in Sparta? What did Spartan women think was most important?

Interpret

5 What could women do in Sparta that was unusual and different from other ancient Greek city-states?
6 What kind of citizens did the Spartan education system create?

Argue

7 How was the structure of Athenian society different from Sparta's society? In what ways was it similar?
8 Do historians prefer primary sources or secondary sources? Give three reasons to support your answer.

Key concepts: sources, evidence, perspectives   **HASS skills:** analysing, evaluating

7.6   The significant beliefs, values and practices of ancient Greece

FOCUS QUESTION

What were the significant beliefs, values and practices of the ancient Greeks?

Ancient Greek religion was very different from most modern religions. For example, the ancient Greeks were very involved in their daily religious practice. Religious belief affected almost every aspect of ancient Greek life. Religion also unified the ancient Greeks and gave them a common identity.

pantheon all the gods in a religion or mythology

Gods

The ancient Greeks were polytheistic, which means that they believed in many gods. The most important of these gods were the 12 Olympians, but there were also many others. Each god in the Greek **pantheon** controlled an aspect of the world. Ancient Greeks believed that making sacrifices and praying to their gods would make their lives easier. The gods often made mistakes and intervened in the lives of humans. Sources 7.18, 7.19 and 7.20 show the names, responsibilities and symbols of some of the most important ancient Greek gods.

The system and central ideas in the Greek pantheon were adapted and adopted by other cultures, such as Rome.

▼ **Source 7.18** The six Olympian goddesses

Queen of the gods
Responsible for:
• Women
• Marriage
Symbol:
• *Polos* (high cylindrical crown)

Hera

Responsible for:
• Agriculture
• Harvest
Symbols:
• Flowers
• Fruit
• Grains

Demeter

Responsible for:
• Love
• Beauty
Symbol:
• Seashells

Aphrodite

Responsible for:
• Wisdom
• Weaving and crafts
• War
Symbols:
• Owl
• *Aegis* (shield)

Athena

Responsible for:
• Hunting
• The moon
• Childbirth
Symbols:
• Moon
• Bow and arrows

Artemis

Responsible for:
• The hearth
Symbol:
• Fire

Hestia

▼ **Source 7.19** The six Olympian gods

King of the gods
Responsible for:
• The sky
• Weather
• Travellers
Symbols:
• Throne
• Sceptre
• Thunderbolt

Zeus

Responsible for:
• The sea
• Earthquakes
• Horses
• Bulls
Symbol:
• Trident

Poseidon

Responsible for:
• Fire
• Metalworking craftsmen
Symbol:
• Anvil

Hephaistos

Responsible for:
• War
Symbol:
• Armour

Ares

Responsible for:
• Education
• Music and the arts
• Archery
• The sun
• Prophecy
Symbols:
• Lyre
• Bow

Apollo

Responsible for:
• Messages from the gods
• Travel
• Trade
Symbol:
• Winged sandals

Hermes

▼ **Source 7.20** Other important ancient Greek gods

God responsible for:
• Death
• The underworld
Symbol:
• Pomegranate

Hades

Outsider god, responsible for:
• Drama
• Wine
• Revelry
Symbols:
• Vines
• Ivy
• Animal skins

Dionysus

Nine goddesses responsible for:
• Artistic talents such as music, dance, and song

Muses

Female spirits of vengeance responsible for:
• Punishing those who had done wrong

Furies

ACTIVITY 7.7

Research task

Investigate the important festivals that were developed by the people to honour these gods.

Key concepts: cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting
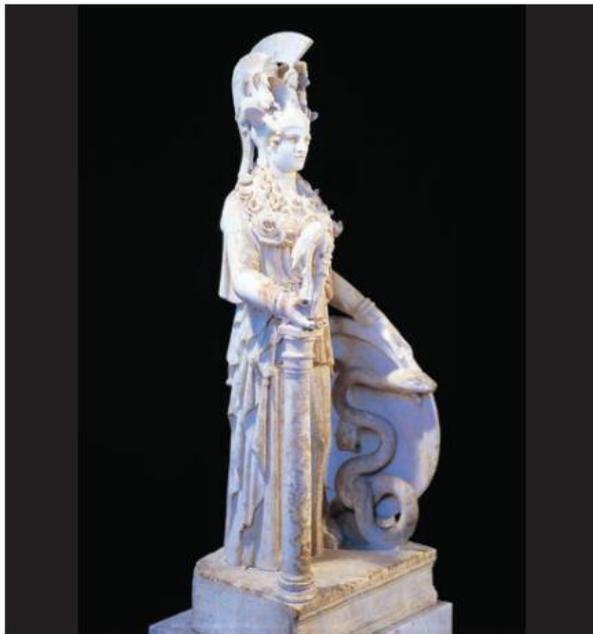
▲ **Source 7.21** Statue of Athena, the patron of Athens and the goddess of wisdom

Heroes

Aside from gods, the ancient Greeks also worshipped heroes. These heroes were based on myth, although some heroes were historical figures. Achilles and Heracles (called Hercules by the Romans) were **mythological** heroes, although there is evidence to suggest they were originally real-life people. Achilles and Heracles were worshipped and revered in ancient Greece for shaping Greek society.

mythological something that is imaginary; from myths or legends
Acropolis the complex of temples and other buildings built on the hill in the centre of Athens

The 10 tribes in Athens were named after 10 heroes from Athenian history. People visited the tombs of these heroes to worship them. In fact, the ancient Greeks believed that heroes sometimes became gods after they died. This was the case with Heracles, who was regarded as one of the greatest of all Greek heroes. Spartans believed they were directly descended from Heracles – they thought that he was the source of their great strength and skill in battle.

ACTIVITY 7.8

Gender roles

Consider the different roles of the gods and goddesses by looking at Sources 7.18, 7.19 and 7.20.

1 What kinds of responsibilities did the male gods have?

2 What kinds of responsibilities did the female goddesses have?

3 What does your examination of male and female roles of gods and goddesses tell you about ancient Greek views?

Key concepts: perspectives

HASS skills: analysing

Temples and practices

Greek temples were important public buildings. They showed off a city-state's wealth and culture, and were built to honour the gods. Temples in ancient Greece were seen as the home of the gods. The architecture was intended to make people feel a sense of wonder and awe. The most famous example of an ancient Greek temple is the Parthenon on the **Acropolis** in Athens. The Parthenon was a temple dedicated to the goddess Athena.

Priests would sacrifice animals to the gods in an area in front of the temple. Food and drinks, such as cakes and wine, were also offered to the gods and left on their altars. The ancient Greeks would offer sacrifices to the gods and pray for the gods to favour them in return.

▲ **Source 7.22** A modern artist's representation of the Acropolis as it probably would have looked in ancient times

Festivals

The ancient Greeks did not have weekends. Instead, most work would stop when they had festival days. The Athenians had over 120 festival days spread throughout the year. Each festival was different, but often a celebration would go for several days and focus on an element of Greek life. These are some examples of Athens' festivals:

- *Dionysia* was held in spring and was an annual celebration of new life.
- *Genesia* was held in September. It was an annual festival to remember and celebrate the dead.
- *Panathenaia* was held in mid-July. It celebrated Athena's birthday and so was the most important festival for Athens. Every four years, the Athenians had a bigger celebration where they played many games.

Sporting events were also important to the ancient Greeks. People came from all over Greece to participate in athletic competitions. The sporting festivals were known as the Panhellenic Games. Some of the most important sporting events in ancient Greece were the:

- Olympic Games – dedicated to Zeus and held every four years at Olympia or Elis
- Pythian Games – dedicated to Apollo and held every four years at Delphi
- Nemean Games – dedicated to Zeus and Heracles, and held every two years at Nemea or Corinthia
- Isthmian Games – dedicated to Poseidon and held every two years at Isthmia or Sicyon.

The afterlife

What happens after we die? Different religions have different answers to this question and the ancient Greeks were no different. The ancient Greeks believed that when a person died, they were sent to the **underworld**. The underworld was ruled by the god of death, Hades. People who had lived lives that harmed others were tormented for eternity. The Greek afterlife had three parts: Tartarus (where the evil were punished for all eternity), the Asphodel Meadows (for those who led neither good nor bad lives) and the Elysium Fields (for heroes).

underworld a place where the ancient Greeks believed the soul went when a person died; it was ruled by the god Hades

Funeral practice

The ancient Greeks performed complicated rituals when a person died. They believed that these acts would help the soul pass safely into the underworld. If the rituals were not completed, the person's soul would wander aimlessly for all eternity. The ancient Greek funeral practice had five stages:

1 preparation
2 *prothesis*
3 *ekphora*
4 burial
5 tending the dead.

▲ **Source 7.23** A carved gravestone of an Athenian solider who fought at the Battle of Marathon in 490 BCE

Stages of a Greek funeral

Preparation	The *prothesis*	The *ekphora*	The burial	Tending the dead
• Only women could prepare the body for burial • The body was cleaned and a coin was placed in the mouth, or in some cases, two coins were placed over the eyes • The coin was for the soul to pay Charon, the ferryman, who would row the soul over the River Styx into the underworld	• For two days the body was laid out in a room • Friends and relatives could come to pay their respects • The women in the house would cut their hair, mark their head with ashes, and sing a lament or song of sorrow (some families hired professional singers)	• The funeral took place before sunrise on the third day • The body would be carried out from the home to the grave • Funerals became so extravagant that laws were eventally introduced to limit excessive displays of grief	• The body was either buried or burned at the burial site • Families would leave gifts at the grave • An animal was sacrificed to the gods	• Ancient Greek society believed in respecting and honouring their ancestors • The period of mourning lasted 30 days • Relatives would visit the grave every year on the anniversary of the person's death

▲ **Source 7.24** The five stages of a funeral for the ancient Greeks

END OF SECTION REVIEW 7.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1   Who was expected to prepare the body of the deceased?

2   What term is used to describe a belief in many gods?

Interpret

3   Explain how the ancient Greeks worshipped their gods.

4   What are the similarities between ancient Greek funerals and Australian funerals in the twenty-first century?

▲ **Source 7.25** The ancient Greek god, Hermes, with the winged sandals also had a winged helmet

Argue

5   Outline the significant beliefs of the ancient Greeks and how they honoured the gods.

Key concepts: continuity and change, significance   **HASS skills:** analysing, communicating and reflecting

7.7   Contact and conflict with other societies

FOCUS QUESTION

How did ancient Greek city-states interact with other civilisations and one another?

The ancient Greek city-states did not exist in isolation. Many other ancient civilisations existed in the Mediterranean region at the same time. The Egyptians, Persians and Greeks had regular contact with one another. Sometimes they also had conflicts.

Trade

The ancient Greeks had a large trading network with other civilisations and societies. They traded with ancient Egypt and communities in southern Italy, especially for food. Ancient Greek pottery can be found all over the eastern Mediterranean region, which shows that the ancient Greeks travelled extensively to trade with their neighbours. They also came into conflict with the Persian Empire, which led to the Greco–Persian Wars.

The Greco–Persian Wars

The Greco–Persian Wars (490–479 BCE) were fought between Greece and Persia. The conflict was one of the most significant in ancient Greek history. We mainly know about these wars from the writings of the ancient Greek historian Herodotus. However, Herodotus' writings were unreliable to some extent because:

- his writing contains factual errors
- he can be narrow-minded when explaining the causes of the wars
- he is pro-Greek, which means he tends to make the Greeks look better than they possibly were.

Causes

The conflict between Persia and Greece began when the Persian King Darius tried to expand the
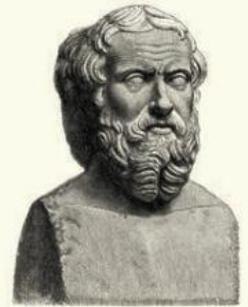
FAMOUS FACE
Herodotus

Herodotus (c. 484–425 BCE) was a Greek writer who invented what we think of as 'history' – the study of the past. He wrote about the wars against the Persians, and about his travels through Egypt, Africa and Asia Minor. While the events that Herodotus wrote about are generally accurate, many of the details are thought to have been exaggerated to cast the Greeks in a favourable light.

▼ **Source 7.26** The Persian Empire 550–330 BCE
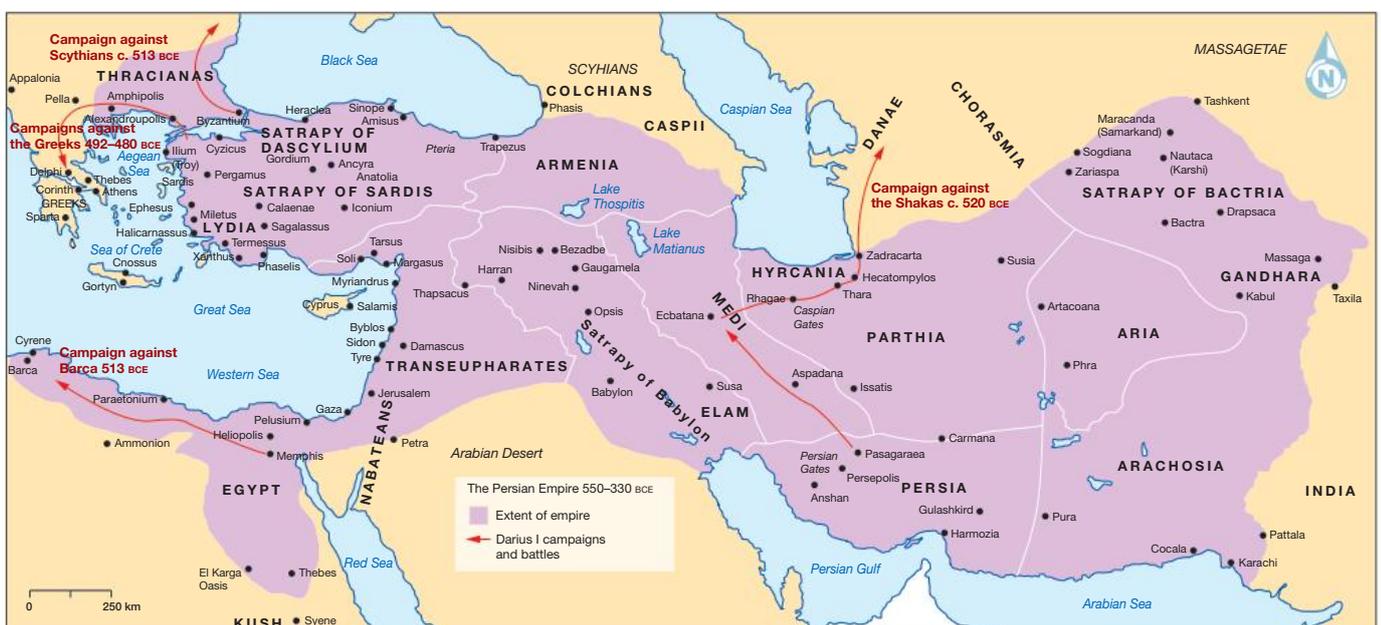
phalanx an ancient Greek military tactic that involved densely packed soldiers fighting with long spears and interlocking shields

hoplite ancient Greek citizens who were also soldiers in city-states; they fought with spears and wore bronze armour

influence of his kingdom into Greece. The Greek city-states were not united and many believed they had no chance of resisting the enormous Persian Empire's army. King Darius demanded the Greek city-states surrender, and many did. However, there were some city-states that refused to submit to the Persians. The most important of these were Athens and Sparta.

Events

The following timeline shows the major events of the Greco–Persian Wars.

- **491 BCE messengers from Persia:** Darius sends messengers into Greece demanding all city-states submit to Persian rule. Some city-states submit, believing it would be pointless to fight, but others resist. Athens and Sparta are the most aggressive in their refusal: Sparta throws the Persian messenger into a well and Athens throws the Persian messenger into a pit.
- **490 BCE Battle of Marathon:** A vastly outnumbered Athenian army manages to defeat a Persian army sent to subdue Greece. According to Herodotus, over 6400 Persians are killed but only 192 Athenians die because of their superior **phalanx** tactic.
- **481 BCE Xerxes and the Hellenic League:** After Darius dies, his son Xerxes personally leads his army to conquer Greece. According to Herodotus, the army has more than five million soldiers. Modern historians think it was more likely to be around 80 000 soldiers. The Greek city-states that resist Persia form an alliance called the Hellenic League, which is led by Sparta.
- **480 BCE Battle of Thermopylae:** Three hundred Spartans heroically resist the massive Persian army at the narrow pass of Thermopylae. However, they are betrayed by one of their own. The Greeks lost this battle but the 300 gave the people of southern Greece enough time to evacuate their cities. Their populations were saved but the Persians advanced, destroying the empty Greek cities as they went. Athens was burnt to the ground twice.
- **480 BCE Battle of Salamis:** The Athenian navy defeats the Persian navy off the island of Salamis. Xerxes, King of Persia, returns to Persia.
- **479 BCE Battle of Plataea:** The largest gathering of Greeks in history deals a massive defeat to the Persians, thereby ending the Greco–Persian Wars.
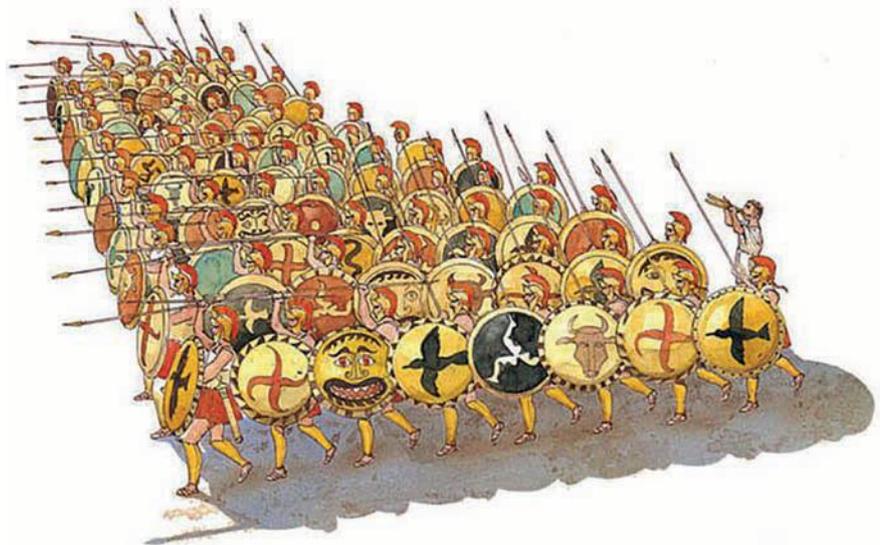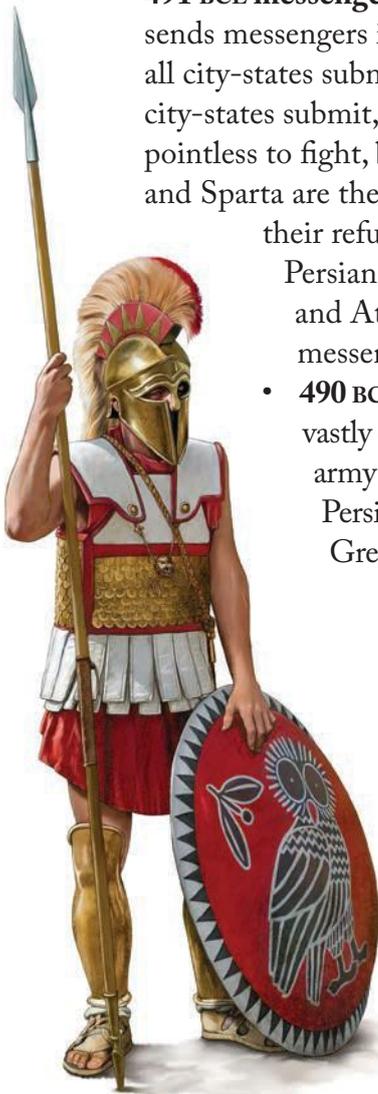
▲ **Source 7.27** An Athenian **hoplite** warrior (left) and a diagram of the famous phalanx formation (right)

Effects

The ancient Greeks were able to stop the Persians from conquering them and taking over Greece. A significant effect of this victory was the shared Greek identity that developed – the ancient Greeks had united against a massively superior enemy and defeated them.

Another significant effect of the Greek victory was the emergence of Athens and Sparta as two of the most powerful city-states. For Athens, victory brought about the peaceful 'classical age', which was a time when their power and influence in Greece was mostly unmatched. Athens created an alliance of cities, called the Delian League, that did not include Sparta. Over time, the Athenians tended to see the league as their empire, which worried the Spartans.

FAMOUS FACE
Artemisia

Artemisia (c. 450 BCE) was the ancient Greek warrior-queen who ruled the city of Halicarnassus during the Greco–Persian Wars. She sided with the Persians to fight against the Greeks. Artemisia was the only woman among Xerxes' commanders. She led a squadron of Persian ships at the Battle of Salamis. The Greeks had a reward of 10 000 drachmas (Greek currency) on her head, but she was never captured.

ACTIVITY 7.9

Using historical sources as evidence

Here is Herodotus' account of the Battle of Marathon.

> ... the Athenians in close array fell upon them, and fought in a manner worthy of being recorded ... There fell in this battle of Marathon, on the side of the barbarians, about six thousand and four hundred men; on that of the Athenians, one hundred and ninety-two. Such was the number of the slain on the one side and the other.

▲ **Source 7.28** Herodotus, *The Histories*, Book 6, Penguin Classics, 2003, pp.110–17

Responding to the source

1 How does Herodotus make the Athenians look?

2 Given that Herodotus was not at the battle and was writing many years after the event, how reliable is this source?

▲ **Source 7.29** The Athenians were greatly outnumbered at Marathon by the invading Persians, but they eventually overcame their more lightly armed foe.

Key concepts: sources, evidence, perspectives, contestability

HASS skills: analysing, evaluating

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 7.3

Reliability of historical sources

Herodotus is an important source because he was able to talk with people who were there at the time, but his accuracy is sometimes questionable and he made all kinds of assumptions about what he saw and heard, so his conclusions aren't always reliable. Does this make his information useful, or not?

1 Go back through this chapter and find three pieces of evidence that we have from Herodotus about Greece in the fifth century BCE. Assess the accuracy of each of these pieces of evidence. Give it a rating out of 5.

2 Now assess how useful this information was in helping you understand something that happened at the time. Give it a rating out of 5.

3 Write one to two sentences explaining what you think about the usefulness of Herodotus' information. Include a short explanation of why you think this.

Key concepts: sources and evidence, contestability   **HASS skills:** evaluating, reflecting

The Peloponnesian War

Causes

Greece entered a period of peace after the Greco–Persian Wars. During this classical age, many of the ancient Greek theories and concepts we know about and use today were developed. This includes ideas about democracy, drama, philosophy and mathematics. Athens was at the centre of this cultural growth. Its power and authority were nearly unmatched elsewhere in Greece. But the Delian League began to resemble an 'Athenian Empire' and other ancient Greek city-states were increasingly forced to do what the Athenians wanted them to do.

FAMOUS FACE

Thucydides

Thucydides (460–400 BCE) was an Athenian general who lived through the Peloponnesian War. He wrote *History of the Peloponnesian War*, one of our main historical sources from this period. Thucydides is often seen as the first historian to use research techniques similar to those of modern historians, including using eye-witness accounts as sources. Some modern historians have questioned how reliable Thucydides' accounts are, but he remains one of the most important sources that we have today about the ancient Greek world.

ACTIVITY 7.10

Using historical sources as evidence

The ancient Greek historian Thucydides wrote about the Athenians' arrogant attitude towards their neighbours. Here he writes about what an Athenian ambassador said to the Spartans in 431 BCE.

> We have done nothing extraordinary, nothing contrary to human nature in accepting an empire when it was offered to us and then in refusing to give it up. Three very powerful motives prevented us from doing so – security, honour and self-interest. And we were not the first to act in this way. Far from it. It has always been the rule that the weak should be subject to the strong.

▲ **Source 7.30** Thucydides, *The History of the Peloponnesian War*, Book 1, Penguin Classics, 1963, p. 76

Responding to the source

1 How does Thucydides make the Athenians look in this account?

2 Do you think the Athenian attitude would have worried or reassured the Spartans?

Key concepts: sources, evidence, perspectives, contestability   **HASS skills:** analysing, evaluating

The Athenians increasingly forced the city-states in the Delian League (their 'allies') to follow their commands. The next activity has an extract from a treaty between Athens and Chalkis, which shows the expectations from Athens.

ACTIVITY 7.11

Using historical sources as evidence

Read the following source and answer the questions that follow.

> That Chalcidians [people from Chalkis] are to swear as follows: I shall not revolt from the people of Athens by any means or device either in word or deed, nor shall I obey anyone who does revolt; and if anyone revolts I shall denounce him to the Athenians … and I shall be as good and upright an ally as I can …

▲ **Source 7.31**   'Athenian relations with Chalkis' (446– 445 or 424– 233 BCE) from Terry Buckley, *Aspects of Greek History*, 1996, p. 191

Responding to the source

Does this treaty look like an alliance between equals? Give a reason for your answer.

Key concepts: sources, evidence, perspectives

HASS skills: questioning and researching, analysing, evaluating

War eventually broke out between Sparta and Athens. Thucydides thought that war was inevitable between the two city-states. What he said about their relations is shown in the next activity.

ACTIVITY 7.12

Using historical sources as evidence

Read the following source and answer the questions that follow.

> What made war inevitable was the growth of Athenian power and the fear which this caused in Sparta.

▲ **Source 7.32**   Thucydides, *The History of the Peloponnesian War*, Book 1, Penguin Classics, 1963, p. 23

Responding to the source

What does Thucydides believe is the main cause of the war between Athens and Sparta?

Key concepts: sources, evidence, cause and effect, perspectives

HASS skills: analysing, evaluating

Events

The Peloponnesian War had three main phases, each lasting several years. The following timeline shows the major events of these phases.

The Archidamian War (431–421 BCE)

- This war is named after the Spartan King Archidamus II.
- Athenian refugees flee from the Spartan armies inside the walls of Athens, but a **plague** kills many people.
- Pericles, the Athenian leader, is killed by the plague.
- There are no clear winners, so both sides sign a 50-year peace treaty known as the Peace of Nicias.

plague a serious and highly infectious disease that kills many people

The Sicilian Expedition (415–413 BCE)

- The Peace of Nicias does not hold.
- The Athenians try to conquer Sicily so that they have access to the Sicilians' huge grain supply.
- The Athenian general, Alcibiades, changes sides to join Sparta.
- The Spartans lend their support to Sicily, which enables the Sicilians to defeat the Athenians.

The Decelean War (414–404 BCE)

- Sparta does a deal with Persia to build a large navy to destroy the Athenian navy.

- The Athenian navy is mostly destroyed or captured.
- Athens surrenders to Sparta.

Effects

The Spartan victory in the Peloponnesian War led to the end of democracy in Athens. The Spartans forced the Athenians to be ruled by a group of 30 men, who soon became known as the 'thirty tyrants'. Years later, some democratic ideas returned to Athens, but the Athenians never regained the power they once held.

▲ **Source 7.33** A spearhead from ancient Greece

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 7.4

Cause and effect

Copy and complete the following graphic organiser to help you make sense of the Greco–Persian Wars and the Peloponnesian War. Placing different events in the graphic will help you to see how these conflicts are connected to each other.
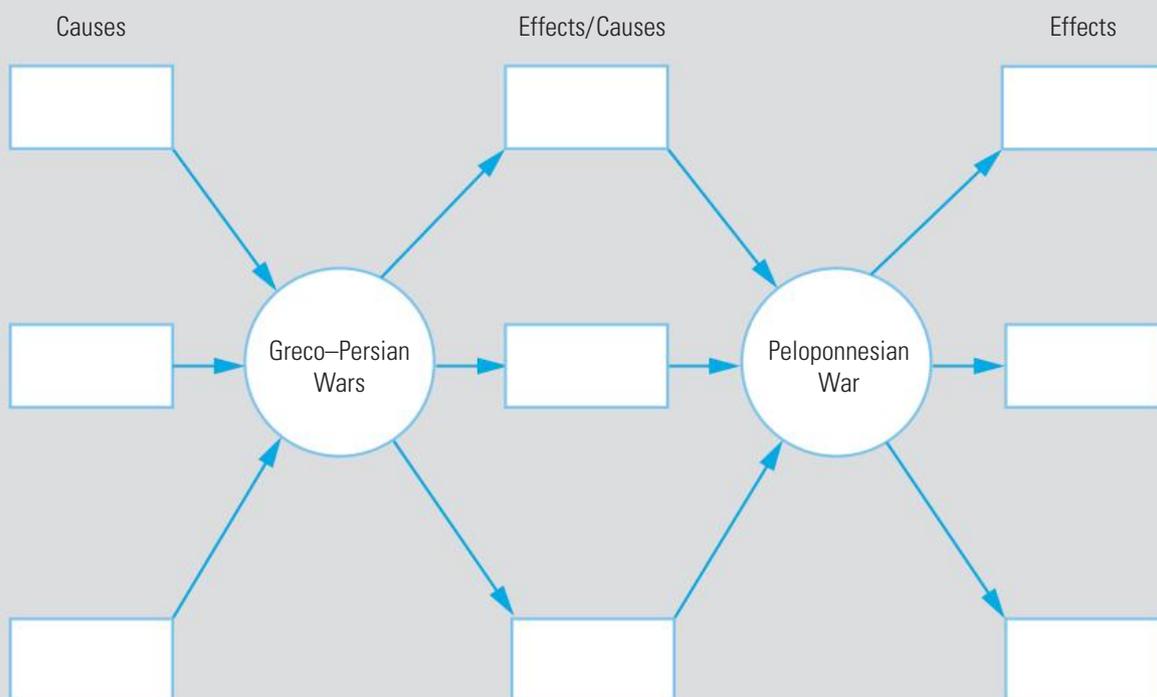
Key concepts: cause and effect, significance

HASS skills: analysing

END OF SECTION REVIEW 7.7

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Why are Herodotus' writings on the Greco–Persian Wars unreliable?

2 Which two important city-states refused to surrender to the Persians?

3 What was the name of the Athenian alliance that was formed at the end of the Greco–Persian Wars?

Interpret

4 How does Herodotus describe the Greeks in battle against the Persians?

5 What did Thucydides think was responsible for causing the Peloponnesian War?

6 Referring to Source 7.34, explain what this image suggests regarding the level of change and continuity in Greece.

Argue

7 What is the historical significance of either the Greco–Persian Wars or the Peloponnesian War for Athens?

▲ **Source 7.34** Herodotus wrote of a long-distance messenger, Pheidippides, who ran a total of 240 km from Athens to Sparta and back to summon their assistance before the battle of Marathon. Another historian, Lucian, writing in 2 CE, confused this story with the messenger sent from Marathon to Athens after the battle to announce victory over the Persians. Lucian called this messenger Pheidippides and reported that he delivered the message with his dying breath. The distance from Marathon to Athens is approximately 40 km and so the distance of the first-ever organised marathon at the 1896 Olympic Games was set at 40 km.

Key concepts: sources, evidence, continuity and change, significance

HASS skills: evaluating, communicating and reflecting

7.8   The role of a significant individual in ancient Greece: Pericles

FOCUS QUESTION

Why was Pericles a significant individual in ancient Greece?

Pericles

There were many significant individuals throughout the history of ancient Greece. One of the most important was an Athenian general called Pericles. Pericles (also known as Perikles) is the person who is most associated with 'radical democracy'. Radical democracy was where all major decisions were made by all citizens gathered in the assembly. It was implemented in Athens before the Peloponnesian War.

Marble portrait bust of Pericles

472 BCE
Pericles presents the play *The Persians* at the Dionysia, which demonstrates he is one of the wealthy men of Athens

462–458 BCE
Pericles and his allies succeed in introducing more democratic practices into Athens

c. 459–431 BCE
Pericles' policy was a key factor in developing the Delian League into an empire – their allies were most tightly controlled while Pericles was in charge

c. 495 BCE
Birth of Pericles

463 BCE
Pericles is the leading prosecutor in the trial of Cimon (who was the most important general at the time)

461–429 BCE
Pericles is the effective ruler of Athens and implements radical democracy. Pericles introduces many successful social and economic reforms, even achieving full employment.

429 BCE
Pericles dies from the plague

A painting of Pericles talking at the assembly

Early life

Pericles was born in Athens to an important family during the Greco–Persian Wars. He was related to famous Athenian politicians and generals, and was influenced by some of the most significant individuals of classical Athens. These people included:

- Anaxagoras – a great thinker who taught Pericles to ignore superstitions
- Damon – Pericles' music teacher who sparked his interest in politics and philosophy
- Protagoras – a renowned **sophist** thinker
- Sophocles – an accomplished **dramatist**
- Phidias – an excellent sculptor.

> **sophist** a teacher in ancient Greece who specialised in philosophy
>
> **dramatist** an individual who writes dramas

FAMOUS FACE
Plutarch

Plutarch (45–125 CE) was a Greek writer and biographer who lived in the Roman world. Plutarch has become an influential writer and is one of our main sources on ancient Greek and Roman societies. While he wrote about Pericles and the ancient Greeks more than 500 years after they had lived, he remains one of the main historical sources we have of these civilisations. Plutarch has remained a popular historian for nearly two thousand years and there is barely a time in history when he has not been widely read and studied.

Skills

The ancient writers Plutarch and Thucydides described Pericles as intelligent with great speaking and debating skills. Plutarch and Thucydides also said Pericles was determined, and had a sense of justice and integrity. He showed firm leadership and loved Athens. In his early years, Pericles served in the Athenian navy and spoke in the assembly in support of democratic ideas. He quickly became one of the most influential speakers in the assembly because of his skills. Eventually Pericles took a position of leadership in Athens.

ACTIVITY 7.13

Using historical sources as evidence

Plutarch wrote about Pericles, stating:

> His teacher in music … was Damon … it was he who trained Pericles for his political contests …
>
> Pericles also studied under Zeno the Eleatic… Zeno had perfected the technique of cross-examination, which enabled him to corner his opponent by the method of question and answer.
>
> … But there was one man more closely associated with Pericles than any other … This was Anaxagoras of Clazomenae, whom men of the time used to call Intelligence personified …

▲ **Source 7.35** Plutarch, *The Rise and Fall of Athens: Nine Greek Lives*, Penguin Classics, 1964, p. 168

Responding to the source

1 How does Plutarch portray Pericles in this source?
2 Does Plutarch's writing create a positive or negative image of Pericles?

Key concepts: sources, evidence, cause and effect, perspectives

HASS skills: analysing, evaluating

Rise to power

Pericles became a key leader of Athens in the period following the Greco–Persian Wars. He was elected as one of the 10 generals to implement the decisions of the Athenian assembly. Pericles had to win the support of the people to be elected to this position, which he did 15 times in a row. His success in being re-elected so many times gives us a good understanding of his popularity, as well as his speaking and debating skills.

archonship high offices in command of important jobs in the city-state of ancient Athens

garrison a group of troops stationed in a town or city

Significant achievements

Pericles had many significant achievements while he was a leader in Athens. He helped implement a radical form of democracy by:

- introducing pay for some government jobs
- making the role of chief **archonships** open to lower economic classes
- restricting citizenship to a smaller group of people.

These changes made it possible for Athenians who did not have much money to take a bigger role in the management of the city. This is because government work was no longer limited to the wealthy as some jobs in government were now paid employment.

MAKING THINKING VISIBLE 7.2

Headlines

If you worked for a newspaper in ancient Greece and were asked to write a headline for one of Pericles' significant achievements, what would it be? (*Hint*: make sure you capture the most important aspect of his achievement in your headline.)

Key concepts: perspectives, empathy, contestability | **HASS skills:** evaluating, communicating and reflecting

---

Pericles expanded the Athenian Empire by setting up **garrisons** and democratic governments in allied cities. He also signed treaties with cities outside of the control of Athens, and spread Athens' influence across Greece.

◄ **Source 7.36** The Athenian Empire during 465–434 BCE

In addition, Pericles presided over the construction of many of ancient Greece's famous buildings. This was one of the reasons for his popularity, as the building program created a great many jobs paid for out of the public coffers (taxes paid by the allies) – Athens enjoyed full employment while Pericles was in charge. The famous buildings built under the leadership of Pericles include the:

- Parthenon
- statue of Athena
- Temple of Athena Nike
- Temple of Hephaestus
- Temple of Poseidon
- Hall of Mysteries at Elusis
- Propylaea
- Odeon.

The Parthenon

The statue of Athena (reconstruction)

The Temple of Athena Nike
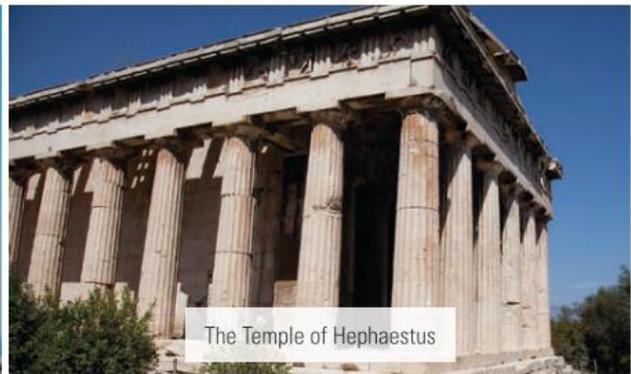
The Temple of Hephaestus
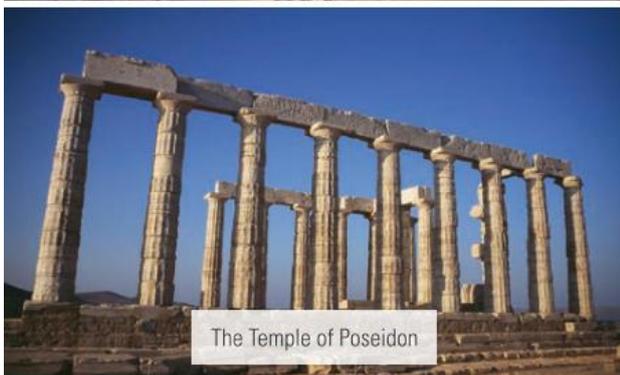
The Temple of Poseidon

The Hall of Mysteries at Elusis
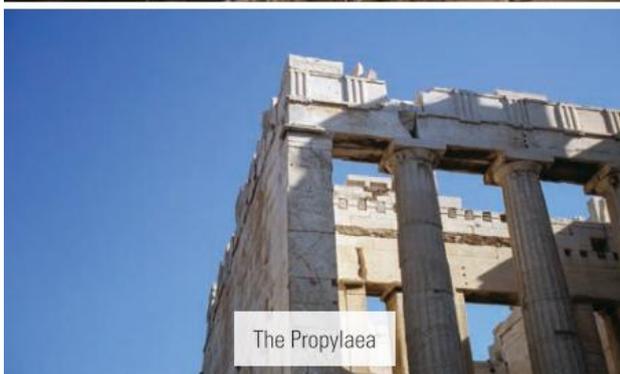
The Propylaea
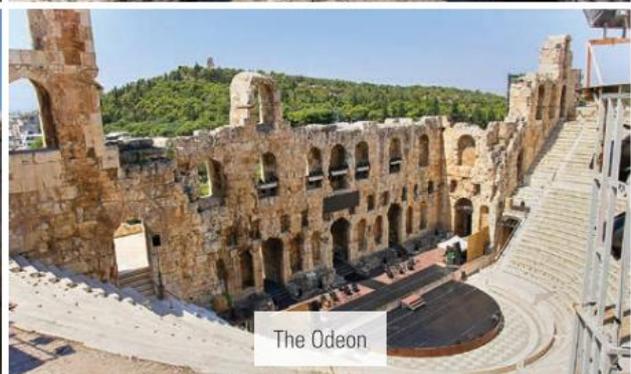
The Odeon

▲ **Source 7.37** Some of the buildings constructed under Pericles' leadership are the most famous of ancient Greek constructions

Opinions on Pericles

We can look at historical sources to gauge the opinions people had of Pericles. Activity 7.14 shows us what Thucydides' opinion was of this Athenian leader.

ACTIVITY 7.14

Using historical sources as evidence

An interesting opinion on Pericles comes from the ancient historian Thucydides. He describes Pericles in the following way:

> Indeed, during the whole period of peacetime, when Pericles was at the head of affairs, the state was wisely led and firmly guarded, and it was under him that Athens was at her greatest …
>
> The reason for this was that Pericles, because of his position, his intelligence, and his known integrity, could respect the liberty of the people and at the same time hold them in check. It was he who led them, rather than they who led him, and since he never sought power from any wrong motive, he was under no necessity of flattering them: in fact he was so highly respected that he was able to speak angrily to them and to contradict them … So, in what was nominally a democracy, power was really in the hands of the first citizen.

▲ **Source 7.38** Thucydides, *History of the Peloponnesian War*, Book 2, Penguin Classics, 1974, p. 163

Responding to the source

1 In what ways is Thucydides making positive comments about Pericles?
2 Do you think Thucydides makes any negative comments about Pericles?
3 How reliable do you think Thucydides is as a commentator on Pericles? Justify your answer.

Key concepts: significance, perspectives, contestability   **HASS skills:** analysing, evaluating

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 7.5

Perspectives on Pericles

Pericles was undoubtedly a great leader, but the information that exists about him is nearly all biased and represents him very positively. This is because the person who wrote one of the most important sources for the period was a peer of Pericles – Thucydides, who was an important general in the highly successful Athenian navy. Perhaps because of his own background and experiences, Thucydides believed that Pericles' leadership was the best thing that had ever happened to Athens. Was he right? The Athenians may have thought so, but most of their allies hated Athenian rule while Pericles was in charge because the Athenians were harsh, cruel and often ruthless.

Consider whose perspective is 'right'? Do you think it matters? Perhaps it is more important that we think about these different perspectives and try to see the situation from both sides.

≫

≫

1 Think about a situation where you have disagreed with someone about something important to you. What key points of difference were there in this disagreement? Did you both think you were right? Why? How did you (or how might you) resolve your differences?

2 Write down your ideas about these questions, and share your ideas with a partner.

3 Extend yourself: Now imagine you are the other person in this disagreement. How does the disagreement look from this perspective? Write down your ideas, and share your ideas with a partner.

Key concepts: perspective   **HASS skills:** communicating and reflecting

ACTIVITY 7.15

Check your understanding

1 Identify the key features of democracy in Australia today (use Chapter 1 to help you).

2 Go back through this chapter and identify the main features of Athenian democracy introduced by Pericles.

3 Compare and contrast Australian and Athenian democracy. Create two lists that identify what has changed and what has stayed the same.

Key concepts: continuity and change   **HASS skills:** evaluating

END OF SECTION REVIEW 7.8

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 In what period did Pericles grow up?

2 Name some of the people who influenced Pericles.

3 How many times was Pericles re-elected a general?

4 What famous buildings is Pericles responsible for building in Athens?

Interpret

5 How did Pericles make it easier for poorer Athenians to be involved in government?

6 What did Thucydides think of Pericles' leadership of Athens?

7 Why does Thucydides say that power was in Pericles' hands even though Athens was a democracy?

Argue

8 Why was Pericles a significant individual in ancient Greece?

Key concepts: continuity and change, significance   **HASS skills:** evaluating, communicating and reflecting

7.9   The process and importance of conserving the past

FOCUS QUESTION

How do archaeologists uncover information about ancient Greece?

Archaeology and its methods

Archaeology today is a scientific and precise process, but this has not always been the case. In the late nineteenth and early twentieth centuries, archaeology was a new idea and the people practising it did not know how to preserve and protect **excavated** remains. Some archaeologists did enormous damage to the sites they were uncovering and accidentally destroyed artefacts that would have given us new understandings about the past. However, today we have technologies like ground-penetrating radar and satellite imagery, which help us to carefully uncover historical remains.

excavate to carefully dig up or reveal something in the ground

▲ **Source 7.39** When archaeologists undertake a dig today, they follow careful rules to minimise any chance of damaging ancient remains by mistake.

Process of an archaeological dig

Choose a site
- Lots of factors help an archaeologist determine a site to dig.
- Geography, ancient texts, the work of other archaeologists and local myths can all help.

Assemble a team
- A team can include:
  - a director
  - diggers
  - recorders
  - local guides
  - specialists (e.g. people who are experts at looking at human remains or inscriptions).

Process what is found
- There can be lots of remains and data to go through, which may include:
  - scientific data like climate, biological remains, metals and so on
  - artefacts like pottery, house foundations, tools, weapons.

Share what is found
- Report back to universities, local government and other organisations about what you found.
- Work with other experts to determine what your findings mean.

▲ **Source 7.40** This flowchart describes the overall process of an archaeological dig.

Methods of conservation

Archaeologists use specific methods to **conserve** the remains of the past. They treat the ownership of what they find very carefully. To do this, archaeologists try to work with local communities to uncover and protect what they find. Unfortunately, when archaeologists first developed their skills in the late nineteenth century, they sometimes did not act with the same **ethical understanding** that we have today.

There are many examples of archaeologists removing extremely valuable and significant artefacts from where the objects were originally found. These artefacts are now displayed in museums and private collections around the world. There has been a lot of argument about what to do with these artefacts. Should they be returned to their original homelands or should they stay in the museums they currently occupy? Some argue that these artefacts have been much better preserved in museums than they would have been if they had stayed in their original locations. They say the museums are keeping the artefacts safe for future generations to see.

Controversy: the Parthenon Marbles

One of the biggest controversies involving artefacts from ancient Greece concerns the Parthenon Marbles. The Parthenon Marbles are a set of marble sculptures that were originally part of the Parthenon on the Acropolis in Athens. In the early

nineteenth century, Lord Elgin acquired the marbles from the Ottoman government, which controlled Greece at that time. Lord Elgin transferred the marbles from their home at the Acropolis to Great Britain, where they came into the possession of the British Museum. They are still on display at the British Museum today.

Greece regained its independence from the Ottoman Empire in 1832 and began to focus on restoring the remains of its ancient past. Greece has asked for the return of the Parthenon Marbles from the United Kingdom, but so far this request has not been met. The Trustees of the British Museum's official position is as follows:

> The British Museum tells the story of cultural achievement throughout the world, from the dawn of human history over two million years ago, until the present day. The Parthenon sculptures are a significant part of that story. The Museum is a unique resource for the world: the breadth and depth of its collection allow a global public to examine cultural identities and explore the complex network of interconnected human cultures. The Trustees lend extensively all over the world and over 3.5 million objects from the collection are available to study online. The Parthenon sculptures are a vital element in this interconnected world collection. They are a part of the world's shared heritage and transcend political boundaries.

▲ **Source 7.42** The position of the Trustees of the British Museum is available on the museum's website.

