

depth study – core

Investigating the ancient past

Finding out about the past is not easy. Some ancient peoples and civilisations have left behind evidence of the past, while many others have not. This means our knowledge and understanding is often incomplete. We can look at evidence such as these ruins at Göbekli Tepe in Turkey to find clues about the past, but they do not always give us the full story. Historians use a range of sources in order to piece together stories and events that took place in ancient times. They also consider a range of different opinions and perspectives about what happened in order to reach the most likely conclusions.



5.1

How is history investigated?

- 1 How do you think historians could use the ruins at Göbekli Tepe to piece together an understanding of the past?

5.2

What sources can be used in a historical investigation?

- 1 These ruins are a primary source for the study of ancient history, because they were made during the period being studied. What can primary sources tell us about history that sources made afterwards cannot?



Source 5.1 Göbekli Tepe, located in south-eastern Turkey, is the world's oldest known human-made religious building. Historians believe it was most likely built by hunter-gatherers around 12000 years ago.

5.3

What methods are used to investigate the past?

- 1 How could scientists and historians work together in order to better understand these ruins?
- 2 What types of things could they tell us about this ancient society?

5.4

Why is conservation important?

- 1 What types of things might damage these ruins?
- 2 Why do you think historians would want to conserve them?

5.1 How is history investigated?

Archaeological digs

If you missed the grand final of your favourite sport and wanted to know what happened, you probably would not get reliable information if you spoke to just one person. You would need to check many sources of information – newspapers, television reports, game replays, fan blogs and so on. Likewise, historians cannot just rely on one source of evidence for an investigation. Historians need to act like detectives, constantly searching for clues about the past to gather as much evidence as possible.

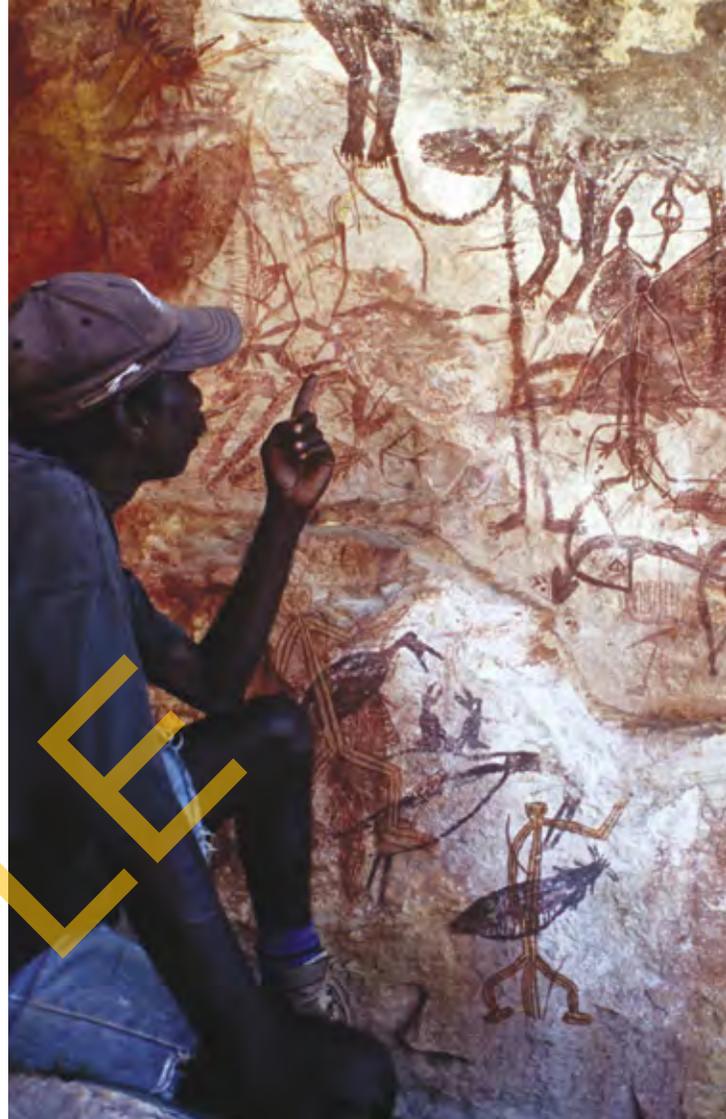
When conducting investigations into the ancient past, historians rely on the work of many other experts, including biologists, **geneticists**, **palaeontologists** and **archaeologists**. Many of these experts work together at **archaeological digs**, which are an important source of evidence of the ancient past.

Archaeologists uncover sources of evidence of past peoples. This includes not only skeletons but also the places where they lived and travelled, such as the ruins of towns, **temples** and **tombs**; artefacts they made, such as **pottery**, **weapons**, **tools** and **coins**; inscriptions and stone reliefs they **carved**; even rubbish dumps (middens) and fire sites. Some sources are so old that they have turned into fossils or remain only as a 'shadow' or crust in the soil. Some archaeologists work underwater, looking for sources on or beneath the **sea bed**, such as old shipwrecks.

Most sources found on land are buried. They might be covered by the silt of past floods, **sand** blown by the wind, or forests that have grown over them. Some, like the ancient Aztec capital of Tenochtitlan, lie beneath more recent cities or settlements that have been built over the top of them.

Once a site is discovered, archaeologists rope off or otherwise protect the site, called the 'dig'. It is then marked off into segments, in a grid. This allows the precise location of any items that are found to be specified. After surveying the site, archaeologists remove overlying rocks and dirt. Ancient objects can be extremely delicate, so archaeologists need to take great care uncovering them.

