

1



Source 1.1 This *Homo sapiens* skull – about 100 000 years old – was found in Israel in 1988.

INVESTIGATING THE ANCIENT PAST

History is the study of the past. Studying the past allows us to appreciate what has been left to us by our ancestors. It helps us to understand how they have shaped and changed the world in which we live. A better understanding and appreciation of ourselves and our world can also help us to shape our future.

Historians are time detectives. They investigate historical mysteries and piece together accurate pictures of what life was like in days gone by. They also look for patterns – what has remained the same, what has changed, and why. In their investigations, historians follow a process of **historical inquiry** – they ask questions, form opinions and theories, locate and analyse **sources**, and use evidence from these sources to develop an informed explanation about the past. As a student of history, it's now your turn to do the same.

1.1

SECTION

HOW DO HISTORIANS AND ARCHAEOLOGISTS INVESTIGATE HISTORY?

Historians use a process of historical inquiry to investigate the past. This section will introduce the process of historical inquiry and familiarise you with the key skills and concepts that historians use every day. We also look at the work of archaeologists and other experts, and explore how time is measured and talked about in history.

HISTORY IS INVESTIGATION

STRANGE BUT TRUE

Bill Gates, the founder of Microsoft and one of the richest men in the world, has often employed history graduates. Gates has preferred history graduates because of the way historians learn to think and are able to consider many different factors at once.

The word 'history' comes from the ancient Greek word *historia*, which means 'investigation'. Understanding that history is an on-going investigation (or inquiry) is the key to the subject. History is not about memorising a list of dates or facts; it is about thinking, understanding and developing research and other skills that are useful in life.

Historians use an inquiry approach when they investigate controversies and mysteries of the ancient past. They:

- develop an inquiry question to clearly identify the problem or issue they want to investigate
- form theories known as **hypotheses** (by stating what they think the likely answer might be)
- conduct research to gather evidence from a range of sources
- evaluate the usefulness of the sources and analyse the evidence they gather from them
- confirm or modify their hypotheses on the basis of this evidence.

In many cases, when investigating the ancient past, some of the evidence is missing. For this reason, historians need to piece together the past – kind of like putting together a giant jigsaw puzzle that is missing some of its pieces.

APPLY 1.1

Use the process of historical inquiry to investigate the question 'What issues are most important to people today?'

- 1 Consider some issues that you think are of interest to people today.
 - a Hold a class discussion and come up with a list. Three examples are:
 - global warming and the challenges to our environment
 - violence and wars caused by racial and religious hatred
 - the cost of living.
 - b In one sentence, write down your own theory or hypothesis.
- 2 Watch the television news or study newspaper articles over the course of a week. Make a list of the main news stories and how often they are included in the news. Compare your results with your hypothesis.
- 3 Confirm or modify your hypothesis based on the evidence you have gathered.

Investigating the mysteries of the Sphinx

The Great Sphinx is an ancient monument located near the pyramids at Giza in Egypt. It features the body of a lion and the head of a man, carved from large blocks of limestone. It is the largest sculpture made in ancient times that still survives today. It measures 73 metres long and 20 metres high.

Historians who have studied the Sphinx have gathered much information about it and developed a number of hypotheses about why it was created, including:

- its age and the materials it is made from
- who built it and why
- an understanding of the creature it represents
- how it was damaged and why
- its social and religious importance to ancient Egyptians.

Despite these investigations, certain facts about the Sphinx still remain a mystery. Uncovering the secrets of the past is not always easy, and historians do not always agree.

When was the Sphinx built?

The Sphinx has been buried in sand many times, and was last dug out in 1905. Between its front paws are a number of stones that are covered with **hieroglyphs**. These carved pictures, which relate a dream of the ancient Egyptian king Thutmose IV, say the Sphinx was made 'in the days of Khafre, when the world was young'. Not all historians agree that the Sphinx was built around 2500 BC on the orders of the **pharaoh** Khafre. Some say it was built much earlier – around 10000 years ago. They base their opinion on the different erosion patterns visible on the Sphinx. Others say there were different erosion patterns because the limestone blocks had both hard and soft layers in them. More recently, it has been discovered that environmental pollution, in particular acid rain, is eroding the surface of the Sphinx.

Whose face is on the Sphinx?

Many historians say it is the face of the pharaoh Khafre himself. Others disagree: they say it does not look anything like the face on Khafre's statue. Is this proof?

Are there secret chambers and tunnels under the Sphinx?