▲ **Source 7.41** A small ceramic container shaped as an Athenian hoplite, known as an *aryballos*. It was created around 600–570 BCE and was used to hold perfume or gels.

conserve to protect something so that it is not damaged or destroyed

ethical understanding to consider different perspectives on what is morally right

FAMOUS FACE
Lord Elgin

Lord Elgin (1766–1841 CE) was a Scottish nobleman who was responsible for removing the Parthenon Marbles from Greece and transporting them to Great Britain. The cost of removing the marbles was significant. They were eventually purchased by the British Museum. The marbles are sometimes referred to as the Elgin Marbles.

Other historians and public figures have a very different opinion on this issue:

These nations have a right to their own heritage and should not have to prove their capacity to care for it to satisfy any foreign museum. To hide behind outdated treaties signed by long-vanished empires does not address the moral issue of one nation generating income from the display of treasures taken from another.

▲ **Source 7.43** Jonathon Downes, 'Losing "Our" Marbles', *History Today*, 2010, p. 19

The debate about whether Britain should give back the Parthenon Marbles is complex. If every museum had to give back every piece they had acquired, there would not be much left in the museums to show. If the marbles had never been taken to Britain, they might not have been preserved as well as they are now. Passionate views are held on both sides of this ethical debate. Many Greeks see the marbles as a significant part of their history and cultural identity.

▲ **Source 7.44** The Parthenon Marbles on display in the British Museum

MAKING THINKING VISIBLE 7.3

Tug of war: who owns the past?

Identify the factors that 'pull' at each side of the dilemma about the Parthenon Marbles, then answer the questions here.

1 What are the reasons that support the British Museum keeping the Parthenon Marbles?
2 What are the arguments for the Parthenon Marbles to be returned to Greece?
3 What do you think about this dilemma?
4 What do you suggest would be a good way to resolve this tug of war?

Key concepts: significance, perspectives, empathy, contestability

HASS skills: analysing, communicating and reflecting

END OF SECTION REVIEW 7.9

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Why are so many artefacts from ancient Greece in museums outside of Greece?

2 Who removed the Parthenon Marbles from Greece and took them to the United Kingdom?

3 Who ruled Greece when the Parthenon Marbles were taken?

Interpret

4 How are methods of archaeological excavation today different from those of early archaeologists?

5 Why do some historians believe removing ancient artefacts and putting them in museums is positive?

Argue

6 Do you think the Parthenon Marbles should be returned to Greece? Support your argument with evidence reasoning.

Key concepts: cause and effect, significance, perspectives   **HASS skills:** communicating and reflecting

FAMOUS FACE

Alexander the Great

Alexander the Great (356–323 BCE) was also known as Alexander of Macedon. Alexander the Great led the Greek armies to conquer most of the known world of the time. He was crucial in uniting the Greek city-states and spreading Greek ideas far and wide. He became one of the most successful military commanders of all time. Many leaders throughout history have tried to emulate his success but few have equalled him.
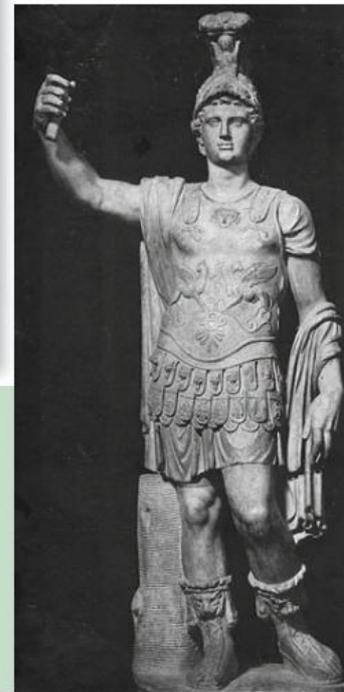
7.10 Conclusion: why does it matter?

Ancient Greece was the beginning of many of the big concepts that we take for granted today, such as 'democracy', 'drama' and 'voting'. There are also plenty of other concepts that had their beginnings in this amazing society.

After the time of Pericles and the Peloponnesian War, ancient Greece began to change. Specifically, a 'Greek identity' spread throughout Greece. Alexander the Great was able to use the idea of Greek identity to create a unified empire, which went on to become a major power in the ancient world.

Ancient Greek ideas spread around the Mediterranean and the Near East, including Egypt, Italy and Mesopotamia, and even as far as India.

Ancient Greek mythology has inspired stories for thousands of years, many of which are still enjoyed today. The influence of ancient Greece runs deep in our society and has influenced much of how Australia works. We might not realise the extent of this influence unless we study the incredible achievements of these intriguing ancient people.

7.11 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Follow the flow of main ideas

What have you learned about ancient Greece? For this activity, copy the diagram and fill it out by explaining your understanding in a few points. (We have done one topic for you.)

Geography of Greece	
Structure of Greek society	
Significant beliefs in ancient Greece	
Conflict in ancient Greece	
Pericles	
Archaeology and ancient Greece	
Conserving ancient Greece	• Many archaeologists over the years have helped us to conserve the past of ancient Greece • Some archaeologists have used controversial methods to preserve precious artefacts • The Parthenon Marbles are a famous example of artefacts that have been removed from their original location • There is much debate about whether Britain should give the Parthenon Marbles back to Greece

Once you have finished adding your notes, rank each category in its order of importance by placing a number to the left-hand side of each box. Justify your decisions in a paragraph.

Making thinking visible

I used to think that ancient Greece was …
Now I think that ancient Greece …

This exercise in visible thinking asks you to track the difference between what you knew about ancient Greece before starting this chapter, and what new understandings you have acquired since reading the chapter.

Using the stem sentences here, write a paragraph explaining what you previously knew about the topic. Then write another paragraph explaining what you now understand about the topic.

1A I used to think that the geography of ancient Greece was important because …

1B Now I understand that the geography of ancient Greece was important because …

2A I used to think that ancient Greek society was …

2B Now I understand that ancient Greek society was …

3A I used to think that ancient Greeks believed in …

3B Now I understand that ancient Greeks believed in …

4A I used to think that ancient Greeks fought …

4B Now I understand that ancient Greeks fought …

▲ **Source 7.45** A reconstruction of the statues above the western door of the Parthenon. The statues were created from a detailed, early twentieth-century drawing.

Analysis

Identify four major changes that Pericles made to Athens (and/or Greece). Write one paragraph explaining:

1 Whether these changes were good or bad for Athens.

2 Whether these changes were good or bad for Greece.

Make sure you use evidence to support your ideas. Try to include information from the ancient primary sources in this chapter.

Writing

Using historical terms meaningfully

As a historian, you will need to confidently and correctly use the terms related to your subject. Write a paragraph in response to the question using all the key terms listed. Ensure that your use of these terms shows your understanding of what each term means.

Question: *Explain the practices of ancient Greeks that are still followed today in Australia.*

Use these words correctly in your answer:

- democracy
- election
- citizen
- drama
- education
- philosophy.

▲ **Source 7.46** The Parthenon is a temple in the Athenian Acropolis

Inquiry

Research task

Investigate the different aspects of ancient Greek civilisation and identify their key elements. Try to find historical sources for each topic.

Copy the lotus diagram provided and fill it in with your research. This will build a complete picture of what you have learned in the different learning areas. One area has been left blank so that you can add topics of your own choosing.

When you have finished creating your lotus diagram, use it to answer the following question. Your answer needs to be an extended written response.

Question: *Explain how different elements of ancient Greek society were influenced by Greece's geography.*

	Conservation			_____			Geography	
		Conservation	_____	Geography				
Archaeology		Archaeology	ANCIENT GREECE	Social system		Social system		
		Pericles	Conflict	Beliefs				
Pericles						Beliefs		
			Conflict					

Key concepts: continuity and change, cause and effect

HASS skills: questioning and researching, analysing, communicating and reflecting

▲ **Source 7.47** A mosaic of Athenian Gods. The mosaic depicts Dionysus as an infant on Hermes' lap.

CHAPTER 8

Ancient Rome

8.1 Setting the scene: Mount Vesuvius erupts!

In the first century CE, Pompeii was a wealthy and pleasant city of the Roman **Empire**. It was a busy tourist town where Romans would come to holiday. However, Pompeii prospered under the shadow of an active volcano – the great Mount Vesuvius.

empire a large area of land under the control of a powerful emperor, king or queen

People in Pompeii lived in villas, where they had private shrines for their household gods. They often showed off their most expensive items on tables in their entrance halls. Slaves attended to their masters and carried out a wide variety of jobs, including cooking, farming, building and even removing human waste from toilets.

Located on the coast, the people of Pompeii were able to trade their wheat, grapes and olives for valuable items from other parts of the Roman Empire. The streets of Pompeii were decorated with beautiful murals and sometimes were graffitied with phrases like 'Aufidius was here', 'Marcus loves Spendusa' and 'Romula hung out here with Staphylus'. People moved through these streets to visit the temples of the city to worship their gods, such as at the Temple of Apollo, and they socialised and made business deals in the public baths.

But all this changed on 24 August 79 CE.

Just one day earlier, the Roman people had celebrated the festival of Vulcanalia, which is a day of worshipping volcanos and the god of fire, Vulcan. The volcano they had celebrated the day before began to smoke and rumble in the afternoon. Terracotta tiles on the roofs of houses fell as the ground shook, and ash and huge chunks of rock fell from the sky. Fires started across the city and buildings collapsed.

Many people fled the destruction of the volcanic eruption. They took with them their most valuable items and fled the city on foot, or by boat on the bay of Naples where possible.

How do we know so much about the city of Pompeii and the night of its destruction? One reason is because of what was written about the night by witnesses. Pliny the Younger was an eyewitness to the destruction and described the night of the eruption to his friend Tacitus in a letter:

> Ashes were already falling, not as yet very thickly. I looked round: a dense black cloud was coming up behind us, spreading over the earth like a flood. 'Let us leave the road while we can still see,' I said, 'or we shall be knocked down and trampled underfoot in the dark by the crowd behind.' We had scarcely sat down to rest when darkness fell, not the dark of a moonless or cloudy night, but as if the lamp had been put out in a closed room.
>
> You could hear the shrieks of women, the wailing of infants and the shouting of men; some were calling their parents, others their children or their wives, trying to recognise them by their voices. People bewailed their own fate or that of their relatives and there were some who prayed for death in their terror of dying. Many besought the aid of the gods, but still more imagined there were no gods left and that the universe was plunged into eternal darkness for evermore.

▲ **Source 8.1** A letter from Pliny the Younger to Tacitus, from 'The destruction of Pompeii, 79 CE'

These kinds of written accounts are very useful to historians, but the greatest sources of information about Pompeii are archaeological.

When Vesuvius erupted, it covered the entire city in a layer of volcanic ash and toxic gases. These killed people where they stood, but also preserved the city like a snapshot in time and revealed the people of Pompeii's final moments to us. The poor man preserved in Source 8.2 was attempting to flee to safety from flying debris when he was hit by a large piece of rock.

Archaeologists who examine Pompeii can see what life was like for the people living in the city on the day that it was destroyed. Archaeologists use Pompeii to learn more about daily life in the whole Roman world because it is the only place where we can

▲ **Source 8.3** A carbonised baby's rocking cradle found in Pompeii

see organic material remains from these times – wood, food and human remains were preserved by the volcano. Archaeologists have found uncooked bread loaves waiting to be put into the oven, but **carbonised** by the heat of the volcano. A wooden cradle was also carbonised, showing that the people of Pompeii rocked their babies to sleep in much the same way parents do today. Even the sewage in the cesspits was preserved. It might sound disgusting to dig up and examine ancient waste, but it can tell archaeologists what the people of Pompeii ate and gives a lot of information about their lifestyle.

When we hear 'ancient Rome', we often think of fighting **gladiators**, powerful emperors or huge buildings in Italy like the **Colosseum**. But a study of ancient Rome also includes the daily lives of ordinary people. It is important to think about what made ancient Romans very different to us, as well as what made them very similar.

▲ **Source 8.2** The city of Pompeii is still being uncovered by archaeologists and new discoveries continue to be made. The site is a wonderful source of information about ancient Rome for historians.

archaeologist person who digs up human and other physical remains to try and understand more about a society

carbonised to turn something into charcoal by heat or fire so that it becomes a fossil and is preserved

gladiator person who fought another person or an animal, sometimes to the death, to entertain crowds

Colosseum an open-air amphitheatre in ancient Rome with seating around the edges that was used to watch an activity taking place in the centre

MAKING THINKING VISIBLE 8.1

Question stems

As you study ancient Rome, you will practise how to ask historical questions. History is about inquiry – examining the past and trying to piece together how people lived their lives and what might have occurred. To be a good historian, you must investigate what makes you curious. To do this, you will need to form questions that help you to think historically.

Use the question stems below to develop some questions about Pompeii and ancient Rome.

1 *How do we know ...?*
2 *What caused ...?*
3 *What were the reasons for ...?*
4 *What happened after ...?*
5 *What can this source tell me about ...?*
6 *Why did people in ancient Rome ...?*

Key concepts: significance   **HASS skills:** questioning and reflecting

ACTIVITY 8.1

Using historical sources as evidence

1 Read Source 8.1 carefully. Pliny was an eyewitness to the eruption of Vesuvius. List the things that Pliny saw on the day that Vesuvius erupted in the order they appear in the extract from his letters.
2 Now look at Source 8.4. This image was painted several centuries after the eruption. Make a list of what you see in the image that tells you about the eruption.
3 Look at both of your lists – highlight in two different colours all the things that are the same and all the things that are different.
4 How accurate is the painting? Write one to two sentences that explain why the image may not be very accurate. Make sure you use at least two points from your lists to help you.

What you just did was to **analyse** both Sources 8.1 and 8.4, and you have **evaluated** both sources for accuracy. Evaluation and analysis are important historical skills in the WA Curriculum. What you have also done is identify that evidence about the eruption of Vesuvius is **contestable** – this is an important historical concept.

> **analysis** (in the study of history) to identify the purpose of sources and determine their accuracy and reliability
>
> **evaluation** (in the study of history) proposing explanations and drawing conclusions about a historical event, development or issue and its connections with the present
>
> **contestability** (in the study of history) this occurs when interpretations about the past are up for debate, especially between different historians

Key concepts: sources, evidence, continuity and change, cause and effect, significance, contestability   **HASS skills:** questioning and researching, analysing

▶ **Source 8.4** This painting, called *Eruption of Vesuvius*, was painted in the 1780s CE by the Austrian painter Michael Wutky. Wutky visited Mount Vesuvius several times while it was active in the late eighteenth century so that he could paint the volcano's eruptions and lava more realistically.

8.2 Chapter overview

Introduction

As historians in the twenty-first century, it is important to think about the **legacy** of the ancient Romans. The ways in which the ancient Romans influenced the world around us can be seen in a range of ways. Did you know that the ancient Romans were some of the first people to build large structures to help direct water to where it was needed? Enormous structures called aqueducts were built to move water around the city. They can still be seen all over Europe in the areas that were once part of the Roman Empire.

At its biggest, the Roman Empire stretched from Italy to Africa, the Middle East, northern Europe and Great Britain. Everywhere the Romans went, they left behind impressive buildings, **monuments** and roads.

> **legacy** an object, idea or story left behind or handed down by people from the past
>
> **monument** statue or building created to commemorate an important event

The ancient Romans were ambitious and they were excellent at organising people. In order to create and rule their enormous empire, they had to have a well-organised government and disciplined army, and effective leaders to control it.

Often the ways the Romans enforced their power and influence were extremely cruel. Rome invaded and took over many other places, stealing from the local people and often enslaving or killing them. The Romans took other peoples' resources and used them to build even bigger armies to take even more. The beautiful city of Pompeii, for example, was created and kept running in part by slave labour and the spoils of war. Studying ancient Rome therefore reminds us of the great things that people can achieve, but also the cruelty and violence they can inflict on others.

Learning goals

After completing this chapter, you should be able to answer these questions:

- How did geography affect the ways ancient Rome developed?
- How did ancient Roman systems of government and laws develop?
- How was ancient Roman society structured, and what were its significant beliefs, values and practices?
- Which key groups of people had an important impact in Roman society?
- How did the ancient Romans interact with other states and civilisations, and with each other?
- Who should we consider as significant individuals in ancient Roman history and why?
- How and why do archaeologists uncover and preserve the remains of the ancient Roman past?

Historical skills

After completing this chapter, you should be able to:

- Explain what cause and effect and change and continuity mean in the study of history
- Analyse different historical perspectives
- Determine historical significance
- Understand the role of historians and archaeologists in uncovering the past
- Develop historical empathy with people in the past

- Interpret primary sources in both print and visual form
- Correctly use special terms specific to the topic under study
- Use evidence (dates, statistics, examples) to communicate your ideas and substantiate an argument
- Reflect on your findings and refine your learning.

Digital resources

Visit the Interactive Textbook to access:
- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video

Five interesting facts about ancient Rome

▲ **Source 8.5** The ruins of the Colosseum today in Rome, Italy. Known in the past as the Flavian Amphitheatre, construction began under the emperor Vespasian in 72 ce and was completed in 80 ce under his successor and heir, Titus. The Colosseum was the largest amphitheatre ever built at the time and held 50 000 to 80 000 spectators. It was used for gladiatorial contests and public spectacles such as mock sea battles, animal hunts, executions, re-enactments of famous fights and dramas based on classical mythology. The Colosseum is situated east of the ruins of another famous construction from ancient Roman times, the Forum.

8.3 Timeline of key events

What came before this topic?

- **1000 BCE** Evidence that Rome was settled
- **1000–700 BCE** Latins (including Romans), Etruscans, Sabines and Samnites settled in Italy
- **c. 750–400 BCE** Greek settlements in southern Italy and other parts of the Mediterranean were established

A statue of an Etruscan woman, c. 425 BCE

58–51 BCE
After being **consul**, Julius Caesar conquers Gaul (modern-day France) and tries to invade Britain, but is forced to withdraw; the invasion of Britain will not be achieved for another 100 years

A statue of Julius Caesar

509 BCE
Rome becomes a republic and the government develops.
Rome expands to control more of the Italian peninsula by defeating neighbouring territories.

115–100 BCE
Roman territory and even Italy itself face a number of external threats. Jugurtha and Mithridates attack from Africa and the East, and the Germanic tribes attack from the north.

73–71 BCE
Spartacus – an escaped gladiator – leads a huge slave rebellion in Italy. At one point he leads a slave army of 100 000. It takes the Roman army and its generals nearly three years to defeat them.

753 BCE
The legend of Rome's **founding** by King Romulus

264–146 BCE
Rome takes on its greatest challenge – it fights and wins three wars against the great African city state of Carthage. Rome keeps invading across the Mediterranean and fights successful wars in Greece and the Middle East to control most of the area.

99–61 BCE
Internally the Roman political system is under threat from ambitious Romans who lead rebellions, several of them even marching their own armies against Rome and killing their political rivals in brutal executions.

59 BCE
Gaius Julius Caesar is made Consul of Rome.

49 BCE
Julius Caesar becomes unpopular in Rome and a civil war begins between his supporters and those who oppose him; in 45 BCE, Julius Caesar wins and becomes the sole leader of Rome

A statue of the myth of the founding of Rome, showing a she-wolf nursing Romulus and Remus

founding when something new is created by a people, generally a city or place
consul the leader of Rome; during the Roman Republic, two consuls were elected into office every year

Timeline activity

1 Use the timeline to identify three challenges faced by ancient Romans. These could be natural disasters, major changes or attacks.
2 Create two historical questions about significant events shown in the timeline. These should be questions that you would like to learn about as you move through the chapter. (You can use the question stems listed in Making thinking visible 8.1 to help you.)

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

What came after this topic?

- The Christian Byzantine or Eastern Roman Empire continues until it finally collapses and is taken over by the Islamic Turks
- The Roman Empire is separated into smaller kingdoms, run by barbarian rulers (even Italy is split into separate states)
- In 800 CE, the French ruler Charlemagne creates an empire covering what are now France, northern Spain, Italy, Germany, Austria, the Czech Republic, Hungary, Italy and Croatia

Portrait of Charlemagne, who was one of the most powerful kings during the medieval period of European history.

A statue of Augustus

27 BCE
The rule of the first Emperor, Augustus, begins. He is the great-nephew of Julius Caesar. The Republic of Rome becomes the Roman Empire.

79 CE
The Colosseum in Rome is opened.

Pompeii and Herculaneum are buried by the eruption of Mount Vesuvius.

283 CE
The Roman Empire is split into the eastern and western empires.

402–410 CE
The Goths and Vandals ('barbarian' tribes) take control of parts of the empire. In 410 CE, Alaric the Goth is able to **sack** the city of Rome itself.

44 BCE
A group of Roman **senators** murder Julius Caesar.

64 CE
A big fire occurs in Rome. Emperor Nero blames the Christians, who are a new religious community.

c. 200 CE
The borders of the Roman Empire come under increased attacks by **barbarian** tribes. Under pressure, a number of costly civil wars weaken the empire.

313 CE
Emperor Constantine accepts Christianity as a religion after centuries of Christians being persecuted and shunned. Christianity later becomes the official religion of the empire.

senator politician who has been elected to a senate

barbarian someone from another place who spoke a different language; for ancient Romans, a barbarian was any person who was not part of the Roman Empire

sack to invade and destroy a city

Emperor Constantine on a coin from c. 751 BCE

8.4 The physical features of Rome and how they influenced the civilisation that developed there

FOCUS QUESTION

How did geography affect the ways ancient Rome developed?

Myth or history?

The timeline begins with the date 753 BCE as the founding of Rome. According to ancient Romans, their city was created on 21 April of that year. The Romans even dated their years and calendars by how long it had been since this date. However, what really occurred on that day is something of a mystery.

Roman stories of Rome's beginning include a lot of **mythology** and the involvement of gods. Although the myths should not be understood as historical fact, it is interesting to learn what ancient Romans believed about the founding of their city. Studying myths is fun and it can also tell historians a great deal about what the people of a society thought, believed and valued.

mythology fictional story, often part of a religion, that describes a heroic deed or the origin of something

One story is that Rome was founded by a prince of Troy, a mythical city that had lost a war against the ancient Greeks. Aeneas, the prince, had fled Troy as it was invaded and burned to the ground. He sailed all the way to Italy and created a new city there. According to legend, Aeneas was the son of the goddess of love, Venus.

Another story is that Rome was founded by Romulus. Romulus and Remus were twin sons of a princess named Rhea Silva. Their father was said to be the Roman god of war, Mars, although in another version the king was their father. In the land where they lived, the king worried that the boys might one day try and overthrow him to rule.

▲ **Video Source 8.6a** The legend of Romulus and Remus

▼ **Source 8.6** This painting portrays Aeneas (centre) being guided on his journey by his mother, the goddess Venus. She has appeared to him disguised as a human. This myth inspired a number of artworks, including this painting, created in 1631 CE by Pietro Da Cortona.

The king therefore arranged to have Romulus and Remus placed in a basket and left by the River Tiber to die. But the sons were saved – first, they were nursed by a she-wolf (a female wolf) and then they were found by a shepherd, who took them home to be raised as his own children.

The boys grew up and were natural leaders. They killed their father, the king, after he took Remus as a prisoner, just as the king had feared would happen. Romulus and Remus decided to create a new city together on the banks of the Tiber, but they argued and fell out with each other. In anger, Romulus fought Remus and killed him. Romulus then went on to create the city of Rome alone and named the city after himself.

Romulus is said to have founded the city on 21 April 753 BCE. He made himself king of the city and established a group of leading citizens of 100 noblemen. These men would become the **patricians** of Rome.

patrician wealthy upper-class person in ancient Rome who often had a political role in society

ACTIVITY 8.2

Using historical sources as evidence

The scene in the source shown here is carved onto an altar, which was used to worship the gods Mars and Venus. In the bottom left-hand corner, you can see Romulus and Remus being suckled by the she-wolf. The children have been discovered by the shepherds (shown behind the children), who are carrying shepherd's crooks (curved sticks), which were used to herd sheep. The man lying in the bottom right-hand corner represents the River Tiber, where the baby boys were left.

◄ **Source 8.7** A detail of an altar from Rome showing the story of Romulus and Remus

Responding to the source

1 Research what an altar is and what it was used for in ancient Rome. Note down your answer.

2 Research what an altar is used for today. Has there been a *change* since Roman times, or *continuity* in the use of altars?

3 Describe everything you can see in the scene. What do you think is the most important part of the carving? Why?

4 Why do you think that this scene was carved on an altar used to worship the gods Mars and Venus? What is the connection of these gods to the story of Romulus and Remus? Explain what you think the Romans were trying to say about themselves through this link to the founding of their culture and the gods Mars and Venus.

Key concepts: sources, evidence, continuity and change, significance, perspectives

HASS skills: questioning and researching, communicating and reflecting

The geography of Rome

We may never know exactly how Rome was founded, but by studying the geography of Rome it is possible to understand why Rome was so successful.

Rome began as just one city, but the rulers of Rome conquered all of Italy, and then expanded across Europe, Northern Africa and the Middle East. Ancient Rome maintained control over its vast empire for hundreds of years. How the Romans achieved this when others failed was due in part to geography.

Position

▲ **Video Source 8.8a** Roman expansion

Look at the map of the Roman Empire shown in Source 8.8. Italy is in the middle of the Mediterranean Sea. This meant that it could conquer territory all across Europe and north Africa, and then manage the empire from its centre of power, the city of Rome.

River and sea

As you learned by reading the myths of Rome's foundation, the city of Rome is located on the banks of the Tiber River, which is quite close to the western coastline of Italy. The ancient Romans took advantage of this by using the river and the Mediterranean Sea to travel, trade and conquer their neighbours. Goods were shipped from farms down the Tiber River and into the city of Rome. From there, more ships travelled to the mouth of the Tiber River and out to sea.

The Mediterranean Sea connected Rome to all of its neighbouring territories, making it easier for Rome to trade and also to conquer surrounding lands. The ancient Romans used the sea so much for transport and trade that they named it *mare nostrum*, which translates as 'our sea'.

▲ **Source 8.8** The growth of the Roman Empire between 275 BCE and 117 CE

Mountains and hills

The city of Rome is famously built on seven hills, which provide the city with protection. According to the myth of the founding of Rome, Romulus and Remus fought over which hill they should use as the **site** of the city.

site area where a building or city is constructed

The Italian peninsula is home to two large mountain ranges. The Alps soar across the north and divide the Italian peninsula from the rest of Europe, whereas the Apennines run the length of Italy. If you look on Google Earth at Italy today, you can see these mountain ranges.

The mountains offered the ancient Romans plenty of protection from enemies, particularly in winter. However, the mountains were not a perfect defence. In 218 BCE, Hannibal, the ruler of Carthage in north Africa, invaded Italy by crossing the Alps. He brought with him an entire army, including elephants, which were used in battle.

▲ **Source 8.9** An artist's impression of Hannibal's journey across the Alps, along with his army and elephants

▲ **Source 8.10** A map of Hannibal's crossing of the Alps and invasion of Rome in 218 BCE. All mountains in the region are indicated by the darker yellow.

tectonic plates parts of the Earth's surface that move in relation to each other

Latins an ancient civilisation of people who lived to the south of the city of ancient Rome

Etruscans an ancient civilisation of people who lived to the north of the city of ancient Rome

Farming

Rome and its surrounding areas were also good places to grow food. This region had experienced a lot of volcanic activity, due to its location between the Eurasian and African **tectonic plates**. Volcanic soils are rich with nutrients and the climate of Italy meant that crops grew well.

As the population of Rome grew, the people needed more food. They invaded and conquered their neighbours, the **Latins** and the **Etruscans**, partly to seize land so that they could grow more crops. The Tiber River was used to transport the crops into the city to feed the people. The map in Source 8.12 shows the kinds of foods grown in ancient Rome around the Tiber River.

▲ **Source 8.11** An ancient Roman bas-relief showing farmers at work

Key

The use of Tiber Valley land:

- Forest
- Pasture
- Market gardening (fruits, vegetables, flowers)
- Wheat, corn, rice
- Vineyards
- Olives
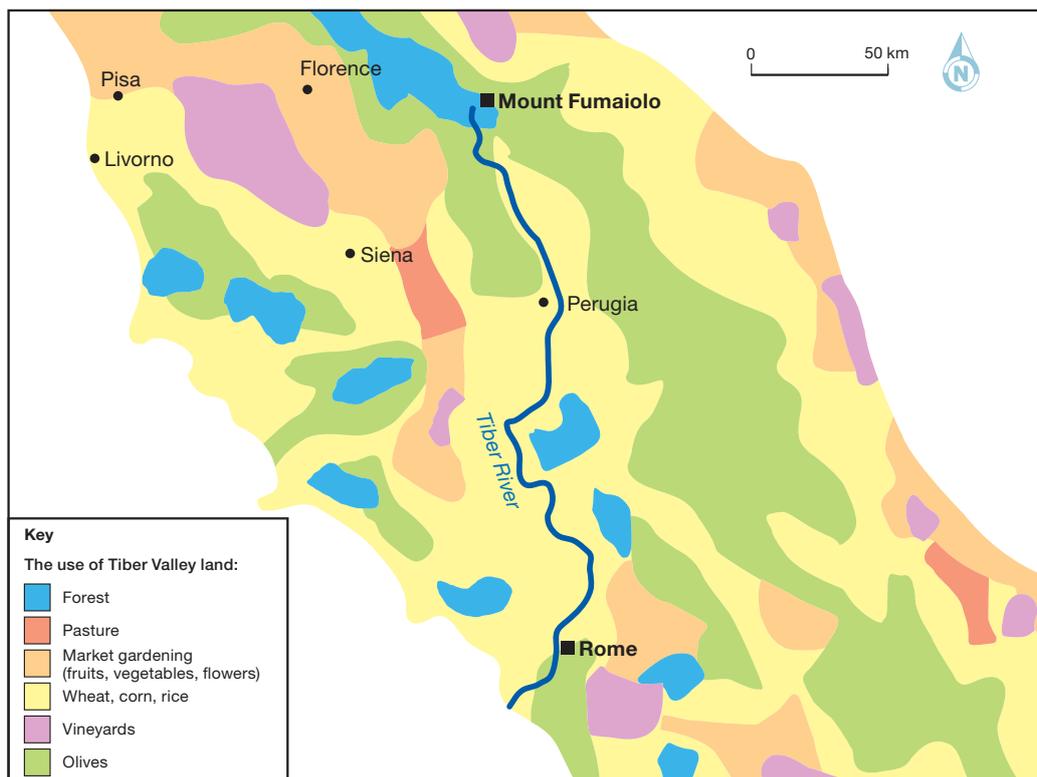
▲ **Source 8.12** Map showing the types of crops grown around ancient Rome

ACTIVITY 8.3

Using historical sources as evidence

The people of ancient Rome were aware that the site of their city and empire was well located. The historian and author Livy wrote:

Source A

> With good reason did the gods and men choose this site for the founding of the city. Rome's hills provide a healthy environment, the Tiber is favourable for navigation upstream to inland crops and downstream to the sea, and the sea itself is close enough for trade and yet far enough that we are not in danger of invasion by foreign fleets. Consider too Rome's location at the centre of Italy. This site is uniquely suited by nature for the expansion of a city – as is proven by the size itself of our city while yet so young.

▲ **Source 8.13** Livy, History 5.54.4, from Peter J. Aicher, *Rome Alive: A Source Guide to the Ancient City*, vol. 1, 2004

Another writer, Vitruvius, also felt that Rome's success was due to where it was located geographically. He further thought that the climate had an impact on the character of the people. Vitruvius argued that Romans became the leaders of the world because Rome was neither too hot nor too cold. He wrote:

Source B

> It is a fact that southern nations, although extremely clever, give way when it comes to a contest of courage. This is because their spirit has been [weakened] by the hot sun. Conversely, people born in the [cold] regions of the north, though better suited for the violence of warfare on account of their fearless courage, are slow of mind, and [have] … no thought of strategy.
>
> … the peoples of Italy are temperamentally balanced in each direction, having both physical strength and a mental vigour suited to their courage … Thus did divine intelligence situate the city of the Roman people in an extraordinary and temperate region, so that it might extend its empire across the world.

▲ **Source 8.14** Vitruvius, Architecture 6.1.10–11, from Peter J. Aicher, *Rome Alive: A Source Guide to the Ancient City*, vol. 1, 2004

Responding to the sources

1 Name three things that are mentioned in either of the sources that demonstrate the location of Rome as being well situated.
2 What do these sources agree on about Rome's geography?
3 What do they disagree on? (*Hint*: think about what is different in the two writers' arguments.)
4 Both of these sources are written by Romans about their home, Rome. How might that have affected what they wrote?

Key concepts: sources, evidence, perspectives, contestability

HASS skills: analysing, communicating and reflecting

◄ **Source 8.15** This contemporary photograph shows the Roman countryside and some ancient Roman remains. Romans would usually build roads and paths in straight lines because they had highly skilled engineers.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 8.1

Cause and effect

When studying history, it is important to understand not just *what* happened, but *why* it happened. This is the study of cause and effect.

So far, this chapter has considered why Rome succeeded in growing into the enormous empire it became. You can summarise this understanding by creating a cause-and-effect diagram, such as the one shown here. Draw a similar diagram on a piece of paper, filling in the spaces for cause and effect. The arrows should lead from the causes and point to the effects.

Why did Rome succeed and grow?
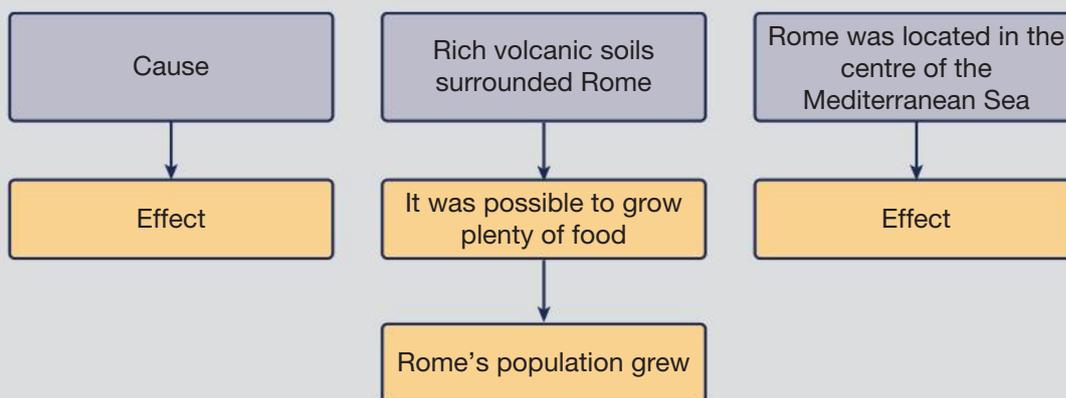
Key concepts: continuity and change, cause and effect   **HASS skills:** analysing, communicating and reflecting

END OF SECTION REVIEW 8.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 According to mythology, in what year was Rome founded?
2 What were the names of the founder of Rome and his twin brother?
3 Name three crops that were grown around the Tiber River, near the city of Rome.
4 What did the ancient Romans call the Mediterranean Sea?
5 When was Pompeii destroyed by Mount Vesuvius? (*Hint:* refer to this chapter's timeline.)
6 Explain why it was important that ancient Rome was located on a river and near the sea.
7 Explain why Pompeii is such an important site for learning about life in ancient Rome.

Interpret

8 Think about the story of Romulus. He killed his own brother but the Romans saw him as a hero and the founder of their city. What does this tell you about the qualities that ancient Romans valued?

Argue

9 What was the most important geographical advantage that Rome had? Think about all the geographical reasons why ancient Rome succeeded and identify which you think was most important for Rome's success. Explain your answer.

Key concepts: continuity and change, cause and effect   **HASS skills:** analysing, communicating and reflecting

8.5 Roles of key groups in ancient Rome, and the influence of law and religion

FOCUS QUESTION

How did ancient Roman systems of government and laws develop?

The Roman Republic

Patricians were citizens of Rome chosen by Romulus to be the noblemen of the city. Women had no legal rights or individual status in Roman culture. But women born into patrician families did belong to the patrician upper class. All patricians were considered nobles, even if they were sometimes quite poor, like Julius Caesar's family. If a Roman was not a patrician or a family member of a patrician, the person was a **plebeian**. Plebeians were citizens who were ordinary people – they did not generally have important roles in society and had fewer rights than patricians.

In 509 BCE, the last king of Rome was overthrown and a republic was created. For Romans, *Res Publica* ('the public thing') meant a type of government where the patrician and plebeian citizens elected representatives to rule on their behalf. Two consuls ruled the republic together so that no one person would have sole rule over Rome at any time. The consuls ruled with the assistance of a **senate** and with the support of the plebeians.

Over time, the plebeians became angry about the power of the patricians. The plebeians gradually gained more rights to elect their own representatives, called **tribunes**, and established their own assemblies to represent their views. By 287 BCE, the plebeians had much greater equality under Roman law. Their **assemblies** and their laws were part of the politics and government of Rome. They could run in elections to become magistrates and they became eligible to hold the position of consul.

It is important to note that only men who were not slaves were considered citizens in Rome. This meant that women did not have a role to play in government and could not vote. The rights of women varied over time, but they were never given political privileges.

plebeian an ordinary Roman citizen who was not part of the privileged patrician class

senate the group of politicians who had the most power to make laws in a government

tribune selected officials whose job was to protect the people's rights

assemblies meetings of the ordinary people. They were legal meetings organised by a magistrate for the purpose of putting any subject to their vote.

◄ **Source 8.16**
A representation of the Roman senate, painted in 1899 CE

Amazing but true …

The senators shown in Source 8.16 are wearing togas. This was a distinctive garment worn by men in ancient Rome. The toga was a semi-circular, woollen cloth that was usually white. It was worn draped over the left shoulder and around the body. Women in ancient Rome wore an equivalent garment known as a *stola*. The senators who were elected to important positions in the senate had purple stripes on the bottom of their togas, and the more stripes they had, the higher their rank. In Rome the colour purple was made by crushing rare molluscs. This was very expensive, which is why only very rich and important people used purple. Julius Caesar sometimes wore a toga that was entirely purple. Purple is still used to denote importance – for example, the official robes of Queen Elizabeth II are purple.

▶ **Source 8.17** An artist's impression of a Roman man dressed in the distinctive toga of a senator

▲ **Source 8.18** A Roman coin from 63 BCE showing a ballot being cast. Romans carved the initials of their preferred candidate into a wax tablet and then dropped the tablet into a box that was closely presided over by guards and election officials.

Consuls (2)

Senators (300–500)

Tribunes (10)

Assembly (all citizens of Rome vote)
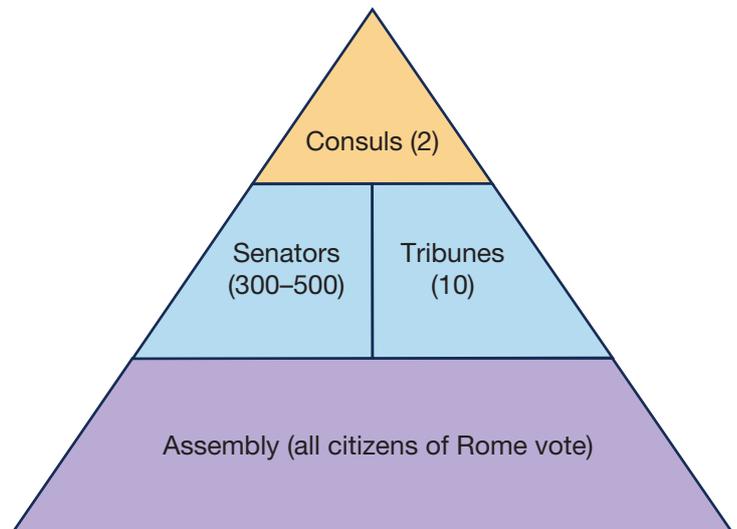
▲ **Source 8.19** The government of the Roman Republic

The Roman Republic lasted until the rule of Julius Caesar, who ruled as a consul but was **assassinated** when some of his rivals in the senate thought he had become too powerful.

assassination murder of an important or powerful person by a surprise attack

Julius Caesar was eventually replaced by his great-nephew (whom he adopted as a son), Augustus, who became the first emperor of Rome. Augustus ruled by himself and with total authority.

▲ **Source 8.20** *The Death of Julius Caesar in the Roman Senate* by Vincenzo Camuccini, 1798 CE

Social groups

As Source 8.21 shows, ancient Roman society was made up of four main groups of people: patricians, plebeians, freed men and slaves.
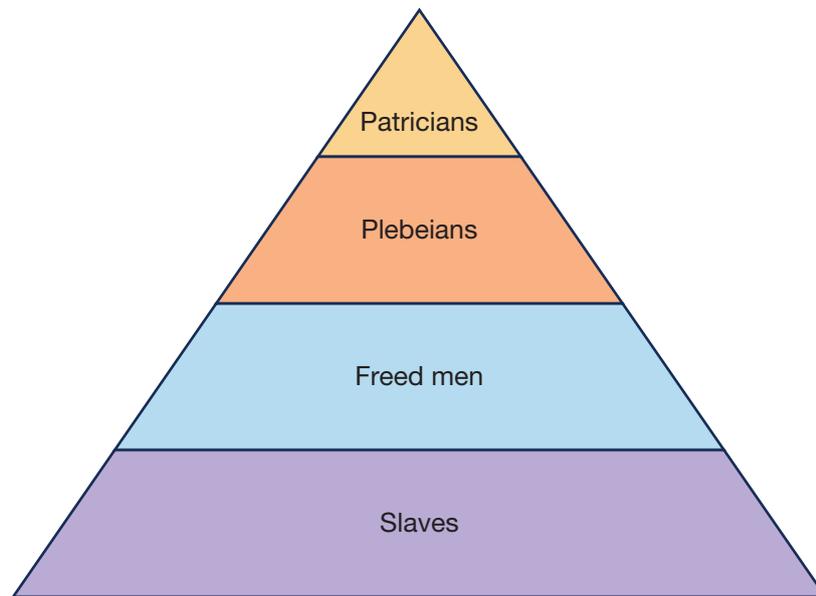
▲ **Source 8.21** The social hierarchy of ancient Rome
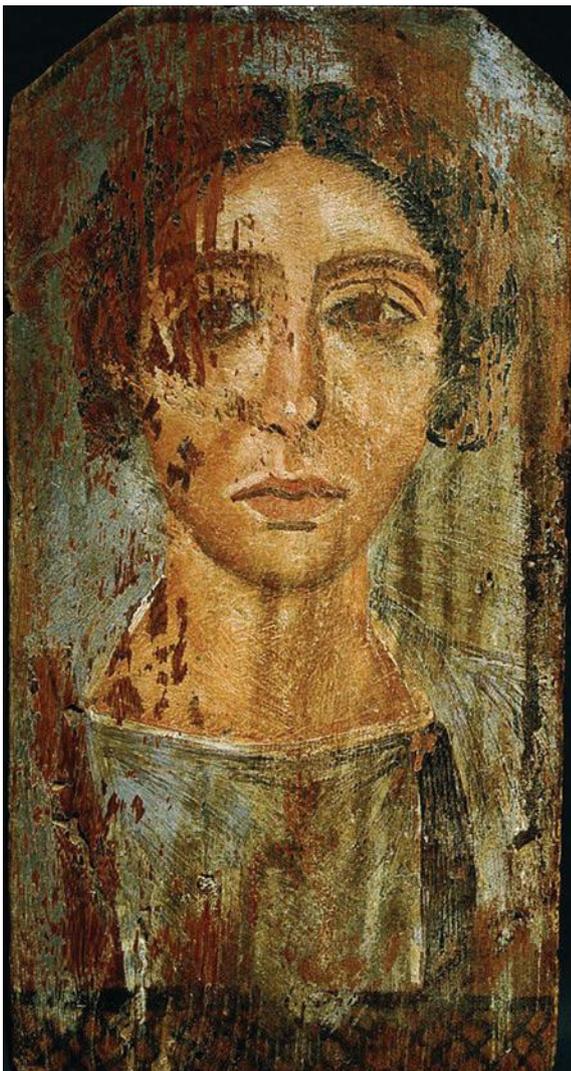
▲ **Source 8.22** Portrait of a woman from ancient Rome, c. third century CE

Women

Women in ancient Rome were valued for being beautiful, honest, and dutiful wives and mothers. A married woman was expected to bear children and look after the household. Women from lower social classes often helped their husbands in shops and workshops. Spinning, weaving and the sewing of cloth were considered part of a woman's role. For example, Emperor Augustus had his wife Livia pose with her **loom** during public appearances.

> **loom** a device used to weave thread into cloth or a tapestry

After the death of her father, a woman could inherit property and do business. However, she needed a man, such as a husband or a brother, to approve her decisions. After reforms made by Augustus, a woman could operate a business without a man to help if she had three children.

Widows and divorced women were able to remarry. For these reasons, many historians argue that women in ancient Rome had more independence in their daily lives than women in other parts of the ancient world, such as in Greece or the Near East. However, it is important to look at the primary sources to get a real sense of what daily life was like for women.

ACTIVITY 8.4
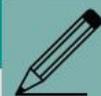
Using historical sources as evidence

Below are three opinions from ancient Romans about women. Read the extracts, then answer the questions that follow.

Source A

> Woman is a violent and uncontrolled animal ... If you allow them to achieve complete equality with men, do you think they will be easier to live with? Not at all. Once they have achieved equality, they will be your masters.

▲ **Source 8.23** Cato the Elder, in a speech in the Roman senate in 195 BCE

Source B

> Why should we pay taxes when we do not share in the offices, honours, military commands, nor, in short, the government, for which you men fight between yourselves, with such harmful results?

▲ **Source 8.24** A speech made by Hortensia, a Roman woman who spoke when a large group of women held a public meeting in Rome in 42 BCE

Source C

> Still more annoying is the woman who as soon as she sits down to dinner, talks about poets and poetry ... professors, lawyers ... can't get a word in ... Wives shouldn't try to be public speakers ... I myself can't stand a woman who can quote the rules of grammar ... as if men cared about such things. If she has to correct somebody, let her correct her girlfriends and leave her husband alone.

▲ **Source 8.25** Juvenal, in *Satires VI*, c. 110 CE

Responding to the sources

1 Sources A and C are negative about women. Identify three flaws they say that women have.
2 Look at Source B. What argument did Hortensia make about women?
3 What do these sources tell us about ancient Roman people's views on women?
4 What do these sources tell us about the challenges women faced living in ancient Rome?

Key concepts: sources, evidence, perspectives, contestability

HASS skills: analysing, communicating and reflecting

Slaves

Slaves made up a significant portion of the population in ancient Rome. They were considered to be property; they could be bought, sold, given as gifts and rented out to others. Slaves were bought and sold at slave auctions in the marketplace.