Once a source has been fully exposed or excavated, the archaeologist photographs and numbers it, and records details of its size, appearance and exact location.



Source 5.2 Indigenous art at Injalak Hill, Northern Territory. This is evidence of Australia's ancient Aboriginal people. A historian might investigate the age of these paintings, who painted them and why.

Sources of evidence

Archival material (e.g. letters, reports, documentaries, voice recordings, newspapers, official documents) found in libraries, archives and on specialised Internet sites

Textbooks and journals by experts relating to the matter under investigation

Portable artefacts (e.g. tools) and other sources (e.g. a skull) in places such as museums, libraries and art galleries

Cemeteries, caves, beach middens, historic sites (e.g. with ruins) and so on

Source 5.3 Sources of evidence for a historical investigation. Some can be found at archaeological digs. Others can be used to make sense of objects found at digs.



keyconcept: significance

Ötzi the Iceman

In 1991, the preserved corpse of a man who had lived 5300 years ago was found accidentally by tourists in the Ötztal Alps, in northern Italy. Ötzi the Iceman is the oldest natural mummy in Europe. At first, the people who found him did not realise the significance of their find. A jackhammer was used to chisel the corpse out, damaging part of the body. Later, the body was treated with much more care. The mummy provided many different types of evidence that showed what life was like when Ötzi was alive. For example, his lungs were blackened, probably from breathing in campfire smoke, and his stomach contained remnants of what he had been eating. Scientists could tell what kind of environment he had lived in from pollen found in his intestine, and they could see what sort of lifestyle he had led from his bones. He also had a tattoo. With the corpse were clothes, tools and equipment, which presented further clues to his life. Ötzi gave historians new insights into the lives of ancient Europeans.

For more information on the key concept of significance, refer to the section HT.1 of 'The historian's toolkit'.



Source 5.4 The remains of Ötzi the Iceman



Source 5.5 Some archaeological excavations can be quite deep because the sources being excavated may be covered by many layers of dirt, rock and debris.

Check your learning 5.1

Remember and understand

- 1 Identify what kinds of sites archaeologists excavate.
- 2 Explain how archaeologists investigate a dig.

Apply and analyse

- 3 Analyse how Ötzi the Iceman's body could be used to provide information about life in the Ötztal Alps more than 5000 years ago.
- 4 Sketch an archaeological dig and label the different types of evidence that could be found there.

Evaluate and create

- 5 Imagine you are an archaeologist. Briefly explain why your job is important to the study of history.

5.1 bigideas: rich task

Historical timelines

Timelines are a critical part of the study of history because they allow us to place events in **chronological order** (that is, the order in which they took place). It is important when studying history to know when particular events happened so that we can draw conclusions about cause and effect, and so we can understand the context of particular historical events.

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Creating a timeline

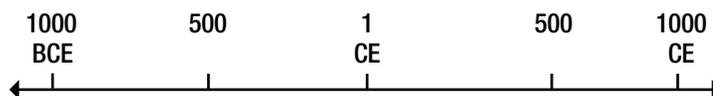
A **timeline** is a diagram showing a range of events over time. The events are arranged in the order in which they occurred. Usually a timeline is shown as a horizontal or vertical bar or a single line. This allows it to be drawn precisely.

Usually BCE (or BC) and CE (or AD) are shown with directional arrows at one or both ends of a timeline. This indicates that time did not start or stop when the timeline starts or stops.

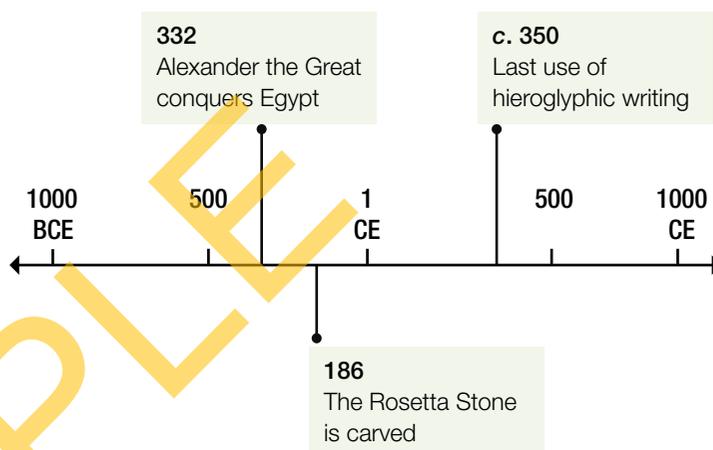
Source 5.6 shows how to construct a timeline step by step.

Apply the skill

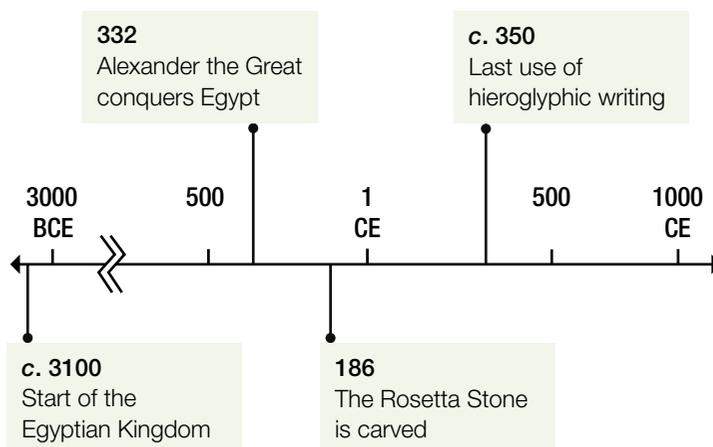
- 1 Draw a timeline to show these important discoveries and inventions.
Wheel – 3500 BCE
Silk – 2700 BCE
Alphabet – 1100 BCE
Paper – 105 BCE
Gunpowder – 900 CE
Car – 1885 CE
Personal computer – 1964 CE
DVD player – 1998 CE
iPod – 2001 CE
- 2 What sort of events do you think historians plot on timelines?
- 3 Why can a timeline be more useful than a list of dates?