Three short passageways have been found under the Sphinx, but they lead nowhere. They may have been dug by robbers. The Roman historian Pliny wrote that local people believed the Sphinx was a king's tomb. Recent technical investigations suggest there is good reason to believe there may be chambers well below the Sphinx yet to be discovered.

Where have the Sphinx's nose and beard gone?

A common view is that the face was damaged when troops of the French general Napoleon used it for target practice in 1798. But a sketch by a French architect in 1737 clearly shows a missing nose. The historian Muhammad al-Husayni Taqi al-Din al-Maqrizi, writing in the early 1400s, said the face was vandalised in AD 1378 to fix up some 'religious errors'. But he said both the nose and ears were knocked off – however, we can see the ears quite clearly on photographs of the Sphinx today. Can his report be trusted if the ears are still there? Marks on the face do suggest that the nose was hacked off. Most experts think that the beard fell off. An archaeologist named Caviglia found what he thought were pieces of it in 1816. Some of these are now in the British Museum.



Source 1. 2 The Great Sphinx

APPLY 1.2

- 1 Develop three inquiry questions about any aspects of the Sphinx that especially interest you. Before you write down your questions:
 - read the information in the text about previous findings and theories about the Sphinx and do your own research on the internet or in the library
 - think about what you already know about the Sphinx, as well as what you want or need to know
 - focus your thinking by using words such as *who*, *what*, *where*, *when*, *why* and *how* as your question starters (this will also help you to select sources to continue your investigation later on in the topic).

The role of archaeologists and other experts

Historians rely on the work of many other experts when conducting their investigations. These include:

- **anthropologists** – study the behaviours and customs of human societies
- **archaeologists** – uncover and interpret sources from the past, including the remains of people, buildings and **artefacts**
- **biologists** – scientists who study living things
- **linguists** and **cryptographers** – experts in languages and symbols who are able to read some of the ancient languages or decode unknown or secret writing
- **forensic pathologists** – specialists in the causes of death, called upon when investigating ancient bodies
- **geophysical surveyors** – use tools and techniques to locate something underground or underwater
- **geneticists** – scientists who study a living thing's unique genes
- **palaeontologists** – scientists who study the fossilised remains of plants and animals.

Historians use all the tools of science, maths, literature, economics, geography and a range of the humanities to help solve the riddles of the past.

Archaeologists locate and uncover sources of evidence of past peoples. This can include their skeletal remains; places where they lived or travelled; the ruins of their temples, towns and tombs; **artefacts** they made, such as pottery, weapons, tools and coins; inscriptions and stone reliefs they carved; even rubbish dumps (referred to by historians as **middens**) and fire sites. Some archaeologists work underwater, scouring the sea bottoms for sources on or beneath the sea bed, such as ancient shipwrecks.

Excavating archaeological sites

Most sources found on land are buried. They might be covered by the silt of past floods, covered by sand blown by the wind or by dense jungle that has grown over them. Some lie beneath the ruins of other settlements built over time on the site. Archaeologists work to locate and then **excavate** artefacts and other sources of evidence.

Once archaeologists have located a historical site that they think may contain important artefacts, it is roped off from the public. These sites are referred to as **archaeological digs**. The area is then divided up and marked off in grid sections so that the precise location of items found can be recorded and catalogued. After surveying the site, archaeologists remove overlying rocks and dirt with great care, sometimes using teaspoons, small brushes, dental tools, sieves – even toothpicks. Once a source is fully exposed and excavated, the archaeologist photographs and numbers it, and records details of its description and the exact location where it was found.



Source 1.3
Archaeologists exploring the wreck of a ship that sank in the Mediterranean Sea during the 11th century.



Source 1.4 A photo of an archaeological dig

REVIEW 1.1

- 1 Use a flow chart to outline the process of historical inquiry.
- 2 What types of experts do you think may have been involved in studying the Sphinx?
- 3 Why are archaeological sites often buried underground?
- 4 Look at Source 1.3.
 - a In the photo there is a grid-like outline on the sea bed. What do you think is its purpose?
 - b Explain what the archaeologists are likely to do with any artefacts they bring to the surface.

TIME IN HISTORY

EXTEND 1.1

- 1 Investigate and report on the number of different calendars used in the world, such as the Jewish calendar, the Islamic calendar and the Chinese calendar.
- 2 During the French Revolution, beginning in 1789, the revolutionaries attempted to create new calendar months. What names did they choose, and why?

To help us understand the past it is useful to know when, and in what order, events happen. Arranging events in the order that they happened is known as **chronology**.

Time terms and concepts

It is important to understand the terms and abbreviations that historians use when they are talking about historical time. These are terms and abbreviations that you will encounter in every history text you will read, so it is important to know them and understand how they work.