Many slaves had been captured in war, but others were convicted of crimes and forced into slavery as punishment. Children could be sold by their families if they could not afford to look after them. Those born to mothers who were slaves automatically became slaves.

Slaves carried out a wide variety of roles in Roman life. They could be builders, cleaners, farmers, messengers, cooks or servants, but they could also be educated and carry out professional jobs such as being an accountant or a doctor. In addition, slaves could be forced to join the army, particularly when Rome required more soldiers.

They also could be gladiators, and fight and die for the entertainment of free Roman citizens.

Gladiators

Gladiator fights were a popular form of entertainment in ancient Rome. Many gladiators were slaves, and some could win enough prize money to buy their freedom. Some free-born men also chose to become gladiators to achieve fame and fortune. There are even references of female gladiators in primary sources.

In the arena, different kinds of gladiators used different kinds of weapons. The *murmillo*, for example, wore a helmet decorated with the image of a fish, and fought with a *gladius* (short sword) and a long, rectangular shield. The *retarius* attempted to capture his opponent with a net and stab them with a trident. A third type of gladiator, the *secutor*, carried a long, rectangular shield and wore a helmet that covered the face. A *retarius* and a *secutor*, a match-up that was especially popular, are depicted in Source 8.26.
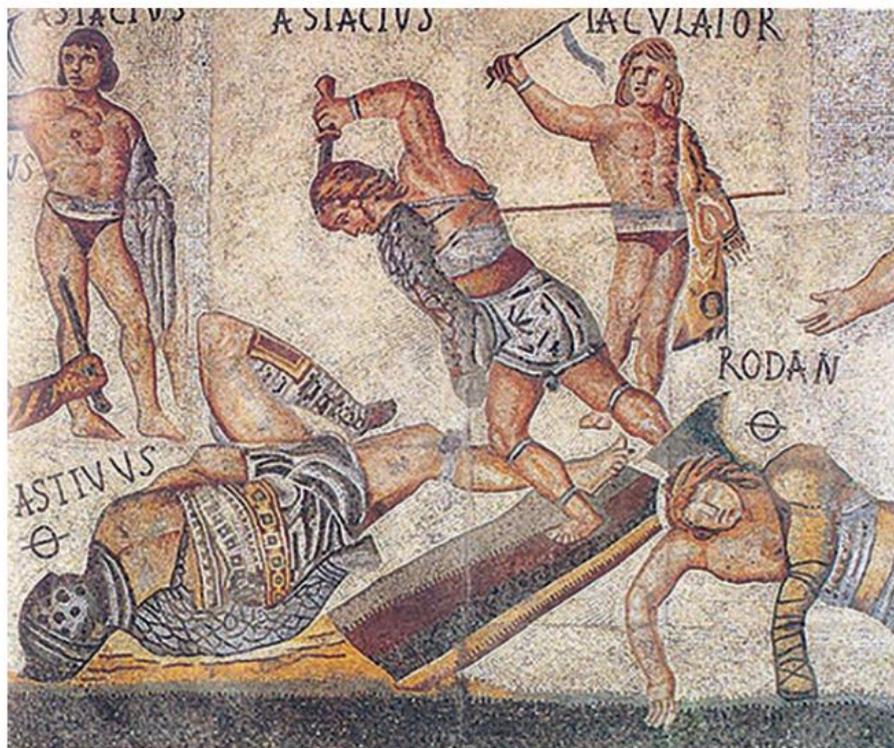
▲ **Video Source 8.26a** Exploring a gladiator mosaic

▲ **Source 8.26** A detail of a mosaic showing gladiators fighting, c. 320 CE

ACTIVITY 8.5

Using historical sources as evidence

Look at the slave's collar shown in Source 8.27, then answer the questions that follow.

Responding to the source

1 What is this object? What was it made for?

2 What does the inscription tell us about slaves? (*Hint:* look at the source caption to see the inscription's translation.)

3 What does the source tell us about how owners viewed their slaves?

▲ **Source 8.27** A slave's collar with the inscription: 'I ran away. Hold me; when you will have brought me back to my master Zoninus, you get a gold coin.' Dated from 4–6 CE.

Key concepts: sources, evidence, perspectives, empathy

HASS skills: analysing, communicating and reflecting
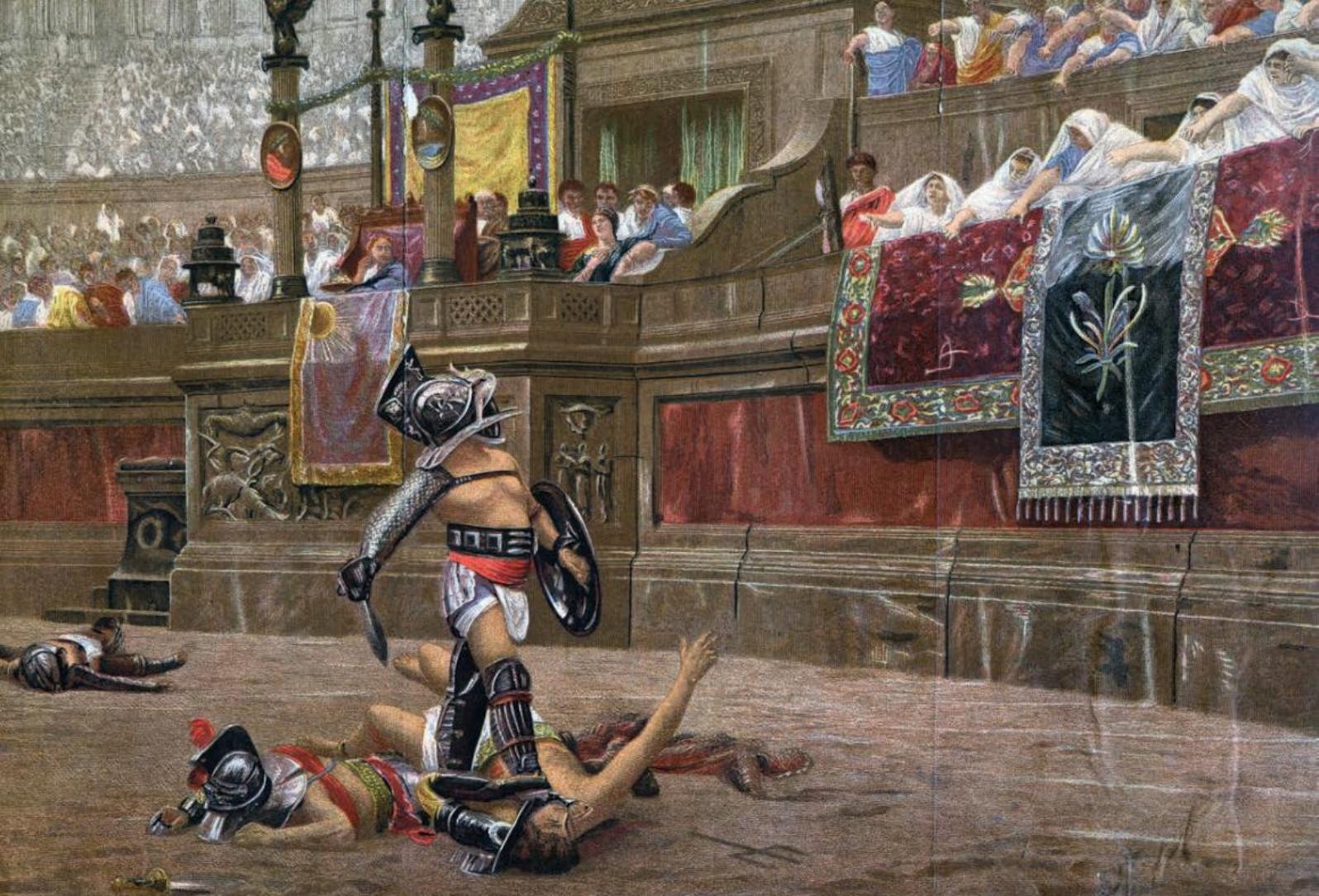
▲ **Source 8.28** *Pollice Verso* ('With a turned thumb') by Jean-Leon Gerome, 1872 CE. A victorious Roman gladiator awaits the verdict of the emperor.

Gladiators who lived past the age of 30 may have become the trainers or managers of schools for gladiators. There is also evidence to suggest that, in between their fights, gladiators socialised with others outside the training schools and had families.

FAMOUS FACE

SPARTACUS (c. 111–71 BCE)

Spartacus was a slave and a gladiator. In 73 BCE he escaped from his gladiatorial school along with 70 other gladiators. They hid and camped near Mount Vesuvius and then travelled north, trying to escape to freedom. They fought and won two battles against the Roman army and the group grew in size until there were 100 000 rebels fighting for Spartacus.

Spartacus and the gladiators made it all the way to the Alps but were stopped by a military general called Crassus. Crassus defeated Spartacus' army and Spartacus was killed. As punishment for their actions, Crassus crucified 6000 of the rebels.

Most historians agree that Spartacus was not trying to make a political point with his actions – he wanted to escape from life as a slave and a gladiator, and knew he would have to fight for his freedom. However, many now see Spartacus as a revolutionary hero, who challenged the power of Rome and gave hope to other slaves.

Free men and women

One important feature of Roman life was that when slaves were freed, they could become Roman citizens, though as Freedmen (as they were known) they had fewer rights than citizens who had been born free.

This law ensured that the Roman citizen population was constantly expanding, and was open to people from many backgrounds and cultures. Freed slaves took on the names of the families that had freed them and had obligations to their ex-owners.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 8.2

Taking historical perspectives

Empathy is being able to understand the points of view of other people. For historians this is a key concept. It is an interesting concept because it also means considering how differently people view things, and how they experience things differently. We all know that everyone interprets and understands things slightly differently to each other. For historians this makes understanding the past a challenge because witnesses and people who were involved in something and people who study these all have different points of view about what they saw or did. For example, a freak storm might blow the tin roof off a building. Everyone who was there will agree that the roof blew off. But, some of them will argue that the way the roof flew through the sky afterwards was the most amazing part, whereas others will emphasise the tremendous noise created as the roof peeled away from the walls. However, people who write about it and study it later (historians) might focus on the cause of the storm, or the damage the roof caused when it landed on the road, as the most important aspects of the whole event.

None of these versions of what happened are wrong. They are all just different *perspectives* of the same event. When there are different perspectives of something that has occurred, this can sometimes lead to opposing views and disagreement. As historians, this is when we can observe that different views are *contestable* (disputed or subject to question). Our job as historians is to work with these different 'contestable' versions of an incident or event and decide what we can learn about the whole event, even when the information we have is not in agreement.

When we study history, it is our job to try and understand as many perspectives or points of view as possible. This is how we use the key historical concepts of perspective and empathy. Both help us to decide what is reliable evidence about the past. But it is also how we explore the concept of *contestability*.

Challenge yourself

Choose two different people from this chapter and write a diary entry for each of them for the same event, but from different points of view. For example, you might decide to write about the battle experiences of a slave in Spartacus' army and a soldier in the Roman army fighting against the slave army. Or you might write about organising a big dinner party in an upper-class senator's home from the point of view of the wife of the senator and from the point of view of a slave who is owned by the family. What you are doing when you write these diary entries is using your empathy to examine different perspectives. These perspectives might contest with each other. All of these are key historical concepts.

Key concepts: perspectives, empathy, contestability   **HASS skills:** analysing, communicating and reflecting

Living in ancient Rome

The ancient Romans were expert engineers and builders, and the Roman Empire had many places that played an important role in people's daily lives. Some of these places still exist today, such as the bathhouse in Bath, England, shown in Source 8.29.

Bathhouses were built throughout Rome and the territories ruled by the Roman Empire. They were like modern gyms and health spas. You can use your school or local library, or search online, to research some of the main features of ancient Roman bathhouses. You might like to consider:

- who visited the bathhouses
- what activities were undertaken at the bathhouses
- the different rooms that made up the bathhouse complexes
- how the ancient Romans heated the water for the baths.

▲ **Source 8.29** An example of a Roman bathhouse. This complex is in Bath, England, and was built in 1 CE.

Aqueducts

Aqueducts are a feat of engineering. Ancient Roman aqueducts were large structures made out of stone, and their main purpose was to help direct water where the Romans wanted it to go. Aqueducts could be many metres tall and were usually constructed from many arches to make them as strong as possible. Across the top of the aqueduct would be a channel that carried the water. Water could be carried hundreds of metres above the land or over a valley so that the Romans could receive and use it where it was needed. Many of the Roman aqueducts were so solidly built that they still exist today. Their remains demonstrate the skilful engineering and building skills of the Romans.

▼ **Source 8.30** A Roman aqueduct that still operates today. View of the Chirk viaduct and aqueduct on the Llangollen canal, in Wales.
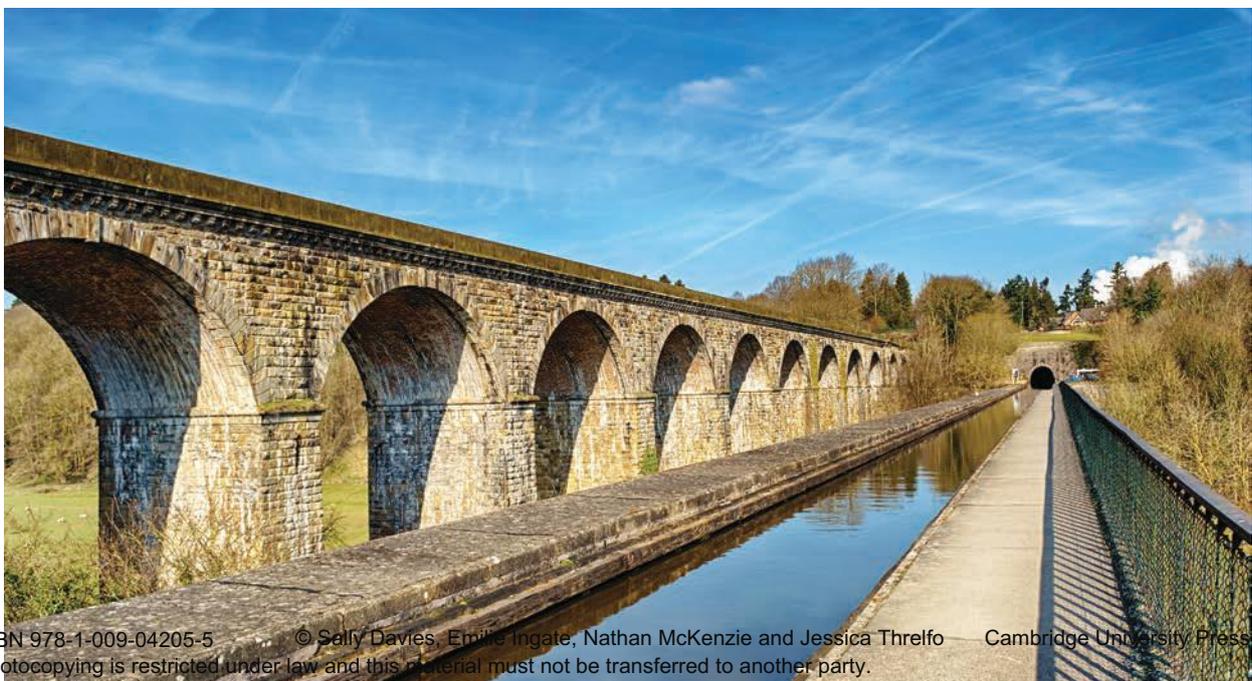
The Forum

The Forum was considered the heart of Rome. It was a site that was used for a range of activities. Events held at the Forum included elections, public meetings and speeches, criminal trials, gladiator matches (before the Colosseum was built), social gatherings, business dealings, religious ceremonies and the trading of goods.

The senate house located at the Forum was used as the council house for the Roman senate. It was a place used to host different political events. The Temple of Saturn was also at the Forum. This building was dedicated to Saturn, the god of agriculture. The Forum was also used as a treasury, which meant that Rome's money was managed and kept there.

The Colosseum

The Colosseum is an enormous stadium situated between the Esquiline, Palatine and Caelian Hills in Rome. Built by the Emperor Vespasian and completed under his son Titus in 80 CE, it seated an audience of 50 000 to 80 000 people for gladiatorial games and spectacles. It was constructed on a grand scale in an attempt to restore Rome to its former glory, after a period of political instability and civil war.

Known by the Romans as the Flavian Amphitheatre after the family of emperors responsible for its construction, the Emperor Titus opened the Colosseum with 100 days of celebratory gladiatorial games. Gladiatorial games remained popular within the Roman world until they were officially banned in 404 CE. From that point onwards, the Colosseum was not used with the same frequency as it had been in earlier centuries.
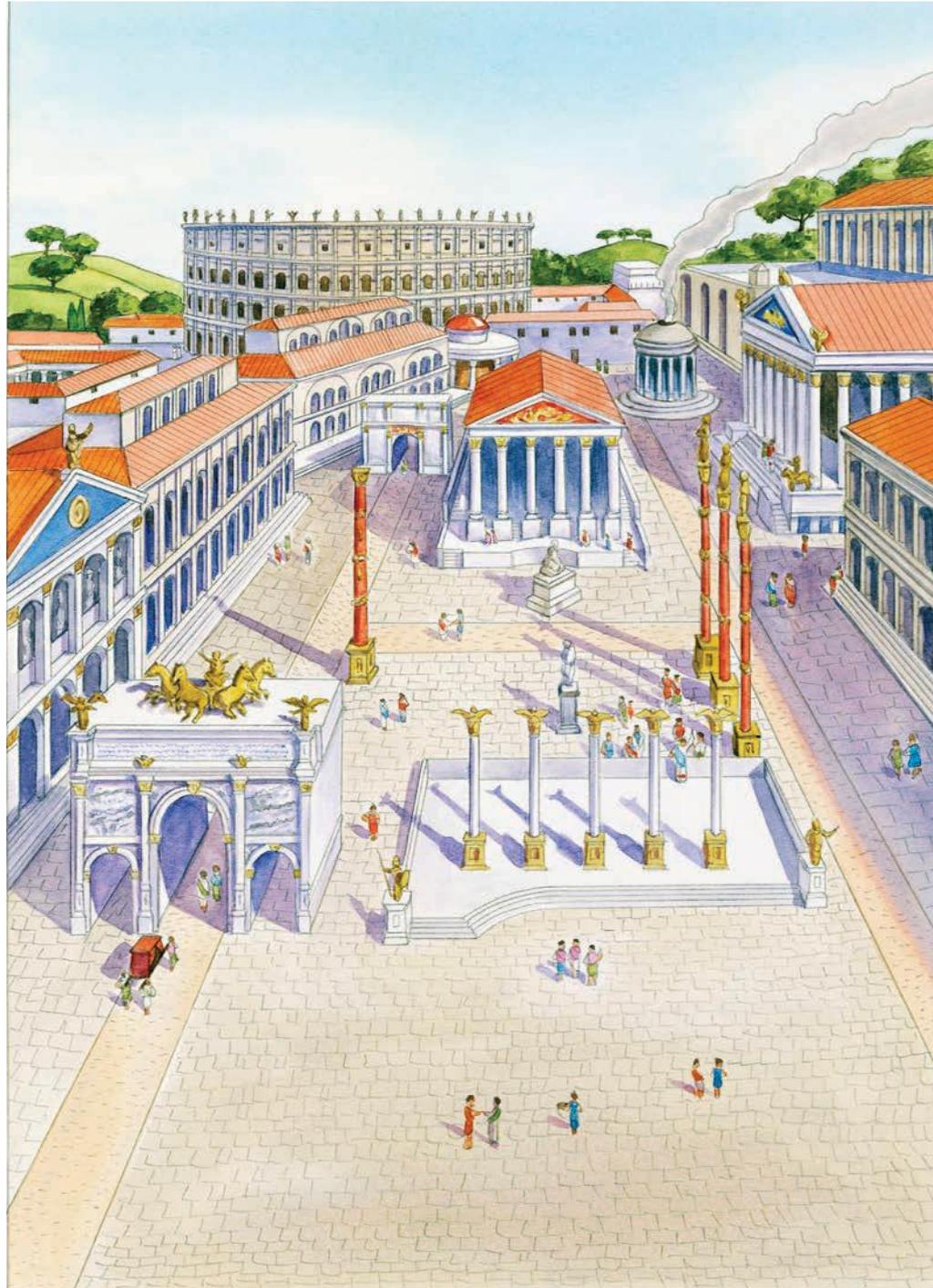
▲ **Source 8.31** A reconstruction of what the Forum in ancient Rome might have looked like

A Central arena, covered with sand. It could be set up with boulders or trees for some events, or even flooded to host mock naval battles.

B The *hypogeum*, which had tunnels, compartments and animal pens beneath the surface of the arena. The Romans used a complex system of pulleys, counterweights and ropes to bring scenery into the arena, as well as to raise the cages containing the animals for combat.

C Sails to give spectators protection from the sun and rain

D Gilded bronze shields supporting the sails

E Archways containing statues
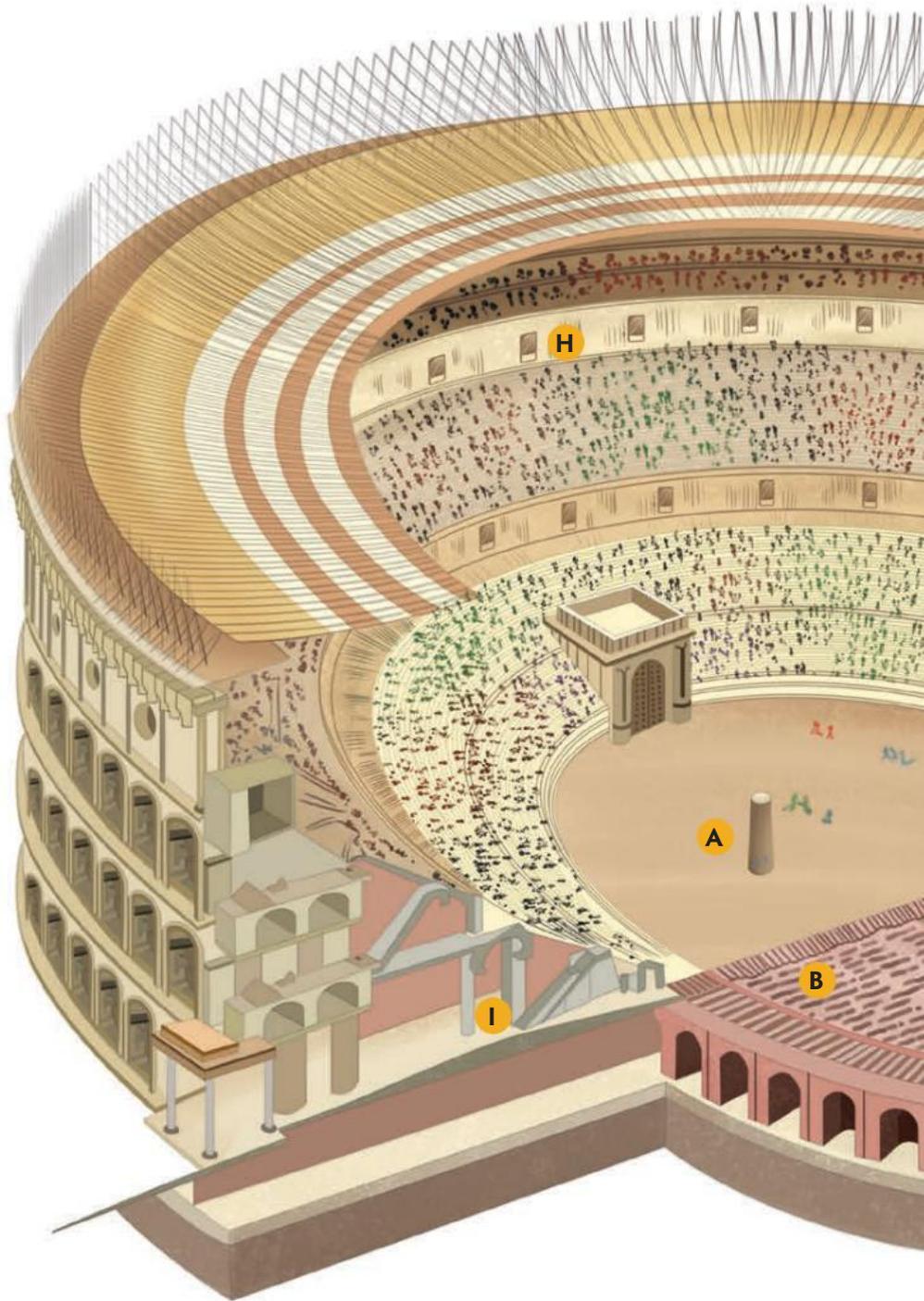
▲ **Source 8.32** A cross-section of the Colosseum in Rome

▲ **Video Source 8.32a**
Aerial footage of the Colosseum
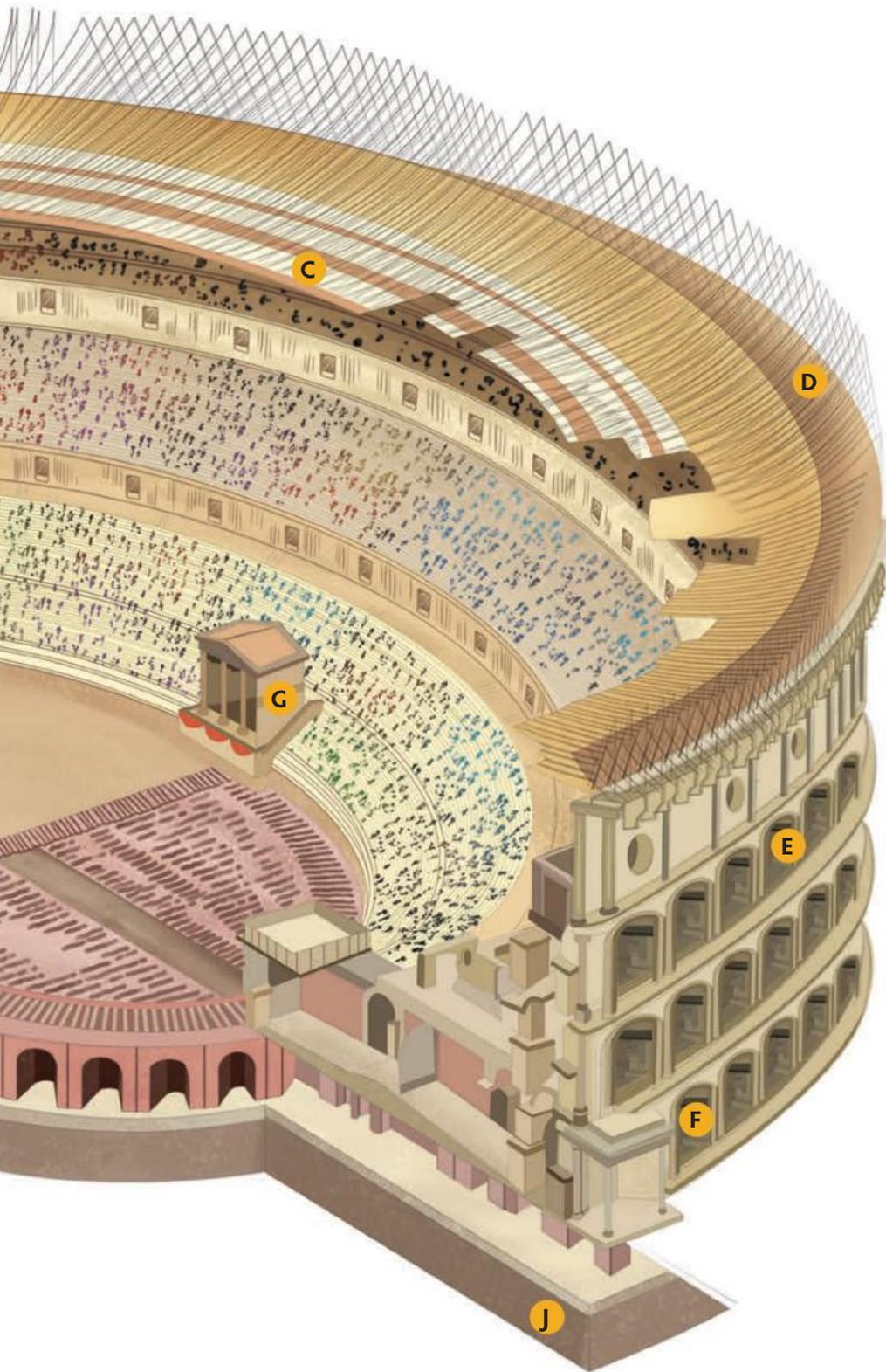
F Façade made of a type of limestone called travertine

G Special box for the emperor

H Several levels of seating. Seats closer to the arena were more expensive. Behind wealthy citizens sat middle-class citizens. Next came slaves and foreigners, and finally, in the standing areas only, were the poor. Women were also in this top tier, separated from the poor by a row of columns. They sat on wooden bleachers.

I Public entrances where tickets were sold. These entrances had staircases giving access to the upper levels.

J Exits

END OF SECTION REVIEW 8.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1   In what year did Rome become a republic?
2   Name three ways in which someone might become a slave in ancient Rome.
3   Who was Spartacus and what did he achieve?
4   Which four groups made up Roman society?
5   What rights did women have in ancient Rome?
6   Describe three different types of gladiators in ancient Rome and the equipment they used.

Interpret

7   What did people think about women and their role in ancient Roman society?
8   The ancient Romans overthrew their king and created a republic. Why do you think they did that? Why might people prefer to live in a republic than with a king?
9   Why do you think popular entertainments in amphitheatres were so important throughout the Roman Empire?

Argue

10 What were the benefits people had and challenges people faced living in ancient Rome? Discuss different groups of people in your answer.

◄ **Source 8.33** A mosaic from 2 CE shows a slave pouring something to drink. This mosaic is part of the collection at the Musée National Du Bardo (Archaeological Museum) in Tunisia.

Key concepts: continuity and change, cause and effect, perspectives

HASS skills: analysing, evaluating, communicating and reflecting

8.6 The significant beliefs, values and practices of ancient Rome

FOCUS QUESTION

How was ancient Roman society structured, and what were the significant beliefs, values and practices of the people?

Religion in ancient Rome had a very important place in the daily lives of the people. The ancient Romans were polytheistic, meaning they believed there were many gods who had different roles to play in determining events in the world.

The ancient Romans generally believed that the actions of the gods could control the fate of the people. Many emperors held great celebrations and events at places like the Colosseum. They performed sacrifices to try and keep the gods happy and supportive of everything the Romans did. Over time, the role of the emperor became partly a religious one. After the death of the first Roman emperor, Augustus, it was believed that all emperors would become gods when they died.

Many **temples** were built to worship the gods across the Roman Empire. People would leave offerings to particular gods and ask for help in their lives. For example, a person might leave an offering to Apollo, god of healing, if they were unwell. But if they were preparing for battle, they might pray to Mars, god of war. People also worshipped the gods within their homes and set up shrines for their household and favourite gods.

> **temples** places for worshipping gods; in ancient Rome a temple would have an altar, where animals were sacrificed
>
> **hearth** the central fireplace in a home

FAMOUS FACES

VESTAL VIRGINS

The Vestal Virgins were priestesses of the goddess Vesta, goddess of the **hearth** and protector of the family. The Vestal Virgins were selected as young girls to become priestesses and to dedicate their lives to their duty, which was to ensure that the eternal flame of Rome, housed in the Temple of Vesta on the Palatine Hill, continued to burn. If the flame went out, it was believed to be a sign that Rome would be destroyed. If one of the priestesses was discovered to have let the flame go out, she was seen to have failed in her duty. The punishment for this was to be buried alive. Because the Vestal Virgins were considered to be sacred women, to kill one was a crime. Therefore, they were buried alive so that it was the earth that killed them, not an individual person.
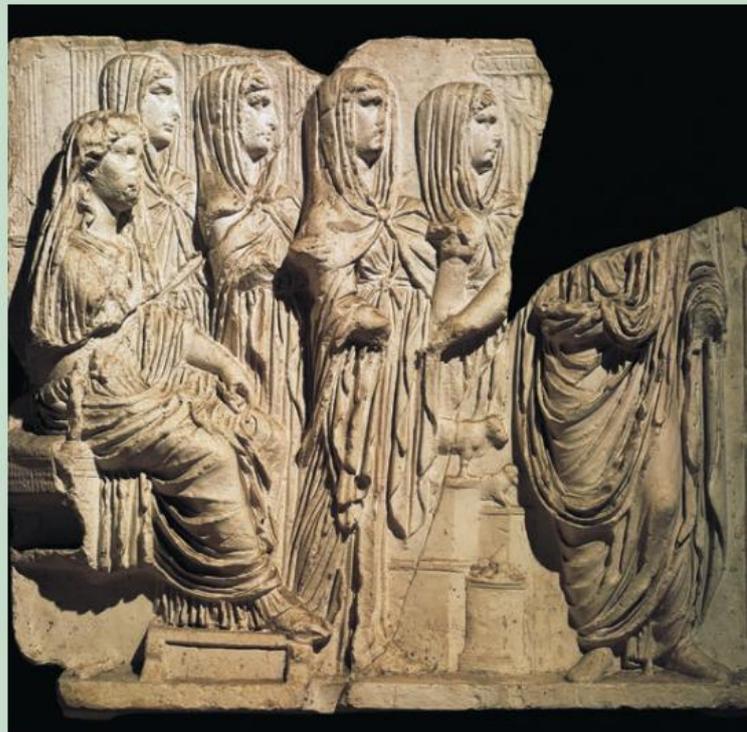
Religious beliefs and death

The beliefs held by the ancient Romans about what happened when a person died tended to vary widely. One thing that was universally believed was that there was reward in the afterlife for good people, who either went to the Elysium fields or the Plains of Asphodel, and that the punishment for the wicked was to go to a dark and scary place, but that they could earn their way out for good behaviour. The ancient Romans had specific practices for dealing with the body of a loved one. The body of the dead person would generally be laid out so that their friends and family could visit and view the body. This would take place for about seven days.

The most common ways in which bodies of dead Romans were disposed of was by **cremation**. But, over time, some of these religious practices changed. The people instead began to have their bodies buried in the earth or in very large tombs. Ancient Roman laws generally made it illegal to bury a person's body or ashes inside the city. This meant that Roman tombs and cemeteries were always outside the city walls; bodies were often buried alongside the roads into Rome and Roman cities.

> **cremation** to dispose of a dead body by burning it to ashes
>
> **patron** someone who supports others with money, gifts or favours; a patron god of a place was seen to support that place with divine favour

King of the gods
- God of sky and thunder
- **Patron** god of Rome

Jupiter

- God of freshwater and the sea, earthquakes, hurricanes and horses
- Often depicted with his trident

Neptune

- God of war, guardian of agriculture
- The embodiment of aggression and what was considered manliness
- Father of Romulus

Mars

- God of music, healing, light and truth
- Twin brother of Diana

Apollo

- God of fire, volcanoes, metalwork and the forge
- Patron god of Rome

Vulcan

- God of translators and interpreters, trade and travel
- Messenger of the gods

Mercury

▲ **Source 8.34** Important gods of ancient Rome

Queen of the gods
- Wife and sister of Jupiter
- Protector of Rome's women
- Patron goddess of Rome

Juno

- Goddess of agriculture and harvests
- Protector of farmers, pastoralists and plebeians

Ceres

- Goddess of wisdom, arts, trade and strategy
- Born from the head of Jupiter – she leapt out of his head, fully grown and wearing armour!

Minerva

- Mother of the Roman people
- Goddess of love, beauty, fertility, sex and desire

Venus

- Twin sister of Apollo
- Goddess of the hunt, the moon and birth

Diana

- The sacred fire of the Vestal Virgins
- Goddess of hearth, home and family

Vesta

▲ **Source 8.35** Important goddesses of ancient Rome

Ancient Roman values

In ancient Rome, people lived their lives by following tradition and customs. In particular, there was a core set of values that people tried to follow in order to live well. The values are known by their Latin names:

- *Fides* – loyalty and trustworthiness, which were considered to be an important part of business relationships and the law.
- *Pietas* – piety and religious devotion. In order to uphold the value of *pietas* people had to conduct all the proper rituals and sacrifices to the gods. They also had to always act morally and with good intent.
- *Gravitas* – self-discipline and composure. People who achieved *gravitas* were in control of their emotions and behaviours, and faced problems in a calm manner. *Gravitas* also referred to someone who was considered wise and was respected.
- *Virtus* – the quality of manliness ('vir' means 'man'). This virtue changed in meaning, depending on what was thought of as manly. For most ancient Romans, *virtus* meant someone who could act rationally, who was a good fighter and a good leader of his family.

- *Dignitas* – the ultimate quality to achieve – if someone was able to uphold all the other values at once, they achieved *dignitas* or honour. It was about being viewed by others as someone worthy and important.

Roman religion: a fair trade

The ancient Romans did not just trade goods with their neighbours, they also adopted some of their neighbours' religious beliefs and practices. The ancient Romans took from others what they felt would improve their empire.

You may have noticed when looking at the list of gods that they are very similar to the ancient Greek gods and goddesses. This is because the ancient Romans copied ancient Greek religious beliefs in many ways. They merged Greek beliefs with their own when they imagined their gods. Another example of this is the god Mithras, who was originally a Persian god. Romans adopted this god into their religion, too. When Rome invaded Britain, the Celts had their own goddess, called Sulis. She reminded the Romans of their goddess Minerva and so they created 'Sulis-Minerva'.

▲ **Source 8.36** This bronze head depicts Sulis-Minerva. It decorated the Roman bathhouse in Bath, England.

ACTIVITY 8.6

Check your understanding

How democratic was Rome? Investigate:

1. Who could vote, or
2. The rights of Roman women.

Key concepts: analysing

HASS skills: significance

END OF SECTION REVIEW 8.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Additional content available:
Contact and conflict with other societies and the fall of Rome

Recall

1 What did people believe happened to emperors after they died?
2 What was a Vestal Virgin?
3 Which god was considered king of the gods?
4 Why were temples built throughout the Roman Empire?
5 Where did Romans bury the bodies or ashes of the dead?

Interpret

6 How did the ancient Roman people dispose of their dead?
7 What did the ancient Roman people value most? Try to summarise the kind of person a Roman was meant to be.
8 Why did the Romans worship so many gods?
9 What role did the gods play in the life of ancient Romans?

Argue

10 In what ways were ancient Roman values and beliefs similar to ours today, and in what ways were they different?

Key concepts: continuity and change, significance, empathy

HASS skills: communicating and reflecting, analysing

▼ **Source 8.37** A sculpture of Neptune in the Piazza del Popolo in modern day Rome

8.7   The role of significant individuals in ancient Rome

FOCUS QUESTION

Who should we consider as significant individuals in ancient Roman history and why?

FAMOUS FACE

GAIUS MARIUS (c.157–86 BCE)

Gaius Marius was a war general who became consul during the Roman Republic. Marius was the son of a man who, though Roman, lived 100 kilometres south-east of Rome and did not come from a family that had a connection to the senate. Marius was therefore a *novus homo* ('a new man'), because he had no ancestors or relatives who had been senators. Marius was incredibly popular. He was elected as consul seven times, which was more often than anyone had ever been elected as consul before. When Rome faced invasion from its neighbours, Marius revolutionised the army, making it stronger and more efficient than before. His most famous change was to allow men who had no property to enter the army. Before Marius, a man had to be a citizen with enough wealth before they were able to serve in a legion. Marius changed this, allowing any free man to serve. This increased the size of the army and meant that men were able to raise themselves up in the world by succeeding in the army and becoming wealthy.
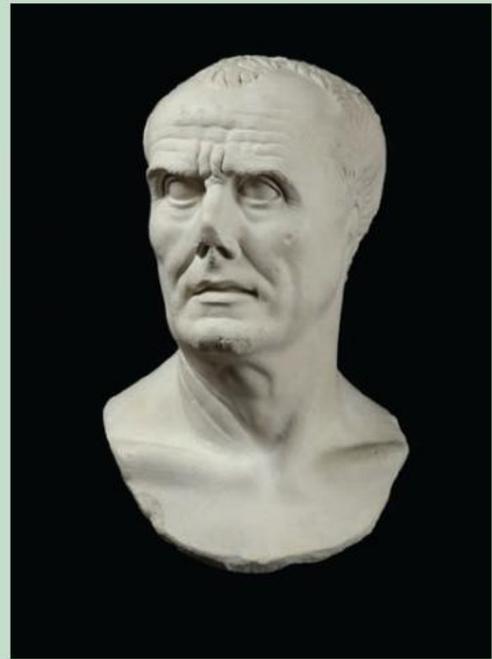
FAMOUS FACE

JULIUS CAESAR (100–44 BCE)

Julius Caesar is one of the most famous and well-known ancient Romans. He was a famous politician, general and writer. He was celebrated for the way he led troops in the area of Gaul, now modern-day France. He was also remembered for how he extended the empire as far as the English Channel. One way that Caesar made himself famous was by writing accounts of his own military campaigns and victories. He also became the lover of the most powerful woman in Egypt, Queen Cleopatra. Caesar was eventually declared to be the **dictator** of Rome for life. But many Romans believed that, as a dictator, he held too much power and did not listen to his political opponents. Due to Caesar's power and influence, many high-ranking wealthy Romans decided to put an end to his leadership. On 15 March 44 BCE, they killed Caesar by stabbing him to death. Julius Caesar's death was described by the author Plutarch, in his biography *Life of Caesar* 66.4–14:

dictator someone who rules with total power over a country or territory

»

> ≫
>
> When, after sitting down, Caesar continued to reject the requests and started to grow angry with one or another … Tilius grasped his toga with both hands and pulled it down from his neck – the signal for the attack. It was Casca who gave the first blow with his dagger, in the neck, a wound which was neither mortal or even deep, probably because he was nervous at the beginning of such a bold venture, and Caesar, as he turned, was therefore able to grab the knife and hold onto it … All of those who had prepared themselves for murder produced their naked daggers, and Caesar was encompassed by them all, wherever he turned confronting blows and dagger aimed at his face and eyes, driven here and there like a wild beast and entangled in the hands of them all – for they all had to participate in the sacrifice and taste the blood … It is said that he received twenty-three [knife wounds], and many of the conspirators were wounded by each other as they tried to direct so many blows into one body.

▲ **Source 8.38** Plutarch, *Life of Caesar*, adapted in M. Dillon and L. Garland, *Ancient Rome: From Early Republic to the Assassination of Julius Caesar*, 2005

FAMOUS FACE

AUGUSTUS (27 BCE to 14 CE)

Augustus was the adopted son and great-nephew of Julius Caesar. After Caesar's death, he struggled for power and was involved in civil war with others who tried to seize control of Rome, including Cleopatra and her husband Mark Antony. Ultimately though, Augustus won and was made consul initially, and then emperor, by the senate. This meant the end of the Roman Republic and its belief in elected leaders – Augustus became emperor for life. Generally, Augustus was seen as a good ruler. He had many impressive buildings created and brought in new laws to help the poor and keep order in the streets. He also agreed to work closely with the senate and bring peace to the empire after years of discord. However, his popularity may have also been because he was emperor and had total control. Augustus had anyone who posed a serious threat to him killed by a process called **proscription**. This involved the names of enemies being written on a list so that anyone could kill them and receive a reward. Not long after Augustus died, he was declared to be a god by the next emperor, Tiberius. After this event, all emperors were considered to become gods after they died.

proscription a list posted in Rome of all those who were outlawed and could be killed by anyone for a reward

FAMOUS FACE

LIVIA DRUSILLA (58 BCE to 29 CE)

Livia Drusilla was a highly influential Roman. She became the third wife of Augustus, and gained power because of her marriage. But she also showed herself to be somebody who could take advantage of the opportunities that she had. Livia was able to influence people very effectively. Some historians have described her as smart and savvy because she attained influence at a time when most women could not vote or even appear in public without a husband or male guardian present. Livia presented herself as supportive of her husband's reform policies. She turned a blind eye to his infidelities and served the empire as a symbol of the loyal wife. However, behind the scenes, Livia spent much of her adult life making sure her son became the future heir to the throne – and she succeeded. Her son Tiberius became the next emperor to rule after Augustus.
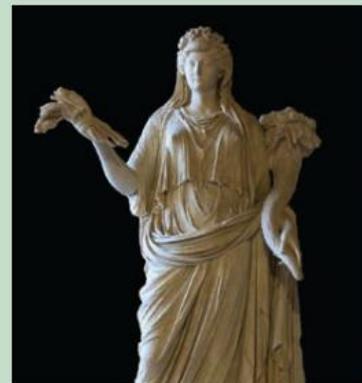
DEVELOPING HISTORICAL CONCEPTS AND SKILLS 8.3

Determining significance

Why does history record the outcome of a great battle or the invention of a new technology, but does not track what you had for breakfast yesterday? History focuses on recording and analysing events that are significant. A battle is significant because many people die and the ruling of a country is often determined. Your breakfast choice does not have the same impact. So, how do we determine and evaluate the significance of key historical events, and the roles and achievements of individual people?

criteria standards or rules against which something can be judged

This is done every day in the news. Watch the news on television and consider which global events are mentioned first and why. This will give you an idea of why we consider some events to be more significant than others.

Some **criteria** for establishing what is significant might include:

1 Many peoples' lives were affected.
2 The event affected some people very deeply.
3 The event caused significant consequences.
4 The event is remembered or commemorated long after it happened.
5 A key person left behind a legacy.

Read the profiles of the significant individuals in this section. Using the criteria listed here, and any other criteria you think are relevant to significance, rank the people in order from *most significant* to *least significant*. Justify your choices with a brief explanation.

Key concepts: sources, evidence, continuity and change, cause and effect, significance

HASS skills: analysing, evaluating, communicating and reflecting

END OF SECTION REVIEW 8.7

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Give two reasons why an event might be considered historically significant.
2 Which significant individual is a 'new man' (*novos homo*) and what does this mean?
3 Who was Livia Drusilla's husband?

Interpret

4 What similarities do the significant people described in this section share? What are their differences?

Argue

5 Choose one of the individuals described. Conduct some further research and create a timeline of their life, including at least five key dates. When choosing the dates, you need to think about what makes an event in someone's life significant enough to be included in a timeline.

Key concepts: sources, evidence, continuity and change, cause and effect, significance

HASS skills: questioning and researching, analysing, evaluating

8.8 The process and importance of conserving of the past

FOCUS QUESTION

How and why do archaeologists uncover and preserve the remains of the ancient Roman past?