Step 1 Work out the length of time you want to represent on your timeline, for example from 1000 BCE to 1000 CE. Then divide the timeline evenly into suitable blocks of time, in this case 500-year blocks. Another timeline showing what you did yesterday might be divided into hours; one showing key events in the 20th century might be divided into decades.



Step 2 Mark specific events on the timeline and include their dates. They must be accurately plotted. If you do not know the exact date, place the abbreviation c. (from Latin word *circa*, meaning 'around') in front of it, for example c. 350. Write a brief description of each event on the timeline.



Step 3 To represent a huge span of time, you may need to break your timeline into segments separated by a jagged break in order to fit it on the page. The break shows that a section of time has been left out, so make sure that no events fall in the time you are leaving out.

Source 5.6 Steps in drawing a timeline

Extend your understanding

Timelines can help us to understand how different historical events might have influenced each other. Construct a personal timeline for somebody in order to understand how history has affected that individual.

Step 1 Find a person significantly older than you to interview. This could be a grandparent or an older family friend. Ask them to tell you the most important things that have happened to them in their life, and when they happened. Construct a timeline of the important events in that person's life.

Step 2 Do some research to determine what events were happening in the world and in this person's country during their life. Add those events on the timeline in a different colour so you can distinguish them from your subject's personal story.

Step 3 Study the timeline and answer the following questions:

- 1 Can you draw any links between personal events and the world events happening around your subject? For example, the person you interviewed may have fought in a war, or may have travelled overseas to see the Olympic Games.
- 2 Which events do you think were most influential in your subject's life?
- 3 How do you think the historical events on the timeline would have affected you if you were born at the same time as your subject? Take into account how old you would have been when each event occurred.



Source 5.7 The personal timelines of older people can be a rich source of history.

5.2 What sources can be used in a historical investigation?

Primary and secondary sources

Historical sources are items that a historian looks for and then studies to investigate the past. If the right questions are asked about sources, they can provide **evidence** for an argument about history. Historians want to know who made a source, how old it is, where it came from, whether it is reliable, and what motivated the person who created it. Historians also look for any gaps or silences in the evidence. Sometimes what is not said can be as important as what is.

The past is represented in many different forms and from a range of different **perspectives**. They include people's remains, what is left of what they built, wrote, crafted or painted, and what they have passed down by way of stories, rituals and ceremonies. The past is also represented by historians and others who write about events or historical periods after they happened. Sources can be divided into two categories: primary and secondary sources.

Primary sources

Primary sources are those that were created during the time being studied. They have a **direct** link to the event, period or person being studied. They may be:

- the skull of a person who lived during the period
- the remains of an ancient temple
- a document or inscription written during the period
- the oral testimony (first-person account) of someone who saw or experienced the time in question.

To find primary sources, historians can look in a number of places. These include excavating ancient sites and also looking in libraries and museums, which often have rich collections of primary sources.

Secondary sources

Secondary sources deal with a particular period, but they are made after that time. For example, this textbook is a secondary source. Some examples of secondary sources are listed in Source 5.9. A source may be both primary and



Source 5.8 This Torres Strait Islander's jewellery, clothing and paint are primary sources of evidence about the Indigenous culture of Saibai Island.

secondary, depending on which historical period is being studied. Imagine you had a painting of a 10th-century battle by a 17th-century artist. The painting would be a secondary source about the battle, since it was created long after the battle. It would be a primary source about that artist's life or about painting styles in the 17th century, since it was created during the period being studied.

Examples of secondary sources used in historical inquiries

- Interpretations of past events by historians and other scholars
- Films and documentaries about past events
- Maps depicting past journeys and trends
- Graphical displays (e.g. timelines)
- Books, magazine articles and websites

Source 5.9 Some examples of secondary sources

Source 5.10 A comparison of primary and secondary sources

Type of source	Value or purpose	Limitation
Primary source	<ul style="list-style-type: none"> Was created by somebody who actually experienced the event Gives direct insight into the past Is a surviving link to a particular time in history 	<ul style="list-style-type: none"> May be inaccurate or distorted May be damaged or incomplete
Secondary source	<ul style="list-style-type: none"> Can fill in gaps about primary sources Is often prepared by experts in their field Can provide other valid perspectives Shows how evidence can be used to construct versions of the past (called representations) 	<ul style="list-style-type: none"> May be inaccurate or distorted Is not a direct link to the past Is prepared after the time being studied

keyconcept: evidence

Oral history

The Indigenous societies of ancient Australia had an oral culture. With no form of writing, their records were preserved in a range of ways. These include the paintings they left, their ceremonies, and the stories, laws and traditions they passed on by word of mouth. Historians and anthropologists rely heavily on these primary sources in searching for evidence of Indigenous people's history. Source 5.11 is one example of an oral account of the Japaljarri-Jungarrayi – a creation story.

Source 5.11

The story I am telling is about my fathers in the Dreamtime who made the stars travel across the sky ... They were not made randomly, but by the Japaljarri-Jungarrayi Dreaming who created the Milky Way and carried stars and witi poles [logs, set on fire at one end to provide light] as he travelled ... We were taught about these Dreamings by our grandfathers, fathers and elder brothers.