Representing time – BC and AD, BCE and CE

In the ancient world, time was measured with the rise and fall of the sun. Over generations, different societies devised their own ways of measuring time, such as the sundial shown in Source 1.5, which was used by the ancient Maya Empire of Mezoamerica (Central America).

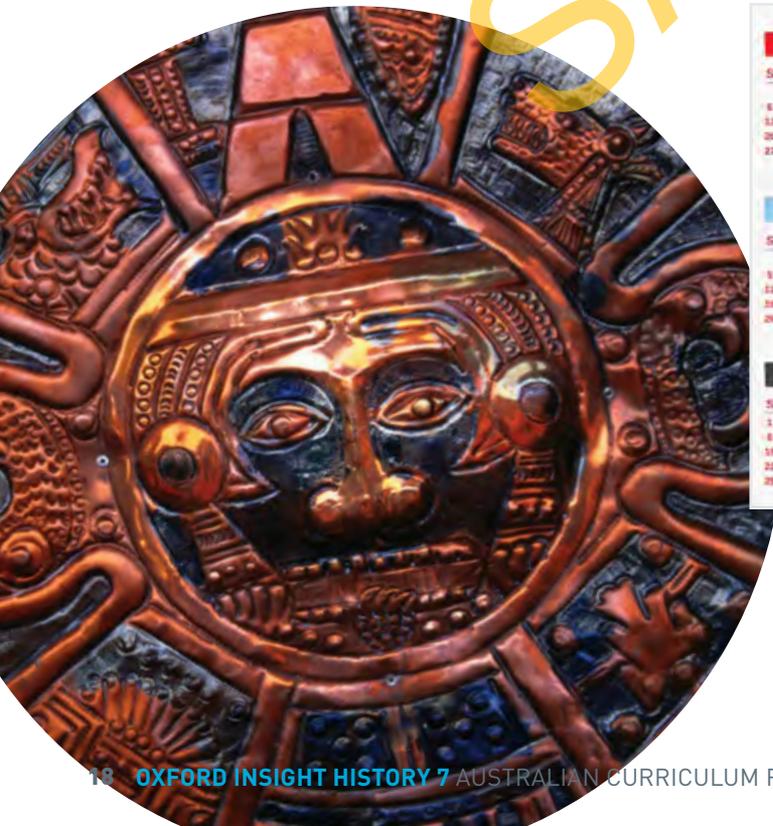
As societies became more advanced they developed systems – such as calendars – to both plan and record time, not only in days, but in weeks, months and years. Today, the most commonly used calendar is the Gregorian calendar. Despite the popularity of the Gregorian calendar, it is not the only way to we record time. There are also currently a number of other calendars used around the world, including the Jewish, Islamic and Chinese calendars.

The Gregorian calendar is a Christian-based calendar. It is broadly broken into two eras (specific periods of time):

- time before the birth of Christ – **BC** ('Before Christ')
- time since the birth of Christ – **AD** (from the Latin expression *Anno Domini*, which means 'in the year of our Lord').

The abbreviation **BC** is placed after the date (for example, 1025 BC), and the abbreviation **AD** is placed before the date (for example, AD 1678).

Source 1.5 A sundial used to measure time by the Maya



Source 1.6 Most countries around the world today use the Gregorian calendar, which was introduced by Pope Gregory XIII in 1582.

You may also come across texts and references that use the alternative terms **BCE** ('Before the Common Era') instead of **BC**, and **CE** ('Common Era') instead of **AD**. Both of these terms are placed after the date (for example, 1025 **BCE** and 1678 **CE**).

Sometimes we are not able to discover the exact date that an event took place. When this happens, historians use the symbol *c.* before a date, for example *c.* 1450 **BC**. The *c.* is an abbreviation of the Latin word *circa*, which means 'about' or 'around'.

Measures of time – decades, centuries and millennia

There are 10 years in each **decade**, 100 years in a **century** and 1000 years in a **millennium**. Source 1.7 shows examples of the start and end dates of centuries, using the terms **BC** and **AD**. The 1st century **BC** ends with 1 **BC** and we count further back to the past. The 1st century **AD** begins with **AD** 1 and we count forward to the present.

Much larger (though less exact) chunks of time are often described as eras, epochs or ages.