Archaeological finds

At the start of this chapter, we looked at Pompeii, buried under the volcanic ash of Mount Vesuvius. Today, you can visit the site of Pompeii and wander around the remains of the city, but this was not always the case. For many years, the city was lost and entirely hidden under the ground, beneath a layer of ash that had become rock and soil. In 1748 CE, while builders were digging into the earth to lay foundations for a new building, they came across the lost city of Pompeii. Since then, sections of Pompeii have been excavated by archaeologists and new discoveries are still being made today.

Another example of archaeologists learning more about ancient Romans is due to the creation of a modern-day skyscraper. In 2013, in a part of London called Walbrook, archaeologists discovered the remains of an ancient Roman shopping street, which was once part of the Roman city known as Londinium. Archaeologists uncovered more than 1000 artefacts during this excavation. The artefacts helped them to learn new things about the Roman Empire and the people who lived in it.

Ancient Roman artefacts were also discovered during the digging of a new train tunnel in London. Jewellery, personal items and some burials of human remains were found.

◄ **Source 8.39** An ancient Roman relic found at a London site for a new skyscraper

▲ **Source 8.40** A Roman waxed writing tablet dated c. 80 CE, which translates as 'You will give (this) to Junius the cooper, opposite (the house of) Catullus'

These artefacts have helped archaeologists to learn new things about life in the Roman Empire.

Another amazing archaeological site where much has been learned about the ancient Romans is Vindolanda, which is a fort in the north of England. Roman soldiers were sent to Vindolanda to protect the border of the empire. Over the years, many artefacts have been found there. These artefacts tell a range of stories about what life was like as an ordinary soldier. Many messages and letters were written on thin pieces of timber, which survived because they were preserved in the mud. Some of the messages talk about how cold life was on the border and how the soldiers needed to be sent certain clothes to try and keep warm. These kinds of artefacts give a wonderful insight into the everyday life of ancient Romans in the military.

Written primary sources

There are many different kinds of written primary sources from ancient Rome. For example, there are written histories by authors like Livy and Plutarch, and governmental records from censuses or the military. There are also poems and plays that the Romans wrote to keep themselves entertained. These can teach us about Roman beliefs and values. Many Romans wrote letters to each other to keep in touch, and these sources give us eyewitness accounts of some of the biggest moments in ancient Roman history.

Some of Rome's ancient buildings are still standing today, like the bathhouse in Bath, England. Monuments and artworks also remain and can teach us about the ancient Romans. For example, Trajan's Column and the graffiti on the walls of Pompeii provide a wealth of information. Studying a range of different sources from the same time is how we can best learn about the past.

FAMOUS FACE
CICERO (106–43 BCE)

Marcus Tullius Cicero was, like Marius, a *novus homo* with no noble ancestors. He was known for his brilliant public speaking and debate skills. He lived during the end of the Roman Republic, as Julius Caesar fought against other powerful commanders for the right to rule on his own. Cicero supported the idea of Rome remaining a republic and was voted as consul for one year in 63 BCE. However, Cicero was unable to prevent the dictatorship of Julius Caesar, and he was proscribed, captured and killed after he insulted Mark Antony. Mark Antony had ordered his execution after Cicero publicly humiliated Antony in a number of speeches called 'The Philippics', which survive today. Antony had Cicero's head and hands displayed in the forum, and Antony's wife is said to have pierced Cicero's tongue with her hairpin. But Cicero is best known for his writings. He wrote many letters in his lifetime and over 900 of these letters survived. This means they were copied down and kept, instead of lost over time as many other written works were. Cicero wrote discussions on all sorts of topics that interested him, from the nature of government to the best way to speak publicly. Cicero's writings, like archaeological evidence, provide historians with important information about what life was like in ancient Rome.

END OF SECTION REVIEW 8.8

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Name two places where ancient Roman remains were discovered by archaeologists.
2 Identify three types of primary sources described in this chapter.
3 How did Cicero die?
4 How can historians still find out about people from ancient Rome who are not labelled 'significant'?

Interpret

5 What were archaeologists able to learn about ancient Rome from their discoveries in Vindolanda?

Argue

6 'It is important for us to continue to investigate ancient Rome and conserve what we find.' Do you agree or disagree with this statement? Explain your answer by giving reasons why you feel one way or the other.
7 To what extent is it reliable to believe that all figures commemorated in sculptures should be seen as significant individuals?

Key concepts: sources, evidence, continuity and change, cause and effect, significance

HASS skills: questioning and researching, analysing, evaluating

8.9 Conclusion: why does it matter?

The remains of ancient Rome exist all around us, even if we cannot always see them. Ancient Rome has influenced how societies work, aspects of many European languages and the sorts of buildings that we use for entertainment. Governments that describe themselves as being republics, such as the United States, adopted the idea of a republic from the ancient Romans. The United States, like many other countries, is ruled by senates and assemblies and, like the Roman Republic, emphasises the idea that rulers should be elected.

To this day, we see parts of ancient Roman life in buildings, art and the layout of major cities around the world. The ancient Romans gave us many practical legacies, like the roads that people still travel along in Europe, sewerage systems, aqueducts, and public baths and gyms. By learning about ancient Rome, we can understand that even though the Romans lived about two thousand years ago, there are things that we share with them as humans. By studying the ancient Romans we can see continuity and change in our own culture.

▲ **Source 8.41** This terracotta oil lamp in the shape of a gladiator's helmet from ancient Rome was a sort of souvenir from the gladiatorial games.

8.10 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Context

In the study of history, context is very important. *Context* helps us to understand the causes of an event, and the situation in which events take place. In this activity, copy the diagram shown here and fill it in by explaining in a few points what each topic means for understanding ancient Rome. This should help you put ancient Rome into context. The first one has been done for you. You can also answer this in the Interactive Textbook.

Republic	A republic is run by a government that has leaders elected by the people
Slavery	
Religion and beliefs	
Daily life	
Roman legacies	

Analysis

Primary-sources task

As part of a good depth study, you should do some thinking about what you can learn about ancient Rome from the ancient source material. Look back through this chapter and find three primary sources.

For each source, create a short summary, describing it as if you were writing about it for someone who could not see or read the source. Try to be as detailed as possible.

In this source you can see …

Explain how this source shows one key thing you already know about ancient Rome.

This source supports the idea that the ancient Romans …

Explain how this source supports what you have learned about ancient Romans.

This source supports … because it shows …

Below is an example of how you could tackle this activity.

This source (the image - Source 8.42) shows Romans had lots of slaves. This source supports the idea that Romans thought of slaves as property because it shows a Roman slave market, where the slaves are being bought and sold like someone would buy furniture or cars today.

Add a third sentence: This source helps us understand … was important because … Explain how the source can be used as evidence of something you have learned; for example, this source helps us to understand that slavery was important to the Romans because slaves were a big part of what the Romans traded and an important part of their workforce. It also help us understand that slaves were not treated like people.
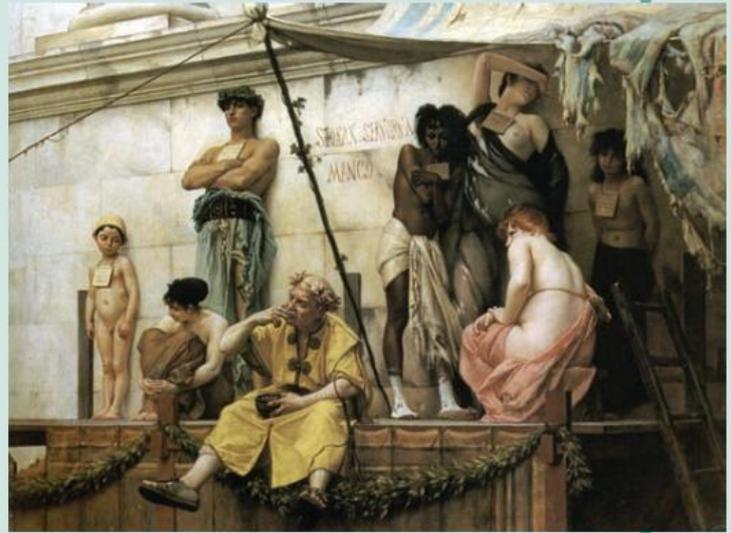
▲ **Source 8.42** *The Slave Market* by Gustave Boulanger, 1886

Inquiry

Research task

Select one of the famous faces mentioned in this chapter. Complete some more research on this person and then copy and complete the following research table.

When were they born?	Where did they live?	What did they do?
What did other people think of them? (Try to find a quote from someone who lived in ancient Rome.)	What did they look like? Paste a picture or a description here.	Were they celebrated or punished by society?
Did they have a family?	How did they die?	Why should they be remembered?

Writing

Extended-response question

Use your research to analyse the success of the Roman Empire.

Topic: Evaluate the importance of a key aspect of ancient Rome and argue that it was the reason Rome succeeded in ruling as a powerful empire for hundreds of years.

In your answer, explain the key aspect you have chosen in detail. Describe how it contributed to Rome's expansion, and discuss how and why this factor should be considered the most important cause of Rome's success.

You must support your argument by providing key names, dates, statistics and terms that are relevant to ancient Rome.

Key concepts: sources, evidence, continuity and change, cause and effect, significance

HASS skills: questioning and researching, analysing, evaluating

CHAPTER 9

Ancient India

This chapter is available in the digital version of this textbook.

▲ **Source A** A painting from India that shows the Hindu god Krishna hugging two cows. As you will learn in the chapter, Hindus are vegetarians and consider the cow to be a sacred symbol of life that should be protected and revered.

秦始皇

姓嬴名政始目始皇乙卯即王位庚辰併天下稱皇帝

在位三十七年居王位二十五年即帝位十二年壽五十

CHAPTER 10

Ancient China

This chapter is available in the digital version of this textbook.

▲ **Source A** A painting from China of Qin Shi Huang, born around 259 BCE, who was the emperor during the Qin dynasty and unified China under his leadership.

History has many connections with other subjects in the Humanities. Have you considered how what you have learnt about the ancient past and ancient societies relates to the other topics you will cover this year? Here's a sample:

Geography

Investigation

We can learn many important things about the past and the present from archaeological sites which have revealed important written and material artefacts and buildings. However, these important archaeological sites are often in places where people still live. Globally population is also increasing, meaning we need more places for people to live and to grow the food they need. Therefore, urban and farmland areas are growing and spreading.

Investigate how urban sprawl, and more land use for farming, has affected one of the following important archaeological sites: Pompeii; Herculaneum; the Great Pyramids in Egypt; the tomb of Qin Shi Huangdi where the terracotta warriors lie; the Acropolis of Athens.
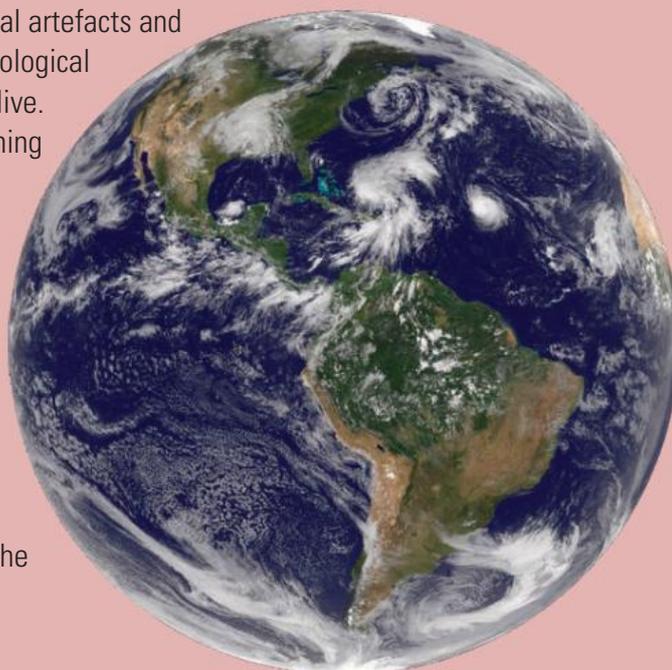
Civics and Citizenship

Justice

In May 2020 Rio Tinto destroyed the Juukan Gorge caves which were part of a sacred site for the Puutu Kunti Kurrama and Pinikura (PKKP) people - the traditional owners of the land. The caves were among the oldest of their kind in the world, with some of the artefacts found there dating back 28 000 years. Rio Tinto destroyed the caves so that it could access iron ore in the area. The company had a number of different options to mine the iron that would not have destroyed the caves, but they chose to destroy the caves instead. Rio Tinto have been condemned internationally for what they did.

The response of Rio Tinto has been to offer compensation to the Puutu Kunti Kurrama and Pinikura (PKKP) people.

Is this justice?

- Look up and write down a definition of 'justice'
- Do some research about the plans put into place by Rio Tinto to try make up for their destruction of these caves – draw a mind-map or use a graphic organiser to structure your research: you should aim to discover 'what when where why how'.
- Once you have collected your research information, look back over your definition of justice and decide if justice can be achieved by Rio Tinto – can they make up for their actions? What do you think? Yes/No? Why do you think what you do? Collect three pieces of evidence to support your decision and be prepared to present them in an Oxford debate in class.

Economics and Business

Who owns the past?

Should museums be free to visit, or, should they charge an entry fee?

Research the different perspectives about whether or not we should pay to enter museums. Draw up and complete a PMI chart to show your findings. Which section of your chart had the most information? Is this the section that you agree with? Write a paragraph explaining your perspective using the information you collected on your PMI chart.

Research how many people have visited the new WA museum since it opened.

Think about why businesses set a certain price for a product. The WA museum is a business. How much should the museum charge as an entry fee? How might the museum adjust their entry price according to demand?

Putting it all together: key concepts for your memory bank

Summarising your studies of the Humanities and Social Sciences in Year 7

Throughout your studies this year, we have asked you to take special notice of certain key concepts across the four HASS subjects. In the following activities, we would like you retrieve what you know from your memory bank about these six key concepts, and demonstrate your understanding of the concepts in writing.

We hope the activities present another opportunity to see how the key concepts are related across the HASS subjects. We also hope the activities allow you to summarise your work in Humanities and Social Sciences in Year 7 and can be looked at again to revise your studies when you start Year 8!

Activity 1 – Create a summary of the concepts you've learned about this year connect to each other

Step 1: Go back through the chapters and identify what each of the concepts in the table below mean. Reread the definition of the concepts in this book first. Now copy and complete the table by defining each concept in the table **in your own words** (one has been done for you).

Concept	Westminster system	Rights and responsibilities	Making choices	Place	Sources	Evidence
Definition			The process of making a choice is not always easy. Because economist study how people satisfy unlimited wants with the use of scarce resources, they are concerned with strategies that will help us make the best choices. Every time a choice is made something is given up			

Step 2: Identify links between concepts by grouping them into pairs or groups of three. For example: you might connect *Sources* and *Evidence* and *Making Choices* together because we need to use information from sources to help us make good economic choices. Write out your ideas as a series of brainstorms until you have used all of the concepts in the table. Share your brainstorms with a partner. How is your work the same and different to each other? Give your partner one piece of positive feedback and offer one idea that might help them improve their work.

Step 3: Create a diagram that demonstrates how these concepts are interconnected. Use arrows to show what/how each concept connects to each other and write your reason for making this connection along each arrow. An example is shown for you below.

Making good economic **choices** depends on comparing the costs and benefits of using the available resources

We need to collect information from sources to help us make decisions about how to us the resources available to us

We need to use sources as evidence to justify the decisions we make

Sources are pieces of information about people events or ideas.

Sources can be used as pieces of evidence

All good claims or points made in an argument need evidence to support them

Evidence is information that helps us to support a claim or argument

Step 4: Repeat Steps 2 and 3 until you have connected all of the concepts into pairs or groups of three.

Extension challenge: can you interconnect all of these concepts in one diagram?

Activity 2 – Writing task: using key concepts meaningfully

In your studies of the Humanities and Social Sciences, you will need to confidently and correctly use the terms related to your subject. Write a paragraph of 100–150 words in response to the question below using all the key concepts listed. Ensure that your use of these terms shows your understanding of what each term means.

Hint: *The question is asking you to do more than define each of these concepts and then put these definitions together in a paragraph.*

To answer the question effectively, in a well-constructed paragraph, you will need to go through several steps.

Step 1: Identify the key words of the question. Highlight, underline or circle them. These are the important things which must be addressed in your paragraph.

Step 2: What does the word 'explain' in the question below mean? Define it. Write this definition down.

Step 3: Use the diagram you constructed in Activity 1 to help you plan how you will address the key words in the question (identified in Step 1) in your paragraph. Make sure you have also explained the connection between the words on the list. To make an effective plan you might draw a flowchart, brainstorm or use a graphic organiser. You might need to do more than one plan before you are happy with your final ideas.

Question: *Explain how big ideas you have learnt in HASS over Year 7 relate to each other.*

Use these words correctly in your answer:

- the Westminster system
- rights and responsibilities
- making choices
- place
- sources
- evidence

Step 4: Before you start writing, analyse the assessment rubric for information on how you might structure a response that scores high marks. Highlight the key ideas in the right-hand column (5 mark column) of the assessment rubric, so that you know **exactly** what is expected of a response that gets top marks.

Quick review: Does the plan you wrote for 'Step 3' help you get the best marks on the marking key? If the answer is yes, start writing. If the answer is no, go back and adjust your plan. Ask a partner and/or your teacher for feedback on your plan before you start to write.

Assessment rubric: Using key concepts meaningfully

Word limit: 100–150 words

	0–1	2	3	4	5
Topic sentence	The topic sentence is unclear and appears unrelated to the task.	The topic sentence is not clear and/or accurate, and/or does not clearly address the task.	The topic sentence is clear and/or accurate, and satisfactorily addresses the task.	The topic sentence is clear and accurate, specific, clearly addresses the task.	The topic sentence is clear, detailed, accurate, specific, and clearly addresses the task.
Evidence	Little or no attempt has been made to use evidence.	Some attempt has been made to use evidence however it appears generalised and/or is inaccurate or irrelevant.	There is some supporting evidence that is mostly relevant and/or accurate.	There is a good use of supporting evidence that is accurate and relevant.	There is excellent use of supporting evidence that is detailed, accurate and relevant.
Explanation	Limited or no explanation has been attempted within the response.	Some attempt has been made to explain.	Explains in a general way.	Explains clearly with some detail in a logical way.	Constructs a logical and complex argument which explains the topic accurately, clearly and in detail.
Answers the question	Little or no attempt made to answer the question.	Limited response to the topic/question.	Has a general or simple response to the of the topic/question.	Shows careful consideration of the topic/question. Includes some detail.	Answers the question in a clear, logical and detailed way.
Effort and organisation	The response is incomplete or disorganised. No attempt to check spelling and grammar, indicating poor or no planning, drafting or proofreading.	The response is poorly presented, disorganised and contains several spelling and grammatical errors, indicating little planning, drafting and proofreading.	The response is satisfactorily presented, may contain some spelling and grammatical errors, indicating limited planning, drafting and proofreading.	The response is well presented, contains few spelling and grammatical errors, and shows evidence of some planning, drafting and proofreading.	The response is neatly presented, checked for spelling and grammar, and shows evidence of careful planning, drafting and proofreading.

Index

See the digital version for additional index entries for the digital-only chapters.

W

Acknowledgments

CHAPTER 9

Ancient India

9.1 Setting the scene: storytelling in ancient India

Some of the earliest poems and books ever written come from ancient India. Two of the most famous examples are the *Ramayana* and the *Panchatantra*. The *Ramayana* is an epic (very long) poem that tells a story about the legendary Prince Rama and the challenges he faces to become king. The *Panchatantra* is a collection of fables told to three princes to teach them how to be good rulers.

The stories in texts like the *Ramayana* and the *Panchatantra* can tell us a lot about the beliefs and values held in ancient Indian societies. Stories like the one below from the *Panchatantra* (c. 200 BCE) are believed to have existed for hundreds of years before they were written down. Read the story and then answer the questions that follow.

THE RESULTS OF EDUCATION

On a part of a mountain, a parakeet brought two chicks into the world. These chicks were caught by a hunter when the mother had left the nest to search for food. One of them – since fate decreed it – contrived to escape, while the other was kept in a cage and taught to speak. Meanwhile, the first chick encountered a wandering holy man, who caught him, took him to his own hermitage and gave him kindly care.

While time was passing in this manner, a certain king, whose horse ran away and separated him from his guard, came to that part of the forest where the hunters lived. The moment he perceived the king's approach, the parrot straightway began to chuckle from his cage: 'Come, come, my masters! Here comes somebody riding a horse. Bind him, bind him! Kill him, kill him!' And when the king heard the parrot's words, he quickly spurred his horse in another direction.

Now when the king came to another wood far away, he saw a hermitage of holy men, and in it a parrot who addressed him from a cage: 'Enter, O King, and find repose. Taste our cool water and our sweet fruit. Come, hermits! Pay him honour. Give him water to wash his feet in the cool shade of this tree.'

When he heard this, the king's eyes blossomed wide, and he wonderingly pondered what it might mean. And he said to the parrot: 'In another part of the forest I met another parrot who looked like you, but who had a cruel disposition. "Bind him, bind him!" he cried; "kill him, kill him!"' And the parrot replied to the king by giving a precise relation of the course of his life.

And that is why I say:

Our education, good and bad,

The obvious consequences had.

▲ **Source 9.1** Vishnu Sharma, *Panchatantra*, c. 200 BCE

MAKING THINKING VISIBLE 9.1

Think, pair, share

1 Think about the story you just read. On a separate piece of paper, write what you think the message of the story is.

2 Share your ideas with a partner. What do stories like this show us about ancient Indian society?

3 Who do you think these sorts of stories might have been intended for?

Key concepts: sources, evidence, significance, perspectives

HASS skills: analysing, communicating and reflecting

▲ **Source 9.2** An illustration from an eighteenth-century version of the *Panchatantra* showing birds trying to keep the ocean away from eggs laid by a type of bird called a lapwing.
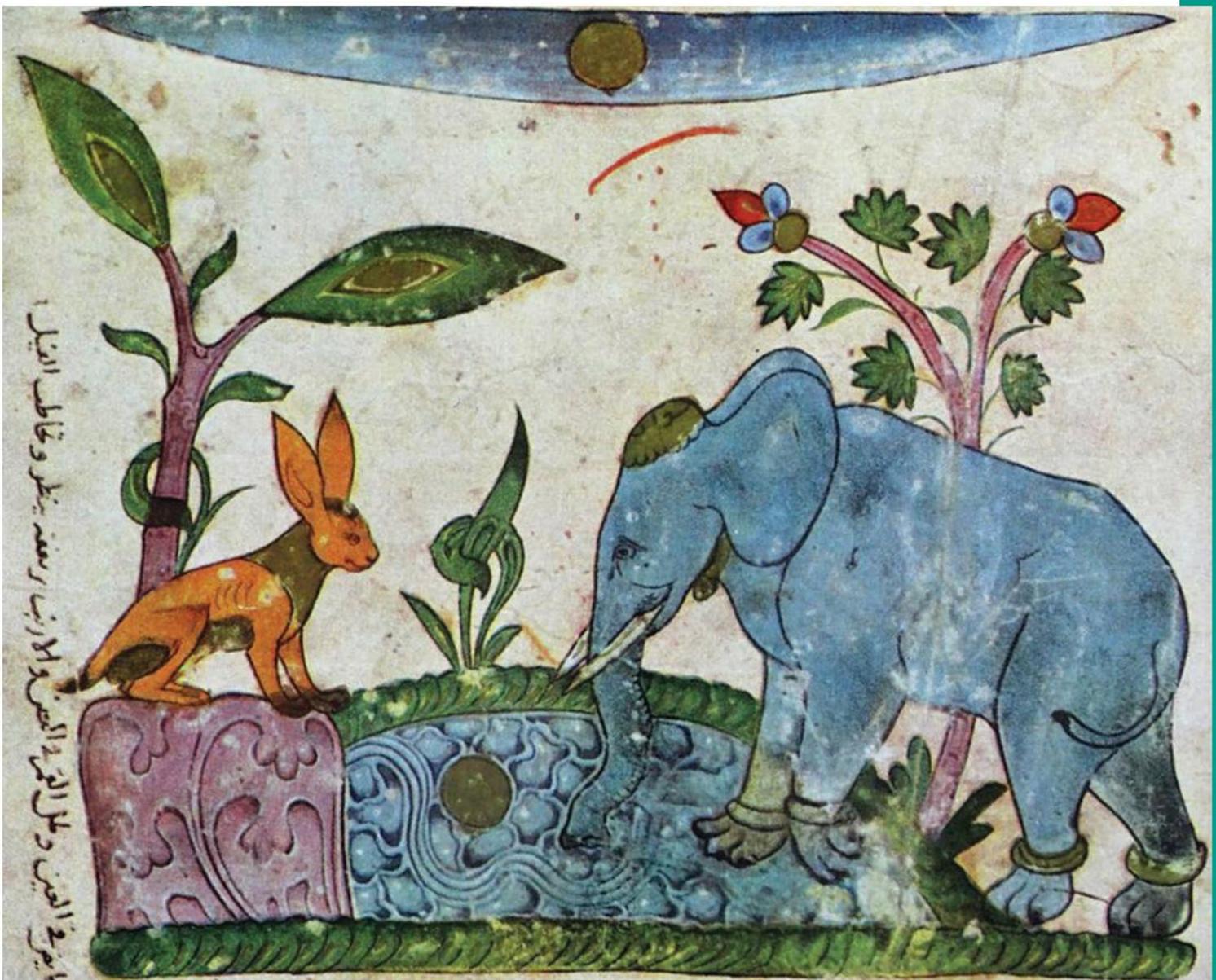
▲ **Source 9.3** An illustration of the elephant king and the hare from an edition of the *Panchatantra* found in Syria in 1354 CE. Translations of the *Panchatantra* have been found as far away as Europe and Indonesia.

9.2 Chapter overview

Introduction

India has one of the largest populations in the modern world, with more than one billion people. It is also one of four places where civilisation, as we know it, began. India was a centre of wealth, power and innovation for centuries. There is evidence that an ancient Indian civilisation of people, known as the Harappans, had tools and technology, including canals, which were not matched until the ancient Romans prospered, around two hundred years later.

The earliest civilisation in India is thought to have been the largest of all the ancient civilisations, covering a huge area and containing a large population.

▲ **Source 9.4** The population difference between the ancient Mesopotamian civilisation and the Indus Valley civilisation

Much of what we know about science, medicine, mathematics and many of the religions that are important in the modern world developed in ancient India, starting with the ancient Harappans in the Indus Valley.

Learning goals

After completing this chapter, you should be able to answer these questions:

- How did the geography of ancient India influence the development of its civilisation?
- What was everyday life like in ancient India?
- What were the significant beliefs and values in ancient Indian society?
- How did trade and war with other countries affect ancient Indian society?
- Why is Ashoka considered to be a significant individual in ancient Indian history?
- How do we know about ancient Indian society?
- How do archaeologists and historians use primary sources to help them understand ancient Indian society?
- Why is it important to preserve historical artefacts and sites from ancient India?

Historical skills

After completing this chapter, you should be able to:

- Understand what chronology and sequencing mean
- Understand the different types of historical sources
- Evaluate the reliability of historical sources
- Develop an understanding of the historical significance of key events and individuals
- Correctly use and define special terms specific to the topic under study
- Use factual evidence (dates, statistics, examples) to substantiate an argument
- Reflect on your findings and refine your learning.

Digital resources

Visit the Interactive Textbook to access:

- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video
Five interesting facts about ancient India

▲ **Source 9.5** This is a carving in stone of the emperor Ashoka the Great riding an elephant, c. 1 BCE. The carving is found on a group of well-preserved Buddhist monuments at Sanchi in India.

What came before this topic?

The earliest evidence of human activity in India is from around 400 000 years ago.
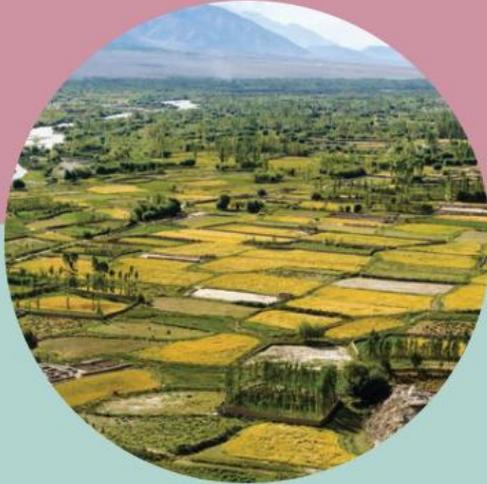
This Mesolithic rock art at the Bhimbetka rock shelters at Madhya Pradesh in India shows a wild animal, perhaps a mythical one, attacking human hunters. Paintings like this were created around 8000 BCE.

The Indus Valley today

c. 4000 BCE
Earliest evidence of farming and herding settlements in the Indus Valley

c. 1400 BCE
The sacred Vedas are written and the Vedic period in India begins

c. 321 BCE
Chandragupta Maurya establishes the Mauryan Empire, which was the largest Indian state until the modern period

c. 8000–5000 BCE
Domestication of wheat, barley, goats and sheep by peoples in the Indus Valley

c. 3300 BCE
Early Indus civilisation develops burial practices and rituals

c. 563 BCE
Siddhartha Gautama is born

Siddhartha Gautama, who later became the Buddha, was a spiritual teacher who lived in ancient India. Buddhism is a spiritual tradition that developed from the Buddha's teachings.

Timeline questions

1 What sort of visual physical evidence exists that humans lived in India for thousands of years?
2 Based on the information in the timeline, why was the Indus Valley a significant location?
3 Based on the dates in the timeline, over how many years did Ashoka the Great rule India?

Key concepts: sources, evidence, cause and effect, significance

HASS skills: analysing, communicating and reflecting

What came after this topic?

After the Gupta dynasty declined, India faced a range of invasions from foreigners, and power within India fragmented, which enabled a number of competing kingdoms to exist within India. These kingdoms varied in size and strength, and often came into conflict with one another. This timeframe is considered to be the end of the classical period of ancient Indian history.

This ancient coin shows a leader from the Alchon Huns – one of the groups who invaded India from Central Asia and contributed to the decline of the Gupta dynasty.

c. 261 BCE
Ashoka conquers Kalinga

c. 185 BCE
Mauryan Empire ends with the assassination of Pushyamitra by his advisor

c. 240–554 CE
The Gupta dynasty reunifies northern India and expands trade with other nations. The empire reaches its height under Samudragupta.

c. 265 BCE
Ashoka the Great comes to power

c. 238 BCE
Ashoka dies and is succeeded by Kunala

c. 184 bce
Sunda dynasty begins

A Buddhist statue from the time of the Gupta dynasty

Ashoka the Great featured on an ancient stone carving

9.4 The physical features of India and how they influenced the civilisation that developed there

FOCUS QUESTION

How did geography influence the development of ancient Indian civilisation?

Geography

Looking at the map of India shown in Source 9.6, we can see that it is a large country. Each part of India has very different geography, ranging from mountains in the north to tropical areas in the south.

A **Mountains**
- The Himalayas run along the northern border of India.
- Many of the mountains in this range are more than 6000 metres tall.
- The mountains act as a natural barrier between India and countries like Nepal and China.
- The mountain chain runs for almost 2500 kilometres and contains some of the highest mountains in the world.

B **Desert**
- India is bordered in the north-west by the Thar Desert.
- During the hot season, the temperature can reach up to 50°C during the day.
- The desert is difficult to cross and water is limited.

C **Plains**
- In the central part of India lies the Indo-Gangetic **plain**.
- This plain is mostly made up of the Brahmaputra River Valley, Ganges River Valley and Indus River Valley.
- There are also areas that have low-lying **floodplains**.
- The soil is incredibly rich due to the silt the rivers bring, which makes it ideal for farming.

D **Plateaus**
- In the south of India, there is a large area known as the Deccan Plateau, which is bordered on either side by tall cliffs.
- In the hot season, temperatures on the **plateau** can reach 38°C.
- The Deccan Plateau doesn't receive high amounts of rainfall, but the introduction of irrigation means that most of the plateau is now used for farming.
- India's **monsoon season** lasts from July to September, which is when most parts of the country receive the majority of their rain for the year. Even today, farmers rely on good rainfall during the monsoon season to ensure that their crops grow.

plain a large area of flat land

floodplain an area of flat land near a river that is often flooded when the river becomes too full

plateau a large, flat area that is high above sea level, often surrounded by mountains

monsoon season a period of time between May and September where the wind blows from the south-west bringing with it a large number of storms
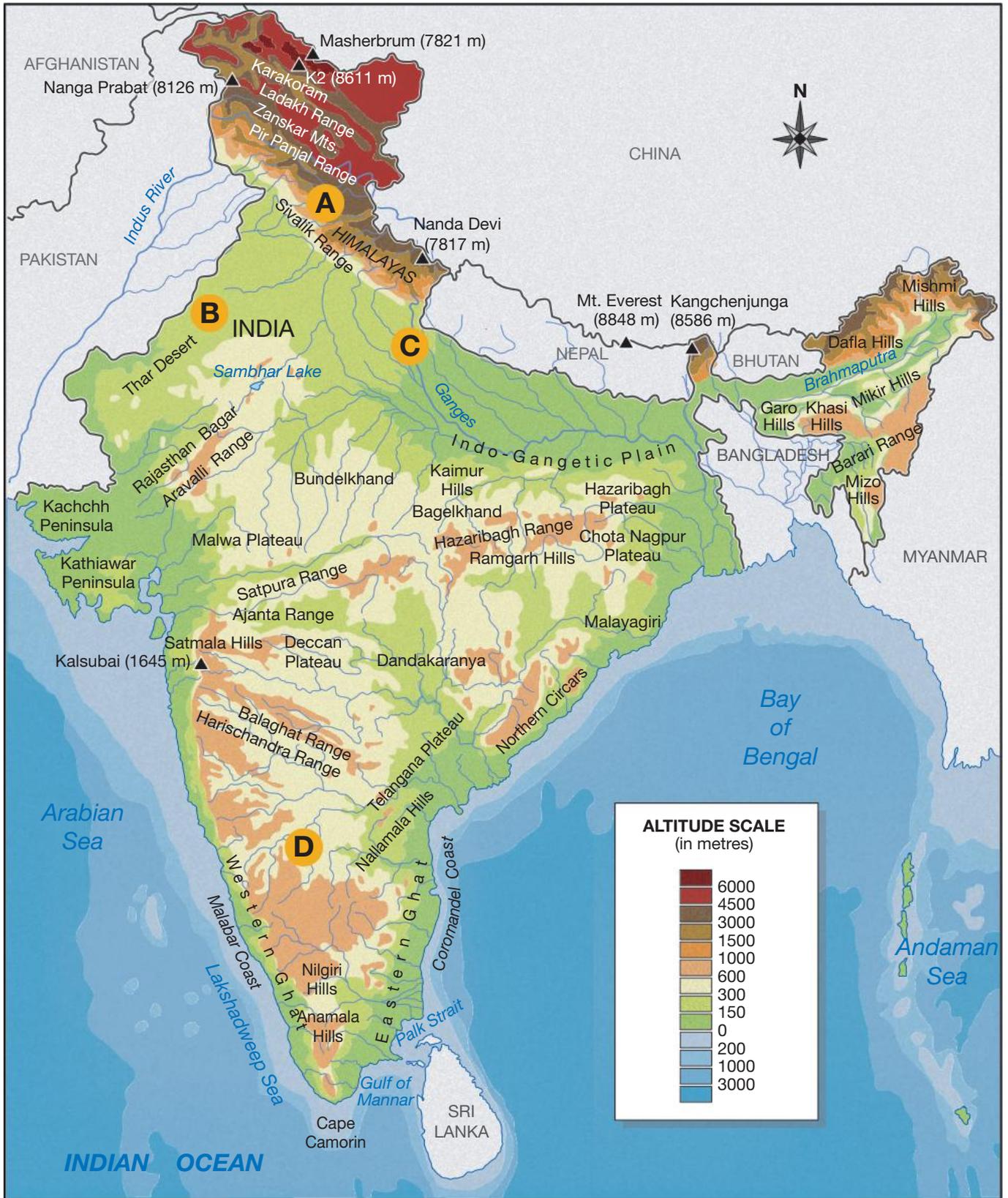
▲ **Source 9.6** The physical features of ancient India played a major role in determining the location, way of life and religious beliefs of the earliest human settlements.

Indus Valley civilisation

There is archaeological evidence that India had one of the earliest known civilisations in human history. The civilisation is from the Indus Valley and is known as the Harappan civilisation. The historical evidence suggests that this civilisation began around 5000 BCE and lasted until about 1500 BCE. Despite this ancient society being one of the most advanced and successful at the time, the civilisation in the Indus Valley remains a mystery. We know the Harappans had a complex writing system of more than 400 symbols, but so far no one has been able to translate it.

Location

The Indus Valley civilisation was located on a huge floodplain between the Indus River and the Sarasvati River. The earliest evidence of human habitation in this area dates from 7000 BCE, after small groups of farmers and herders settled there and traded with one another.

By around 2600 BCE, the Indus Valley civilisation had developed; more than 1500 villages and cities have been found in this area. Being on a floodplain between two rivers meant that the Harappans had a reliable source of water. There was yearly flooding from the rivers and reliable rainfall in most areas. This allowed them to grow a range of crops like wheat, barley, melons, dates, sesame, peas, nuts and cotton.

Trade

The Harappans traded extensively. They traded goods between towns and cities in the Indus Valley, and with other ancient civilisations. Most cities were built on or next to the river, which meant that merchants could use small river boats to move their goods quickly.

The Harappans also built larger boats that could make longer journeys. Archaeologists have discovered Indus seals, jewellery and weights as far away as Mesopotamia. Trade records show that trade between the two empires occurred frequently.

The Harappans would trade with many different people for metals like copper and gold, and precious and semi-precious stones like lapis lazuli and carnelian. They used these items to make tools, jewellery, figurines and more.

► **Source 9.7** This is a digital illustration of an Indus Valley seal from c. 2500 BCE. It shows the Harappan civilisation's script and a Zebu bull. What does this suggest to you about this ancient society? What might these seals have been used for?

◄ **Source 9.8** The city of Harappa was the centre of the Indus Valley civilisation until c. 1300 BCE. This photograph shows the drainage system that was present throughout the city and the remnants of an old well. Many cities in the Indus Valley had numerous wells. For example, Mohenjo-daro had more than 700 wells within its city walls.

Society

The cities of the Indus Valley show that society was very advanced. However, because archaeologists cannot read the Harappan script, they do not know for sure who built these cities and who ruled them.

The two largest cities in the Indus Valley civilisation, Harappa and Mohenjo-daro, are very similar.

▲ **Source 9.9** Mohenjo-daro was abandoned in the nineteenth century BCE and the site was not discovered until the early twentieth century CE.

Some of their similarities include:

- The main streets are laid out in an organised grid pattern, along the points of a compass.
- The buildings are mostly made of mud bricks of uniform size and shape.
- Many of the buildings have been built with slightly raised platforms, to protect them from the regular flooding of rivers.
- Houses were attached to a drainage system that used gravity to move the waste.

- Houses had baths and there is an extensive system of wells in cities and villages.

At Mohenjo-daro, one of the largest and most impressive buildings excavated is known as the 'great bathhouse'. The building was enormous. It contained a large central pool, bordered on each side by stairs that led to the pool. To the north of the baths, a series of eight rooms with bathing platforms was discovered. Archaeologists think it must have been used for rituals of some sort.

The Harappans were one of the earliest civilisations and the most advanced. The Harappans mostly remain a mystery to modern archaeologists because nobody quite knows who ruled them or how their society was organised. Until someone deciphers the writing they left behind, this ancient civilisation will probably remain that way.
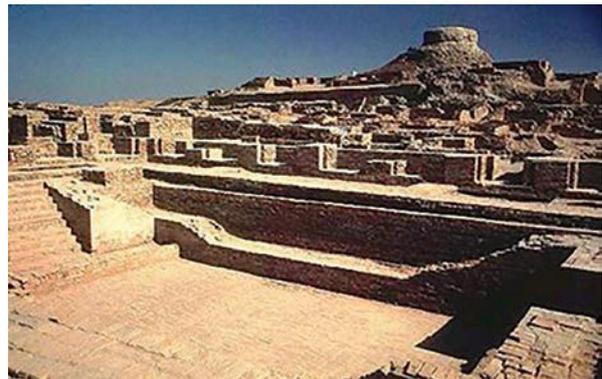
▲ **Source 9.10** The great bathhouse at Mohenjo-daro. The main bath is in the centre and steps lead to the edge of the bath at one end. What do you think this sort of huge bathhouse might have been used for?

Amazing but true …

Stepwells first appeared in Rajasthan and Gujarat around 3 CE. It is estimated that there were more than 3000 of these stepwells scattered across this dry area. The stepwells were dug deep into the ground as the water table was often deep below the earth. The stairs were added to give people easier access to the water. Stepwells were incredibly clever. In the rainy season, they could fill and become places to store water and in the dry season they provided access to water from below ground. Though the stepwells were originally built to help store water and allow people to access it, in the long dry season they also became places to bathe and pray. There is even evidence to suggest some stepwells became functioning Hindu temples.

▲ **Source 9.11** The Chand Baori Stepwell in Rajasthan is one of the most famous examples of stepwell architecture.

MAKING THINKING VISIBLE 9.2

See, think, wonder

Look at Source 9.12, then answer the questions that follow.
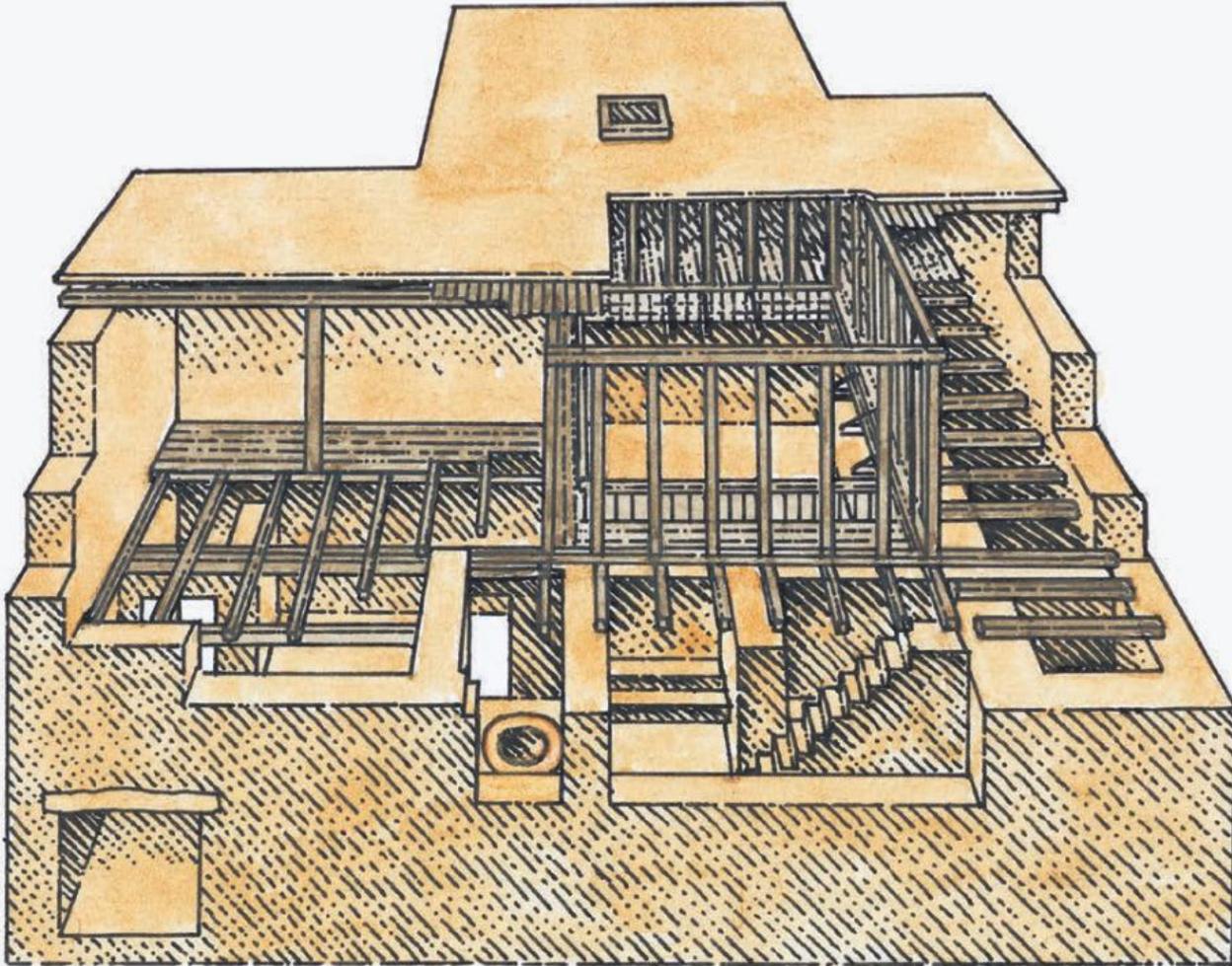
▲ **Source 9.12** This is an illustration of a house from the city of Mohenjo-daro in the Indus Valley. It has a complicated system of drainage and waste management that was not matched until the Roman Empire.

1 What do you *see* in this image that might be similar to something you would find in a modern home?

2 What does this make you *think* about the Harappan civilisation?

3 What does this make you *wonder*?

Key concepts: sources, evidence, significance   **HASS skills:** analysing, communicating and reflecting

ACTIVITY 9.1

Using historical sources as evidence

We call artefacts that help us learn about the past 'sources'. A *primary source* is one that comes from the time period you are investigating.

The ruins of Mohenjo-daro shown in Source 9.13 are a primary source. We can examine this picture and ask ourselves a few questions about it to help us learn more about the Harappans and how they lived. Copy the table that follows the picture and fill in your responses about the Mohenjo-daro remains.

▲ **Source 9.13** These are the remains of houses and streets in Mohenjo-daro. The city dates back to c. 2500 BCE.

Responding to the source

Questions	Answers
What type of source is this?	
Who created it, and when?	
Describe what you see in this source.	
List two or three things this image shows us about Harappan society.	
What evidence from the source supports this? (Identify specific things in the picture that helped you to reach your conclusion.)	
What questions do you still have about the source?	

Key concepts: sources, evidence, cause and effect, significance, perspectives

HASS skills: analysing, evaluating

END OF SECTION REVIEW 9.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Explain the four key geographic features of India.

Interpret

2 If you were creating a settlement in ancient India and you wanted it to have the best chance of success, where would you build it and why?