The [people to the north and west of Alice Springs] instructed us in the Warlpiri law and told us not to forget what we had been taught ... I am now telling the Dreaming of the Milky Way, all of those millions of stars up above us, as I was told it by our old men.

Paddy Japaljarri Sims, 'Yiwarrakurlu/Milky Way' in Warlukurlangu Artists, *Kuruwarri/Yuendumu Doors*, Australian Institute of Aboriginal Studies, Canberra, 1987, Door 29, p. 127

For more information about the key concept of evidence, refer to Section HT.1 of 'The historian's toolkit'.

Check your learning 5.2

Remember and understand

- 1 In your own words, write a definition for primary and secondary sources.
- 2 Make a table that lists some examples of primary and secondary sources.

Apply and analyse

- 3 Explain what we can learn from oral history and identify some of the advantages and disadvantages of oral accounts.
- 4 Imagine you are a historian in the year 2100 who is studying the life of a person who died in 2013. What primary and secondary sources could you use to gather evidence about their life? List two of each.
- 5 Compare and contrast the usefulness of primary and secondary sources. List three advantages and three disadvantages of each.



Source 5.12 Aboriginal rock art is an example of a primary source

5.2 bigideas: rich task

Interpreting sources

Historians need to use a variety of sources to develop an understanding of a particular historical event or concept. Primary and secondary sources provide different types of information and different levels of accuracy. Both types of sources can be biased in particular ways, depending on who made or wrote them and why.

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Comparing primary and secondary sources

In the study of history, it is important to distinguish between primary and secondary sources of evidence. It is also important to be able to determine how reliable these sources are.

When examining a source you must determine:

- who made it
- why it was made
- whether the creator may have wanted to influence people reading or viewing it
- what information the creator might have had access to when making it
- whether the creator could have had a bias or unfair prejudice towards the thing or event they describe in the source
- how reliable it is.

Source 5.13 A modern artist's interpretation of how the Colossus of Rhodes may have been constructed



Source 5.14 A modern artist's interpretation of how the Colossus of Rhodes may have looked

Source 5.15

At Rhodes was set up a Colossus of seventy cubits high, representing the Sun ... the artist expended as much bronze on it as seemed likely to create a dearth [shortage] in the mines, for the casting of the statue was an operation in which the bronze industry of the whole world was concerned.

Philo of Byzantium, scientist and engineer, 1st century BCE

Source 5.16

Colossus, one of the seven wonders of the world, was built around 304 BCE by Chares the Lindos (from Lindos), in honour of Apollo the god of the sun (Helios in Greek) and patron god of Rhodes. It stood one hundred feet tall and it was located at the entrance of Mandraki harbour. Made entirely of bronze, it was then used as a lighthouse. It symbolised the strength and wealth of the Rhodian people.

It is believed to have been destroyed in 226 BCE by a powerful earthquake. Later the pieces, it is believed, were taken by the Egyptians.

Rhodes Travel,
www.rhodestravel.co.uk/rhodes-tn/colossus-rh.htm

Source 5.17

Even as it lies it excites our wonder and admiration. Few men can clasp the thumb in their arms, and its fingers are larger than most statues. Where the limbs are broken asunder, vast caverns are seen yawning in the interior. Within it, too, are to be seen large masses of rock, by the weight of which the artist steadied it while erecting it.

Pliny the Elder, Roman author (23–79 CE)

Source 5.18

Colossus of Rhodes (Gk. *kolossos*, 'a more than lifesize statue'), a bronze statue of the Greek sun-god Helios, one of the Seven Wonders of the ancient world. Erected to commemorate the successful defence of the city against a siege in 305–304 BCE, it stood at the entrance of the harbour (the tradition that it stood astride the entrance is discredited), and was 70 cubits high (30–5 m, 100–15 ft). It was completed c. 280 BCE and overthrown by an earthquake c. 224 BCE.

Oxford Companion to Classical Literature, Oxford University Press

Apply the skill

- 1 Look carefully at the sources describing the Colossus of Rhodes and complete the table. Like all historians, you may need to conduct some research to help you, or even make an educated guess based on the evidence available to you. Use this evidence to make an assessment about whether the sources show any bias and decide how reliable each one is. Justify your responses for each source.

Source number	Primary/ Secondary source	Creator	Reason source was created	Date created (if known)	Bias or prejudice	Reliability
5.13						
5.14						
5.15						
5.16						
5.17						
5.18						

Extend your understanding

Now form small groups to answer the following questions based on the most reliable sources provided:

- 1 When was the statue built and why?
- 2 How tall was it?
- 3 When did it fall and why?
- 4 Which are the two primary sources? At which point in the history of the statue were they written?
- 5 How sure can we be of what the Colossus looked like?

5.3 What methods are used to investigate the past?

Scientific techniques

When archaeologists and historians find objects from the past, they often need help from scientists who use the latest techniques and machinery to gather more information. Many of these techniques – known as scientific techniques – are used to assess the likely age of sources. They can tell us, for example, the ages of the skulls in Source 5.20. Scientific techniques like the ones described below need to be used in combination with other historical techniques and evidence to provide a complete explanation of the past.



Source 5.20 Three skulls – front: *Homo habilis* (Kenya, 1.88 million years old); centre: *Homo erectus* (Kow Swamp, Victoria, 13 000 years old); back: *Homo sapiens* (Keilor, Victoria, 13 000 years old)

Some scientific techniques used to analyse historical sources

- Stratigraphy (analysis of soil or rock layers)
- Fluorine dating (analysis of the age of bones)
- Radiocarbon dating
- Dendrochronology (analysis of tree rings)
- DNA analysis
- Ice-core sampling
- Palynology (analysis of microscopic organic compounds)

Source 5.19 Some scientific techniques used to investigate the past

Scientific dating techniques

Many scientific dating techniques are used to investigate the past. Some are absolute dating techniques, which allow the age of an object to be stated as precisely as possible (in years). Others are relative dating techniques, which can only determine whether an object is of an earlier or more recent date relative to (compared with) another object.