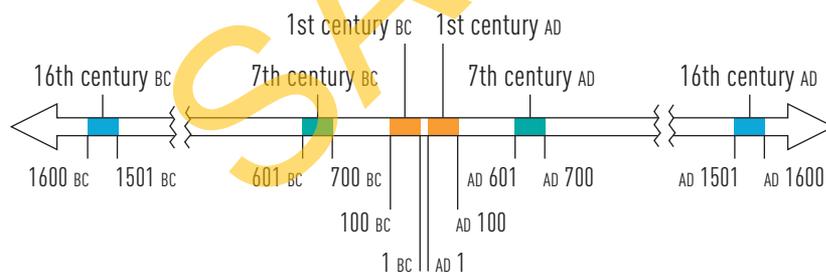
Source 1.7 Examples of the start and end dates of centuries

Century	Year it started	Year it ended
1st century BC	100 BC	1 BC
7th century BC	700 BC	601 BC
16th century BC	1600 BC	1501 BC
1st century AD	AD 1	AD 100
7th century AD	AD 601	AD 700
16th century AD	AD 1501	AD 1600

Timelines

Timelines are a useful way to visually represent the scope of a time period, and to show the sequence of events. Source 1.8 gives a more immediate idea of the scope of time than the same dates presented in the table format of Source 1.7.

Source 1.11 gives a step-by-step guide to constructing timelines, including common timeline features. (A further example and activities on timelines can be found in 'The historian's toolkit'.)



Source 1.8 A timeline can give an immediate idea of the scope of time periods. Note that the year before **AD** 1 is 1 **BC**; there is no Year 0.

Dating in history

Historians use a range of methods to date past events. For the recent past and where there are written sources it is fairly easy, but dating can be more difficult the further back we go. When there is no written record, archaeologists, palaeontologists and other scientists use a range of techniques to date ancient remains. (We examine these methods in more detail in the next section.) Many of these techniques determine whether an **artefact** or **fossil** is older or younger than other objects. This is known as **relative dating**. Some scientific techniques can provide an **absolute dating**. They can determine the age of an object in years, as precisely as current technologies allow.



Source 1. 9 A wall painting from ancient Egypt showing a battle using horse-drawn chariots



Source 1. 10 An artist's impression of the building of the Great Wall of China

Relative dating can also involve the historian working out the logical relationship between two events to decide which one came first. The two examples below show how the order of two events could be logically arranged.

Example 1: Which came first?

- the use of chariots by the ancient Egyptians
- the invention of the wheel.

Logically, the wheel came before the chariot, the reason being that you cannot build a chariot before the invention of the wheel.

Example 2: Which came first?

- the construction of the Great Wall of China
- the beginning of agriculture in China.

Logically, the appearance of agriculture in China is followed by the construction of the Great Wall of China. It is reasonable to assume that the construction of the wall would require much labour and time, which would not be available to hunter-gatherers who had to spend most of their time and energy finding food.

APPLY 1.3

1 The list below includes pairs of related events. Find the pairs and then order the events in each pair as shown in the relative dating examples above. Write a sentence or two explaining the reasons for your decision on each pair.

- | | |
|---|--|
| • the beginning of agriculture around the Nile delta in Egypt | • the first Moon landing |
| • the firsts pace flight | • discovery of the atom |
| • the discovery of electricity | • permanent settlement by the British in Australia |
| • horses are tamed and used for transport and labour | • the appearance of horse shoes |
| • construction of the first Egyptian pyramids | • electric fans |
| | • the explosion of the first atomic bomb |
| | • the opening of your school. |

2 Use the step-by-step guide shown in Source 1.11 to construct a timeline that shows these key discoveries and inventions. Then, add three more events from your own knowledge or research.

- | | |
|----------------------|-------------------------------|
| • wheel – 3 500 BC | • rockets – AD 1232 |
| • silk – 2 700 BC | • car – AD 1885 |
| • alphabet – 1100 BC | • personal computer – AD 1964 |
| • paper – AD 900 | • DVD – AD 1998 |

Source 1.11 Step-by-step guide to drawing timelines

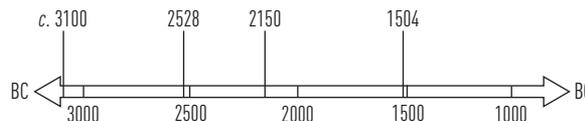
Step 1

Work out the length of time you want to represent on your timeline, such as from 3000 BC to 1000 BC. Then divide the timeline evenly into suitable blocks of time, in this case 500-year blocks. A 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 dates onto the timeline. These dates need to be accurately plotted so that they appear in chronological order. If an exact date is not known, the abbreviation *c.* (from the Latin word *circa*, meaning 'around') is placed in front of it (e.g. *c.* 3100).



Step 3

Provide a brief description of the dates plotted on the timeline, describing the events that took place.