3 What geographic features influenced the location of the Indus Valley civilisation?

4 How did these features help the Harappans become a successful civilisation?

Argue

5 Using the sources in this section, describe some of the major achievements of the Indus Valley civilisation. Which of these achievements do you think was most significant and why?

6 Conduct some research into another ancient civilisation. What are the similarities and differences between the two societies?

7 Research online to see the location of the major ancient cities of Harappa and Mohenjo-daro. What elements of ancient India's geography might have influenced the locations of these cities?

8 Why is it significant that the Harappans had drainage systems in their homes?

▲ **Source 9.14** This is a photo of the Harappa archaelogical site. The city is believed to have had as many as 23 500 residents and occupied over 100 hectares at its greatest extent, which was a very large city for the time.

Key concepts: sources, evidence, cause and effect, significance

HASS skills: questioning and researching, analysing, evaluating, communicating and reflecting

9.5   Roles of key groups in ancient India, and the influence of law and religion

FOCUS QUESTION

What was everyday life like in ancient India?

Social structure

The **caste** system developed in ancient India around 1500 BCE. This was during the Vedic period, which was around the time that the *Rigveda* was first written down. The *Rigveda* mentions a cosmic man who was sacrificed in order to create the universe. This cosmic man's body was divided into four parts and each section became a *varna*, or section of society.

> The *Brahman* was his mouth, of both his arms was the *Rajanya* (*Kshatriya*) made. His thighs became the *Vaisya*, from his feet the *Sudra* was produced.

▲ **Source 9.15** *Rigveda*, chapter 5, 10:90, c. 1200 BCE

The divisions of the cosmic man is the earliest-known form of the caste system. Each part of the body had a role to fulfil to ensure that society functioned effectively.

- *Brahmins*: the *Brahmins* were the priestly class. They were highly regarded. The colour associated with this group was white because they were seen to be the most pure. They were priests who were responsible for performing sacrifices on behalf of others. Their role also included writing and enforcing the laws. The *Brahmins* were highly educated. This meant that they also developed many philosophical and scientific works. They also served as advisors to kings and held government positions, which gave them great power and wealth. They were often given lands and villages by kings.
- *Kshatriyas*: the *Kshatriyas* were the warrior class. This was where most leaders and

Caste
Guild or corporation

Brahmins Priests and teachers

Kshatriyas Warriors and rulers

Vaisyas Farmers, traders and merchants

Shudras Labourers, artisans and servants

Panchama Dalits (outcasts)
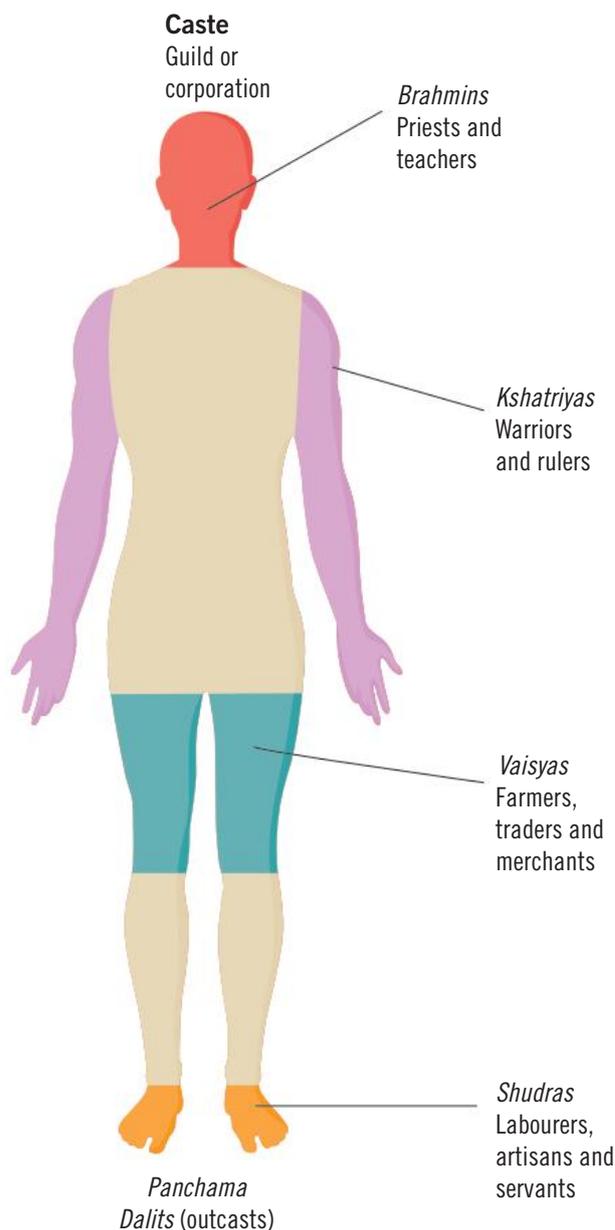
▲ **Source 9.16** The different castes representing different parts of the body of the cosmic man, according to the *Rigveda*, which is a sacred Hindu text from ancient India.

kings came from. They were responsible for the day-to-day running of the government.

caste a system of dividing Hindu society into classes

Rigveda the oldest of the sacred texts of Hinduism

They were also responsible for protecting the country from invasions. The *Kshatriyas* enjoyed great wealth and many lived quite privileged lives.

- *Vaisyas*: the *Vaisyas* were farmers and merchants. They owned land and worked it, producing crops and raising **livestock**, and selling what they produced. The *Vaisyas* were also merchants who traded across India and with other countries. Their position was seen as an important one as they brought money into the country, which helped ancient India become wealthy.

> **livestock** the term for animals like cows, sheep, pigs, goats and chickens that people raise

- *Shudras*: the *Shudras* were a large class of people who were artisans and servants. They were labourers, metalsmiths, jewellers, weavers and servants. The *Shudras* worked for those in higher *varnas* or they produced goods that people needed or things that the *Vaisyas* could sell.

The caste system began to change from around 900–200 BCE. During the Vedic period there is evidence that people were able to move between the castes. They could pursue different careers and roles, depending on their interests and skills. After this point, the caste system began to grow and many *jatis*, or sub-castes, began to appear. The ancient peoples began to believe that this system was a 'divine design'. They thought that people were born into particular castes as a result of their behaviour in past lives.

During this time, a strict system of rules was developed to control the behaviour of each caste. The caste a person was born into determined the sort of jobs they would have. Marrying between different castes was forbidden and there were food taboos for certain castes. Anyone who broke caste rules could be punished severely.

Panchama

During the later Vedic period and also after it, there came to be a fifth *varna* in the social structure. The people within it were known as *Panchama*, which means 'untouchable'. The preferred term for this caste is *Dalit*, which means 'scattered' in Sanskrit. The people who belonged to this *varna* were seen as ritually impure, because of the work they did. Those in this group were responsible for tasks like sweeping the streets, working in crematoriums, butchering dead animals and tanning hides to make leather.

Although their work was necessary to ensure that society could function, other members of society avoided contact with them. They were very poor. There were lots of rules the *Panchama* had to follow, including:

- they were not allowed to stay sitting down in the presence of someone of a higher caste
- they were not allowed to use the same water sources as those members of higher castes
- they were forbidden from studying sacred religious texts.

This caste system still exists in India today, and although the level of *Dalit*, or untouchables, has been made illegal by the Indian Government, many people from this lowest caste are still discriminated against.

Women and marriage

Before the Vedic period, women in India had an important role in society and were seen as equal to men. Women were able to:

- participate in and lead religious rituals
- undergo an initiation into religious life
- gain an education
- choose their husbands
- inherit land and money
- take up positions in the government, including acting as regent for those who ruled the land.

Over time, women in ancient India came to be seen as subordinate to men. This started when the caste system became more established. The customs changed and women were prevented from leading religious rituals. Also, education for women changed and fewer women were taught to read and write. The role of women in society became more limited. They were expected to manage the house, produce children and take care of them.

ACTIVITY 9.2

Using historical sources as evidence

Read the following text, then copy the table shown and fill it out.

> The entire world of noble people bows to the glory of the glorious woman so that she enlightens us with knowledge and foresight. She is the leader of society and provides knowledge to everyone. She is symbol of prosperity and daughter of brilliance.
> May we respect her so that she destroys the tendencies of evil and hatred from the society.

pyre a platform with wood and other flammable items on it where a dead body is placed to be burned

▲ **Source 9.17** An extract from the *Rigveda* about women and their role in ancient society during the Vedic period

Responding to the source

Questions	Answers
What type of source is this?	
Who created it, and when?	
What is the message of this source?	
What evidence can you find in the source to support your interpretation? (Include specific examples of things you read in the source.)	
Who do you think the audience was?	
What extra information do you need to interpret this source?	

Key concepts: sources, evidence, significance, perspectives

HASS skills: analysing, communicating and reflecting

During the Vedic period, rules forbidding people from marrying outside their castes came into existence. This meant that the pool of people a woman could choose to marry became smaller, so parents began to arrange the marriages of their daughters and sons to ensure that they married someone suitable. This is when the first instances of child marriage are recorded in India.

Women were also forbidden from remarrying. A widow had to spend the rest of her life without a husband.

Sati

Around 5 CE a new custom began to arise known as *sati*. This was when a married woman threw herself on the funeral **pyre** of her husband so that she might die with him. This came about for many reasons. Women were not allowed to remarry after their husbands died and they relied on their families to care for them.
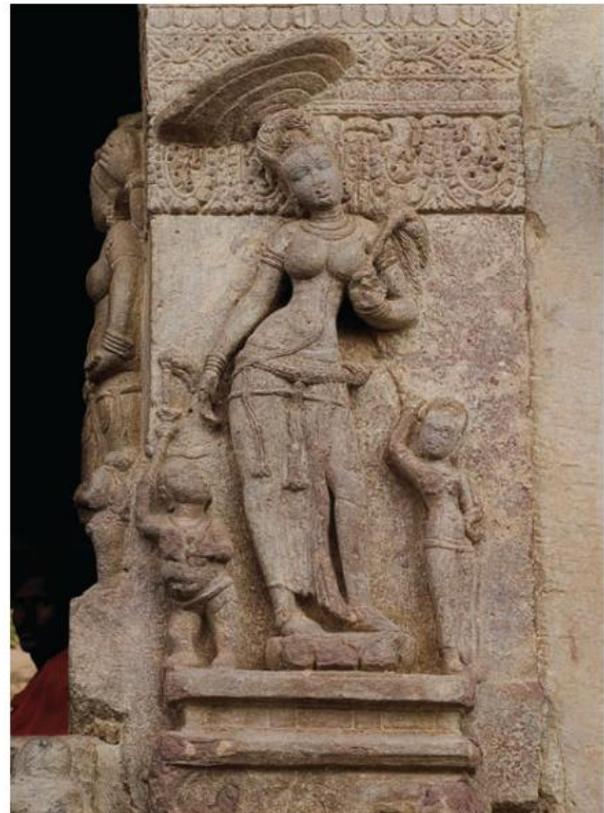
▲ **Source 9.18** A carving of a woman on one of the buildings at the Virupaksha Temple in Pattadakal, Karnataka

In some cases, a family might not have been able to look after a widow. Many people looked down on widows and treated them poorly. The practice of *sati* was not banned in India until 1829 CE.

Food and drink

Crops grown in the Indus Valley suggest that people at that time ate a varied diet. They would have eaten grains like wheat, barley and rice. They also ate melon, peas and dates. During this period, cattle, sheep, goats and pigs were kept and used for food and other products like milk.

However, with the rise of Hinduism, Buddhism and Jainism, diets began to change. The emperor Ashoka spread Buddhism across India during his reign (c. 265–238 BCE) and this led to a rise in people following a vegetarian diet. The Jains also follow a strict vegetarian diet as part of their attempts not to harm any living creature. By 4 CE, Hindus had come to view cows as sacred and they no longer ate the meat of cows.

Education

Education was very important in ancient India. The type of education a person received depended on their social position and gender. During the Vedic period, young students would leave home and live with their teacher. The student became a member of their teacher's household and often studied for years. They would learn to write, and they would read sacred religious texts and books on law or philosophy.

Children of traders and merchants received a basic education to ensure they could read, write and perform the basic arithmetic they needed to buy and sell goods.

Apprenticeships existed and many children were sent to live with master craftsmen. They would learn the skills of a trade, like jewellery making, from this master over many years. Eventually, they would set up their own shops.

Those of the lower classes would have received no formal education. They would have learned practical skills from their parents and others around them.

Amazing but true …

Even in modern India today, because of their sacred status, cows are allowed to roam freely across the countryside. It is not unusual for cows to be lying down or walking on a main road or highway – the traffic simply slows down and moves around them! Some people estimate that up to six million cows are currently wandering in India.

▲ **Source 9.19** The Hindu god Krishna hugging two cows

▲ **Source 9.20** A potter making a jar in the traditional manner. Why might parents have wanted their children to serve apprenticeships?

ACTIVITY 9.3

Using historical sources as evidence

Look at Source 9.21, then answer the questions that follow.

Responding to the source

1 Describe what is happening in this source.
2 Who might this source have been created for?
3 What does this picture show you about education in ancient India?
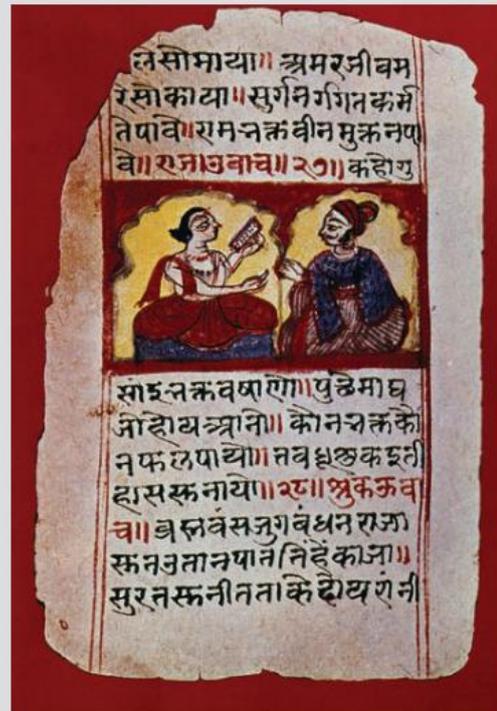
► **Source 9.21** A section from an ancient copy of the Vedas

Key concepts: sources, evidence, significance

HASS skills: analysing, communicating and reflecting

A snapshot of life in ancient India

People lived in small houses with flat roofs. These roofs were important because they gave people extra space to work, play and have access to a cooling breeze. Since the weather was often very hot in the Indus Valley, access to a cooling wind was important.

Once they woke up, people would get to work. There is evidence that the ancient cities had many craftsmen. People worked from their homes or in small workshops to create jewellery, pottery and other objects. Farmers would water their fields using water that had been moved from the river through a clever system of canals.

In the evening, people would enjoy a meal and spend some time in their houses playing board games or with dice. Archaeologists think that the people of the Indus Valley may have even invented dice.
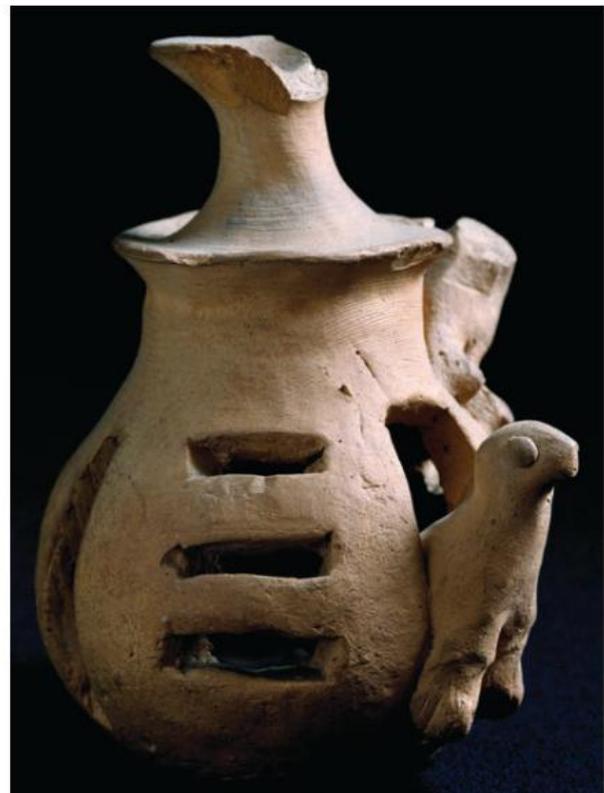
▲ **Source 9.22** A terracotta birdcage produced in Mohenjo-daro. In the afternoon, craftsmen and farmers might head to the market. People did not use money at this time, so they would barter and trade their goods. A farmer might trade part of their crop for cloth, pottery or other household goods. A craftsman would trade their work for food and other goods.
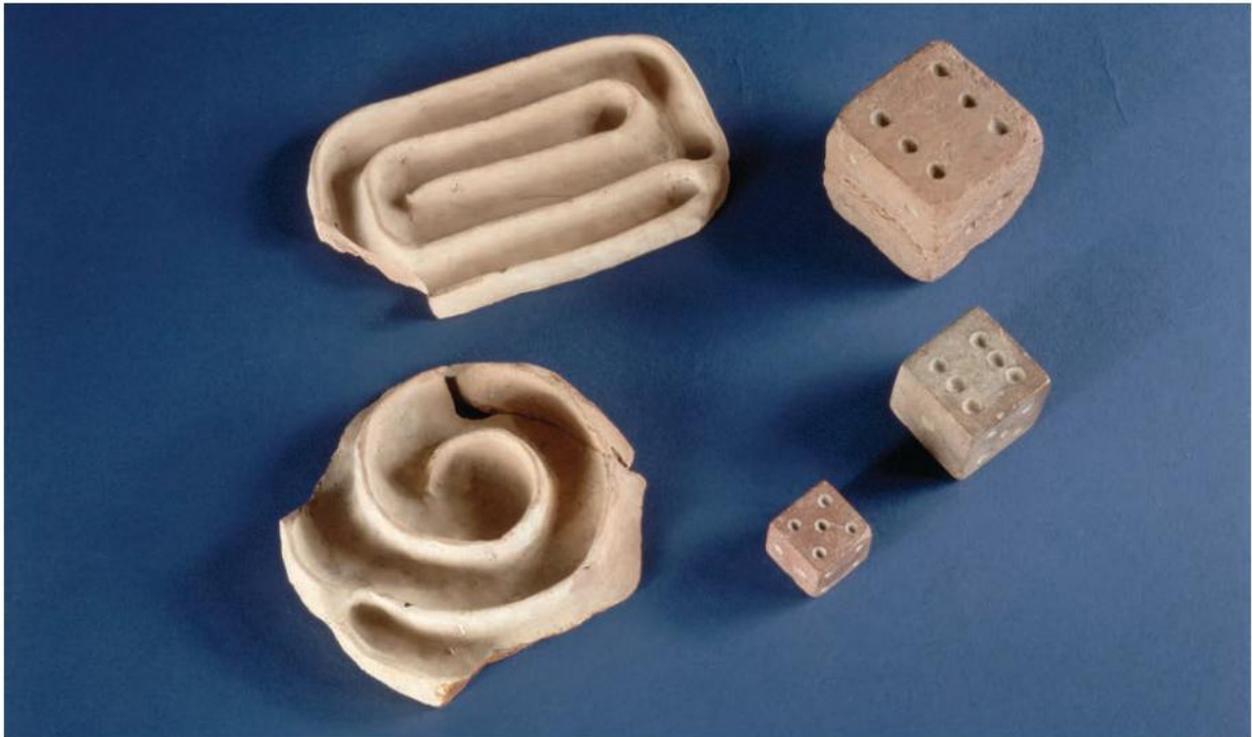
▲ **Source 9.23** Dice and maze games from the Indus Valley civilisation

END OF SECTION REVIEW 9.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What is the caste system based on?
2 What happened to the caste system between around 900–200 BCE? Why is this significant?
3 Draw a pyramid that represents the social structure of ancient India. Label each level, and describe some of the duties and occupations in dot points.

Interpret

4 Why were the *Panchama* treated so differently to other members of society?
5 What does Source 9.18 suggest about how women were valued in ancient India?
6 How were education and social class linked?

Argue

7 Which group in the caste system had the most important role in society? Justify your answer in your response.
8 Why did the role of women in society change over time?
9 Did religion influence daily life in ancient India?

Key concepts: continuity and change, cause and effect, significance, perspectives, contestability

HASS skills: analysing, evaluating, communicating and reflecting

9.6 The significant beliefs, values and practices of ancient India

FOCUS QUESTION

What were the significant beliefs and values in ancient Indian society?

Hinduism

Hinduism is thought to be one of the oldest religions currently practised in the world today. It began somewhere in the north-west of India. The *Rigveda*, one of the earliest recorded sacred texts of Hinduism, is thought to have been written around 1500 BCE.

The *Rigveda* is one of four Vedas that contained prayers and hymns. The Vedas are ancient texts that outline the rituals and philosophy of Hinduism. The *Rigveda* is still one of the most sacred texts in Hinduism today. Many sections of the Vedas contain writing that is older than the sacred writings of any other religion in the world.

A core belief in Hinduism is that the soul never dies. All creatures are involved in a cycle of death and rebirth known as ***samsara***.

Samsara means that a person's actions in their current life determine what their future lives will be like. Good actions generate positive karma, while bad actions generate negative karma (karma here refers to the actions a person makes to create a result). The type of karma that will be experienced in the next life encourages a person to live a moral life so that when they are reborn, their soul is in a better position than in their current life.

The ultimate aim of a Hindu is to attain *moksha* (freedom from the cycle of reincarnation). One sacred text, the *Bhagavad Gita*, teaches that there are three paths to achieve *moksha*:

- the path of duty
- the path of devotion
- the path of knowledge.

> **samsara** the cycle of life death and rebirth

Amazing but true …

One of the ways the teachings of Hinduism have been spread since ancient times is through epic poems. The two most famous epics are the *Mahabharata* and the *Ramayana*. These poems contain important messages about how people should behave. The *Mahabharata* and the *Ramayana* are some of the earliest examples of literature in the world, and they have been told and retold for thousands of years.

▶ **Source 9.24** This illustration from the late seventeenth century shows a king travelling to Prince Rama's wedding.

ACTIVITY 9.4

Using historical sources as evidence

Look at the two sources shown here, then answer the questions that follow.

SOURCE A

▲ **Source 9.25** A scene from the *Ramayana* painted on the wall of the Matancherry Palace in Cochin, India

SOURCE B

Known to the world by Rama's name;
With soul subdued, a chief of might,
In scriptures versed, in glory bright.
His steps in virtue's paths are bent,
Obedient, pure, and eloquent.
In each emprise he wins success,
And dying foes his power confess.
Tall and broad-shouldered, strong of limb,
Fortune has set her mark on him

▲ **Source 9.26** An extract from the epic poem, *Ramayana*, c. 500–100 BCE. The *Ramayana* tells the story of prince Rama and his quest to rescue his wife Sita from the demon king Ravana.

Responding to the sources

1 Referring to Source A, what do you notice about the figure at the centre of the image?

2 Copy the following table, then fill it in with information about Source B.

Type of source:	Creator and date of creation:
What is the message of this source?	
What evidence can you find in the source to support your interpretation? (Include specific examples of things you read in the source.)	
Who do you think the audience was?	
Why was this source written?	

Key concepts: sources, evidence   **HASS skills:** analysing, communicating and reflecting

karma in Jainism it is believed that karma determines quality of life. Karma is thought to be a physical substance that sticks to the soul. The happiness of life results from how much karma sticks to the soul because of good or bad actions and thoughts that are carried out.

Jainism

Jainism developed from the Hindu tradition. Jainism is a religion that suggests gods and spirits do not help humans, so humans must help themselves by following the five *mahavratas* (great vows). Jains believe all living things have an immortal soul that is reborn many times before finally achieving a state of perfect bliss. The only way for a person to achieve a state of bliss is to completely rid themselves of their **karma**.

The five *mahavratas*

The five *mahavratas* of Jainism	
Ahimsa: non-violence	A vow not to harm, injure or kill any other living being
Satya: truth	A vow to always speak the truth, unless it causes pain, anger, hurt or death to another living being
Achaurya or *asteya*: non-stealing	A vow not to take anything that does not belong to you
Brahmacharya: chastity	A vow to avoid indulging in one's senses
Aparigraha: non-attachment or non-possession	A vow to avoid being attached to thoughts, feelings and external possessions

▲ **Table 9.1** The five *mahavratas* of Jainism

Buddhism

Buddhism is another religion that has its roots in ancient India. Buddhism is based on the teachings of Siddhartha Gautama, who is thought to have lived from 563 to 483 BCE.

Siddhartha was born as a prince in Lumbini, which is in modern-day Nepal. For the first years of his life, he lived in luxury at his father's palace and was deliberately sheltered from the hardships of living. However, when he was 29, Siddhartha secretly left the palace and, for the first time, saw the old, the sick and the dead, as well as a monk in meditation.

Moved by the suffering he saw in ageing, sickness and death, and inspired by the monk's spiritual solution, the prince renounced all his wealth and everything he owned. He shaved his head and changed into the clothes of a beggar, and left the palace in search of enlightenment.

After six years of searching, Siddhartha sat beneath a bodhi tree in Bodh Gaya in India, and vowed to meditate until he discovered the truth about reality and how to escape *samsara*. Siddhartha said that he would not move until this was achieved, and he went on to meditate beneath the tree for 49 days until he attained enlightenment.

When Siddhartha achieved enlightenment, he became known as the Buddha and taught what he had discovered to others. The Buddha's key teaching was how people can understand the truth of reality to free themselves from *samsara*. The followers who concentrate on this teaching follow Theravadan Buddhism. Mahayanan Buddhists believe the Buddha also taught some of his students how to become a Buddha themselves so that they could best help others to be free.

All Buddhists believe that every living being is caught in an endless cycle of birth, suffering and being born again. A fundamental spiritual aim of all Buddhists is therefore to be released from the never-ending lives of ageing, sickness and death.
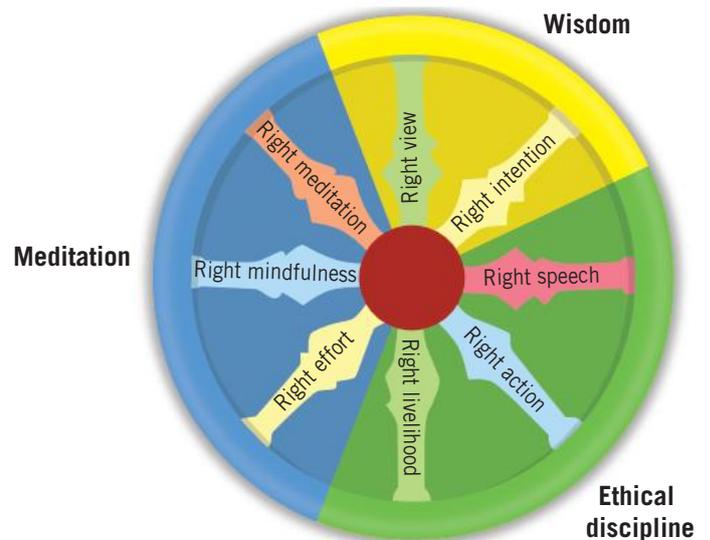
▲ **Source 9.27** The Buddhist symbol of a wheel is shown here with eight spokes, which represent the eightfold path taught by the Buddha. The yellow section of the wheel shows practices that develop wisdom, the green section shows practices that develop ethical conduct and the blue section shows practices that enable a person to develop an intense focus. Each of these eight practices leads a person to be freed from *samsara*. Why do you think the eightfold path is represented as a wheel?

Since every Buddhist believes that thoughts, speech and actions will affect their future lives, they follow the Buddha's advice on how to conduct themselves.

In Theravadan Buddhism, the Buddha's teachings on following the eightfold path are emphasised.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 9.1

Developing empathy

Empathy is an important part of history because it helps us understand the beliefs and values of cultures and people who are different to us. This is important in our daily lives, too, because it helps us develop relationships with all sorts of people in the world around us.

Carry out some research about Hinduism to answer the following questions.

1 How many people in the world are Hindu?

2 Where do people who believe in Hinduism live?

Now use the information you have from this chapter, your research and your answers to the review questions in the End of section review 9.6 to respond to the following question:

3 Why do you think Hinduism is a significant religion? Discuss your reasoning with a classmate.

Key concepts: empathy, significance   **HASS skills:** researching and questioning, evaluating

END OF SECTION REVIEW 9.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What are the three main belief systems of ancient India?

2 Which religion did Jainism evolve from?

3 Define the terms karma, *samsara* and *moksha*.

4 Why did Siddhartha Gautama renounce his life as a prince?

Interpret

5 Draw a Venn diagram that shows the similarities and differences between Hinduism, Jainism and Buddhism.

6 How do the different religions in India emphasise living in harmony with nature?

Argue

7 What is similar about all three belief systems? How do you think this might have influenced Indian society?

Key concepts: significance, perspectives, empathy   **HASS skills:** evaluating, communicating and reflecting

9.7   Contact and conflict with other societies

FOCUS QUESTION

How did trade and war with other countries affect ancient Indian society?

The Mauryan Empire

The Mauryan Empire lasted from around 321–185 BCE and was founded by Chandragupta Maurya. This empire is remembered as being one of the largest in Indian history. It is known for having effective government and for bringing wealth to India.
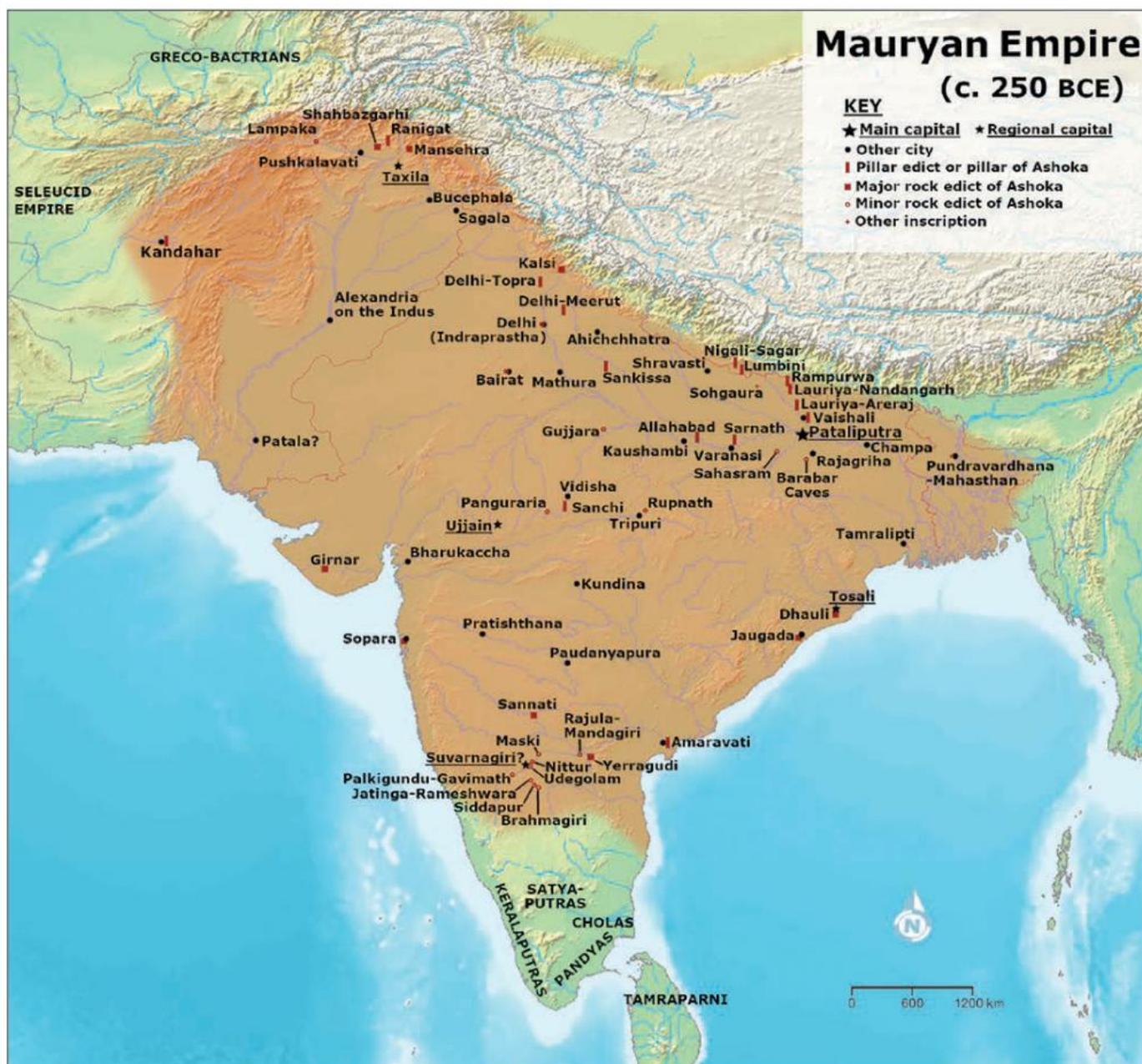
▲ **Source 9.28**   The Mauryan Empire around 250 BCE, at the time of Ashoka the Great. Ashoka was the grandson of Chandragupta Maurya. The empire reached all the way into modern-day Afghanistan. Compare and contrast this with the map of modern-day India shown in Source 9.29. What do you notice about them?

▲ **Source 9.29** A map of India showing the country's modern borders

Chandragupta Maurya

Not much is known about the early life of Chandragupta Maurya. He is thought to have studied in Taxila, a city in the north-west of India, before building his army.

In around 310 BCE, Chandragupta Maurya rebelled and seized control of Magadha from King Dhana Nanda. Over the course of his life, Chandragupta Maurya created a huge empire, fought many wars and took control of a lot of land. He advanced into the north, and then into central and western India. This enabled him to gain control of important ports that traded with other parts of Asia.

▲ **Source 9.30** Chittorgarh Fort was built in 7 ce and is one of many forts built across India by the Mauryan Empire to celebrate military victories. Besides celebrating their victories, why might the Maurya have built forts in their newly conquered territories?

Amazing but true …

The Mauryans were introduced to astronomy through their contact with the ancient Greeks. Under the Mauryans, and a subsequent dynasty known as the Guptas, the study of astronomy flourished. Early Indian astronomers were among the first to suggest that the Earth rotated on its axis every day and to come up with an approximation of pi. One Indian astronomer, Brahmagupta, estimated the circumference of the Earth and his estimate remains one of the most accurate ever made!

▲ **Source 9.31** The world's largest sundial, at the Jantar Mantar observatory in Jaipur, India

MAKING THINKING VISIBLE 9.3

See, think, wonder

Examine the two columns shown in the source, then respond to the questions.

Responding to the source

1 What do you *see*?
2 What do you *think* about that?
3 What does it make you *wonder*?

▶ **Source 9.32** The pillar on the left is a reproduction of the sphinx at Delphi in Greece. The pillar on the right is one of the pillars of Ashoka.

Key concepts: sources, evidence, cause and effect

HASS skills: questioning and researching, communicating and reflecting

Contact

The Mauryan Empire included modern-day Afghanistan, which was an enormous asset for the Mauryans because the location was an important hub for trading. The Mauryan Empire's control over this area enabled them to have contact with other ancient civilisations like those of Greece, Rome, Egypt, Iran and Iraq. There is evidence that contact with these nations influenced Indian architecture, technology and art, and that the Indians gave these countries valuable knowledge about science and technology in return.

The Mauryans sent ships to trade in Africa and the Middle East. They traded spices, diamonds, pearls, ivory, cloth made from cotton or wool, and precious woods like sandalwood. This brought them immense wealth and power, and enabled them to maintain an enormous army and government.

◀ **Source 9.33** These are silver coins from the Mauryan Empire, c. 207–197 BCE. The Mauryan Empire created a single system of money in the lands it controlled.

Conflict

During his reign from 336 to 323 BCE, Alexander the Great and his armies invaded the Indus Valley and gained control of an area in modern-day Punjab, which is in northern India. Though Alexander was forced back by the armies of the king at the time, he still maintained control of a section of India until his death in 323 BCE.

After Alexander died, one of his successors, Seleukos Nicator, attempted to take back control of the Indus Valley. Chandragupta Maurya's armies forced Seleukos Nicator back. In 305 BCE, Seleukos Nicator was forced to surrender not only the Indus Valley to Chandragupta Maurya, but also a large amount of land in modern-day Afghanistan. This victory was important because it gained the Mauryan Empire a reputation as skilled rulers and warriors.

Cavalry

The **cavalry** at the time of the Mauryan Empire were highly trained and well equipped. They were mostly professional soldiers from the *Kshatriya varna* and they trained for years to master the skills for battle. Each rider carried two javelins that could be thrown during battle and a spear used in a charge against enemy **infantry**. There were more than 30 000 cavalry in Chandragupta Maurya's army and they were devastating in battle.

Infantry

The army of the Mauryan Empire was huge. It is estimated that more than 600 000 men were in the infantry alone. This meant that India had the largest army in existence at the time. Each soldier carried a short sword and a shield made of hide. Many would have carried bows made from bamboo.

Elephants

Elephants were an important part of the army in India from before the Mauryan period. They were so effective during battle that Chandragupta Maurya kept up to 9000 elephants as part of his army.

Enemy soldiers were terrified of facing the enormous creatures in battle. Although the elephants were slow, they could cause chaos on a battlefield and easily kill many soldiers. The ancient Indian war elephants carried four men: three archers would shoot at the enemy, while one *mahout* (an elephant trainer) led and controlled the animal.

> **cavalry** soldiers who ride horses
> **infantry** soldiers who fight on foot

◀ **Source 9.34** An illustration of an elephant in battle, created around 1750 CE in Rajasthan, India

Amazing but true …

Elephants appeared in the artwork of the Indus Valley civilisation and although it is not known exactly when they began being domesticated, it is clear that by 4 BCE Indian kings kept many elephants as part of their army.

After Seleukos Nicator won a battle using the 500 elephants gifted to him by Chandragupta Maurya, other civilisations like the Persians, Egyptians and Carthaginians began to train their own elephants for war. Elephants then became a common feature of armies in this region.

▲ **Source 9.35** Coins minted during the reign of King Seleukos Nicator, c. 288 BCE. Note the elephant on the reverse of the coin. What does this show us about the significance of elephants to the ancient Greek king?

Decline

After the death of Ashoka the Great in 238 BCE, the Mauryan Empire began to crumble. There have been many reasons suggested for this.

One suggestion is that the empire was just too big. It covered most of what would today be considered modern India. It would have been very challenging to govern such a vast area of land, given the length of time it took to travel from place to place.

Another suggestion is that Ashoka spent too much money building stupas, monasteries and religious sites, which meant that the Mauryan Empire did not have as much wealth. Some people suggest that Ashoka's focus on non-violence meant that the army shrank and became much weaker. This made it easier for other groups to overthrow the emperor and seize control of the kingdom for themselves.

The last Mauryan emperor, Brihadratha Maurya, was assassinated in 185 BCE by his advisor and general, Pushyamitra Shunga, who then founded his own dynasty, the Shungas.

END OF SECTION REVIEW 9.7

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What is the Mauryan Empire remembered for?
2 What were some of Chandragupta Maurya's major achievements?
3 What is a *mahout*?

Interpret

4 How did trade with other countries influence the Mauryan Empire?
5 Why were the Mauryan emperors so successful?
6 Examine Source 9.33. Why would having a single system of money be useful?

Argue

7 Evaluate the significance of the Mauryan Empire in India. How did it help create modern-day India?

Key concepts: sources, evidence, continuity and change, cause and effect, significance, contestability

HASS skills: analysing, evaluating, communicating and reflecting

9.8   The role of a significant individual in ancient India: Ashoka

FOCUS QUESTION

Why is Ashoka considered to be a significant individual in ancient Indian history?

When did Ashoka rule?

Ashoka is thought to have come to power around 265 BCE and ruled until around 238 BCE. He was one of the most important emperors of the Mauryan Empire.

Ashoka was ruthless and ambitious. Legend says that he murdered several of his brothers to ensure he inherited the throne, and he was known to be cruel and brutal at the start of his reign.

In one of Ashoka's earliest battles, his army attacked and captured the city of Kalinga. Thousands of innocent people were slaughtered when Ashoka and his troops took the city.

The battle at Kalinga was a turning point for Ashoka. After seeing all the death he had caused, he became a Buddhist and began to practise non-violence.

Achievements

Ashoka is remembered for many things:

- He helped to spread Buddhism beyond India.
- He had up to 100 Buddhist stupas built across India.
- He had many Buddhist monasteries built throughout his lands.
- He treated all religious groups within his kingdom with respect and tolerance.
- He encouraged the different peoples to live in harmony with one another.

Ashoka had numerous pillars and tablets with inscriptions placed all over his empire. These objects were made of rock and had Ashoka's rules for living and his accomplishments carved into them.

◀ **Source 9.36** This stone carving shows Ashoka with two of his queens.

Ashoka's pillars and tablets have been found as far away as Afghanistan and Pakistan. Much of what we know about Ashoka's religious beliefs and achievements comes to us through the inscriptions carved on these objects.

ACTIVITY 9.5

Using historical sources as evidence

Sources and artefacts can help us to better understand Ashoka and his significance in India's ancient past. Look at the sources below, then answer the questions that follow.

SOURCE A

▲ **Source 9.37** This triple lion is on top of one of Ashoka's famous pillars. It is often called the 'lion capital of Ashoka'. The lion capital was adopted by modern India as the country's national emblem.

SOURCE B

▲ **Source 9.38** This Ashokan rock edict, which is an order given by someone in authority like a king or a queen, is from c. 269–233 BCE. It was found in modern-day Afghanistan. The carving is unique because it is written in Greek and Aramaic. When translated into English, part of the inscription reads: 'Ten years [of reign] having been completed, King Piodasses [Ashoka] made known [the doctrine of] Piety to men; and from this moment he has made men more pious, and everything thrives throughout the whole world.'

SOURCE C

Beloved-of-the-Gods, King Piyadasi, says: Along roads I have had banyan trees planted so that they can give shade to animals and men, and I have had mango groves planted. At intervals of eight *krosas* [around every 3.5 kilometres], I have had wells dug, rest-houses built and, in various places, I have had watering-places made for the use of animals and men. But these are but minor achievements. Such things to make the people happy have been done by former kings. I have done these things for this purpose, that the people might practise the Dhamma [i.e. the teachings of the Buddha].

▲ **Source 9.39** This is a translation of an inscription found on one of the pillars Ashoka commissioned.

>>

SOURCE D
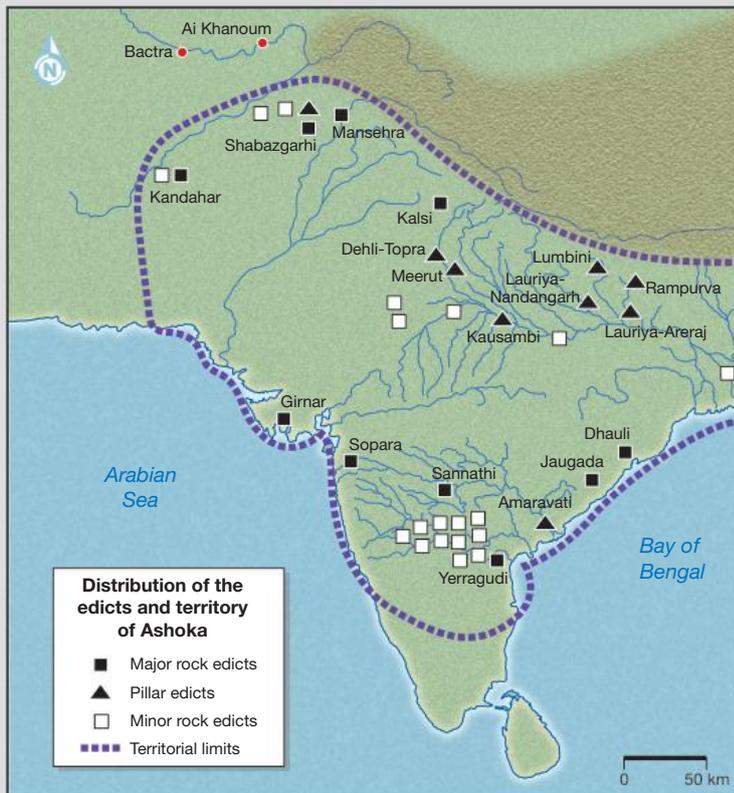
◄ **Source 9.40** This map shows where the edicts of Ashoka have been found. The edicts were carved into pillars or rocks, and gave an overview of Ashoka's religious beliefs and achievements.

Responding to the sources

1 Look at Source A and complete this sentence.

In the source I notice that …

2 Why do you think modern India adopted the triple lion on Ashoka's pillar as its national emblem?

3 Look at Source B, then copy and fill out this table.

Questions	Answers
What type of source is this?	
Who created it, and when?	
What is the message of this source?	
What evidence can you find in the source to support your interpretation? (Include specific examples of things you see in the source.)	
Who do you think the audience was?	
What does this source show us about Ashoka's importance in Indian history?	

4 Look at Source C. Why do you think the edict is written the way that it is? (*Hint:* think about who would have created this source and why.)

5 According to Source C, how did Ashoka improve people's lives in ancient India? Does this source give us a reliable understanding of Ashoka's achievements?

6 Look at Source D. Ashoka's edicts were carved on rocks and pillars all over India, but were not found in the south. Why do you think that is the case?

⚙️ **Key concepts:** sources, evidence, cause and effect, perspectives, contestability

📋 **HASS skills:** analysing, evaluating, communicating and reflecting

Ashoka is remembered for ordering hospitals to be built for people and for animals. As part of his belief in non-violence, he also forbade people from harming animals. After Ashoka's conversion to Buddhism, he became concerned with the happiness and wellbeing of his subjects. This concern was based on his interpretation of Buddhist beliefs.

During Ashoka's reign, India was a largely peaceful society and people prospered. The system of irrigation channels and wells that he ordered to be built ensured that crops were plentiful. Ashoka also made sure there were controls on prices so that all people in his land could afford food. He even appointed officials to ride through his kingdom and check on the wellbeing of the people.

ACTIVITY 9.6

Using historical sources as evidence

Examine the source shown here, then copy and fill out the table that follows.

> If one is acting thus, he is promoting his own sect [people with a set of beliefs] considerably and is benefiting other sects as well.
> If one is acting otherwise than thus, he is both hurting his own sect and wronging other sects as well.
> For whosoever praises his own sect or blames other sects ... he rather injures his own sect very severely.
> But concord is meritorious [harmony and agreement brings benefits], that they should both hear and obey each other's morals.
> For this is the desire of Devanampriya, that all sects should be both full of learning and pure in doctrine.