Stratigraphy

Stratigraphy involves analysing sources found in the different strata of earth. Strata are layers marking different geological time periods. Since the layers of rocks are generally youngest on top and oldest on the bottom, items found in the lowest strata will usually be the oldest (see Source 5.21). In an **archaeological dig**, scientists may know that a particular stratum (the singular form of strata) is 1000 years old. This means that the items excavated from that stratum will probably be of a similar age.

Natural disasters and geological events can change the way strata are arranged, so it is not an exact science. Stratigraphy is a relative dating technique.

Fluorine dating

Bones can be dated using **fluorine dating**. Bones absorb the chemical element fluorine from the soil in which they are immersed. The longer they are there, the more fluorine they absorb. Like stratigraphy, this is a relative dating technique.



Source 5.21 Different artefacts are found in different strata (or layers). These are generally positioned according to their age. Artefacts found in stratum A will be more recent than those found in stratum E.

Radiocarbon dating

Radiocarbon dating is a complex technology that is more accurate than stratigraphy and fluorine dating. It is an absolute dating technique. All living things contain a particular type of carbon called C14, which is why we are called carbon-based life forms. This carbon is continuously renewed while an organism is alive. Living things stop absorbing C14 when they die. C14 is radioactive, which means that, over time, it breaks down at a known rate into a different type of carbon. Scientists use special equipment to work out how much C14 is still present in once-living organisms. Using that information, they can work out how long ago the organism died, and therefore how old it is.

Dendrochronology

Dendrochronology refers to tree-ring dating. Scientists can date a tree by studying the growth rings in a cross-section of its trunk (see Source 5.23). Each year in a tree's life, a new ring forms. It varies in shape and width according to the conditions that year. It has two parts: a light part (spring growth) and a dark part (summer/autumn growth). Scientists can study these rings and can compare rings between trees to determine their age.

Sometimes experts can calculate the relative age of wooden artefacts, such as bowls or floorboards. This is possible if they can match the ring patterns in the wood with those of local trees of the same species.

Source 5.23 Trees grow a new ring every year.



Source 5.22 Radiocarbon dating would determine the likely age of mummified human remains such as these. This corpse was found in central Asia.

Other scientific techniques

DNA analysis

All living organisms (except some viruses) contain deoxyribonucleic acid, or **DNA**. DNA holds the genetic code that determines how a living thing develops and operates. It is comparable to the ones and zeros that make up computer code and tell your software what to do. DNA is sometimes preserved in the remains of once-living organisms. Scientists can learn a lot from studying DNA. They can tell what type of organism it is. They can also tell how closely related it is to other species and to other individuals of the same species. For example, they can study the DNA of ancient remains and determine how closely related they are to modern humans.

Ice-core sampling

This technique works in a similar way to stratigraphy. Ice-core samples are long cylinders of ice that have been drilled from thick ice sheets. These samples are most commonly taken in the polar ice caps of Antarctica and Greenland, or from high mountain **glaciers** all over the world. As ice forms in the gradually increasing build-up of annual layers of snow, lower layers are older than upper layers. This means that an ice core contains ice formed over many years. Air trapped at various sections along an ice core, such as the one shown in Source 5.24, provides evidence of what the atmosphere was like at different periods in the past. Scientists can then form conclusions about the climate at a particular time.



Source 5.25 Analysis of the fossilised pollen in this soil core allows researchers to find out how plant life in a particular area changed over thousands of years.

Palynology

Palynology is the study of microscopic organic compounds (such as pollen) that are found in soil. Taking soil cores enables scientists to analyse fossilised pollen and find out how plant life in a particular area has changed over thousands of years (see Source 5.25).

Check your learning 5.3

Remember and understand

- 1 In your own words, describe each of the scientific techniques covered in this section.
- 2 Describe how DNA analysis can help historians to better understand a source.

Apply and analyse

- 3 Explain why it is important to be able to date sources.
- 4 Imagine you found human remains at an archaeological dig. Which methods would be best suited to dating these remains and why?

Evaluate and create

- 5 Explain which dating technique you think is the most accurate or the most reliable. Justify your answer.
- 6 Study the evidence about the age of the Sphinx in the following Key concept section. Determine how old you think the Sphinx is. Make sure you support your decision with evidence.

Source 5.24 Scientists collecting ice-core samples in Antarctica

The mystery of the Sphinx

Historians and archaeologists disagree about how old the Sphinx is. Different forms of evidence point to different answers, and historians look at various forms of evidence in combination to form an opinion about the Sphinx's age.

Most archaeologists believe that the Sphinx is about 4500 years old, having been built around 2500 BCE, but there are some who believe it is much older.