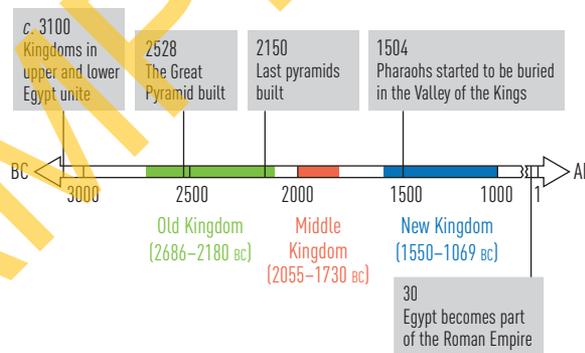
Step 4

Sometimes, sections on a timeline are shaded in different colours and labelled to indicate a period or block of time, such as the different kingdoms in ancient Egypt.



Step 5

To represent a huge span of time, you may need to break your timeline into sections using a jagged line. This break shows that a section of time has been left out and will ensure that your timeline will fit on the page! Just make sure no important events fall in the time you are leaving out.



REVIEW 1.2

- 1 What is the Gregorian calendar?
- 2 Identify the two alternative ways of listing dates, based on the two eras of the Gregorian calendar.
- 3 What are the start and end dates of the following centuries?
 - a 3rd century BC
 - b 20th century AD
- 4 In which centuries were the following dates?
 - a AD 1 996
 - b AD 1 066
 - c AD 3 3
 - d 753 BC
- 5 Why are timelines useful for studying history?
- 6 Draw a timeline to show a decade, a century and a millennium.
- 7 Explain the difference between relative and absolute dating.

1.1

CHECKPOINT

HOW DO HISTORIANS AND ARCHAEOLOGISTS INVESTIGATE HISTORY?

» Outline the main features of the study of history and archaeology

- 1 Explain the purpose and importance of the study of history. (10 marks)
- 2 What is the difference between the study of history and archaeology? (5 marks)

» Outline the role of historians and archaeologists

- 3 What are the responsibilities and tasks performed by historians?
In your answer, be sure to include some information about:
 - what historians investigate
 - why historians are important for us today. (15 marks)
- 4 What are the responsibilities and tasks performed by archaeologists?
In your answer, be sure to include some information about:
 - what archaeologists investigate
 - why archaeologists are important for us today. (15 marks)

» Describe the different ways that archaeologists and historians approach historical investigations

- 5 Outline the skills and technologies employed by historians and archaeologists during a historical investigation. (20 marks)

» Define terms and concepts of historical time

- 6 Define the following terms:
 - a chronology
 - b BC and AD
 - c BCE and CE
 - d *circa*
 - e decade, century and millennium
 - f timeline
 - g relative dating and absolute dating. (15 marks)

TOTAL MARKS [/80]

RICH TASKS

Your own investigation

Locate an artefact, document or other source of evidence that interests you, either found at home or in your local area. Conduct a mini historical investigation to find out more about it, following the process of historical inquiry outlined in this section.

Thinking about history

Source 1.12 is a collection of quotes about history from well-known philosophers, scholars, politicians and others.

- 1 Read and talk about the quotes in class and at home. Consider what you think each of them means. Open a document or copy each of them in to your notebook and then underneath re-write them in your own words to make sure that the meaning is clear.
- 2 Make a brief note under each quote indicating whether or not you agree with the statement and the reason for your view.
- 3 Next, approach these sources like a historian and do some research on each of the people who made these comments about history. Finding out about the people might provide clues about their perspectives – their biases, likes and dislikes and qualifications.

4 Has your view of any of the quotes changed after talking about them in class or as a result of your finding out about the people who made them?



History is ... the study of questions.

W.H. Auden, English poet



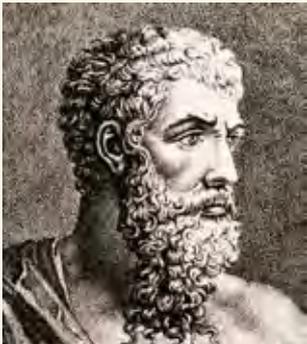
History is more or less bunk [useless].

Henry Ford, American industrialist



There is nothing new except what has been forgotten.

Marie Antoinette, wife of Louis XVI of France



If you would understand anything, observe its beginnings.

Aristotle, philosopher of ancient Greece



What is history but a fable agreed upon?

Napoleon Bonaparte, French general and emperor



History teaches everything, including the future.

Lamartine, French writer



It's just one damned thing after another.