▲ **Source 9.41** Inscription on a rock edict, c. 270 BCE. Rock edicts like this one were created on the far edges of Ashoka's kingdom. Though he did not carve them himself, Ashoka ordered them to be made.

Responding to the source

Questions	Answers
What type of source is this?	
Who created it, and when?	
What is the message of this source?	
What evidence can you find in the source to support your interpretation? (Include specific examples of things you see in the source.)	
Who do you think the audience was?	
Why do you think this source was created? Does this affect the way you interpret the source?	

Key concepts: sources, evidence, perspectives

HASS skills: analysing, communicating and reflecting

◄ **Source 9.42** The national flag of India contains a 24-spoke wheel, which is known as the Ashoka chakra. The use of this wheel on India's flag today shows the significance Ashoka's ideas about ruling have had on modern India.

Legacy

Not long after Ashoka's death, the Mauryan Empire began to crumble. This was because of war and infighting over the throne. When Ashoka died, most of his building of hospitals, roads, wells and other public works was stopped.

Today, Ashoka is mostly remembered for his contributions to Buddhism. When he became a Buddhist, the religion was just a small sect among many in India. However, with Ashoka's patronage, Buddhism became and remained an important religion in India for the next thousand years.

The initial spread of Buddhism beyond the borders of India into what would become Sri Lanka and Afghanistan is also significant. From Afghanistan, Buddhism travelled along the Silk Road to places as far away as China. This allowed it to become a major religion. Though this spread of Buddhism did not occur until after Ashoka's death, without his work setting up monasteries and helping spread the Buddha's teachings, Buddhism may not have spread beyond India's borders.
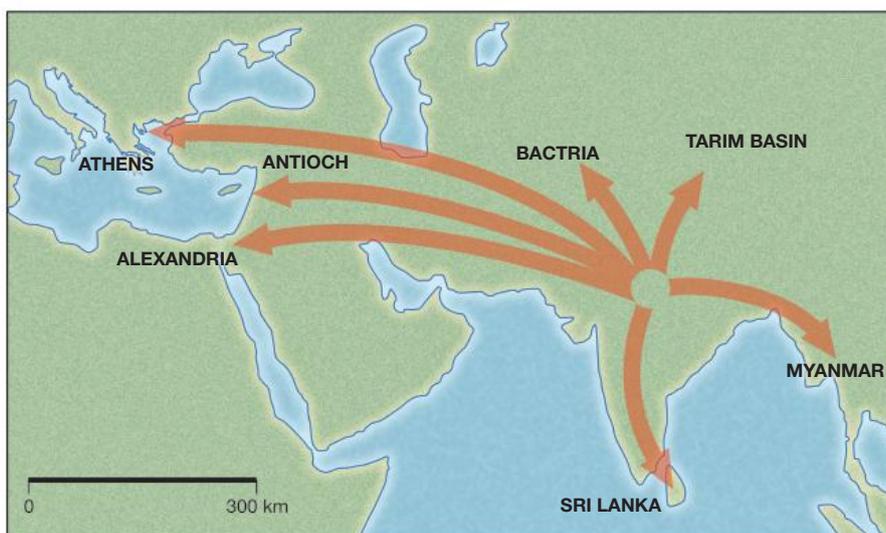
◄ **Source 9.43** Map showing the spread of Buddhism from India during the reign of Ashoka

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 9.2

Why are some things significant?

In history, when we talk about significance, we are referring to the importance that is assigned to particular aspects of the past (e.g. events, developments, individuals, groups, movements and historical sites). However, we also need to think about the reasons for making decisions about what is considered significant. It is also vital to consider why some things have been remembered and/or selected for investigation.

In this section, we selected the Mauryan Empire as significant. Why do you think this decision was made?

1   Look through Sections 9.7 and 9.8. Identify five things that you think are important pieces of information about the Mauryan Empire.

2   Explain why you chose each. Write one to two sentences for each choice you made.

3   Do you agree that the Mauryan Empire was significant? Bring all your ideas together in one short paragraph, explaining what you think. Make sure you use at least three of the pieces of evidence you collected (for Question 1) to support your ideas.

Key concepts: significance

HASS skills: analysing, evaluating, communicating and reflecting

ACTIVITY 9.7

Research task

1 Go back through Chapter 9 and find information about the rights of people in the *Panchama* (Untouchable) caste. Conduct a quick internet search to add to your information.

2 Go back to Chapter 1 and look at the definition of democracy. Now conduct a quick internet search about the rights of people living in Australia today.

3 Place all of your findings in a table with the rights of a *Panchama* in a column on one side and the rights of an Australian in a column on the other.

4 Underneath these two columns, write two to three sentences explaining how different life is for people in different places. Use two to three examples from your table to help you explain your ideas.

Key concepts: evaluating, communicating and reflecting

HASS skills: perspectives, empathy

END OF SECTION REVIEW 9.8

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What is said to have made Ashoka convert to Buddhism?

2 List some of Ashoka's major achievements during his reign.

3 What happened to the Mauryan Empire after Ashoka's death?

Interpret

4 How do we know so much about Ashoka?

5 Look at Source 9.36. How does this source represent Ashoka? How accurate do you think this representation is?

Argue

6 Do you agree that Ashoka's greatest achievement was spreading Buddhism beyond India? Explain your response.

Key concepts: sources, evidence, cause and effect, significance, perspectives, contestability

HASS skills: analysing, evaluating, communicating and reflecting

9.9 The process and importance of conserving the past

FOCUS QUESTIONS

- How do we know about this ancient society?
- How do archaeologists and historians use primary sources?
- Why is it important to preserve historical artefacts and sites from ancient India?

Archaeologists and historians are the reason we know as much as we do about ancient cultures and empires. Their work allows us to learn more about the past. Archaeologists and historians use many sources and methods to help them reconstruct what different societies were like, and to help us understand the significant beliefs of these societies.

ACTIVITY 9.8

Using written primary sources as evidence

Written primary sources are enormously valuable sources of information for archaeologists and historians. They examine written histories, personal diaries, government records, religious texts, and inscriptions on pillars, tombs and temples, to gain an understanding of ancient civilisations.

◀ **Source 9.44** This Ashokan pillar has seven edicts dating from the time of Ashoka, but it also contains an inscription from 4 CE that outlines the achievements of the Gupta king Samudragupta. Part of the inscription tells us that Samudragupta 'was skilful in engaging in hundreds of battles of various kinds … [and through] extraordinary valour … [killed] … many kings … [and made other kings] … his servants'.

1 What is the written primary source saying about Samudragupta?
2 Why do you think Samudragupta used one of Ashoka's pillars for his message?

Key concepts: sources, evidence, cause and effect   **HASS skills:** analysing

Excavations

Archaeologists find many of their artefacts through excavation. An archaeologist might conduct some research into a potential ancient site through a number of means. For example, they might take **aerial photographs**, look at old maps or examine the **topography** of an area to try and find a place that might be appropriate.

aerial photographs pictures taken from above by using planes, helicopters or drones

topography the shape and features of the land such as hills, rivers and valleys

relative dating a dating technique that uses comparison an artefact's surroundings to discover its age

absolute dating a dating technique that uses properties within an artefact to work out how old something is

salinity the amount of salt contained in something

Often excavation is made easy for archaeologists because cities often require plenty of digging beneath the earth to create new roads, buildings and public places. Archaeologists are frequently called to construction sites when important artefacts are unearthed. Archaeologists are also sometimes required to search for significant artefacts before a building project in a city commences.

▲ **Source 9.45** This gold coin shows King Samudragupta riding his horse. More than 50 coins in this style have been found in archaeological sites around India. Coins were only produced while a king was alive. After he died, his successor minted his own coins. What can we learn about Samudragupta from this artefact?

How are artefacts dated?

When archaeologists find artefacts during their excavation, one of the first things they have to do is date what they discover. There are many ways to do this.

Relative dating techniques are often used first. The two most common types of relative dating are stratigraphy and fluorine dating.

Stratigraphy involves looking at the different strata or layers of the earth. Over time, each layer of earth covers the remains of a different civilisation and creates a new layer or stratum. Archaeologists are able to figure out if an artefact is older or younger than other artefacts depending on the stratum it is found in.

Fluorine dating involves checking how much fluorine is in an artefact. Anything buried in the earth starts to absorb this chemical. Archaeologists can test the amount of fluorine in artefacts to see how old they are. The longer an artefact has been buried in the soil, the more fluorine it will have absorbed.

Absolute dating techniques are another important way for archaeologists to work out how old different artefacts are. Radiocarbon dating provides very accurate information about the age of an object. This is because all living things absorb a kind of carbon known as C-14, but when they die, they stop absorbing this carbon and it breaks down. Scientists have worked out a mathematical formula that shows how old something is based on the level of C-14 that is left in a fossil or artefact.

History at risk

Artefacts and the sites of archaeological significance are often under threat. This is due to many reasons, including decay or environmental change. For example, the ancient Harappan city of Mohenjo-daro is currently being damaged by changes in the **salinity** in the area. Higher levels of salt are destroying the traditional mud-brick buildings, causing many of them to crumble and become

unstable. More everyday dangers to artefacts and sites include their exposure to the air, sun and rain, which can lead to carvings, paintings and writing wearing away or fading.

Tourism can also cause damage to important archaeological areas. This is because tourists touch ancient inscriptions and images, and the oils in their fingers cause the artefacts to degrade. In some cases, visitors have also defaced ancient sites with graffiti or left rubbish behind, or even worse, visitors have stolen artefacts from ancient sites.

In some places, property developers have been responsible for tearing down ancient sites or covering tombs as part of the process of putting up a new building.

Amazing but true …

According to Hindu teachings, caves are sacred and are thought to be the homes of the gods. There are hundreds of Hindu caves across India that contain temples, carvings, paintings and statues. Buddhists also used caves to build monuments and to meditate in. Some of the most famous Buddhist caves are the Ajanta caves, which were used as places for Buddhist retreat, worship and meditation. These caves were cut from the mountain and feature many paintings and statues that are well preserved.
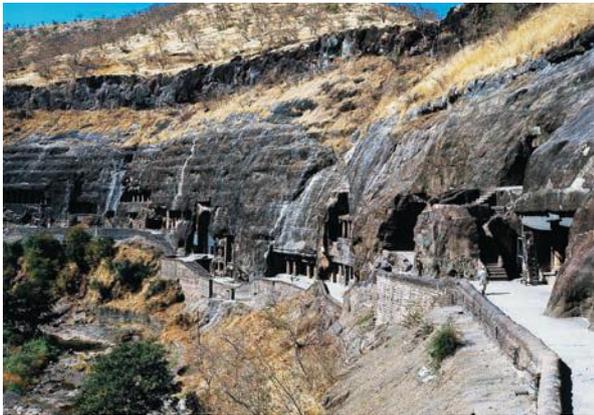
◄ **Source 9.46** The Ajanta caves in Maharashtra, India, date from 2 BCE to 480 CE.

▼ **Source 9.47** The Ajanta caves are rock-cut caves that feature monasteries and stupas, some of which date back to the reign of Ashoka. Why might it be important to preserve a site like this?
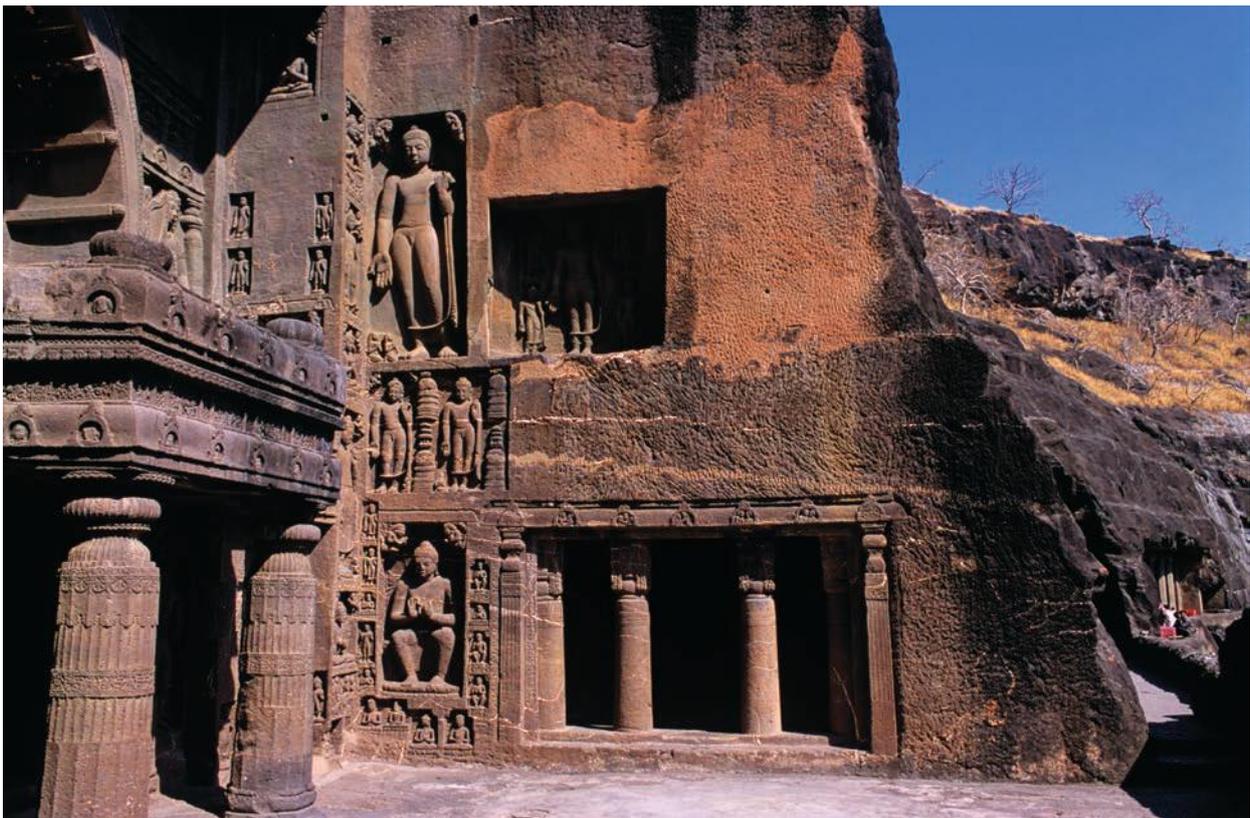
How do we conserve the past?

More and more people are recognising the significance of historical sites and artefacts, so a range of measures have been taken across the world to preserve key sites. In some locations, this has meant placing fences around the artefacts or sites to prevent tourists from touching them. Protective glass, plastic covers or cases are also used to prevent objects being damaged.

Many countries have laws that make it illegal to deface historic sites or steal from them. There are also government departments that oversee sites and artefacts, and manage and restore them if they are damaged. Groups like UNESCO (United Nations Education Scientific and Cultural Organization) attempt to preserve important cultural sites and artefacts across the world. They have created conventions that countries can choose to sign up to that outline the best ways to protect and preserve their cultural history.

The Elephanta caves

The Elephanta caves are on Elephanta Island off the coast of Mumbai. They were carved from 500–700 CE. They were carved by Hindu monks and they represent important events from Hindu mythology. Originally, the caves were a place people came to worship gods like Shiva but they now are mostly a tourist attraction.

The Elephanta caves are overseen by the Archaeological Survey of India and UNESCO. These two groups:

- monitor the caves to check for deterioration of the carvings or the cave walls
- build supports to hold up pillars
- reinforce the floors of the caves
- put up fences around carvings that are at risk of being damaged or degraded by tourists
- maintain an on-site museum and patrol the caves each day.

Why conserve the past?

The cities, temples and key sites of ancient civilisations can provide invaluable insights into the ways people worked, lived and worshipped, as well as their views and values. The sites are an enormous source of information for archaeologists. They are often where the most significant artefacts, which reveal the most about civilisations, are found. Archaeological sites are important to modern society because it has developed from these older cultures. The artefacts and sites help us to understand our personal histories, as well as the development of the unique cultures that exist around the world.

▼ **Source 9.48** This carving from the Elephanta caves is of the Hindu god Shiva. What are some of the challenges archaeologists might have in preserving caves like this one?

ACTIVITY 9.9

Using historical sources as evidence

Examine Source 9.49, then answer the questions that follow.

▲ **Source 9.49** This is a carving from inside the Elephanta caves, c. 500–700 CE. It shows the Hindu god Shiva's marriage to Parvati. Shiva is in the centre of the carving and Parvarti is to his left.

Responding to the source

1 Describe what you see in this source.
2 What is the message of this source?
3 What evidence can you find in the source to support your interpretation?
4 Who do you think the audience was?
5 What extra information do you need to interpret this source?

Key concepts: sources and evidence, perspective   **HASS skills:** analysing

END OF SECTION REVIEW 9.9

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What sources do archaeologists mainly use to learn about the past?
2 How do archaeologists work out which sites they should excavate?
3 What are some of the dangers to archaeological sites and artefacts?
4 How can we prevent archaeological sites and artefacts from being damaged?

Interpret

5 Based on the images shown in Sources 9.46 and 9.47, what sort of challenges might archaeologists face in preserving the Ajanta caves?

Argue

6 How effective do you think organisations like UNESCO are at helping to preserve our past?
7 Do you think it is important to preserve ancient sites? Justify your answer in your response.

Key concepts: sources, evidence, continuity and change, cause and effect, significance   **HASS skills:** analysing, evaluating, communicating and reflecting

9.10 Conclusion: why does it matter?

The ancient Indian people are thought to have invented the concept of zero and they gave the world the number system we still use today. The ancient Indian people also had one of the earliest systems of astronomy, and they made many important discoveries about the movement of planets and the sun. In addition, some of the earliest known writings about human anatomy and about plants being used as medicine come from ancient India. Today, Hinduism and Buddhism, which were founded in ancient India, have spread across the world to become global religions.

◄ **Source 9.50** This instrument is part of the Jantar Mantar observatory in Jaipur. It is one of five instruments constructed in ancient India to take measurements of the sun, planets and the moon. The tools here can be used to tell the time; they are as accurate as modern clocks and watches.

9.11 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Reflection

After working through this chapter, consider why it is important to preserve evidence of ancient civilisations like the Harappan peoples. Think about the following questions to help you with your answer:

- How did ancient Indian beliefs help shape modern India?
- How did ancient Indian society influence other societies that existed at the same time?
- How have the beliefs and values of ancient India spread across the world?

Then reflect on the following statement.

India has one of the largest populations in the world today. The country's importance in, and influence on, the world is growing.

Analysis

Key terms and names

Write a sentence for each of the following key terms, explaining its significance to ancient India:

- edict
- Jainism
- Buddhism
- Hinduism.

Inquiry

Research task

After the Mauryan Empire, the Gupta Empire was one of the most significant in ancient India. Conduct some research into the Gupta Empire and create a presentation that gives an overview of the most important achievements of the dynasty. In your presentation, explain how these achievements have continued to influence modern-day India and the world.

Writing

Extended-response questions

Topic: Evaluate the importance of one major religion that developed in ancient India.

In your answer, explain how the religion began, describe how it spread beyond India's borders, and discuss how and why this religion is significant in the world today.

Make sure you substantiate your argument by providing key names, dates and terms covered in this chapter.

Topic: Evaluate the significance of ancient monuments, cities and artefacts.

In your answer, explain what archaeologists do, describe how they preserve cities, monuments or artefacts, and outline why their work is important.

Remember to substantiate your argument by providing some examples of key archaeological finds and terms covered in this chapter.

Key concepts: sources, evidence, continuity and change, significance

HASS skills: researching and questioning, analysing, evaluating, reflecting and communicating

Ancient China

10.1 Setting the scene: how did an engineer become a king?

Around 4000 years ago during the **Neolithic period**, the people in China decided they no longer wanted to roam the land. The idea of having a stable place to call home was appealing and the banks of the mighty Yellow River seemed like an ideal location to start a civilisation.

However, there was a significant problem for the growth of communities along the river. Frequent flooding damaged crops and property, and sometimes the water swept away citizens. But living near the river was vital to the future of the **fledgling** civilisation. The Yellow River was necessary for trade and agriculture, so a solution needed to be found to manage the river's unpredictability and its destructive power.

A man named Gun was chosen to fix the problem. Gun's solution was to use soil to build **embankments** and **levees** that would protect the farms from rising water, but the strength of the Yellow River's floodwaters proved to be too strong. After nine years of attempting to hold back the water, a devastating flood broke through the embankments, which wiped out crops, buildings and many people. Gun was dismissed from his post (possibly executed) and his son Yu was appointed to find a permanent solution.

Yu worked tirelessly for 13 years to protect the people and their farms from the devastation of another flood. He redirected the waters out towards

Neolithic period an era of change when people who used stone tools moved away from hunting and gathering to settle in an area to farm animals and crops

fledgling something that is new or young and without much experience

embankments ridges of earth or stone walls used to hold back water

levee earth embankments built along riverbanks to prevent flooding

▲ **Source 10.1** A painting from the Song dynasty of King Yu

the sea by using a combination of levees and **canals**. Yu worked so diligently during this period that stories say he never found time to go home to visit his wife and children, and he only passed their door three times. This dedication to his work and the ultimate success of his plans was so appreciated by the people that the then ruler, King Shun, passed the throne on to Yu, rather than his own son. This is how Yu became the first ruler of the Xia dynasty.

Yu the Great, as he became known after his death, has been revered throughout Chinese history as an ideal ruler. He is referred to as a **sage-king**. There has long been doubt, however, about whether Yu was an historical figure or a mythological king created to promote the values of a good ruler. There is no written record that exists from the time of Yu or any artefacts that can be directly linked to him. Further, many of the stories that explain Yu's exploits include an array of mythical creatures; for example, Yinglong the dragon who helpfully used his tail to direct flood waters towards the sea.

▲ **Source 10.2** These drummers are part of a recent celebration of the birth of Yu the Great. Why do you think people still celebrate the life of someone who lived so long ago that many people believe to have been mythical?

Nevertheless, a recent scientific study of the Yellow River basin has found physical evidence of significant flooding around 1920 BCE. This evidence matches the era identified in later historical writings, which suggests there may be more to the story of Yu than an educational myth.

canals channels dug to carry water

sage-king is a ruler in ancient China known for being very wise and having good judgement

MAKING THINKING VISIBLE 10.1

Think, puzzle, explore

Reflect on what you have just read about how ancient Chinese civilisation began and the skill of Yu the Engineer.

1 What do you *think* the story of Yu tells us about ancient China?
2 What question or *puzzle* do you have about what you have read?
3 How can you *explore* your question further?

Key concepts: significance, perspectives, contestability

HASS skills: questioning and researching, communicating and reflecting

10.2 Chapter overview

Introduction

Ancient China had three thousand years of nearly uninterrupted imperial rule, which means that China can claim to have had one of the world's oldest continuous civilisations. The many legacies of ancient China have had an enduring effect on the land and on the Chinese people today.

In the modern world, China occupies a significant area of over 9.5 million square kilometres in East Asia, and the country is home to more than 1.4 billion people. This makes China the world's largest country by population and third or fourth in terms of land mass. Currently, China boasts the second-largest economy and is one of Australia's most important trading partners. China has become an influential player in global politics and is emerging as a superpower. But what are modern China's foundations?

Learning goals

After completing this chapter, you should be able to answer these questions:

- How did the geographical features of China shape the development of the ancient Chinese civilisation?
- How did the ancient Chinese develop and structure their society?
- What do we know about early cultural practices in ancient China?
- How did rulers gain and hold power in ancient China?
- What did the people of ancient China believe?
- How did contact with the outside world shape the society, economy and political structures of ancient China?
- Who were the significant individuals of Imperial China and what were their key achievements?
- How do historians and archaeologists use technology to find out about the people of the past?
- What responsibility do we have to the conservation of the past and how should it be undertaken?

Historical skills

After completing this chapter, you should be able to:

- Explain what continuity and change and historical significance mean in the study of history
- Understand what the term 'historical interpretation' means
- Understand the role of historians and archaeologists in uncovering the past
- Develop historical empathy with people in the past
- Interpret primary sources in both print and visual form
- Evaluate the reliability of primary sources
- Correctly use special terms specific to the topic under study
- Use factual evidence (dates, statistics, examples) to substantiate an argument
- Reflect on your findings and refine your learning.

Digital resources

Visit the Interactive Textbook to access:

- interactive Scorcher Quiz
- videos, image galleries and other extra materials.

Video
Five interesting facts about ancient China

► **Source 10.3** Spirals of incense burn inside Man Mo temple, Hong Kong

10.3 Timeline of key events

What came before this topic?

In Stone Age and Neolithic China people lived as hunter-gatherers and early farmers began to domesticate animals and plant crops.

Jade axe, c. 4500–2300 BCE

2070–1600 BCE
The Xia dynasty rules part of north-eastern China

c. 1200 BCE
Life of Lady Fu Hao, an important consort and Shang general

771–475 BCE
Spring and Autumn period after the Zhou lose control over the western regions

475–220 BCE
The *Warring States period* when Zhou rule begins to crumble and many states break away to govern themselves; the first parts of the Great Wall are built

2123–2025 BCE
Lifespan of Yu the Engineer

1600–1046 BCE
The Shang dynasty rules north-central China

1046–256 BCE
The Zhou dynasty defeats the Shang and rules north-central China

551–479 BCE
Life of Confucius, an important Chinese philosopher

Bronze *zun* (wine container) shaped like an elephant from the Shang dynasty, c. 1600–1046 BCE

Bronze-ring handle with mask from the Zhou dynasty, c. 1046–771 BCE

Timeline questions

1   What does the information in the timeline indicate about the way ancient China was ruled?
2   Who was Cai Lun and what did he do? Research him and write a short summary of his contributions to ancient Chinese culture.

Key concepts: sources, evidence, cause and effect

HASS skills: questioning and researching, communicating and reflecting

What came after this topic?

Imperial China continued through several more dynasties, including the Mongolian Yuan dynasty, the powerful Ming dynasty and the Manchu Qing dynasty. The dynasties lasted until the removal of the child emperor Pu Yi in 1912 CE.

Detail of a decorated vase from the Ming dynasty

Terracotta warrior from Emperor Qin Shi Huangdi's tomb

221 BCE
Qin Shi Huangdi, who was King of the Qin, conquers the last of the warring states and becomes the first emperor of a unified China

206 BCE–220 CE
The Han dynasty rules China

c. 145 CE
Sima Qian, author of Shiji (the *Historical Records*), is born

581–618 CE
The Sui dynasty rules China for a short but significant period; the north and south of China are reunified

627 CE
Wu Zeitan, China's only female emperor is born

50–121 CE
Lifespan of Cai Lun, reputed inventor of paper

220–589 CE
The *six-dynasties period* when there was some breakup of the Chinese state and six short-lived dynasties ruled from the capital of Jiankang

618–907 CE
The Tang dynasty rules China; many historians regard this period as a golden age of civilisation in China

221–206 BCE
The Qin dynasty rules China

Chinese pronunciation

Chinese words can be tricky for English speakers to pronounce, as the Chinese language uses unfamiliar sounds and tones. Also, Chinese is written in characters rather than with letters, so a system called 'pinyin' was designed to translate characters into the Roman alphabet. For example, the Chinese character 天, meaning heaven or sky, is written as *tiān* in pinyin. English speakers can often sound out words written in pinyin as most of the vowels represent similar sounds to those in English. However, some of the consonants are very different. Here is a quick guide to help you with some of the differences.

c   'ts' as on lots

j   'j' as in jet

q   'ch' as in chop

r   'z' as in haze

x   'sh' as in lesion

zh 'j' as in job

z   'ds' as in woods

So, the Zhou dynasty is pronounced 'Joe' dynasty, while the Xia is 'Shaa' and the Qin is 'Chin'.

10.4 The physical features of China and how they influenced the civilisation that developed there

FOCUS QUESTIONS

- How did the geographical features of China shape the development of ancient Chinese civilisation?
- How did the ancient Chinese develop and structure their society?
- How can we find out about early cultural practices in ancient China?

▲ **Video Source 10.4a** Physical features of China

Geography

China is a land of many different climates and terrains. It is also a large and populous country, but this was not always the case.

▼ **Source 10.4** The geographical features and borders of modern China

Legend
- Forest
- Cropland
- Desert
- Mountain
- ◉ Capital City

1. The core of ancient Chinese culture and civilisation grew in the flat, fertile plains of the country's north-eastern regions. Only later did the Chinese Empire's power grow and expand the country to its current size.

2. The Tibetan Plateau covers a wide western area of modern China. It consists primarily of a vast plateau that rises around 4.8 kilometres above sea level and is bound by the Himalayan mountains to the south-west. China first claimed ownership of this land during the Yuan dynasty in the thirteenth century CE.

3. To the far north-east of China are the Manchuria plains. This area was a conquest of Genghis Khan, who was the grandfather of Kublai Khan. Kublai Khan became the first ruler of the Yuan dynasty.

4. To the north and north-east of the Tibetan Plateau lies the Tarim Basin containing the Taklamakan Desert. The Tang dynasty of the seventh century was the first to establish control in this region. It was through this region that the main paths of the important trade route, the Silk Road, were travelled.

5. The central and eastern regions of China include: the Loess Plateau 5A and the Chinese plain 1 to the north; and the Sichuan Basin 5B and southern hills to the south 5C.

6 The earliest civilisations in China developed along the banks of two key rivers: the Yellow River **6A** and the Yangtze River **6B**. Both of these rivers emerge from the heights of the Tibetan Plateau.

7 The Yellow River heads north-east towards the plains and plateaus of Northern China in wide sweeping loops, until it passes through the North China Plain and empties into the Bohai Sea.

▲ **Source 10.5** The Yellow River winds its way through the Tangke grasslands of Sichuan province.

8 The Yangtze wends its way south-east through mountainous terrain. It cuts through the Sichuan Basin and the Three Gorges, eventually ending in the East China Sea.

▲ **Source 10.6** The Yangtze River flows through Yunnan province.

MAKING THINKING VISIBLE 10.2

What makes you say that?

Look closely at the map and information in Source 10.4, then answer the following questions.

1 Why do you think civilisations develop around rivers?

2 Why did the Yellow River become the centre of ancient Chinese civilisation? What evidence or reasoning can you provide to support your claim?

3 What other factors might be important in the establishment of a civilisation? How could you find out?

Key concepts: sources, evidence, cause and effect, significance

HASS skills: questioning and researching, communicating and reflecting

Early civilisation in China

In around 8000 BCE, China's hunter-gatherer societies began to plant and grow grain, which mostly consisted of millet and rice. This development of agriculture meant that the ancient Chinese could create a stable food supply, which allowed them to establish permanent settlements. Farming meant that fewer members of a community needed to work on finding food, and they could instead spend time in developing crafts or being soldiers. Before agriculture developed fully, the Neolithic societies used stone, horn and bone tools. They wore fabric clothing and animal skins, and had developed increasingly complex pottery designs. The cultivation of silkworms possibly also began in the Neolithic period.

The Yangshao culture was one of the many communities that sprang up along the Yellow River between 4700 and 3600 BCE. In the 1950s CE, workers digging the foundations for a new factory discovered the remains of a large Yangshao village. This site is now called the 'Banpo archaeological site' and is located in the Yellow River valley, which is a few kilometres east of the city of Xi'an.

kilns ovens for drying or baking mud and clay

osteoarchaeologist an archaeologist who specialises in the study of bones

▲ **Source 10.7** A decorated pot from the Yangshao culture (4700–3600 BCE). What do you think this pot might have been used for?

▲ **Source 10.8** A food vessel made from black pottery found in Yangshao (4700–3600 BCE). What bird do you think it is shaped like?

The Banpo archaeological site is a rich source of evidence about the lives of the people of Yangshao, their technology and social structures. In addition to the over 10 000 stone tools and other artefacts found, archaeologists have discovered the foundations of almost 100 buildings, as well as a long ditch surrounding the village that may have served as a moat. Six large **kilns** were discovered at the edge of the village, which suggests there was large-scale production of pottery at that time.

Yangshao tombs

Tombs are an excellent place for historians and archaeologists to look when they want to find out about how cultures lived in the past. We can learn about the roles of men and women from tombs. This is because when people were buried in tombs, the tomb was used as a way of remembering what they had done in their lives. We can find out which people had power, and what they thought was important in life and in death.

The 250 tombs that have been uncovered at the Yangshao village have provided historians with information about the health and daily life of the Neolithic peoples in China. Research by **osteoarchaeologists** reveals that life expectancy for both men and women was around 36 years. Women began to give birth to children when they were about 14 or 15; they had between two and seven children.

There are an equal number of graves for women as there are for men at the Banpo archaeological site, and the graves contain similar amounts and quality of **grave goods** like jewellery, tools and pots. There are also several women's graves containing more and better-quality items. This suggests that these women had some higher status or rank in society.

There is disagreement among historians about how to interpret the tombs at the Banpo archaeological site. Some believe that the graves are evidence of a **matriarchal society**, where women controlled and ran the communities. Others argue that the evidence of the graves is not enough to support this interpretation, and that the types of goods in the tombs demonstrate gender divisions. For example, women were more likely to be buried with stone **querns** for grinding grain, while men possessed more farming tools.

Whichever interpretation is correct, it does appear there was a level of equality between men and women in these early societies. However, the graves of later Neolithic communities and the early Bronze Age demonstrate a slow decline in the status of women. As time went on, there were fewer graves created for women, and their grave goods became less valuable in comparison to men's graves. There is even evidence of human sacrifice by the late Neolithic period, with women being found folded into positions like servants in the graves of men.

> **grave goods** items buried alongside a body; usually personal possessions or items to help their journey to the afterlife
>
> **matriarchal society** a society ruled by women
>
> **querns** stone tools used for grinding grain

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 10.1

Examining historical interpretations

Have you ever had a disagreement with a friend at school? If a teacher had to intervene, they might have asked you each to tell your side of the story. If so, were these sides exactly the same? Probably not. Even though both of you were part of the same event, it is likely that you interpreted it differently. Otherwise there may not have been a disagreement in the first place!

While historians are always trying to find the truth of the past, even when there is lots of information available, people can disagree about what really happened. The further back we try to look, the less information there is to work with. This means an even wider range of interpretations is possible. As historians, our job is to weigh the evidence carefully and develop an interpretation that fits the evidence. We must also be willing to reassess when new information is discovered that affects our interpretation.

Refer to the information that you have just read and follow these steps to create an historical interpretation.

1 Why do historians disagree about the meaning of the evidence found at Banpo?

2 Decide which interpretation of Banpo you think is most likely. What evidence or reasoning can you provide to support your claim?

3 What other factors might be important in understanding why historians may have different interpretations? How would you find out?

▲ **Source 10.9** This photograph shows the Banpo archaeological site with some of the pottery pieces found that date from around 4700–3600 BCE. How important are tombs in understanding past cultures?

Key concepts: sources, evidence, continuity and change, significance, perspectives, contestability

HASS skills: analysing, evaluating, questioning and researching

END OF SECTION REVIEW 10.4

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 Where did the first civilisations in ancient China begin?

2 What types of tools did Neolithic people use?

3 Where does the Yangtze River end?

Interpret

4 What evidence found at the Banpo archaeological site suggests developments in ancient Chinese civilisation?

5 Why do you think that women may have been sacrificed by being placed in the graves of men by the late Neolithic period?

▲ **Source 10.10** This double-cup from the Yangshao culture (c. 2500 BCE) includes a hollow tube between its two containers that allows liquid to flow from one cup to the other

Argue

6 Were men and women equal in Yangshao society? Provide evidence to support your opinion.

7 Look at Source 10.10. In what situation do you think a double-cup like this would be used?

Key concepts: sources, evidence, continuity and change, significance, perspectives

HASS skills: communicating and reflecting

10.5 Roles of key groups in ancient China, and the influence of law and religion

FOCUS QUESTIONS

- How did the ancient Chinese develop and structure their society?
- How did emperors gain and hold power in ancient China?

Xia dynasty 2070–1600 BCE → Shang dynasty 1600–1046 BCE → Zhou dynasty 1046–256 BCE → Warring States period 475–220 BCE → Qin dynasty 221–206 BCE

The Xia dynasty: myth or reality?

For many years, the stories of the Xia dynasty were considered to be more myth than reality. Almost everything that we know of the Xia comes from records written during the later Shang and Zhou dynasties, since no writing from the Xia era has been discovered. According to these later records, the Xia were the first to establish a government and begin the use of a **dynastic succession** to maintain power. Some historians believed the Xia were invented to add legitimacy to the Zhou dynasty's rise to power. The Zhou used the overthrow of the Xia dynasty by the Shang as an example of how earlier dynasties had to be replaced when they became immoral and corrupt. In this way, the Zhou justified their own overthrow of the Shang dynasty.

However, archaeological digs of the late twentieth century have uncovered physical evidence that a society more sophisticated than Neolithic communities had existed before the Shang. In 2011, the foundations of a large palace were excavated by Chinese archaeologists at the Erlitou Bronze Age dig site in Henan province, which is near the Yellow River. The palace was dated, through radiocarbon dating, to be from around 1700 BCE and covered 2100 square metres. It was built with rammed earth walls and based around three main courtyards.

> **dynastic succession** a process of passing power and authority from one person to a family member, traditionally often father to son

A structure this large and elaborate suggests the existence of a ruler with the wealth and power to command many workers. The site is believed, by some archaeologists, to have been the capital during the Xia dynasty. There are many tombs and, most importantly, many bronze items have been discovered near where later records suggested they would be. Despite this, some historians are not convinced there was a Xia dynasty. They argue that the evidence for the dynasty is inconclusive and believe the Erlitou culture was an early part of the Shang dynasty, rather than a society in its own right.

Whether the society found at Erlitou was the first dynasty or not, the dig site does mark a transition between Neolithic societies and the early Bronze Age in China.

smelting a process of heating rocks and sediment to extract metals

Neolithic societies relied on stone tools, whereas societies during the Bronze Age produced harder and more durable metals like bronze by **smelting** copper and tin alloys. These new metals proved invaluable in the development of new technologies and improved weaponry.

MAKING THINKING VISIBLE 10.3

Perspectives

The work of a historian is to gather evidence and interpret it to develop an understanding of the past. Sometimes they need to draw conclusions when there is a limited amount of evidence and this can lead to differences in interpretation between historians.

1 How do we know about the past?

2 How do we evaluate conflicting evidence or interpretations?

3 Is there enough evidence to confirm the existence of the Xia dynasty?

4 If not, what more would need to be found?

◄ **Source 10.11** The oldest bronze items found in China have all been excavated from the Erlitou ruins in Henan province. This three-legged bronze vessel is believed to be between 3500 and 3800 years old. It is called a *ding* and was probably used to cook food or burn incense. Why do you think this vessel has three legs rather than four?

► **Source 10.12** This bronze *jue* is attributed to the Xia dynasty. A *jue* was a type of container used to serve warm wine.

Key concepts: continuity and change, cause and effect, perspectives, contestability

HASS skills: analysing, communicating and reflecting

The Shang dynasty

The Shang dynasty began around 1600 BCE after the Xia tyrant, Jie, was overthrown in a rebellion by the Shang leader, Tang. The stability of the Shang rulership over the next 600 years led to numerous advances in science and culture. The ancient Chinese developed sophisticated bronze-casting techniques and moved away from using stone tools. Shang craftsmen became skilled in working with jade, bone and silk. The improvements in agricultural practices during the Shang dynasty meant that less labour was required to produce more food. Workers were freed up to undertake other tasks, such as building cities and elaborate tombs, and digging canals to link rivers. Writing was developed and used in religious ceremonies, where fortune tellers asked the **ancestors** for advice. The ancient Chinese also created a calendar based on the phases of the moon during the Shang dynasty.

ancestors people you are descended from like a parent, grandparent, great-grandparent, great-great-grandparent and so on

◀ **Source 10.13**
An owl-shaped, Shang-era, *zun*. Compare this vessel to the ones of the Xia dynasty. How is this vessel different to those in the Xia dynasty? What do these differences suggest about Shang culture and craftspeople?

Xia dynasty 2070–1600 BCE → Shang dynasty 1600–1046 BCE → Zhou dynasty 1046–256 BCE → Warring States period 475–220 BCE → Qin dynasty 221–206 BCE

MONGOLIA

Gobi Desert

Taklamakan Desert

GREAT WALL

TIBETAN PLATEAU

YELLOW SEA

Yellow River

EAST CHINA SEA

Yangtze River

Himalayas

Pearl River

INDIA

PACIFIC OCEAN

Shang dynasty 1600–1046 BCE
Zhou dynasty 1046–256 BCE
Qin dynasty 221–206 BCE
Han dynasty 202 BCE–220 CE
Great Wall of China
Silk Road

SOUTH CHINA SEA

BAY OF BENGAL

◀ **Source 10.14**
The territory controlled by the ancient Chinese dynasties (each new dynasty incorporated the earlier one)

The Mandate of Heaven and the Zhou dynasty

The Shang dynasty finally came to an end in 1046 BCE when King Wu of Zhou overthrew the last Shang king at the Battle of Muye. The Zhou accused the Shang dynasty of immoral conduct and corrupt rule, which justified the removal of the Shang as rulers. Zhou historical records suggest that the Shang people were so unhappy with their king that they, and many Shang soldiers, laid down their weapons and welcomed the Zhou.

When the Zhou overthrew the Shang dynasty, the Zhou established the principle of the Mandate of Heaven (*Tiānmíng*). Essentially, the Mandate of Heaven is the divine right to rule the Chinese people. Heaven (*Tiān*) chose who had a right to rule, and could take away this right if a ruler behaved in an unacceptable way. The mandate meant that if any dynasty or ruler was overthrown by another, the very fact of it being overthrown was proof that the previous ruler had lost the Mandate of Heaven. Zhou scholars explained that this was what happened when the Shang overthrew the Xia. The Mandate of Heaven became a very important principle because it gave divine authority to all of the dynasties that followed.

feudal a societal structure based on rank where higher ranks owe protection to lower ranks; lower ranks give a tribute in return, usually agricultural goods

The Zhou dynasty lasted nearly 800 years and is officially the longest dynasty in Chinese history. During this time, culture in ancient China continued to develop. Peasants in the countryside farmed the land using what was called the 'well-field system'. Under this system, areas of land were divided into nine sections. Eight of these sections were farmed individually by different families, while one section was farmed collectively for the lord who owned the land. Ancestor worship continued to be important to the Zhou, but they focused more on family lines and inheritance than the Shang had done.

While the Zhou was still the ruling dynasty of China until 256 BCE, in practice they had lost control of most of the country long before then. The Zhou had ruled the large kingdom by establishing a network of **feudal** states, where regions were ruled by local lords who paid tribute to the Zhou king. However, over time some of these local lords felt that

| Xia dynasty 2070–1600 BCE | → | Shang dynasty 1600–1046 BCE | → | Zhou dynasty 1046–256 BCE | → | Warring States period 475–220 BCE | → | Qin dynasty 221–206 BCE |

MAKING THINKING VISIBLE 10.4

Explanation game

Refer to what you have just read and Source 10.15 to answer the following questions.

1 What do you notice about how the Mandate of Heaven came about?

2 Why did the Mandate of Heaven happen that way?

► **Source 10.15** This photograph shows a Mandate of Heaven seal or stamp to acknowledge the emperor's mandate. It is from the Qin dynasty (18 CE).

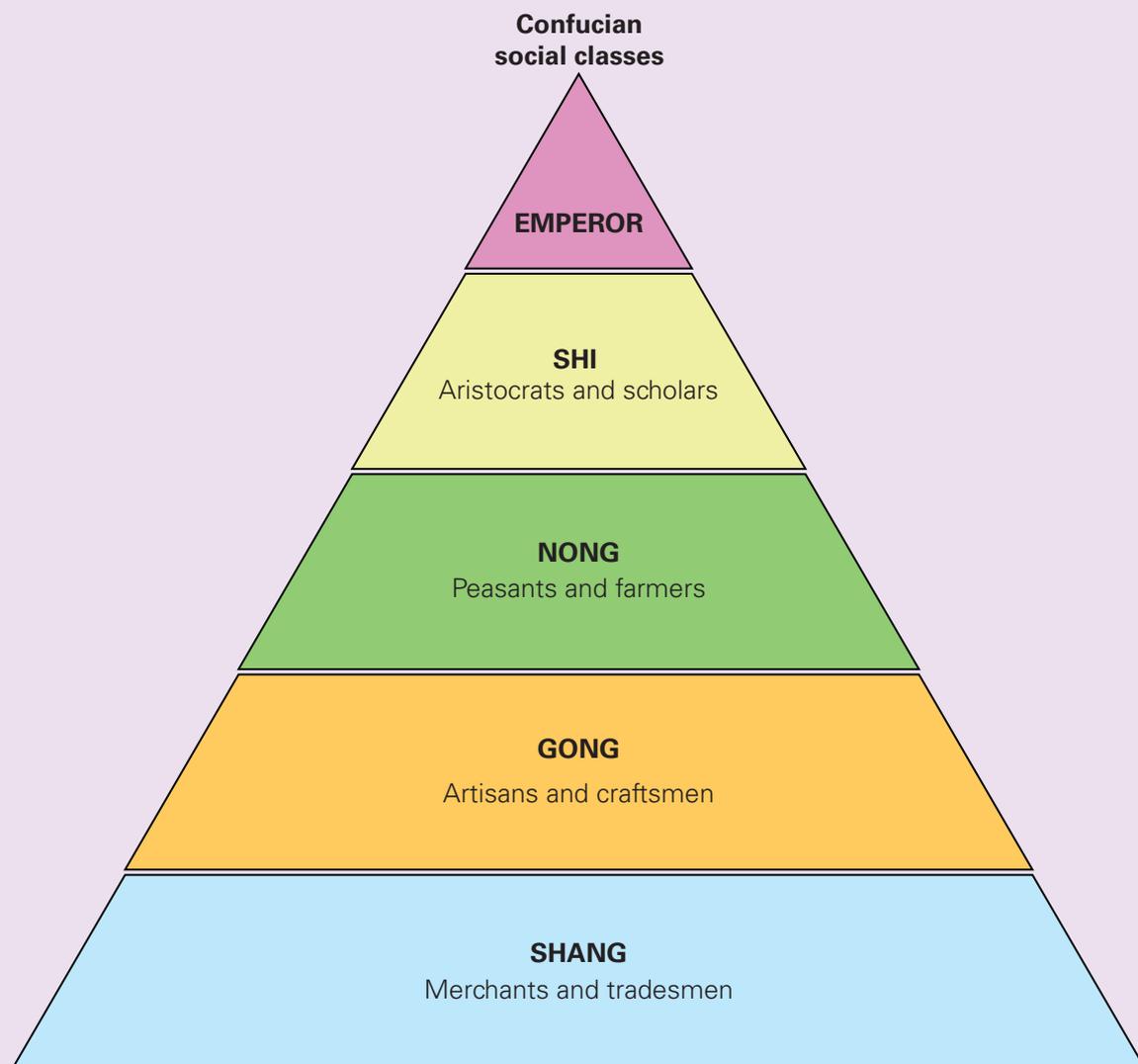**Key concepts:** sources, evidence, cause and effect

HASS skills: analysing, communicating and reflecting

they no longer needed to recognise the Zhou king and so began to break away. Some of the lords even began to challenge Zhou rule. In 771 BCE , the Zhou capital was attacked and the king was killed, which forced the Zhou to retreat east and continue the dynasty from what is now Henan province.