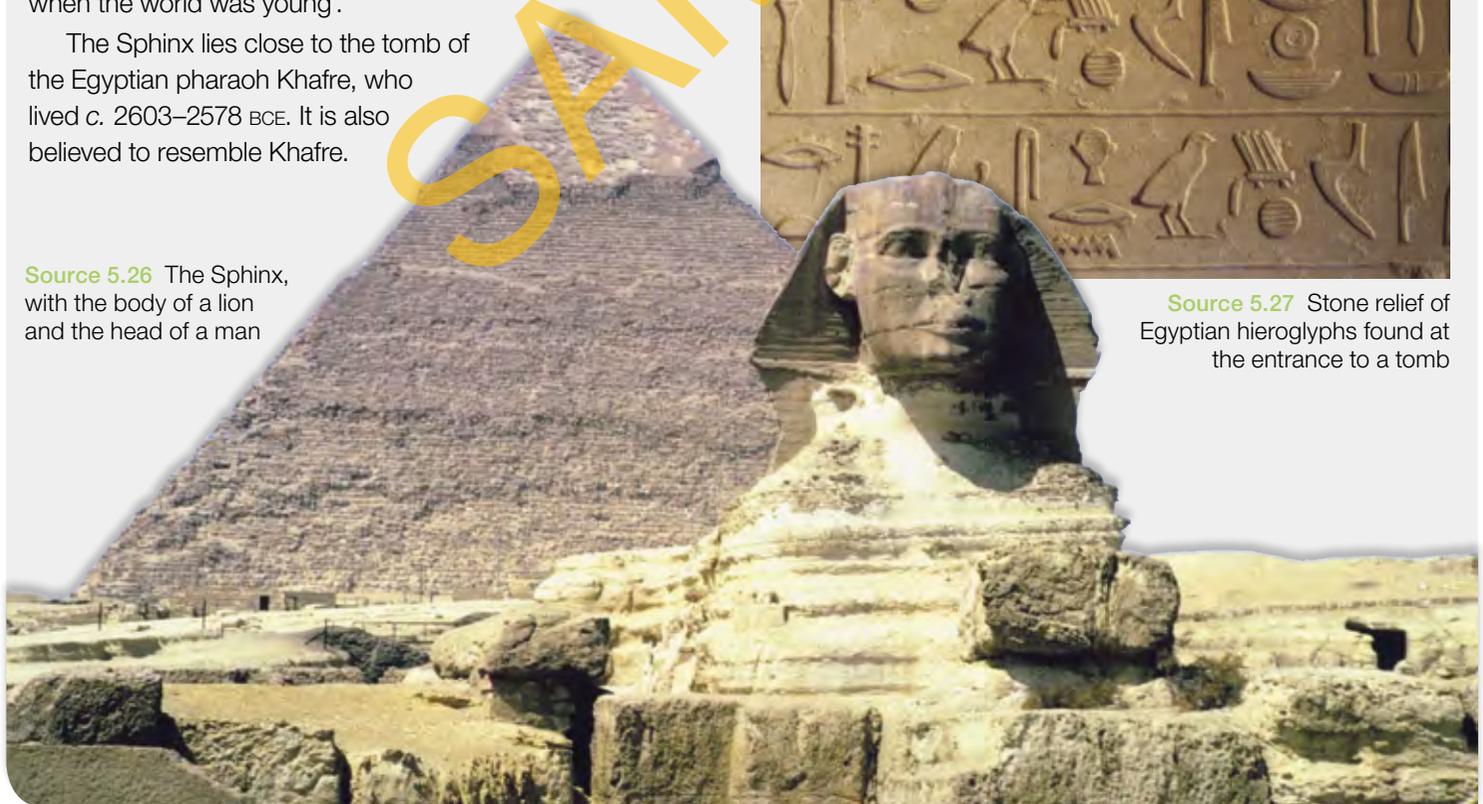
The Sphinx lies among Egypt's pyramids at Giza. It was carved from an outcrop of limestone rock and was probably once painted. The Sphinx has been studied by many scholars and scientists. There is much we know but also a great deal we do not. For example, whose face is represented on this monument? How and why was the face and nose of the Sphinx damaged? Are there tunnels beneath it? How old is it?

HISTORICAL EVIDENCE

Between the front paws of the structure there is a tablet inscribed with **hieroglyphs** (similar to those in Source 5.27). The hieroglyphs describe a dream of the Egyptian king Thutmose IV, who ruled Egypt between 1424 and 1417 BCE. He ordered that this inscription be made. It includes the statement that the Sphinx was made 'in the days of Khafre, when the world was young'.

The Sphinx lies close to the tomb of the Egyptian pharaoh Khafre, who lived c. 2603–2578 BCE. It is also believed to resemble Khafre.

Source 5.26 The Sphinx, with the body of a lion and the head of a man



EVIDENCE FROM EROSION

Some archaeologists and scientists believe the Sphinx was built about 9000 years ago. They argue that the erosion on the Sphinx could only have been caused by steady rainfall. The last time it rained steadily in the Sahara was about 8000 years ago.

Other scientists **contest** this evidence. They argue that the erosion could have other causes. The erosion could also have been caused by water rising in the ground under the Sphinx. It moves up into the limestone, and when it evaporates it leaves behind salt, which can cause the limestone to break down.

Finally, there is **no** evidence of an Egyptian civilisation that existed in 7000 BCE. For the Sphinx to be 9000 years old, there would have to **have been an** ancient civilisation that predated the Egyptians. This is a tantalising idea, but is it true?

For more information on the key concept of contestability, refer to section HT.1 of 'The historian's toolkit'.



Source 5.27 Stone relief of Egyptian hieroglyphs found at the entrance to a tomb

5.3 bigideas: rich task

Studying Aboriginal Australia

In addition to using scientific techniques, historians use a range of other methods to investigate the past. This always involves using a wide variety of sources. To understand the ancient past of Australia, historians use artefacts, photographs, oral accounts and other sources. A combination of sources must be used if a historian is to create a complete picture of the past.