Arnold Toynbee, English historian



To be ignorant of what happened before you were born is to be ever a child.

Cicero, Roman writer and politician

Source 1.12 What some famous people have had to say about history

In these Rich Tasks, you will be learning and applying the following historical skills:

- » Analysis and use of sources
- » Perspectives and interpretations
- » Research
- » Explanation and communication.

For more information about these skills, refer to 'The historian's toolkit'.

CHECKPOINT

1.2

SECTION

WHAT TYPES OF SOURCES ARE USED IN HISTORICAL INVESTIGATIONS?

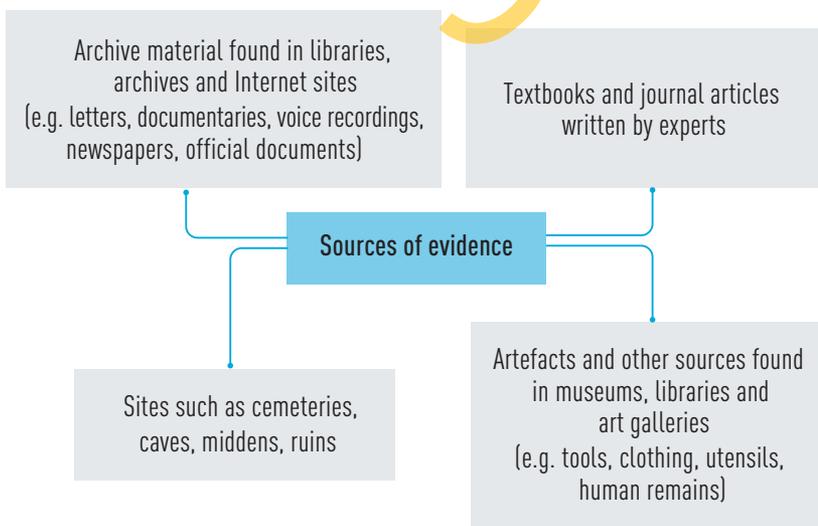
A historian is constantly looking for and checking clues. This means looking for **evidence**, the information gathered from historical **sources**. In this section we look at the sources of evidence used by historians, and the dating methods used by archaeologists to provide evidence about the age of ancient sources.

GATHERING EVIDENCE FROM A RANGE OF SOURCES

Historians do not always agree on evidence, even when it is gathered from the same source. They often have different opinions or points of view. This is why historians are always searching for new sources of evidence, checking and re-checking the evidence they already have. They need to use a range of different sources to help them gain a more complete picture of the past.

Types of sources

The types of sources that historians might use to gather evidence are summarised in Source 1.13. These can include the written evidence of eyewitnesses who observed an event. Evidence can also come in the form of artefacts and objects – tools, weapons and household items – or in the form of buildings and other physical remains from the past. Evidence from the more recent past can be found in photographs, films and sound recordings.



Source 1.13 Some sources of evidence for a historical inquiry

Evaluating sources

Historians evaluate a source by asking questions such as:

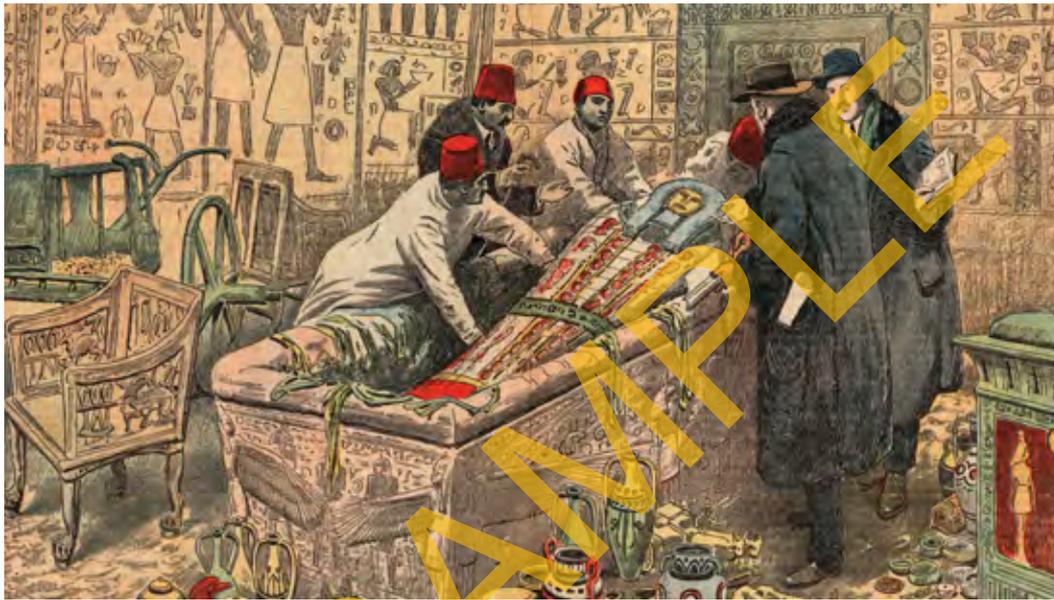
- How old is the source?
- Who made or created it, or where did it come from?
- Does it come from a trustworthy source?
- What motives might have been behind its creation?
- Are there any gaps and silences in the evidence it presents? (That is, is there anything missing, has the source been damaged, is there something that the creator has deliberately left out, and, if so, what and why?)