Social structure in ancient China

Society in ancient China was traditionally separated into four classes. These were described by the philosopher Confucius as the natural organisation of a just and moral society. At the top of the social structure, just below the emperor, were the Shi. The Shi were the aristocrats and members of the imperial court and included scholars (who were called 'the literati') and bureaucrats. Next in order of status were the Nong, who were peasants and farmers. They were the largest group in society. Although they were not wealthy, the Nong were well respected in ancient Chinese society as the producers of food. Under the Nong came the Gong, who were artisans and craftsmen. Beneath them were the Shang, or merchants. The merchants were lowest in ancient Chinese social ranks because they produced nothing but acted as go-betweens, so their contribution to society was considered less significant than either the Nong or the Gong. In practice, many Shang people became much wealthier than their higher-class counterparts.

Confucian social classes

EMPEROR

SHI
Aristocrats and scholars

NONG
Peasants and farmers

GONG
Artisans and craftsmen

SHANG
Merchants and tradesmen

▲ **Source 10.16** The basic social structure of ancient China

The Warring States period

The time after the Zhou moved the capital to the east is known as the Spring and Autumn period. It was a time of almost constant conflict, but also a time when philosophy and culture flourished. Two of the key ancient Chinese belief systems, Confucianism and Daoism, emerged at this time.

As the conflict between peoples grew more intense, the period became known as the Warring States period. The various Chinese states fought among themselves in a bitter struggle for control that lasted over 200 years. The Jin defeated the Chu, but their power was broken by internal fights and they split into three states: the Han, the Wei and the Zhou.

The state of Wu became powerful, only to fall to the Yue, who were then defeated by the Chu. One of the most important campaigns of this time was the Battle of Changping, which lasted from April 262 BCE to July 260 BCE. In this battle, the state of Qin attacked the states of Han and Zhou over the border-province of Shan Dong. The Zhou army was larger and constructed fortifications to protect their land, but they were ultimately defeated by the Qin.

The Qin became the ultimate victors of the Warring States period when they defeated the last two states of Qi and Chu. In 221 BCE, the Qin king unified China under a new dynasty and declared himself the first emperor.

Xia dynasty 2070–1600 BCE → Shang dynasty 1600–1046 BCE → Zhou dynasty 1046–256 BCE → Warring States period 475–220 BCE → Qin dynasty 221–206 BCE

▼ **Source 10.17** Constructing a barrier to be placed in a shallow river to divert the water flow for irrigation or flood control. Logs are roped together into tripods called *macha* and they are weighed down with *zhulong*, woven bamboo baskets containing large pebbles. Once placed in the river, more *zhulong* are added to create a dam. This technology was invented in 256 BCE during the Warring States period to irrigate fields and is still in use in some parts of China today.
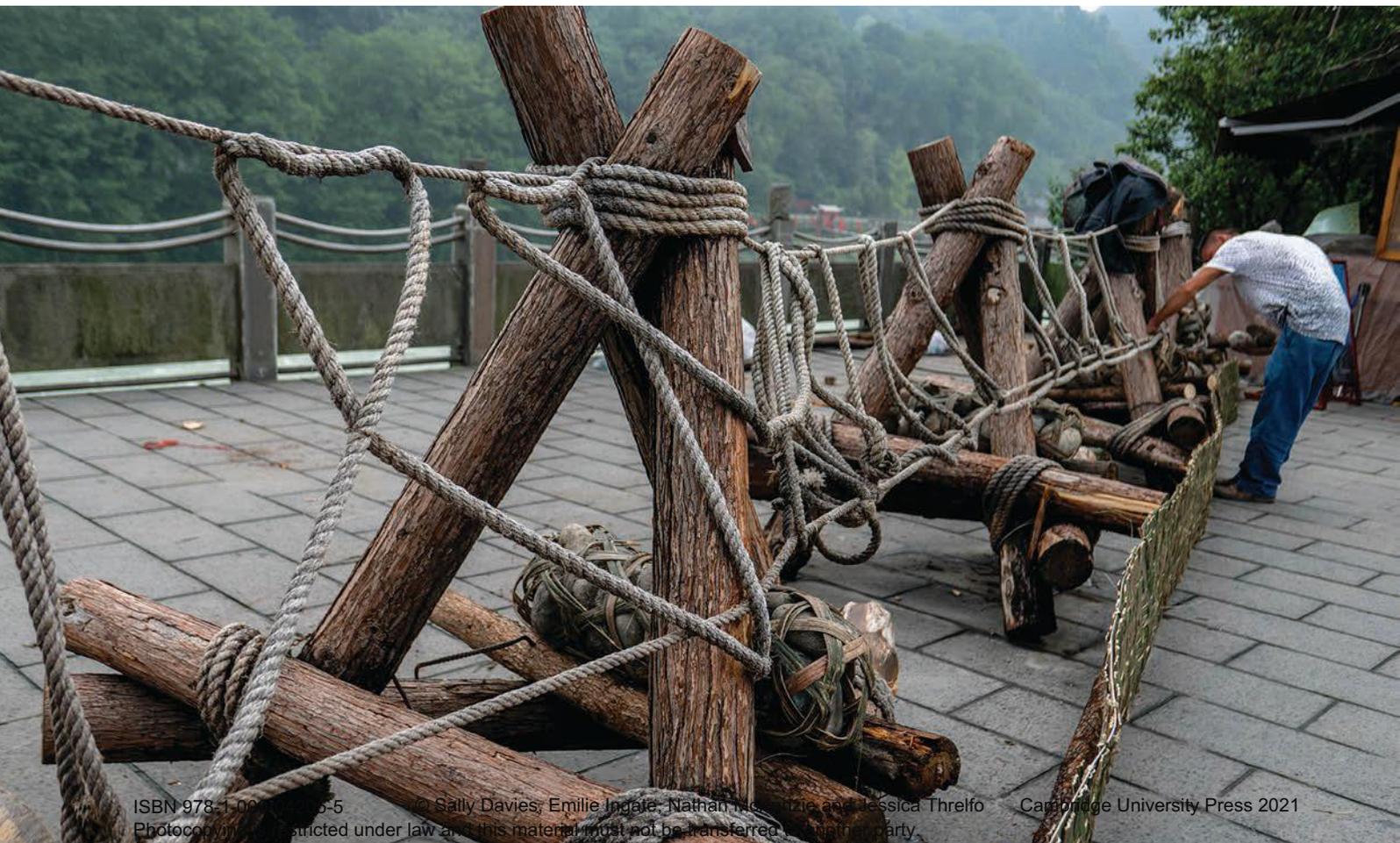
The Qin dynasty

The Qin dynasty was very brief compared to the Zhou dynasty it replaced. While the dynasty lasted only 15 years, it was a time of great change. For 11 of those years, the first emperor, Qin Shi Huangdi, ruled with an iron fist and began an ambitious plan to reshape the country. He divided up the land into 40 different states and appointed governors who were loyal to him to run them. In order to control the leaders of the conquered states, they were all required to live in the Qin capital. This limited their ability to oppose his authority.

Not everyone was happy about Qin Shi Huangdi's way of ruling, so in 213 BCE a group of scholars tried to convince Qin Shi Huangdi to give the states more **autonomy**. Rather than give in to this request, Qin Shi Huangdi ordered that all books that were not written about practical topics like medicine or agriculture must be burned. He also ordered that any scholars who disobeyed him would be executed. He believed that the scholars were using history to criticise him, so it was necessary to eliminate any history that did not support his ideas. Overall, 460 scholars were said to have been buried alive.

Not all of Qin Shi Huangdi's changes were brutal. Some of his reforms had long-lasting benefits for Chinese society. Qin Shi Huangdi created a set of standards for weights to ensure that all merchants and craftsmen were using the same measurements. He rewrote the laws to make them consistent throughout the country, and he made taxes uniform. To replace the many different kinds of money being used, he adopted a single type of coin: round with a square hole in the
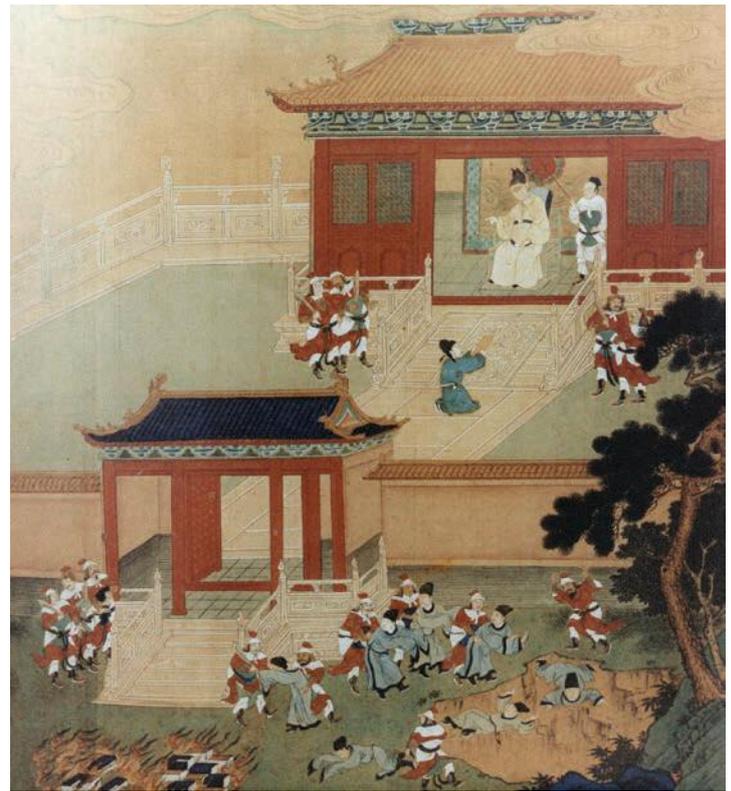
▲ **Source 10.18** An eighteenth-century painting called *Killing the Scholars and Burning the Books.* What details do you notice? How does this make you feel about Qin Shi Huangdi?

centre. These coins could be threaded onto rope or a ribbon to be kept safe. They continued to be used until the modern era. The writing system was also standardised during Qin Shi Huangdi's rule, so that all states used the same characters. These kinds of changes created consistencies between the various states which unified China as an empire.

> **autonomy** the right to rule or live independently

After the death of Qin Shi Huangdi, the empire rapidly fell to pieces as none of his successors had the power to hold it together. In 202 BCE, Liu Bang, the leader of the Han, declared himself emperor and the Han dynasty began.

Xia dynasty 2070–1600 BCE → Shang dynasty 1600–1046 BCE → Zhou dynasty 1046–256 BCE → Warring States period 475–220 BCE → Qin dynasty 221–206 BCE

FAMOUS FACE

Qin Shi Huangdi

Qin Shi Huangdi (259–210 BCE) was born in the state of Qin, which was a **vassal** of the Zhou dynasty at the time. He became King Zheng of Qin in 238 BCE at the age of 21. He completed the job of conquering the other states that had been begun by Shang Yang, a previous powerful ruler of the Qin. In 221 BCE, he gave himself the title of *Shi Huangdi*, which means 'first emperor'. In this way, he styled himself as being the first emperor of China since the mythological Yellow Emperor, Huangdi, who, according to mythology, founded the first centralised Chinese state several centuries before the Xia dynasty, and in the same area.

Qin Shi Huangdi was known as a ruthless and arrogant leader, who was very concerned with preserving his own life. He was superstitious and spent a great deal of time and money attempting to find an **elixir of immortality** so that he could live forever. He was told by a group of magicians that there were Daoist immortals living on the Penglai Islands, so he made multiple trips to the coast looking for them. In 211 BCE, Qin Shi Huangdi spent eight months touring the country after being told that the omens were bad, hoping to find an elixir. Instead he became ill and died. He was 48 years old.

vassal a person or state that must pay tribute to a king in return for protection

elixir of immortality a potion or medicine to keep you alive forever

While Qin Shi Huangdi had been attempting to find a way to live forever, craftsmen and labourers had been working hard under his orders to create the most elaborate tomb that could be made. In addition to the massive burial chamber, with an immeasurable wealth of grave goods, he was sent to his final resting place with an army of over 8000 terracotta warriors buried in pits surrounding his tomb. The famous terracotta army was uncovered more than 2000 years later when some farmers digging a well came across the first of the buried warriors.

ACTIVITY 10.1

Showing continuity and change on a timeline

1. Reread Section 10.5. Create a timeline for the period of time described. Start at the Xia dynasty and end at the Qin dynasty.
2. On the timeline, identify and briefly describe all most important changes that have occurred.
3. Now describe all the things that you think stayed the same during this time. Identify and briefly describe them underneath the timeline.

Key concepts: cause and effect, continuity and change   **HASS skills:** communicating and reflecting

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 10.2

Understanding continuity and change

Continuity and change are important ideas for historians to consider. They refer to when we can observe that aspects of life or society have remained the same or changed over a period of time. Historians are interested in the causes of change, or reasons why change has been resisted. Continuity and change are evident in every period of time, and progress and decline can be used to evaluate how continuity and change has had an effect on a culture or society.

Historians identify continuity and change by:

- comparing objects from the past and present to identify the nature of change or continuity
- analysing aspects of daily life to identify how some have changed over recent times, while others have remained the same
- sequencing events and creating timelines in order to identify broader patterns of continuity and change
- recognising and explaining patterns of change and continuity over time by examining beliefs and values, key events and the actions of individuals and groups.

Reflect

Choose two examples of change and two examples of continuity from this chapter. Explain to a classmate what you chose and why you think they are important for helping us understand ancient China.

Key concepts: continuity and change, significance   **HASS skills:** communicating and reflecting

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 10.3

Identifying continuity and change

To make sense of the past, an important historical concept to understand is continuity and change. This refers to the ability to understand the importance – the *significance* – of events, ideas, people and groups.

Historians must identify when a change occurred or when things continued unchanged. Keeping this in mind, complete the following.

1 Make a list all the significant ideas and events from Qin Shi Huangdi's reign from the information in the preceding pages.
2 Which of these ideas and events do you think were positive for China?
3 Which of these ideas and events do you think were not positive for China?
4 To what extent did Qin Shi Huangdi's reign change China for the better? Discuss your opinion with a partner, remembering to use evidence to support your argument.

Key concepts: continuity and change, significance, perspectives   **HASS skills:** evaluating, communicating and reflecting

END OF SECTION REVIEW 10.5

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 How do we know how old the Erlitou dig site is?
2 What types of items did Shang craftsmen make in bronze?
3 How was ancient Chinese society structured?
4 Who won the Battle of Changping?

Interpret

5 Why is there doubt about the existence of the Xia dynasty?
6 How did Qin Shi Huangdi maintain power during his lifetime?
7 Examine the image of the terracotta warriors shown in Source 10.19. What were they supposed to do for the emperor? How do you know this?

Argue

8 Why do you think the Mandate of Heaven was such a long-lasting idea? Provide evidence to support your opinion.

▲ **Source 10.19** Some of the 8000 terracotta warriors buried in Qin Shi Huangdi's tomb

Key concepts: sources, evidence, contestability

HASS skills: analysing, evaluating, communicating and reflecting

10.6 The significant beliefs, values and practices of ancient China

FOCUS QUESTION

What did the people of ancient China believe?

Early religious practices

Religious practices and spiritual beliefs existed in China long before the teachings of Confucius or the arrival of Buddhism from India. Early Chinese societies believed in a pantheon of gods with a supreme deity (*Shàng Dì*) or heaven (*Tiān*). They believed in the existence of an afterlife, and the tombs they created for their dead reflected the need to honour and provide for their ancestors. Ancestor worship was an important aspect of ancient Chinese religious belief, because people thought they could connect with the gods through ancestors who had died.

Oracle bones

One method of contacting the gods through the ancestors, which was particularly significant during the Shang era, was the use of oracle bones. These bones, usually the shoulder blades of oxen or the flat underside of turtle shells, were used in **divination**. Shang diviners (fortune tellers) would ask the spirits of the ancestors to predict future events by inscribing questions on the bones and then using a hot poker to crack them. The cracks would then be interpreted as positive or negative answers to the question.

The diviners were very good record keepers and inscribed both the answers and the outcomes of the predictions on the bones. This is helpful to modern archaeologists and historians because the records help

them to learn a great deal about what the Shang were interested in and the issues they considered important.

divination the practice of foretelling the future through supernatural means

Most oracle bones were used by wealthy people and rulers, as only they were able to afford the bones and the services of fortune tellers. The wealthy and rulers would ask many types of questions such as whether family members would recover from illnesses, the likelihood of good crops and the outcome of wars. Sometimes, the same question was asked many times and the prediction was based on the answer that came up most often.

▲ **Source 10.20** This oracle bone is made from plastron, which is the flat underside of a turtle's shell. It was created during the Geng reign of the Shang dynasty. What types of questions did people ask the oracle bones? What would you have asked?

ACTIVITY 10.2

Using historical sources as evidence

Examine the following historical source and then answer the questions that follow.

Crack-marking on *jiashen* [day 21]

consort a wife or companion of a ruler

Que divined: 'Lady Hao [a **consort** of Wu Ding] will give birth and it will be good.'

The king read the cracks and said: 'if it be on a *ding* day that she give birth, it will be good. If it be on a *geng* day that she give birth, it will be prolonged auspiciousness [good luck for a long time].'

[Verification:] After thirty-one days, on *jiayin* [day 51], she gave birth. It was not good. It was a girl.

▲ **Source 10.21** Oracle bone inscription in Patricia Buckley Ebrey, *Chinese Civilization: A Sourcebook*, 1993, p. 4

Responding to the source

1 In what way do you think the birth could have been 'not good'?

2 What does this tell us about what the Shang people thought was important?

3 What does this source tell us about the role of religious beliefs in ancient Chinese society?

Key concepts: sources, evidence   **HASS skills:** analysing, communicating and reflecting

Daoism

Daoism (also spelled 'Taoism') emerged some time in or before the sixth century BCE in the province we call Henan today. The exact circumstances surrounding the start of Daoism are unclear, although Laozi is usually identified as the first Daoist philosopher. Dao literally means 'the way', but can be interpreted as 'path or road' or 'doctrine'. It refers to the force that shapes all things in heaven and nature. There are still 12 million Daoists today.

Following Daoism is an attempt to be one with the way by avoiding conflict and finding peace. It requires constant adjustment to find balance between the two halves of life: the yin and the yang. Daoist religious practices are concerned with honouring ancestors,

purifying spaces and having a reverence or admiration for nature. Private altars are common in Daoist households and individual worship is encouraged. Festivals are held where Daoists can perform rituals together under the guidance of a grand master. These festivals can go for weeks and are often very elaborate.

▲ **Source 10.22** This photograph shows a yin–yang symbol (the black and white motif in the centre) in front of the Qingyang Gong Daoist temple in Chengdu.

ACTIVITY 10.3

Using historical sources as evidence

Zhang Zhou was a Daoist philosopher who became known as Zhuangzi. He lived during the Warring States period. His written work, *Zhuangzi*, is one of the main texts of Daoism and has inspired many beautiful poems and paintings. Examine the following sources and answer the questions that follow.

SOURCE A

Once Zhuang Zhou dreamed he was a butterfly, a fluttering butterfly. What fun he had, doing as he pleased! He did not know he was Zhou. Suddenly he woke up and found himself to be Zhou. He did not know whether Zhou had dreamed he was a butterfly, or a butterfly had dreamed he was Zhou. Between Zhou and the butterfly there must be some distinction. This is what is meant by the transformation of things.

▲ **Source 10.23** Zhuang Zhou, *Zhuangzi*, in Patricia Buckley Ebrey, *Chinese Civilization: A Sourcebook*, 1993, p. 30

SOURCE B

◄ **Source 10.24** A mid-sixteenth-century Ming-dynasty silk painting, which shows Zhuang Zhou dreaming of being a butterfly

Responding to the sources

1 What does Zhuang Zhou perceive in this tale?
2 What might Zhuang Zhou know about or believe after this incident?
3 What might Zhuang Zhou care about after this?

Key concepts: sources, evidence, perspectives   **HASS skills:** analysing

Confucianism

Confucianism was an ancient Chinese belief system that emerged during the Zhou era. It is still important in China today. Confucianism is more a philosophy or way of life than a religion. It was based on the teachings of Confucius during the Spring and Autumn period, when Zhou rule was beginning to weaken.

Confucius is believed to have been born around 551 BCE in the city of Qufu. He worked as a government official for the prince of Lu, but was not particularly successful in his political career. He travelled widely throughout China explaining his political philosophy to various courts, but eventually returned to Qufu to establish a school. He is credited with having written or compiled several classic Chinese texts, and many of his teachings were recorded in books such as the *Analects* and the *Doctrine of the Mean*. Confucius claimed his principles were not ones that he had invented, but rather they had been distilled from the wisdom of the ancients.

Many of Confucius' teachings were focused on the creation of a just and moral society. He believed that in order to create this, all

▲ **Source 10.25** A statue of Confucius

relationships must be well regulated. Family loyalty was of utmost importance, particularly the respect and obedience children must have for their parents. Ancestor worship was an essential part of regulating relationships. Only if family relationships were solid could the state work effectively. Confucius was a strong advocate for the Mandate of Heaven, where rulers needed to govern effectively and act in the best interests of their people or otherwise lose their power to those who could rule better.

▶ **Source 10.26** This Song-era silk painting shows Confucius teaching students about the importance of respect and loyalty to their parents. This virtue was known as 'filial piety'.

ACTIVITY 10.4

Using historical sources as evidence

Here is a piece of writing from Confucius. Read what he says and answer the questions that follow.

> The duties of universal obligation are five and the **virtues** by what means they are practised are three. The duties are those between **sovereign** and minister, between father and son, between husband and wife, between elder brother and younger, and those belonging to the association of friends. Those five are the duties of universal obligation. Knowledge, **magnanimity**, and energy, these three, are the virtues universally binding.

▲ **Source 10.27** Confucius, *The Doctrine of the Mean*, c. 500 BCE

virtues qualities of goodness or moral excellence

sovereign a king or ruler who has total and permanent authority

magnanimity the quality of being highly moral in forgiveness and overlooking insults from others

bodhisattva a follower of Mahayana Buddhism who is able to reach nirvana (a state without suffering) but delays doing so out of compassion for the suffering of others

Responding to the source

1. What are the five duties of universal obligation?
2. What are the three virtues?
3. What is Confucius suggesting about the importance of relationships?

Key concepts: sources, evidence, perspectives **HASS skills:** analysing, communicating and reflecting

Buddhism

Buddhism originated in India about 500 years before it arrived in China during the Han dynasty (206–220 CE). The form that became popular in China was Mahayana Buddhism, which developed into several schools, including Pure Land Buddhism. A combination of Buddhism and Daoism was adopted by many people in ancient Chinese society, whereby the practitioners continued to pay respect to their ancestors. Buddhism became an official religion during the Sui era and was an important feature of the Tang dynasty.

Mahayana Buddhists believe in spirits, ghosts and gods, and worship the qualities of Buddha and **bodhisattvas**. A Buddha in Mahayana Buddhism is any person who has attained enlightenment by perfecting every virtue and removing all negativities. Ultimately, Mahayana Buddhists believe that they themselves can become a Buddha through developing qualities to replace harmful ways of thinking and acting. They want to become Buddhas so that they can help others to also become Buddhas and escape the suffering of rebirth. This wish is what makes them Mahayana Buddhists.

Buddhists believe that everybody is reborn after they die – sometimes as humans but also as animals or insects, or even ghosts or gods. Unfortunately, these rebirths are without end and only result in suffering. The only way to escape this situation of continuous rebirth is to attain enlightenment.

▶ **Source 10.28** This standing bodhisattva is from the Sui dynasty during the late sixth to early seventh century BCE. It is carved from stone and originally was painted in bright colours with gold gilt.

▲ **Source 10.29** These statues are part of the Longmen Grottoes. There are tens of thousands of statues of the Buddha and his disciples carved into the limestone cliffs, which surround the Yi River near Luoyang in Henan province. Some, like those pictured, are many metres tall, but others are little more than a couple of centimetres high.

← **To learn more about the Buddha, see Chapter 9.**

Therefore, each human life provides an opportunity for the Mahayana Buddhist to come closer to developing good qualities and overcoming negativities. When enlightenment is attained through this process over many lifetimes, there is no further need for rebirth as the practitioner has become a Buddha.

MAKING THINKING VISIBLE 10.5

Connect, extend, challenge

Think about what you have read so far in this section and answer the following questions.

1 *Connect*: How are Daoism, Confucianism and Buddhism connected to what you already know about ancient Chinese history?

2 *Extend*: What new ideas extended or pushed your thinking in a new direction?

3 *Challenge*: What is still challenging or confusing for you? What questions do you have now?

Key concepts: continuity and change, cause and effect

HASS skills: questioning and researching, analysing, communicating and reflecting

The teachings of Buddhism came from an Indian prince named Siddhartha Gautama, who lived in the sixth century BCE. He rejected a life of wealth and luxury to focus on attaining spiritual qualities. When Siddhartha achieved enlightenment, he became known as the Buddha. The Buddha's teachings, known as the *Dharma*, are the basis of all forms of Buddhism.

Death and burial

Many ancient Chinese people believed that the afterlife was a continuation of life on Earth. The wealthy prepared for death by arranging tombs. It was very important to them that all the things they needed were buried with them in their tombs. Some people had objects made especially for this purpose.

The powerful and wealthy of ancient China had their tombs furnished with very fine objects made from the very best materials. They had large sets of ritual vessels in their tombs so that they could continue to make offerings to their ancestors in the afterlife. They often had weapons buried with them to use and show their power.

Jade played an important role in ancient Chinese burials. Jade objects were placed on top of and around the body of the person who had died. The ancient Chinese believed that jade had the power to protect bodies. Royal tombs, from the Han dynasty onwards, contained bodies wearing burial suits made from jade to protect the corpses from decay.

The *Book of Later Han*, which was the official history of the Han dynasty written in the fifth century BCE, says that the type of wire used in a jade suit depended on the status of the person buried:

- emperors used gold thread
- princes and princesses used silver thread
- sons or daughters of those that used silver thread used copper thread
- lesser aristocrats used silk thread.

Aside from those listed above, all other people were forbidden to be buried in jade burial suits. However, examination of the suits that have been found today has revealed that these rules were not always followed. Considering the vast size of the country, and the relatively slow means of spreading information, it is not surprising that the materials and techniques used in a jade burial suit occasionally differed from the official guidelines.

A jade burial suit was extremely expensive to create; only wealthy aristocrats could afford to be buried in them. Additionally, the process of manufacturing a suit was labour-intensive and it is estimated to have required several years to complete a single suit.

Amazing but true …

The jade burial suits of the Han dynasty were made from up to several thousand jade pieces, which were sewn together by gold or silver wire.

▲ **Source 10.30** Jade burial suit from the Han dynasty, located today in Xuzhou Museum, Xuzhou, China

▲ **Source 10.31** Visitors at the National Museum of China looking at a jade burial suit from the Han dynasty

END OF SECTION REVIEW 10.6

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What was an oracle bone made from?

2 Who did the Shang believe answered their questions on the oracle bones?

3 How did Buddhism come to China?

Interpret

4 What does the yin–yang symbol represent in Daoist philosophy?

5 What did Confucius think was necessary to create a just and moral society?

6 Why might Buddhists choose to be kind to animals?

▲ **Source 10.32** Yin–yang symbol

Argue

7 Of Daoism, Confucianism and Buddhism, which do you think has had the most long-lasting impact on Chinese society? Why do you think this? Search online to find out how many people in China today still follow these teachings.

8 'The jade burial suit tells us a lot about the priorities of the ancient Chinese.' Discuss whether you agree with this statement. Provide an explanation and examples to justify your opinion.

Key concepts: continuity and change, cause and effect, perspectives

HASS skills: analysing, evaluating, communicating and reflecting

10.7 Contact and conflict with other societies

FOCUS QUESTION

How did contact with the world shape the society and development of ancient China?

▲ **Source 10.33** This mural, found in the tomb of Li Xian from the Tang era (618–907 CE), shows ambassadors from Korea and the west being received at court

▲ **Source 10.34** The Jinshanling section of the Great Wall

Early contact and conflict

Ancient China had contact with foreigners and outside powers from the time of the Qin dynasty, possibly earlier. From the second century BCE, Chinese diplomats were sent into parts of central Asia, looking for allies against the nomadic tribes who threatened their northern borders. Later, diplomatic relations were established with other nearby societies like the Korean, Japanese and Vietnamese peoples. Religious ideas, like Buddhism from India, arrived in China during the Han dynasty, while the philosophies of Confucius were passed on to other Asian societies.

When contact became dangerous or unprofitable, most notably with the nomadic tribes of the northern regions, the ancient Chinese built fortifications to protect their society. The Great Wall of China is not one wall but many sections, which are not all connected. The first sections of the wall were built as early as the seventh century BCE. However, Qin Shi Huangdi was responsible for greatly enlarging and connecting those parts. Many of the dynasties that followed maintained and repaired the wall as well as built new sections. The Great Wall protected China from intruders and invaders, and was also a way for the ancient Chinese to control trade at the border. They were able to impose duties or taxes on goods brought into China from outside.

▼ **Source 10.35** An artist's representation of the construction of a section of the Great Wall of China

Amazing but true ...
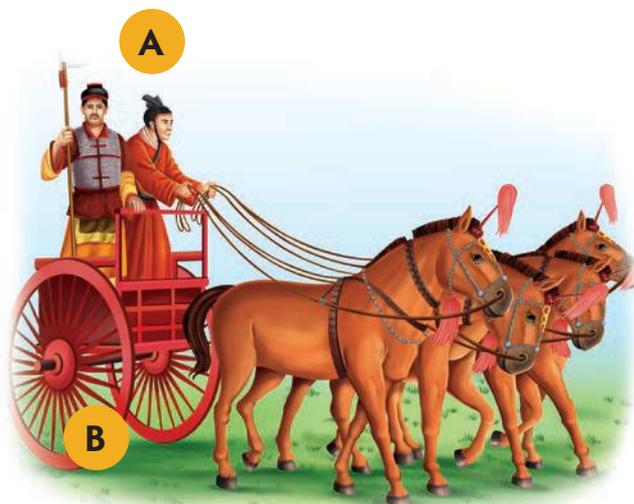
A Early hand-held weapons included daggers, spears, axes and halberds (a combination of a long-handled spear and an axe). Swords were introduced from 500 BCE, made originally from bronze and then from iron or steel.

B Chariots were first used as a status symbol, then as an important weapon for fast attacks. Different versions were pulled by two, three or four horses. The chariot was quite large and carried the charioteer bowman and spearman.

C Soldiers on horseback (cavalry) were more mobile and faster than chariots. When saddle technology improved, cavalry used bows, halberds and swords, and became an important part of the army. The northern clans greatly influenced the development of new skills and technology.

D Bows were the most common and most prestigious weapon in ancient China. They were used by infantry as well as cavalry. Archers were often used in armies to protect the sides (flanks) of the infantry troops.

E The crossbow was an important technological development from the fifth century BCE. It could be used by individual soldiers, but they were also built as huge weapons to defend forts and cities from the tops of walls.
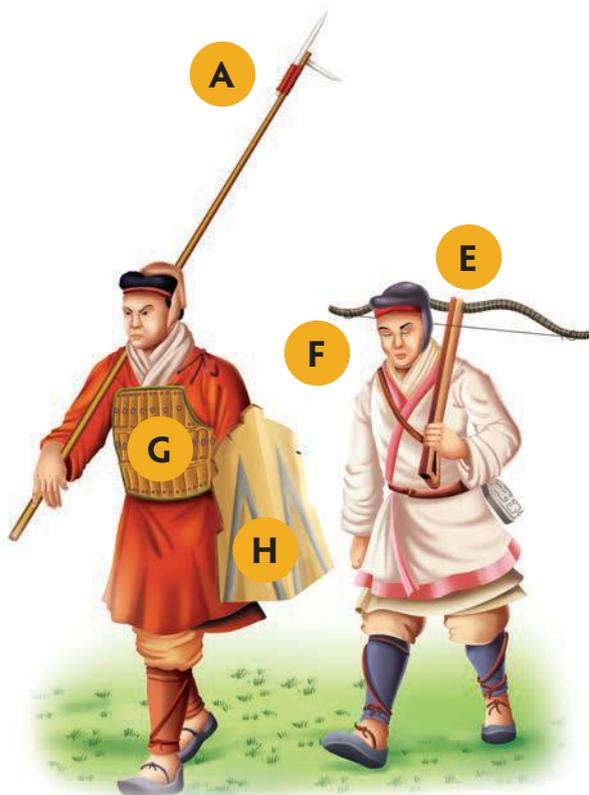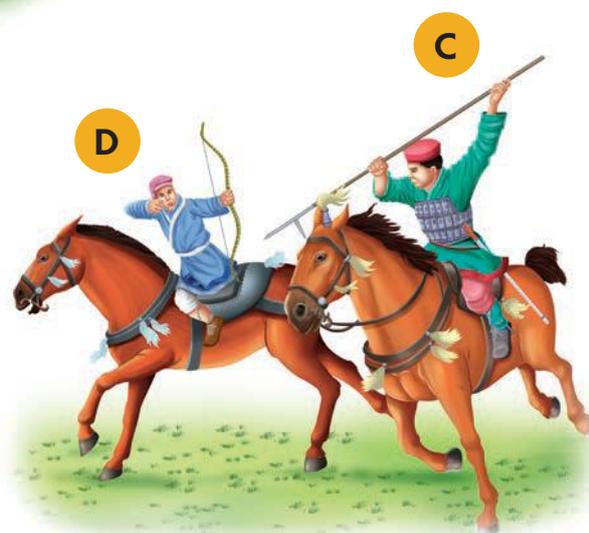
F Helmets were designed to protect the head, ears and back of the neck. They were originally made of leather, then bronze was used. They were sometimes decorated with plumes.

G Body armour started as hardened leather as protection against arrows. During the Zhou dynasty, more flexible armour was made from interconnected pieces of lacquered leather or bronze.

H Shields were originally made from bamboo and leather. In later periods bronze, and later iron, was used for greater protection, even though this made the shields heavier.

Starting in the Han period, simple catapults were used to throw stones. Gunpowder was not used in warfare until after 900 CE.

▲ **Source 10.36** An artist's representation of members of the imperial army during the Han dynasty

ACTIVITY 10.5

Research task

Research the development of the crossbow in China. Use at least three different sources to support your research.

1 Before you start, write out five questions you want to answer with your research.

2 Write a short report that answers your questions and includes additional information. Make sure you have some sketches or images in your report.

3 Add a bibliography at the end of your report that lists the resources you used. Ask your teacher for help in citing your resources properly.

Key concepts: sources, evidence, significance

HASS skills: questioning and researching, communicating and reflecting

The Silk Road

Ancient China first made contact with more distant civilisations, like those in Europe, through trade. The Silk Road was not a single road, but a series of overland tracks that wound from the heart of China, through the Middle East and into Europe. Many goods were bought and sold along these trade routes, including olive oil and wine from Italy, cotton and peppercorns from India, ivory from east Africa, and spices from Arabia. Ancient China exported jade and iron, but its most significant product to trade was silk.
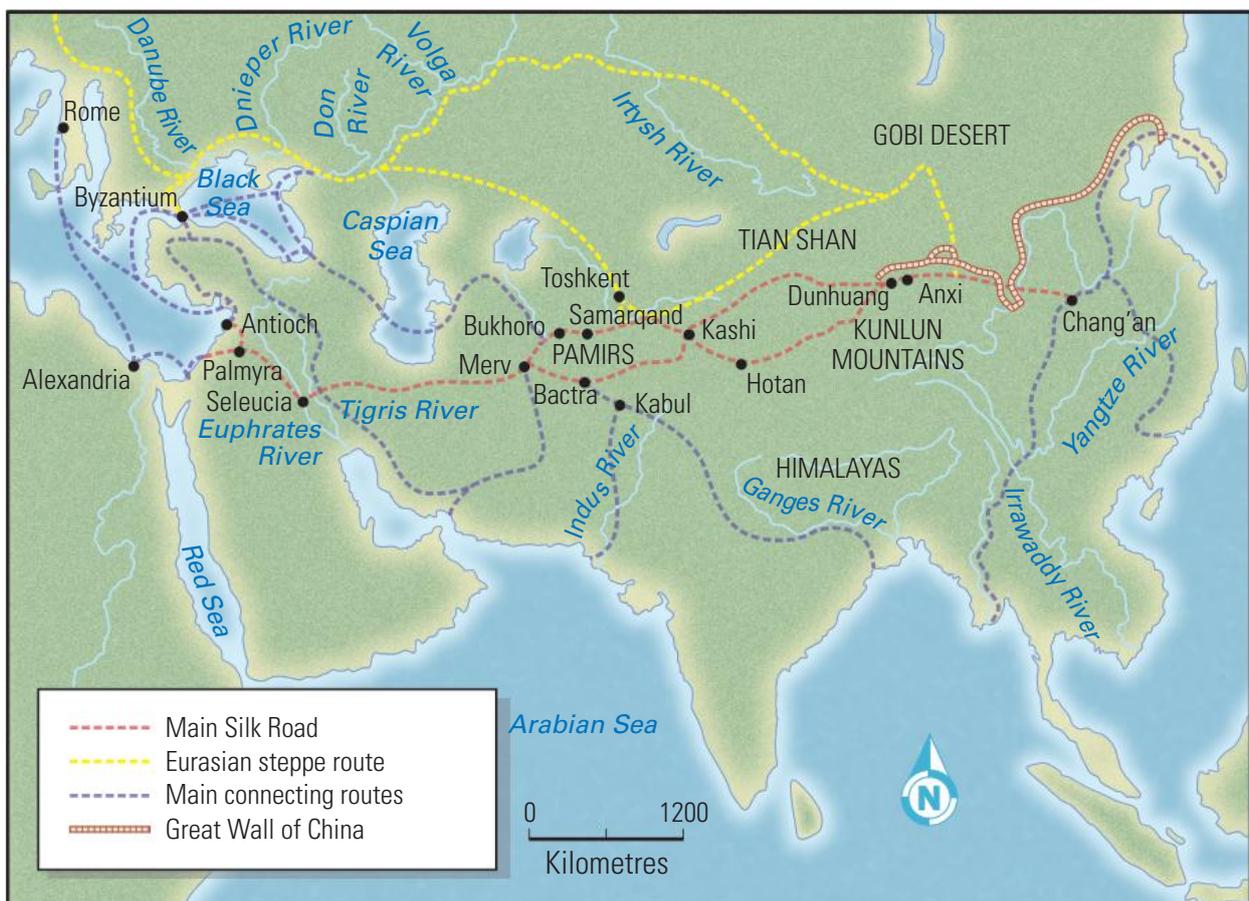

▲ **Source 10.37** Routes that made up the Silk Road in ancient China

Silk is a natural fibre produced by silkworms that live only on the leaves of the mulberry tree. The silk thread is formed by the caterpillars as they make their cocoons in preparation for transformation into moths.

There is evidence of silk being produced in ancient China as far back as 5000 years ago; the first written reference to silk we have is from the Shang era. The secret of silk production was kept very carefully by the ancient Chinese for many centuries, as it was such a lucrative product. As well as being beautiful, the fabric made from silk is strong and lightweight, and cool in summer and warm in winter. People outside of China were willing to pay very high prices for silk, so it was for this reason that the trade routes became known as the Silk Road.

bolt a large roll of cloth

Very few, if any, merchants travelled the whole length of the Silk Road; instead, they travelled back and forth over different sections, buying and selling goods as they went. A **bolt** of silk purchased in Xi'an could be bought and sold several times on the long road to Italy. It would increase in price at every step until it was finally sold to a noble lady in ancient Rome. Silk clothing was extremely popular among the wealthy of ancient Rome. The use of the fabric was a sign of a family's power and status.
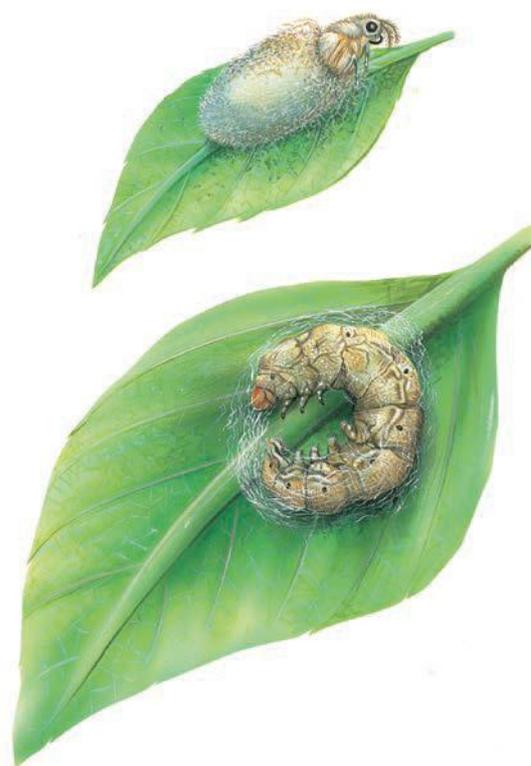
▲ **Source 10.38** The silkworm creates a cocoon of raw silk, produced by its salivary glands, then emerges from the cocoon as a moth.

Amazing but true …

A Chinese legend says it was the wife of the mythological Yellow Emperor who taught the Chinese people the art of silk production. Throughout ancient Chinese history, Empress Si Ling-Chi (also known as Xilingshi or Lei-tzu) has been credited with discovering silk-making itself, as well as the weaving of silk thread into fabric.

▼ **Source 10.39** A detail from an illustrated map showing European merchants travelling along the Silk Road

▲ **Source 10.40** Yueyaquan, or Crescent Moon Lake, lies on the western edge of the Gobi Desert 7 kilometres from the centre of Dunhuang. It was a strategic location on the crossroads of two major Silk Road trading routes.

ACTIVITY 10.6

Using historical sources as evidence

The following text extract about the silk trade in ancient China is written by modern historian Peter Frankopan. After you read what he says, answer the questions that follow.

> Silk performed a number of important roles in the ancient world apart from its value to nomadic tribes. Under the Han dynasty, silk was used alongside coins and grain to pay troops. It was in some ways the most reliable **currency**: producing money in sufficient quantities was a problem, as was the fact that not all of China was fully **monetised**; this presented a particular difficulty when it came to military pay since theatres of action were often in remote regions, where coins were all but useless. Grain, meanwhile, went rotten after a time. As a result, bolts of raw silk were used regularly as currency, either as pay or, as in the case of one Buddhist monastery in Central Asia, as a fine for monks who broke the foundation's rules. Silk became an international currency as well as a luxury product.

▲ **Source 10.41** Peter Frankopan, *The Silk Roads: A New History of the World*, Vintage Books, 2017

Responding to the source

1 According to this historian, what problems did the empire encounter when attempting to pay soldiers who were fighting in distant parts of China?

2 What were the benefits of using silk as currency?

3 Why was silk so valuable?

4 As this information is written by an historian, it is a secondary source. Is a secondary source likely to be more or less reliable than a primary source? Why or why not? Test your theory on this source by searching for information in the library or online to **corroborate** or contradict the information here.

currency any type of item used in trade; often coins or notes, but it also can be items of high value like gold, gems or silk

monetised to have a currency, usually in the form of coins

corroborate to support or confirm an idea or claim with evidence

⚙ **Key concepts:** sources, evidence, contestability

📋 **HASS skills:** questioning and researching, analysing, evaluating, communicating and reflecting

▲ **Source 10.42** *Left:* A silkworm. *Centre:* Silkworm cocoons are boiled to kill the caterpillars inside and loosen the thread for spinning. *Right:* An artist in Nanjing practises the ancient art of silk weaving.

END OF SECTION REVIEW 10.7

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What philosophies or religions travelled between China and other places?
2 What was the Silk Road?
3 What types of goods did ancient Chinese people buy from Silk Road merchants?

Interpret

4 Why did so few merchants travel the whole length of the Silk Road?
5 Why was the Great Wall of China built?

Argue

6 Why do you think silk has continued to be such a valuable material? Provide evidence to support your answer.

▲ **Source 10.43** This painting from the Song dynasty (960–1279 CE) shows ladies preparing a panel of newly woven silk. The painting is attributed to Emperor Hui-Tsung.

Key concepts: sources, evidence, continuity and change, contestability

HASS skills: evaluating, communicating and reflecting

10.8 The role of a significant individual in ancient China: Fu Hao

FOCUS QUESTION

Who was a significant individual of ancient China and what did that person achieve?

Fu Hao

Lady Fu Hao was a consort of Wu Ding, the 22nd king of the Shang dynasty. She is one of the most famous women in ancient Chinese history. Her tomb was discovered by archaeologists in 1976, and is the only Shang tomb found that had not been looted by grave robbers. Historians estimate that she died in around 1200 BCE.

A huge number of grave goods were discovered in Fu Hao's tomb, including 468 bronze objects, 755 jade items, 61 ceramic or pottery objects, over 6000 seashells, and a variety of other items made out of gems, bone and ivory. At least 109 items from the tomb have Fu Hao's name engraved on them, clearly marking this as her final resting place. Less happily, 16 humans and six dogs were also entombed with Fu Hao to join her on her journey into the afterlife. There is evidence that a **shrine** was built on top of the tomb where her relatives could pay respect to her spirit.

However, Fu Hao is not just famous for her tomb; she was a clan leader and landowner whose property lay beyond the area directly controlled by the king. This land gave her wealth and power, but also the duty to pay tribute. Fu Hao spent much of her time at court performing religious rituals, including sacrifices for ancestors and gods. She had several pregnancies although it is not clear how many surviving children she had.