Source 5.28 A woomera (top), a shell used in rainmaking ceremonies, and a killing stick (bottom)



Source 5.29 A stone spearhead from the Kimberley region of Australia

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Analysing primary and secondary sources

Sources of the first Australians reveal a mostly semi-**nomadic** people. There is evidence they understood the land and seasons and had great skills as trackers and mimickers (of animal noises, for example). They adapted the natural resources they found to:

- build their shelters
- manage their environments
- fashion their weapons, tools and musical instruments
- make carry bags, water containers and cradles
- keep themselves warm, fed, watered and alive.

Study the following sources and use them to develop an understanding of how various Indigenous Australian groups used natural resources to survive in the harsh Australian environment.



Source 5.30 Two Indigenous men using natural resources to start a fire

Source 5.31 Hunting techniques among the Iora tribe in the Sydney region

By any standards, the Aborigines were technologically weak but manually adept. They had not invented the bow-and-arrow, but they had exquisite skill as stalkers, trackers and mimics. A competent hunter needs to be able to read every displacement of a leaf or scuffed print in the dust. He must freeze in mid-step and stand unblinking on one leg for half an hour, waiting for a goanna to work up the courage to come all the way out of its log. He must know how to pick up a blacksnake by the tail and crack its head off, as one cracks a whip ... Above all, the hunter needed to know every detail of animal life in his territory – migratory patterns, feeding habits, nesting, shelter, mating. Only thus could a small nomadic group survive.

Robert Hughes, *The Fatal Shore: A History of the Transportation of Convicts to Australia, 1787–1868*, The Harvill Press, London, 1996, p. 12



Source 5.32 An early 18th-century painting showing Indigenous men hunting birds, entitled *Throwing the spear*, Ballarat Fine Art Gallery

Apply the skill

1 Fill in the table to help develop your understanding of Sources 5.29, 5.30 and 5.32.

Source number	What does the source depict or describe?	How did the activity or item depicted or described in the source help that particular Aboriginal group to survive?	What can you tell about the ancient people's relationship with the land from the source?
5.29			
5.30			
5.32			

2 Write a 100 word paragraph to explain how Indigenous Australians used the land. Make sure you refer to at least two sources provided here.

3 How could you find out more information about any of these sources?

4 How could you determine the age of the artefacts in Sources 5.28 and 5.29?

Extend your understanding

Historical sources are often more useful to a historian when he or she can access additional sources of information about a particular source. Look at the Aboriginal rock art in Source 5.33.

- 1 What can you tell about the people who painted this, just from looking at it?
- 2 Do some research on the Internet to find out more about the people who lived at Injalak Hill. What more can you tell about the source using the additional information you have found?
- 3 What techniques could you use to determine how old this rock art is?



Source 5.33 Aboriginal rock art at Injalak Hill, Arnhem Land

5.4 Why is conservation important?

Conserving and protecting sources

Historical sources can be very fragile. Once exposed to the open air, weather, pollution and humidity, many items will quickly deteriorate. In addition, sources may be stolen or broken by careless handling. If a source is important, it needs to be conserved to secure its value for future generations.

Tourist numbers are growing rapidly in places such as Pompeii and the Indigenous art caves in the Kimberley. Too much trekking over the same ground, too much touching and too much breathing in a confined space can damage sources, especially if they are very old and fragile. In addition, such actions may sometimes cause offence to others, or show disrespect to others' beliefs.

Conservators are now taking a range of measures to protect certain objects and places from overexposure. For example, Indigenous cave art is often fenced off. Such an action respects the spirituality of Indigenous people but also protects this ancient art from damage. Another example is the inclusion of certain old buildings in Australia and around the world on heritage lists, which ensures their protection and conservation.

Many sources are stored in libraries, archives, art galleries and public museums where they can be cared for and preserved. Valuable, fragile or very important sources can usually be viewed but not borrowed, touched or removed. Some examples include:

- the Mitchell Library in the State Library of New South Wales, which houses a huge collection of historical sources on Australiana
- the Bunjilaka Aboriginal Cultural Centre at the Melbourne Museum, which aims to 'keep alive' the oral stories and history of Victoria's Koorie people. In this case, conservation is about making sure stories are not forgotten.

Venues such as museums and galleries provide security and proper storage facilities. Their design also sets the right environmental conditions. Some items, for example, must have muted light or low humidity. Think how your clothes fade when you wear them outside in the sun a lot. It is important to protect historical sources from such damage. In addition, these institutions have staff who know how to restore and repair damaged items. They also know which artefacts are the most important to conserve, because conservation can be expensive.



keyconcept: evidence

Preserving our heritage



Historical sources are part of our heritage. They are a reminder of the glories and terrors of past times, and the mistakes and great advances made. They remind us where we have come from and what shaped our societies and cultures. They give us a sense of who we are as a people. Conserving these remnants of the past ensures that future generations will be able to appreciate a shared heritage.



Source 5.34 A conservator restoring an ancient statue of Marcus Aurelius' horse. Marcus Aurelius (121–180 CE) was Roman emperor for the last 19 years of his life.



Source 5.35 The Gallery of First Australians in the National Museum of Australia in Canberra includes this display, which provides evidence of the strong connection Torres Strait Islanders had with the sea. The museum conserves these sources in order to maintain this part of Australian history.



Source 5.36 The Pintupi Aborigines' women's Dreaming site

It is important to conserve not just our recent past but also our ancient past. Some groups want to ban access to significant Indigenous sites in order to aid their conservation. Large numbers of tourists visiting a site can both physically damage it and can be regarded as disrespectful.

Source 5.36 shows a sacred women's Dreaming site belonging to the Pintupi Aborigines. Some people think public access to such sites should be limited in order to conserve it.