They also consider whether the source is a **primary source** or a **secondary source**.

Primary and secondary sources

Historians classify sources of evidence into two categories:

- *primary sources* are objects created or written at the time being investigated, such as during an event or very soon after. Examples of primary sources include official documents, such as laws and treaties; personal documents, such as diaries and letters; stone carvings and other artefacts.
- *secondary sources* are written accounts about the past that were created after the time being investigated, or objects that were created after the event. They often use or refer to primary sources and present a particular interpretation. Examples of secondary sources include writings of historians, encyclopaedia entries, documentaries, history textbooks and websites.



Source 1. 15

An illustration shows Howard Carter inside the tomb of Tutankhamun. The illustration is a secondary source because it was drawn by an artist long after the discovery of the tomb in 1922. It is only a representation of the inside of Tutankhamun's tomb, even though it is based on a photograph taken at the time of its discovery.

Source 1. 14

A photograph taken in 1922 shows British archaeologist Howard Carter leaving the tomb of Tutankhamun. He is holding a box of artefacts made by ancient Egyptians. Both the artefacts shown in the photograph and the photograph itself are primary sources because the artefacts were made during the rule of the ancient Egyptians and the photograph was taken at the time of the discovery of the tomb.

Oral history

Some cultures, such as that of the Indigenous peoples of Australia, have oral cultures. This means that their records were not written but were preserved in other forms. With no form of writing, their records were preserved in the paintings they left, as well as the ceremonies, rituals, stories, laws and traditions that they have passed on. Historians and anthropologists rely on sources such as these when searching for evidence of their history.

Digital sources

A web search can provide a huge amount of possible source material for historians and researchers. However, as anyone can post material on the Internet, the reliability of the material needs to be evaluated, in the same way that any historical source would be evaluated and checked against other sources. More reliable sources may be found at websites of government organisations, academic institutions, museums and libraries. These websites have material that has been written, edited and reviewed by experts.

Evaluating sources

In the digital age, where so much information is available, it is even more important to gather information from a variety of reliable historical sources when seeking an answer to a question. Look carefully at the following sources related to the Colossus of Rhodes, reportedly the tallest statue built in ancient times and one of the Seven Wonders of the ancient world. It was built on the Greek island of Rhodes.

Source 1.16

The project was commissioned by the Rhodian sculptor Chares of Lindos. To build the statue, his workers cast the outer bronze skin parts. The base was made of white marble, and the feet and ankle of the statue were first fixed. The structure was gradually erected as the bronze form was fortified with an iron and stone framework. To reach the higher parts, an earth ramp was built around the statue and was later removed. When the colossus was finished, it stood about 33 m (110 ft) high ... The construction of the Colossus took 12 years and was finished in 282 BC. For years, the statue stood at the harbor entrance, until a strong earthquake hit Rhodes about 226 BC.

Rhodos travel service—/www.rodos.com/index.htm



Source 1.17

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 (AD 23–79)

Source 1.18

As fate would have it, however, an untimely end was destined for the Colossus. In 224 BC, only sixty-five years after its completion, the statue was toppled by a strong earthquake, crushing many houses as it fell. King Ptolemy III immediately offered to pay for it to be rebuilt, but the Rhodians had been warned by an oracle to let it lie and so declined his generous offer. The statue lay where it fell for over 875 years until Arab invaders pillaged its remains and sent the scrap metal to Syria, where it was carried off on the backs of 900 camels to be melted down — probably into bronze lamps. Nothing of the Colossus remains today, and the site upon which it once stood has not been securely identified.

www.amazingart.com/seven-wonders/colossus.html

Source 1.19 A modern artist's interpretation of the Colossus of Rhodes

Source 1. 20

Colossus of Rhodes (Gk. *kolossos*, 'a more than life-size 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 (30–35 m, 100–115 ft.). It was completed c. 280 BCE and overthrown by an earthquake c. 224 BCE.