Probably the most notable aspect of Fu Hao's life was that she led soldiers into battle on more than one occasion. Women did not commonly go to war but, as the head of a clan, she was responsible for her army. During her lifetime she participated in every significant **military campaign** and at one stage led a force of 13 000 soldiers into battle, which is the largest army recorded at any time during the Shang era.

Fu Hao was a successful general with many significant victories to her name, including the defeat of the Tu Fang. It was after a long, drawn-out campaign against the Ba, however, that Fu Hao became ill and died. Her military service is acknowledged in her grave goods, as many of the bronze items are weapons like axes, knives and arrowheads.

> **shrine** a place used for religious rituals
>
> **military campaign** a series of conflicts or battles that are aimed at reaching the same goal

◀ **Source 10.44** A modern artist's representation of Lady Fu Hao holding her ceremonial *yue*

▲ **Source 10.45** Jade monkey from the tomb of Fu Hao

▲ **Source 10.46** Dagger-axe from the tomb of Fu Hao

◄ **Source 10.47** Bronze, owl shaped *zun* (wine vessel) from the tomb of Fu Hao

▲ **Source 10.48** Bronze *zun* from the tomb of Fu Hao

◄ **Source 10.49** Bronze *fang-ding* (food vessel) from the tomb of Fu Hao

MAKING THINKING VISIBLE 10.6

Creative questions

1 Examine Sources 10.45 to 10.49 and brainstorm a list of questions about them.

2 Look over your list and transform some of the questions into queries that challenge your imagination. You can do this by using the following question stems:

   a *What would it be like if …?*

   b *How would it be different if …?*

   c *Suppose that …?*

   d *What would change if …?*

   e *How would it look differently if …?*

3 Then, choose a question to explore using your imagination. Think about all its possibilities. You can try one of the following: write a short story or play, draw a picture, invent a game, or conduct an imaginary interview.

4 Now reflect: what new ideas do you have about Fu Hao and the Shang burial customs that you did not have before?

Key concepts: sources, evidence, significance   **HASS skills:** questioning and researching, analysing, communicating and reflecting

ACTIVITY 10.7

Using historical sources as evidence

Here is a text extract from modern historian Barbara Bennet Peterson about Fu Hao. Read what she says and then answer the questions that follow.

> Wu Ding knew of his wife's capabilities and was persuaded, after consulting with Fu Yue, to grant Fu Hao a bronze *yue*, a symbol of empowerment for a military campaign. A diviner, brought in to see whether the omens were favourable, wrote questions on tortoise shells and they were answered in the affirmative. Fu Hao was commissioned to fight. Marching with her troops northward to battle the Tu Fang, she fought at the head of her troops. Off the battlefield, she nursed the wounded and raised morale. The Tu Fang were badly beaten and would never again challenge the Shang's military power.

▲ **Source 10.50** Barbara Bennett Peterson, *Notable Women of China: Shang Dynasty to the Early Twentieth Century*, 2015, p. 14

Responding to the source

1 What did the bronze *yue* represent?

2 What attributes or qualities does this source suggest Fu Hao had?

3 What does this source tell us about the role of women during the Shang dynasty?

▲ **Source 10.51** A bronze *yue* from the tomb of Fu Hao

Key concepts: sources and evidence   **HASS skills:** analysing, evaluating

MAKING THINKING VISIBLE 10.7

Claim, support, question

Use 'claim, support, question' to develop your historical thinking and arguments.

1 *Make a claim*: What do you think the life of Fu Hao can tell us about society and the role of women during the Shang era?

2 *Support*: What evidence or reasoning can you provide to support your claim?

3 *Question*: What other factors might be important in Shang society? How would you find out?

Key concepts: sources, evidence, significance, empathy   **HASS skills:** analysing, communicating and reflecting

END OF SECTION REVIEW 10.8

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What was Lady Fu Hao best known for?

2 How many items were found in her tomb?

3 What items from Fu Hao's tomb show that she was a military leader?

Interpret

4 Why was a shrine built on the top of Fu Hao's tomb?

5 What do you think the seashells might have been used for?

6 Why are oracle bones such useful sources for historians?

Argue

7 Explain why you think human and dog sacrifices were included in Fu Hao's tomb.
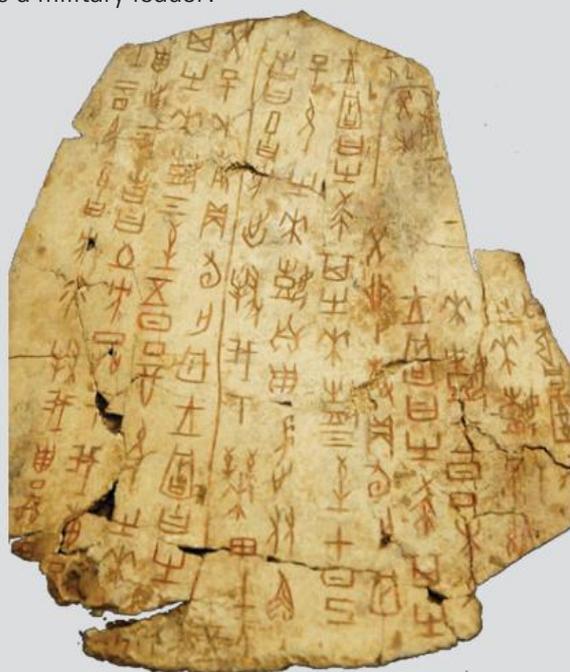
▲ **Source 10.52** A Shang oracle bone similar to those on which Lady Fu Hao's life was recorded

Key concepts: cause and effect, significance   **HASS skills:** communicating and reflecting

10.9 The process and importance of conserving the past

FOCUS QUESTIONS

- How do historians and archaeologists use technology to find out about the people of the past?
- What responsibility do we have to conserve the past and how should it be undertaken?

What science can do for history

Historians find out about the past in different ways. We often think that historians sit in dusty libraries surrounded by piles of ancient books and crumbling scrolls. But this image ignores the array of other techniques that are available to historians and archaeologists to study history. These techniques are particularly useful when exploring ancient societies, because there are few or no written texts. Studying objects therefore is an important method of finding out about the past.

Scientific techniques continue to be developed to assist our understanding of past societies. For example, methods like radiocarbon dating are used to find out how old organic items are, and ground-penetrating **radar** is employed to find out what is below the surface of the Earth and to identify the most suitable locations for archaeological dig sites. Chemical analysis of artefacts can sometimes provide very specific information about the life of past societies. For example, the analysis of tooth enamel can identify the location where a person grew up. It does this by matching the chemical profile of the tooth's enamel to that of the water available at the location. Chemical analysis can also be used to discover what items are made of and how they were constructed.

> **radar** a device using very high frequency radio waves to identify objects, materials and their location
>
> **pigments** dry substances that can be mixed with liquid to become coloured paints

Scientific investigations into Han purple

One area where chemical analysis has become useful is the investigation of ancient paint. The ancient world was much more coloured than we usually imagine. What remains of statues and pottery is often only the base stone or terracotta, as the paint has faded or flaked off.

Painters of the ancient world had a variety of natural **pigments** to use that could produce many colours. The colours ranged from earthy yellows and reds made from ochre, to blues and greens from minerals like azurite and malachite. There were limitations, however. The full spectrum of colours was not available to the painter of the ancient world as it is to a painter today. Modern painters have access

▲ **Source 10.53** A close-up of a terracotta soldier from the army of Qin Shi Huangdi. It has traces of paint still visible.

synthetic made through a technical process by humans rather than by nature

dye a solution that can stain or colour material by chemically binding to it

to a much wider range of colour, because chemists are now able to create **synthetic** pigments.

Only in the late twentieth century was it discovered that synthetic pigments were not entirely unknown in ancient China. Elisabeth FitzHugh, a conservator at the Smithsonian Institution in the United States, analysed chips of purple paint from several artefacts from the Han dynasty. She found that the pigment used was not natural.

How exactly Chinese craftsmen were able to create this synthetic pigment is unclear. It is a barium copper silicate compound, which must be heated to about 1000°C for long periods. The colour was named 'Han purple' by FitzHugh and has only been found on artefacts dating between around 221 BCE

to 220 CE. At some point, after the Han dynasty fell, the knowledge of how to make it disappeared and was not discovered again for another 1700 years.

Han purple was a much stronger and more vibrant purple than any of the other purples of the ancient world. Tyrian purple, which was made from sea snails, was a valuable **dye** much loved by the ancient Romans, but was not a pigment, and most other natural purples were really more reds.

The discovery of Han purple is important because it tells us a great deal about the technological abilities of ancient Chinese society. It is evidence of innovation and a focus on improving art, science and technology in ways that are similar to how we live today. It is only modern scientific processes that allow us to recognise the historical significance of evidence like Han purple.

▲ **Source 10.54** Han purple was a rich and vibrant synthetic colour. What do you think its presence on 2000-year-old pottery tells us about the development of technology in ancient China?
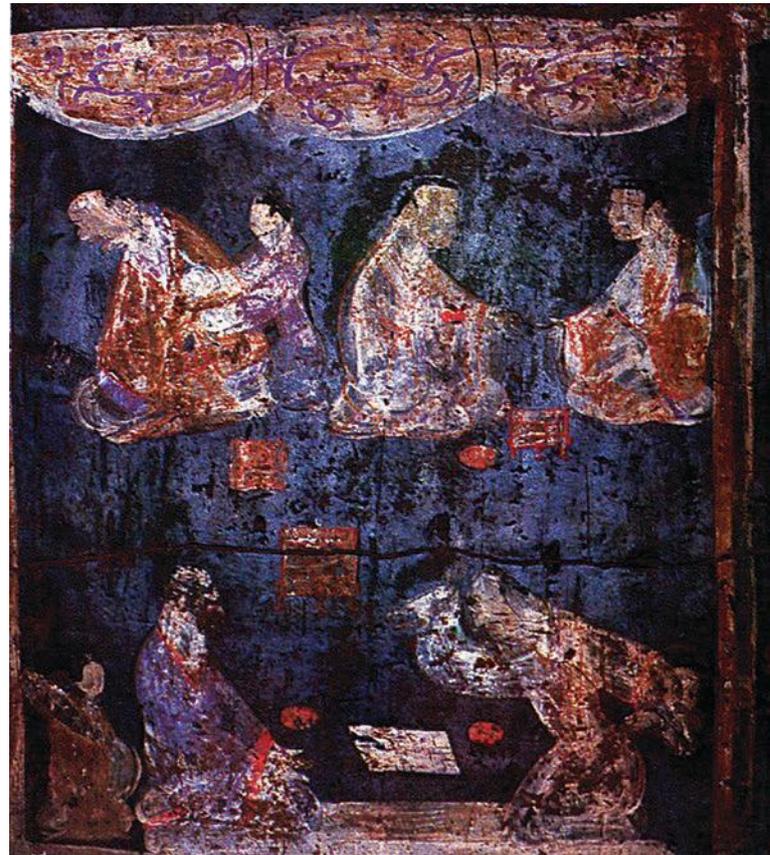
▲ **Source 10.55** A section of a mural from the tomb of Zhucun of the Han dynasty, located in Luoyang, Henan province. It includes use of the synthetic Han purple pigment.

MAKING THINKING VISIBLE 10.8

Think, puzzle, explore

Reflect on what you have just read about scientific investigations to learn more about ancient civilisations. Use 'think, puzzle, explore' to expand on your knowledge and ideas.

1 What do you *think* you know about the scientific techniques historians and archaeologists use to find out about the past?

2 What question or *puzzle* do you have about these methods?

3 What can you do to *explore* this topic further?

Key concepts: sources, evidence, significance

HASS skills: questioning and researching, communicating and reflecting

Conserving the past: our duty

Asking 'Why is it important to conserve artefacts of the past?' is really the same as asking 'Why is history important?' We can only understand the world that we live in and the people that we are if we have a knowledge of our shared past. Understanding where we have come from is important, especially if we are to make informed and positive decisions about where we are going.

The reason why people become emotional when historical artefacts and sites are destroyed is because they represent a physical link with the past. Artefacts and sites remind us of how fragile human achievements can be. The deliberate destruction of the sixth-century Bamyan Buddhas in Afghanistan in 2001 and the demolition of the Roman ruins at the ancient trade city of Palmyra in Syria in 2015 by religious extremists has prevented any further historical research and understanding of those societies. Many other significant sites around the world are at risk of damage or destruction because they exist in war zones or regions where people are unable or unwilling to protect them.

Preserving the terracotta warriors

Not only deliberate acts destroy our heritage. Even just being exposed to air and light can be enough to damage some very fragile artefacts. Conservation and **preservation** are expensive processes that can require a lot of technical and scientific skill, as well as money.

The terracotta army is one of the most significant archaeological finds from ancient China. Discovered by three farmers in 1974 in Shaanxi province, the thousands of life-size clay statues of warriors and horses form part of the burial complex for Qin Shi Huangdi. After Qin Shi Huangdi unified China at the end of the Warring States period, his reign was short. But in that time he oversaw the building of sections of the Great Wall, created a standard for coins, weights and measures, and organised a royal palace and equally royal **mausoleum** for himself.

Since the discovery of Qin Shi Huangdi's tomb, four pits have been partially excavated. The single warrior uncovered by the farmers turned out to be one of at least 8000 individual soldiers. Every terracotta warrior is unique with different facial features, hair styles and positions. There are officers, archers, foot soldiers, charioteers and the horses to go with them. These warriors, which would have taken more than a decade to make, were created to be included in Qin Shi Huangdi's mausoleum to accompany and protect him in the afterlife.

A dilemma has arisen for archaeologists and conservators attempting to excavate the tomb. While everybody is keen to uncover as much as possible, there have been serious difficulties in looking after the items that have already been found.

preservation to prevent decay or damage to historical artefacts and sites

mausoleum a very large and expensive grand tomb

▲ **Source 10.56** A photograph of the repaired terracotta warriors from Pit 1 in Xi'an, Shaanxi province, China
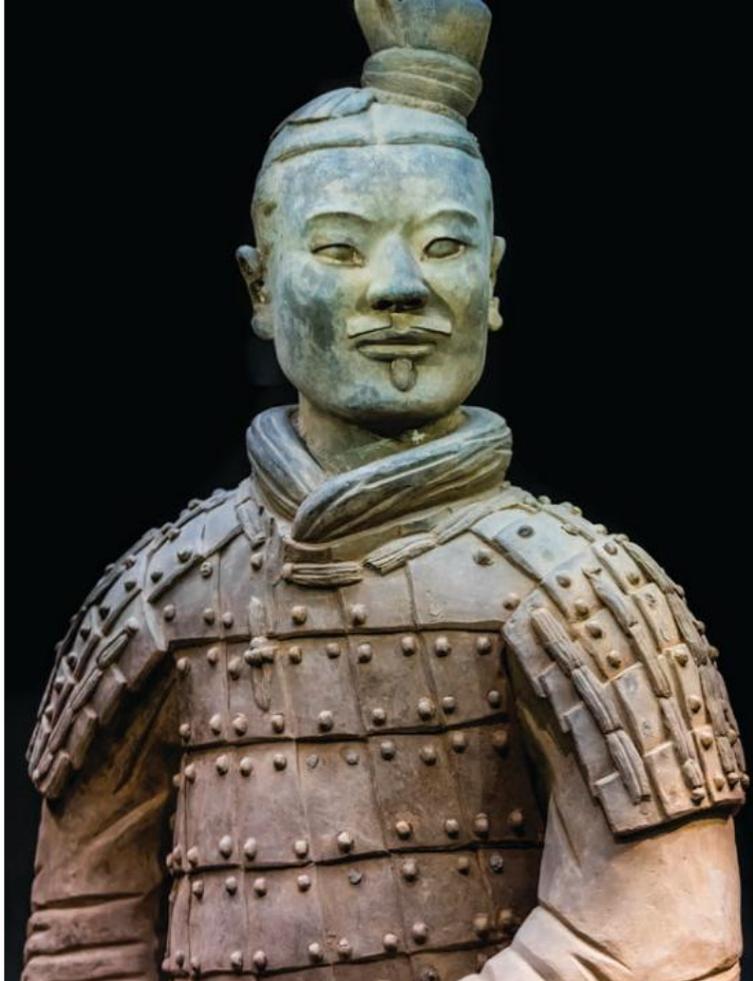

▲ **Source 10.56a** Exploring the Terracotta Warriors

Almost all of the terracotta warriors were broken when they were discovered, so Chinese archaeologists have spent decades piecing them back together again. Most of the warriors that you can now see on display are the smooth sandy colour of terracotta, but when they were first entombed, each one was brilliantly painted. Over the centuries, the paint has become fragile and unstable. Exposure to the air causes much of it to immediately shrink and flake from the outside of the warrior. Scientists have

▲ **Source 10.57** A close-up of one of the terracotta army warriors

worked to develop methods of uncovering new warriors and preserving the paint before it can disintegrate, but so far this has only been partially successful. So, every time a new artefact is uncovered, it is at risk of immediate damage by exposure to air and light.

▼ **Source 10.58** In 2009, more than 30 years after they were first discovered, Chinese archaeologists continue to work on carefully excavating the terracotta warriors

MAKING THINKING VISIBLE 10.9

See, think, wonder

Contestability occurs when particular interpretations about the past are open to debate; for example, as a result of a lack of evidence or different perspectives. Part of what we are doing in this chapter is identifying past events and developments that have been interpreted in different ways.

Look carefully at the images of the terracotta army and then answer the following questions.

1 What do you *see* in these images?
2 What do you *think* about the things that you see?
3 What does it make you *wonder* about the terracotta army and the conservation of historical artefacts?

Key concepts: sources, evidence, significance

HASS skills: questioning and researching, communicating and reflecting

Future excavations of Qin Shi Huangdi

Is it right that archaeologists should continue to excavate items that they are not fully able to protect yet? The central tomb, where Qin Shi Huangdi himself is buried, has not yet been opened. The problem with conservation is one of the main reasons. Even though historians have known the approximate location of the Qin Shi Huangdi tomb for over 40 years, there will be no excavation until archaeologists and scientists are sure they can open it and preserve the artefacts without any damage. In the meantime, work to preserve and maintain the already uncovered artefacts continues.

▲ **Source 10.59** Terracotta warriors and horses

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 10.4

Determining historical significance

'Historical significance' is something that we, as historians, have decided was important in the past. According to the WA Curriculum:

The concept of significance is the importance that is assigned to particular aspects of the past (e.g. events, developments, individuals, groups, movements and historical sites).

An understanding of the concept of significance is developed in the following ways:

- retelling personal and family events that have significance
- examining a historical site of a cultural or spiritual significance
- recognising the significance of people and events in bringing about change
- investigating the significance of people, events and developments, over the short and long term.

With these things in mind, what do you think was the significance of the archaeological discovery of the terracotta warriors?

▲ **Source 10.60** An archaeologist at work on one of the terracotta warriors

Key concepts: significance, continuity and change, cause and effect   **HASS skills:** communicating and reflecting, evaluating

END OF SECTION REVIEW 10.9

Review questions

Complete the quiz in the Interactive Textbook, and answer the questions below on paper or in the Interactive Textbook.

Recall

1 What are some of the scientific methods used to find out about the past?
2 What is the difference between a natural and a synthetic pigment?
3 When and where were the terracotta warriors first uncovered?
4 Who found the terracotta warriors?
5 What are some of the problems archaeologists have faced when excavating the terracotta army?

Interpret

6 How do you think the Han dynasty first invented a synthetic purple pigment? Do a search online to find more evidence.
7 What was the purpose of the terracotta army? Why were they buried in the first place?
8 Why was the terracotta army such an important discovery?

Argue

9 'Synthetic purple tells us a lot about the technology and culture of ancient China.' Discuss whether you agree with this statement. Use evidence to support your argument.
10 Who is responsible for ensuring historical artefacts are preserved? Is it more important to find out about the past than it is to preserve the original artefacts? Use evidence to support your argument.

Key concepts: sources, evidence, cause and effect, significance, perspectives   **HASS skills:** questioning and research, analysing, evaluating, communicating and reflecting

10.10 Conclusion: why does it matter?

From the small beginnings on the banks of the Yellow River to the society that developed, ancient China was astounding for its strength, sophistication and longevity. The people of ancient China were skilled artisans and productive farmers. They lived and worked under strictly ordered dynasties, which rose and fell over time. Rulers came from engineers like Yu, as well as from those who had military power; the ancient Chinese demonstrated great respect for knowledge and wisdom. They lived active, spiritual lives and ordered their communities on Confucian, Daoist and Buddhist values.

The dynastic system of rulership in China lasted long beyond what we call the ancient world. Through the Middle Ages and into the early modern world, dynasties came and went. This is a level of continuity that no other empire can match. The last dynasty fell just over 100 years ago, in 1911. The lives and achievements of ancient China are no less relevant now than when Yu first became determined to hold back the floods.

What do you think Yu the Engineer would have thought about China today in the modern world?

▼ **Source 10.61** People rebuilding the Great Wall after part of it was damaged

10.11 End of chapter activities

Reflection

Self-assessment

That just about wraps up this topic. How do you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

Making thinking visible

Circle of viewpoints

Claim: *We should excavate the tomb of Qin Shi Huangdi.*

Discuss this claim with others in the class. In what kind of situation would a claim like this be made? What is the claim asking us to do? What problems might the excavation of the tomb cause?

Brainstorm the claim. Make a list of all the different points of view on this. Who might agree or disagree with this claim? Why?

Dramatise. Choose a viewpoint and imagine the stance a person from this viewpoint would be likely to take. Would they think the claim is wrong? Right? Uncertain? Why? Write a short speech from the perspective of this person. Use the following sentence stems:

- *My viewpoint is ...*
- *I think this claim is wrong/right/uncertain because ...*
- *What would convince me to change my mind is ...*

Share your viewpoint with the group and listen to other people's viewpoints.

Stand back. Look at all the viewpoints you have heard and brainstormed. What is your conclusion or stance? What new ideas or questions do you have?

▲ **Source 10.62** Spring Dragon Day is held on the second day of the second lunar month in order to bring the rains. Here, the twenty-first-century celebrations in Gansu province still follow many of the customs begun centuries earlier.

Inquiry

Research task

Investigate the significance of a dynasty in the overall context of ancient China. First, choose one of the dynasties of ancient China and do some research to find out more information about it.

Explain the importance of this dynasty in shaping ancient Chinese culture and society. In your answer, describe the society before this dynasty took over, explain how it took over from the previous dynasty and summarise the key features that made this dynasty so important.

In your response, support your argument by providing key names, dates and facts.

Analysis

Go back through the chapter and find at least three primary sources that you think represent an important piece of information about ancient China. These could be about an event, an idea or a person. You could choose things that historians have a lot of reliable information about already, or you might choose things that are still 'history mysteries'. Write down your responses to the points below:

1 Explain what each source tells us about an event, person or idea. What do you see?
2 Explain why you chose this as an important piece of information about an event, idea or person in ancient China.

Writing

Using historical terms meaningfully

As a historian, you will need to confidently and correctly use the terms related to your subject. Write a paragraph in response to the question below using all the key terms listed. Ensure that your use of these terms shows your understanding of what each term means.

Question: *How did the people of ancient China develop a long-lasting and sophisticated empire?*

- neolithic
- matriarchal society
- empire
- agriculture
- Qin Shi Huangdi
- mausoleum
- Fu Hao
- the terracotta army
- Mandate of Heaven
- Han purple.

Key concepts: continuity and change, cause and effect, significance

HASS skills: questioning and researching, analysing

Glossary

Civics and Citizenship

Act of Parliament   statute law, resulting from a Bill successfully passing through parliament and gaining royal assent

Australian Constitution   a set of rules that came into effect on 1 January 1901; it outlines some of the rights of Australians and how power is shared between federal and state parliaments

beyond reasonable doubt   a legal concept in a criminal trial in which a person can only be found guilty if the judge or jury, after examining the evidence, finds that it conclusively shows the accused committed the crime and there is no other likely cause

bicameral   refers to the two houses of parliament in New South Wales, Victoria, Western Australia, South Australia and Tasmania

Bill   a drafted law that has not yet been passed by parliament

check and balance   the sharing of power between groups, individuals and institutions that allows one group to prevent the abuse of power by another group

civil liberties   basic rights of individuals that are protected by law; for example, freedom of religion and freedom of speech

concurrent powers   existing at the same time; powers held by both state and federal parliaments

constitutional monarchy   a form of government where the monarch is the head of state

delegated legislation   laws made by authorities other than parliament, which are delegated the power to do this by an Act of parliament

democracy   a political system where a government's power is vested in its citizens, who vote through elections to shape decisions

election   a local, state or national ballot cast by citizens who vote for a person from a political party or a person standing independently

electorate   a defined area within a state or territory that is represented by a member of a political party or an independent

exclusive powers   powers that can be exercised only by the federal parliament

Federation   the process of uniting several states to form a single national government

governor   the monarch's representative at a state level

Governor-General   the monarch's representative at a federal level

justice   the system of laws in a country that judges and punishes people but can also mean fairness in the way people are dealt with

legislative power   the legal power or capacity to make laws

plaintiff   the person making a legal complaint against someone else in court in a civil case

preamble   an introductory statement or declaration

referendum   a general vote on an issue affecting the Australian Constitution that all enrolled voters must vote on

residual powers   those matters on which the states can legislate, as they are not referred to in the Australian Constitution

rule of law   the principle that nobody is above the law; this can be seen in the requirement that government actions and decisions must be in line with the laws they create and that they themselves must follow the laws

state   a defined area within Australia controlled by its own political unit, which has the power to pass its own laws. These laws are protected by the Australian Constitution, except where they contradict Commonwealth law.

territory   a defined area within Australia controlled by its own political unit, but its laws can be revoked by the federal government

unicameral   refers to a parliament having one house, such as in Queensland, the Northern Territory and Australian Capital Territory

Westminster system   based on the British political system developed in Westminster, London. It is another term for parliamentary government, in which the Executive is drawn from the Legislature; that is, government is formed by the majority party or coalition in the lower house of parliament. The leader of that party or coalition becomes the prime minister.

writ   a form of written command that is legally binding

Economics and Business

ambiguity   able to be interpreted in many ways

ASX   an abbreviation of the Australian Securities Exchange, a stock exchange where people can buy shares in a business

body language   the movements or positions by which you show other people your feelings without using words

brand   a business asset that is essentially a characteristic or what it is known as; it creates and brings with it awareness, desirability and power. An example of a famous brand is Coca-Cola.

business plan   a detailed plan describing the goals of a business and how to achieve them

communication   the process of sharing information, especially when this increases understanding between people or groups

competitive   aspiring very much to win or be more successful than others

competitive advantage   the conditions that make a business more successful than the businesses it is competing with, or a particular quality that makes it more successful

crowdfunding   the practice of getting a large number of people to each give small amounts of money in order to provide the finance for a business project, typically using the internet

decision-making   the process of gathering information and assessing solutions in order to make a choice

demand   the quantity of a good or service that consumers wish to buy at a given price

disruptor   in business this is a company that changes the traditional way an industry operates, especially in a new and effective way

economics   the study of the way in which economies work

employment   being paid to work for a company or organisation

equilibrium price   occurs when demand and supply are equal

equity   the value of the shares issued by a company

ethical   relating to beliefs about what is morally right and wrong

forest degradation   involves a change process that negatively affects the characteristics of a forest

freelancer   self-employed and hired to work for different companies on particular assignments

global awareness   an awareness of what's happening worldwide

globalisation   the process by which particular goods and services, or social and cultural influences, gradually become similar in all parts of the world

innovation   the development of a new idea or product

IP   an abbreviation of intellectual property; someone's idea, invention, creation, etc., that can be protected by law from being copied by someone else

job satisfaction   the feeling of pleasure and achievement that we experience in a job when we know that our work is worth doing

leadership   the set of characteristics that make a good leader

lucrative   producing a lot of money

market   the business or trade in a particular product, including financial products

market conditions   relates to the status of the overall market in which a business trades

needs   products and services that people cannot do without

opportunity cost   the loss of an alternative course of action when an economic decision is made

personalised   has been made for a particular person

planning   the process of planning activities or events in an organised way so that they are successful or happen on time

price mechanism   the relationship between the supply and demand of a product or service, which affects its price

price point   the price that is chosen for a product, usually when there are several different prices to choose from

problem-solving   the ability to find solutions to problems

professional dress   wearing appropriate clothes for a business setting to present a professional image

responsive   saying or doing something as a reaction to something or someone, especially in a quick or positive way

scarcity   refers to the finite resources we have on Earth and the decisions we make to allocate these resources to satisfy consumer needs

shortage   a situation in which there is not enough of something

slave labour   very hard work for which people are paid very little

start-up company   a new business in its initial stages of operation that is developing a product or service that is new and innovative

stockist   a shop that sells a particular type of goods

supply   the quantity of a good or service that producers wish to sell at a given price

surplus   an amount that is more than is needed

sustainably   in a way that can continue over a period of time

top end   best or most expensive of a type

vocation   a type of work that you feel you are suited to doing and to which you give much of your time and energy

volunteering   the act of offering to do something that you do not have to do, often without having been asked to do it and without expecting payment

wants   products and services that people want but are not necessary for survival

work   an activity, such as a job, that a person uses physical or mental effort to do, usually for money

Geography

abundance   the amount of something that is found in a specific location

accessibility   resources or services are available and affordable for all people to use

affordability   the ability to afford a service or attendance at a facility; for example, going to the doctor

agricultural industry   the business involved in cultivating plants and livestock

amenity   a feature that is desirable, useful or aesthetically pleasing

aquaculture   the breeding and harvesting of fish and other freshwater organisms

arid   very dry, often without rainfall to support plants

artificial   made by people, often as a copy of something natural

availability   how easily people can access a service or facility

bores   holes drilled into the ground to access underground water resources

brackish   water that is slightly salty

central business district (CBD)   the centre of business in a town or city

change   the ways in which something is different to the past

climate   the long-term trends in the weather conditions of a place, such as its average rainfall and temperature

commercial building   a building that is used for business activities

condensation   the process by which water vapour in the atmosphere cools and changes into liquid water

crop yield   the size of a crop grown within an area

cubic kilometres   a cubic kilometre is equal to a volume of $1000 \times 1000 \times 1000$ metres; a cubic kilometre is also equal to a teralitre, which is exactly one trillion litres

cull   the selective slaughter of animals to reduce their population

drainage basin   an area of land where precipitation collects and drains into a central point such as a river channel

drought   a long period of water shortage, usually as a result of low rainfall

environment   the air, water and land of a particular area, which contains people, animals and plants

environmental resources   resources that are from the natural environment such as water and wood

ephemeral   something that happens only for a short time

equity   all people have equal access to resources that meet their basic needs

erosion   a process that gradually wears away and removes rock, soil and sediment by wind or water

evaporation the process of a liquid changing to a gas, especially by heating

exploitation the use of something in order to get an advantage from it

fauna the animals of a particular region

fieldwork gathering information and data about a natural or human environment outside the classroom

filtered the process of removing solids and impurities from water

finite resources resources that have a limit or end

floodplain an area of flat land near a river that is often flooded when the river becomes too full

flora the plants of a particular region

fossil fuels fuels that were formed underground from plant and animal remains millions of years ago; examples include gas, coal and oil

freshwater water with less than 0.5 per cent of dissolved salts

geographical processes a series of events or actions that change environments, spaces and places

gigalitres a gigalitre is exactly one billion litres

glaciers large masses of ice that move slowly; they are frozen rivers of ice that form when snow accumulates and is compacted

habitat the natural environment where an animal or plant usually lives

hard surfaces human-made surfaces, such as concrete, which cover the natural ground and limit the amount of water that can infiltrate the soil to become groundwater

harvest to pick and collect crops, or to collect plants, animals or fish to eat

heritage status a status given to a building or area to protect it from future development and preserve its past

hydroelectricity electricity produced by the force of fast-moving water such as rivers or waterfalls

hydrological relating to the study of water on the earth, for example, where it is and how it is used

ice caps a thick layer of ice that permanently covers an area of land

ice sheet a thick layer of ice covering a large area of land for a long period of time

infertile land or soil that is not good enough for plants or crops to grow well there

infiltration the process by which water is absorbed into the ground

infinite resources resources that are without limits

infrastructure the physical structures and facilities needed within a community, such as roads, buildings and pipelines

intangible something that exists but you cannot see or touch it

interconnection the relationship between places and people, and the ways in which they influence each other

invertebrates animals that do not have backbones

irrigation the practice of supplying land with water so that crops and plants will grow

liveability the qualities of a place that enable a person to live there with a good standard of living. To work out whether a place has a high or low level of liveability, we consider the quality of economic, environmental and social living conditions in that place.

megacity a city with 10 million or more residents

megalitre a metric unit of capacity equal to a million litres

non-renewable resources resources existing in limited quantities that cannot be replaced after they have all been used

nutrients any substance that plants or animals need in order to live and grow

ore a type of rock or soil that can be mined to obtain metal

pasture grass or similar plants suitable for animals, such as cows and sheep, to eat

pedestrian people who are walking rather than travelling in a vehicle

perception the way something is viewed or understood

percolation the process of a liquid moving slowly through a substance that has very small holes in it

perennial something that happens repeatedly or all the time

phenomenon an occurrence or observable fact

polar regions areas near the north and south poles

population density a standard measurement of people per square kilometre, which can be calculated at different scales (suburbs, cities, countries, regions)

populous a place that has a lot of people living in it

porous something that has many small holes so liquid or air can pass through, especially slowly

potable water that is clean and safe to drink

precipitation water that falls from the clouds towards the ground, especially as rain or snow

projections estimated forecasts based on current trends

pull factor the reasons people move in to an area

purified the process of removing dirty or harmful substances from water

push factor the reasons people move away from an area

regenerate to grow again

renewable resources resources that can be produced as quickly as they are used

residential building a building that is used for private activities

root zone the area of soil surrounding the roots of a plant

runoff water that is not absorbed by the land and flows from high areas to low areas

rural an area in the countryside that is not part of a large town or city

rural-urban migration when people move from rural areas to urban areas, usually for better opportunities such as employment and education

salinity the amount of salt contained in something

sanitation the system for taking dirty water and other waste products away from buildings to keep places clean and protect people's health

scale the size of an area and how it is viewed in relation to another area

sediment sand and silt that is moved by rivers and deposited in a new location

sense of place the meaning a person or group attaches to a specific area or space

sewage waste matter such as human urine or solid waste

sleet rain that also contains some ice

space how different places, and the features within places, are distributed

species a group of plants or animals that are classified as having the same characteristics

stormwater excessive water runoff from rain and snow after a storm

sustainable causing little or no damage to the environment and therefore able to continue for a long time

sustainability the wise use of resources so that they are available into the future

tangible things that you can physically see and touch

temperate a climate that has four distinct seasons: summer, autumn, winter and spring

topsoil the soil that forms the top layer of ground where plants grow

transpiration the process of losing water through the surface or skin of a body or a plant

tributaries rivers or streams that flow into a larger river or a lake

urban relating to towns and cities

urban consolidation keeping residential development and population growth restricted to the urban areas that already exist

urban planning the process of planning the layout and infrastructure of a place

urban renewal the improvement, or sometimes the replacement, of buildings in a city

urban sprawl the gradual spread of cities into previously rural areas due to population growth

walkability a measure of how easy it is for a pedestrian to walk around

water crisis occurs when the amount of freshwater that is easily available within a region is less than what the region needs

water scarcity a lack of freshwater resources to meet the demands of water usage within a region

water withdrawals the total amount of water withdrawn from a surface water or groundwater source

weir a small dam or barrier stopping the flow of a river

History

abnormal   something that is not normal

absolute dating   a dating technique that uses properties within an artefact to work out how old something is

Acropolis   the complex of temples and other buildings built on the hill in the centre of Athens

aerial photographs   pictures taken from above by using planes, helicopters or drones

agora   an open public space used for markets or assemblies

analysis   (in the study of history) to identify the purpose of sources and determine their accuracy and reliability

ancestors   people you are descended from like a parent, grandparent, great-grandparent, great-great-grandparent and so on

ankh   a symbol like a cross with a loop (an oval shape or circle) at the top, used in ancient Egypt to mean 'life'

aquaculture   farming of animals and plants that live in water, such as fish

archaeologist   person who digs up human and other physical remains to try and understand more about a society

archonship   high offices in command of important jobs in the city-state of Athens

artefact   an object that is made by a person, such as a tool or a decoration; it is usually of historical interest

artisan   someone who does skilled work with their hands

assassination   murder of an important or powerful person by a surprise attack

assemblies   meetings of the ordinary people. They were legal meetings organised by a magistrate for the purpose of putting any subject to their vote.

autonomy   the right to rule or live independently

barbarian   someone from another place who spoke a different language; for ancient Romans, a barbarian was any person who was not part of the Roman Empire

barracks   a place where soldiers live and train

bas-relief   a type of art in which shapes are cut from the surrounding stone so that they stand out slightly against a flat surface

biased   one-sided, unfairly shows only one point of view or is prejudiced

bodhisattva   a follower of Mahayana Buddhism who is able to reach nirvana (a state without suffering) but delays doing so out of compassion for the suffering of others

bolt   a large roll of cloth

brutalise   cause damage to something

bureaucracy   a system for controlling or managing a country, company or organisation that is operated by many officials employed to follow rules carefully

canals   channels dug to carry water

canopic jars   jars for preserving the internal organs of the deceased, as part of the process of mummification; different jars were made for different organs

carbonised   to turn something into charcoal by heat or fire so that it becomes a fossil and is preserved

caste   a system of dividing Hindu society into classes

cavalry   soldiers who ride horses

chariot   a two-wheeled vehicle that was used in ancient times for racing and fighting; it was pulled by a horse or horses

chronology   arrangement of dates in the order in which they occur

city-state   a city that rules itself and the area immediately surrounding it

civilisation   a society that has developed an organised system of government, social customs and religious beliefs, as well as forms of technology that include writing and the arts

Colosseum   an open-air amphitheatre in ancient Rome with seating around the edges that was used to watch an activity taking place in the centre

conserve   to protect something so that it is not damaged or destroyed

conservation   ensuring that artefacts are able to last well into the future

consort   a wife or companion of a ruler

consul   the leader of Rome; during the Roman Republic, two consuls were elected into office every year

contestability   (in the study of history) this occurs when interpretations about the past are up for debate, especially between different historians

corroborate   to support or confirm an idea or claim with evidence

cremation   to dispose of a dead body by burning it to ashes

criteria   standards or rules against which something can be judged

currency   any type of item used in trade; often coins or notes, but it also can be items of high value like gold, gems or silk

dictator   someone who rules with total power over a country or territory

divination   the practice of foretelling the future through supernatural means

dramatist   an individual who writes dramas

Dreaming   a term for the spiritual, legal and ritual beliefs of Aboriginal peoples

dye   a solution that can stain or colour material by chemically binding to it

dynastic succession   a process of passing power and authority from one person to a family member, traditionally often father to son

dynasty   a succession of rulers from the same family; in ancient Egypt and China some of the dynasties included rulers who were not related to the ruling family

elixir of immortality   a potion or medicine to keep you alive forever

embankments   ridges of earth or stone walls used to hold back water

empire   a large area of land under the control of a powerful emperor, king or queen

endow   to give something to someone

ethical understanding   to consider different perspectives on what is morally right

Etruscans   an ancient civilisation of people who lived to the north of the city of ancient Rome

evaluation   (in the study of history) proposing explanations and drawing conclusions about a historical event, development or issue and its connections with the present

excavate   to carefully dig up or reveal something in the ground

exertion   physical or mental effort

exile   a forced absence from one's home or country; anyone who was exiled was not permitted to return

famine   when there is not enough food for everyone in society

feudal   a societal structure based on rank where higher ranks owe protection to lower ranks; lower ranks give a tribute in return, usually agricultural goods

fledgling   something that is new or young and without much experience

floodplain   an area of flat land near a river that is often flooded when the river becomes too full

founding   when something new is created by a people, generally a city or place

free   a term used to describe people in ancient times who were not slaves

frescoes   pictures painted directly onto fresh plaster

garrison   a group of troops stationed in a town or city

gladiator   person who fought another person or an animal, sometimes to the death, to entertain crowds

grain crops   plants used to grow grain to use in making food like bread

grave goods   items buried alongside a body; usually personal possessions or items to help their journey to the afterlife

Greco–Persian Wars   a series of conflicts between the ancient Greek city-states and the Persian Empire

Hapi   (or Hapy) the god of the annual flooding of the Nile in ancient Egyptian religion

hearth   the central fireplace in a home

hieratic   a simplified version of the hieroglyphic script intended for everyday use

hieroglyphs   a picture or symbol that represents a word or concept

hoplite   ancient Greek citizens who were also soldiers in city-states; they fought with spears and wore bronze armour

hypothesis   an idea or explanation for something that is based on known facts but has not yet been proved

infantry   soldiers who fight on foot

in situ   in the original position

inscription   writing that has been carved into a hard surface, such as solid stone, to help people remember a certain person or event

inundation   the yearly flooding of the Nile River

irrigation   the practice of supplying land with water so that crops and plants will grow

karma   in Jainism it is believed that karma determines quality of life. Karma is thought to be a physical substance that sticks to the soul. The happiness of life results from how much karma sticks to the soul because of good or bad actions and thoughts that are carried out.

kilns   ovens for drying or baking mud and clay

Latins   an ancient civilisation of people who lived to the south of the city of ancient Rome

legacy   an object, idea or story left behind or handed down by people from the past

levee   earth embankments built along riverbanks to prevent flooding

livestock   the term for animals like cows, sheep, pigs, goats and chickens that people raise

loom   a device used to weave thread into cloth or a tapestry

magnanimity   the quality of being highly moral in forgiveness and overlooking insults from others

matriarchal society   a society ruled by women

mausoleum   a very large and expensive grand tomb

middens   the rubbish piles of early settlement sites, often containing shells, bones, botanical materials, and the workings from ceramics and stone tool-making

military campaign   a series of conflicts or battles that are aimed at reaching the same goal

military state   a society that is organised around the military

monetised   to have a currency, usually in the form of coins

monsoon season   a period of time between May and September where the wind blows from the south-west bringing with it a large number of storms

monument   statue or building created to commemorate an important event

mummification   a method of preserving a dead body by removing the internal organs and drying out the body

mythological   something that is imaginary; from myths or legends

mythology   fictional story, often part of a religion, that describes a heroic deed or the origin of something

nation-state   an area of land ruled by a central government with clear and fixed boundaries

natron   a salt mixture from dry lake beds in ancient Egypt, it has been used for thousands of years as a cleaning product for both the home and body. It was the mineral used during mummification ceremonies in ancient Egypt because it absorbs water and behaves as a drying agent.

necropolis   an ancient cemetery

Neolithic period   an era of change when people who used stone tools moved away from hunting and gathering to settle in an area to farm animals and crops

Nile River   the main river running through Egypt

oracle   a person who is guided by the gods to answer a question about the future

osteoarchaeologist   an archaeologist who specialises in the study of bones

pantheon   all the gods in a religion or mythology

patrician   wealthy upper-class person in ancient Rome who often had a political role in society

patron   someone who supports others with money, gifts or favours; a patron god of a place was seen to support that place with divine favour

Peloponnesian War   a series of conflicts between Athens and Sparta, and their allies

perspectives   different attitudes or ways of thinking about something, such as an issue, person or event

pigments   dry substances that can be mixed with liquid to become coloured paints

phalanx   an ancient Greek military tactic that involved densely packed soldiers fighting with long spears and interlocking shields

pharaoh   divine ruler of ancient Egypt; the term meant 'the one from the palace'

plague   a serious and highly infectious disease that kills many people

plain   a large area of flat land

plateau   a large, flat area that is high above sea level, often surrounded by mountains

playwright   a person who writes plays

plebeian   an ordinary Roman citizen who was not part of the privileged patrician class

Pleistocene Epoch   a long period of geological time that includes the last glacial period, when temperatures were cooler and sea levels lower

polytheistic   believing in many gods

primary sources   documents or artefacts that were created at the time of the historical event or era

preservation   to prevent decay or damage to historical artefacts and sites

proscription   a list posted in Rome of all those who were outlawed and could be killed by anyone for a reward

pyramid   a massive monument of ancient Egypt that has a rectangular base and four triangular faces that finish in a single point; they are built over or around a crypt or tomb

pyre   a platform with wood and other flammable items on it where a dead body is placed to be burned

querns   stone tools used for grinding grain

radar   a device using very high frequency radio waves to identify objects, materials and their location

regalia   the emblems or insignia of royalty, especially the crown, sceptre and other ornaments used at a coronation

relative dating   a dating technique that uses comparison an artefact's surroundings to discover its age

representation   the way that someone or something is shown or described

Rigveda   the oldest of the sacred texts of Hinduism

rump jumps   an exercise that involved the person jumping up and hitting their feet

sack   to invade and destroy a city

sage-king   is a ruler in ancient China known for being very wise and having good judgement

salinity   the amount of salt contained in something

samsara   the cycle of life death and rebirth

sarcophagus   a stone coffin decorated with sculpture or inscriptions

secondary source   a document that provides or discusses information that uses information collected from primary sources

senate   the group of politicians who had the most power to make laws in a government

senator   politician who has been elected to a senate

shaduf   hand-operated device for lifting water from rivers, used in ancient Egypt from 2000 BCE to irrigate the land

shrine   a place used for religious rituals

silt   rich, fine soil carried in the waters of a river

site   area where a building or city is constructed

smelting   a process of heating rocks and sediment to extract metals

sophist   a teacher in ancient Greece who specialised in philosophy

sovereign   a king or ruler who has total and permanent authority

strata   layers of material in the ground deposited one upon another (*singular: stratum*)

synthetic   made through a technical process by humans rather than by nature

tectonic plates   parts of the Earth's surface that move in relation to each other

temples   places for worshipping gods; in ancient Rome a temple would have an altar, where animals were sacrificed

terra nullius   a Latin term that translates as 'land belonging to no one', meaning free to be claimed

terrain   the landforms of a particular area

topography   the shape and features of the land such as hills, rivers and valleys

tribune   selected officials whose job was to protect the people's rights

tribute   goods or services that one group gives to another as a sign of respect or, as was often the case in ancient Egypt, of submission or allegiance

typology   using the characteristics of an object to classify them over time. It helps in showing how an object has changed over time

underworld   a place where the ancient Greeks believed the soul went when a person died; it was ruled by the god Hades

unification   the process of combining things or people

vassal   a person or state that must pay tribute to a king in return for protection

virtues   qualities of goodness or moral excellence

vizier   the most important adviser and helper of a pharaoh

was-sceptre   a stylised animal head at the top of a long, straight staff with a forked end; it was an ancient Egyptian religious symbol

Index

This index is for the digital-only chapters.