For more information on the key concept of evidence, refer to section HT.1 in 'The historian's toolkit'.

Check your learning 5.4

Remember and understand

- 1 In your own words, describe what conservation is.
- 2 List the different reasons for conserving historical sources.

Apply and analyse

- 3 Explain what precautions museums put in place for fragile artefacts and why.
- 4 Outline the reasons for banning access to popular Indigenous sites.

Evaluate and create

- 5 Justify whether you think access to significant Indigenous sites (like the one shown in Source 5.36) should be limited.
- 6 Create a plan for conservation of an important source of history in your community. Think about why it is important and what factors may cause it to be damaged.

5.4 bigideas: rich task

Conserving ancient sites

In order to conserve and restore ancient historical sites, historians need to understand what these sites used to look like, how they were constructed and how they may have been damaged over the years. Conservation projects are expensive and time-consuming, so historians need to do extensive research to understand a site before conservators can accurately restore it.

This rich task looks at two major conservation projects: the Gate of Ishtar in Iraq and the Tomb of Menna in Egypt.

skilldrill

Identifying and locating relevant sources about ancient sites using ICT

Researching ancient sites to understand why they are significant, what they were like in the ancient past and how they have changed is an important part of the work that archaeologists, historians and conservators do. The first part of this research involves identifying and locating different sources to help them. To begin such research, follow these steps:

Step 1 Construct a table to organise your thoughts and direct your research. Begin by listing the things you already know about the ancient site (such as where it is, what civilisation it was built by, and anything you know about that civilisation). Then list the things you still need to find out about the ancient site (such as who built it, how it was built, what it looked like when it was built, what it looks like today, what it was used for, how and why it was damaged, and whether or not it is worth conserving).

Source 5.37 An artist's impression of a procession entering the city of Babylon through the Ishtar Gate

Step 2 Use the questions you have listed in your table to create keywords and search terms for an Internet search.

Step 3 Conduct an Internet search to gather relevant sources and to answer your questions about the ancient site. You may also like to find images of the site and any conservation work that has been done so far.

Step 4 Remember to assess the reliability of the sources you have collected. Think about who wrote them and why. Also be aware of the types of websites you collected them from. Were they reputable? A set of guidelines to help you identify relevant and reliable sources on the Internet is included in 'The historian's toolkit' in this book.



Source 5.38 Detail of an ox on the front wall of a reconstruction of the Ishtar Gate





Source 5.39 The entrance to the Tomb of Menna in Luxor, Egypt

Source 5.40 Detail of a wall painting from the interior of the Tomb of Menna

Apply the skill

- 1 Conduct an Internet search to locate and identify relevant sources related to these ancient sites:
 - a the Ishtar Gate – the main entrance to the ancient walled city of Babylon built around 575 BCE, now part of modern-day Iraq
 - b the Tomb of Menna – the tomb of an Egyptian official in Egypt who died around 3400 years ago, during the rule of pharaoh Amenhotep III.
- 2 Make a list of all of the websites you visited and the sources you gathered.
 - a Which of these sources do you think are the most reliable and relevant? How can you tell?
 - b Which of these sources do you think are not reliable or relevant? How can you tell?
- 3 Now imagine that the governments of Iraq and Egypt are deciding whether to fund the conservation of these two ancient sites. Make a recommendation about why and how each site should be conserved (if you believe it should).

Follow the steps outlined above to complete the following table in your notebook.

	Site 1 – Ishtar Gate	Site 2 – Tomb of Menna
What I know already		
Where is it?		
What civilisation built it?		
Do I know anything else about it?		
What I still need to find out		
Who built it?		
How was it built?		
What did it look like when it was built?		
What does it look like now?		
What was it used for?		
How and why was it damaged?		
Should it be conserved?		

Extend your understanding

- 1 Conduct some further research to find out which organisations are currently responsible for conserving the Ishtar Gate and the Tomb of Menna.
- 2 Conservation projects are expensive, so determine who is funding these organisations to work on the sites.
- 3 What reasons do the organisations give for conserving the Ishtar Gate and the Tomb of Menna?
- 4 Do you think that there are any other reasons to fund the sites' conservation?
- 5 Imagine you are a historian working for one of these organisations. Write a 'funding proposal' paragraph that justifies why your organisation requires funding to continue its conservation work of the site.

What emerged as the defining characteristics of ancient societies?

Depth study 2 The Mediterranean world

This depth study offers a choice of three options:

- Ancient Egypt
- Ancient Greece
- Ancient Rome.

You are required to choose ONE of these options and learn in detail about particular aspects of its development.

Before beginning a process of inquiry related to your chosen **civilisation**, it helps to look at some of the factors that defined the ancient Mediterranean civilisations – geography, social structure and government, cultural evidence, religion, and war and conflict.

In Overview 2, you will be looking briefly at each of these factors, finding the similarities and differences between the Mediterranean civilisations, and making links between them. This will help you build a deep understanding of their cultures and legacies.

Geography

The geographical features of the Mediterranean region were critical in influencing how early societies there developed.

In ancient Egypt, the Nile was the lifeblood of the civilisation. Egypt would never have developed as a civilisation without the Nile. It provided the water critical for irrigating crops that fed the early Egyptians. The deserts to the west could not support a civilisation, but they did provide the Egyptian people with protection from enemy invaders because they were impossible to cross. The Red Sea to the east and the Mediterranean Sea to the north also provided a barrier against invasion. Egyptian architecture and fashion was adapted to living in a hot, dry climate.



Source O.14 A satellite image of Egypt showing the fertile Nile valley and delta in green