Oxford Companion to Classical Literature, Oxford University Press

INTERPRET 1.1

1 In your notebook, create a table like the one below. Rank the sources from most (1) to the least (5) reliable (think about who created them, and why). Justify your choices for the highest-ranked and lowest-ranked sources.

Source number	Creator	Date created (if known)	Primary/Secondary	Rank

2 Form small groups to answer the following questions, based on your evaluation of the sources' reliability.

- When was the statue built?
- How tall was it?
- When did the statue fall and why?

Which is the primary source? At what point in the history of the statue was it written?

REVIEW 1.3

- 1 List some of the sources of evidence used by historians.
- 2 What is the difference between a primary and a secondary source?
- 3 Classify the list of sources set out below as either primary sources or secondary sources. Explain the reasons for your answers.
 - a program from the opening of the Sydney Harbour Bridge in 1932
 - an interview in 1982 on the 50th anniversary of the Sydney Harbour Bridge's opening with one of the people who was there in 1932
 - a newsreel film taken at the time of Dawn Fraser winning the 100 metres freestyle at the Melbourne Olympics in 1956
 - scenes from the film *Dawn* made in 1978 about the life of Dawn Fraser
 - the film *Marco Polo* made in 2000
 - an interview in 2009 with the actor Harrison Ford about the making in 1981 of the film *Raiders of the Lost Ark*
 - the Sydney Harbour Bridge
 - a painting of the Sydney Harbour Bridge painted by a 20-year-old artist in 2009
 - a TV debate in 2007 between historians about the Japanese Midget Submarine attack on Sydney Harbour in 1942
 - a DVD of a silent film taken in 1927 of the opening of Parliament House in Canberra in 1927.
- 4 What methods and sources do you think historians and other scholars would use when investigating the history of a people with an oral culture?
- 5 Explain why material on the internet needs to be carefully evaluated.

METHODS AND SOURCES USED IN HISTORICAL INVESTIGATIONS

Sometimes historians (or just ordinary people) accidentally find something of historical importance. For example, they might notice something unusual about the landscape that suggests that something intriguing lies beneath the surface of the earth, or they stumble across an interesting and unexpected artefact that leads them to investigate a site more closely. Other times, historians know exactly what they are looking for, but they have to use a variety of methods to uncover and correctly identify the historical treasures they are seeking.



Source 1.21 The Serpent Mound

Locating archaeological sites

Earlier, we looked at the approach taken by archaeologists when excavating archaeological sites underwater and underground. Sometimes these sites are located during a search, with help from aerial photographers, geophysical surveyors, sonar technologists and other specialists. One site that is easy to locate from the air is the Serpent Mound of Ohio in the United States

(see Source 1.21). Historians believe it may have been built by the Native American Adena people who are thought to have lived in the area for a millennium from about 800 BC.

Archaeological sites are sometimes found by accident, when a field is being ploughed or when the foundations of a building are being dug. Sometimes artefacts are revealed after they are uncovered by floods, landslides or by erosion. The 5000-year-old remains of Ötzi the Iceman were found in 1991, after an unusually warm summer melted ice high up in the Ötztal Alps on the border between Austria and Italy (see Source 1.22).

Dating methods

Many of the experts called on to help historians and archaeologists with their investigations use state-of-the-art technologies to work out the likely age of sources. As we defined in the unit 'Time in history', some techniques described are absolute dating techniques, which assess the age of the source as precisely as possible. Others are relative dating techniques, assessing whether sources are older or younger than other sources.

Stratigraphy

Stratigraphy is a relative dating technique. It involves looking at the different layers of earth (known as strata) where an artefact or fossil is found. The assumption is that, as at the local rubbish tip or in an untidy bedroom, the oldest objects are at the bottom of the pile and the most recent objects are closer to the top (see Source 1.23). Note that a thicker layer (or stratum) would indicate a longer time period than a very thin layer.

Stratigraphy is not an exact science, however, because natural disasters such as earthquakes and landslips can change the way strata are arranged.



Source 1.22 The remains of Ötzi the Iceman



Source 1.23 A diagram showing how different artefacts can be found in different strata, generally arranged according to their age

INTERPRET 1.2

Look carefully at Source 1.23.

- 1 Which layer is likely to provide the oldest sources?
- 2 Which layer do you think is likely to have the more recent sources – D or B?
- 3 Why do you think layer C contains no historical sources?
- 4 Imagine there was an earthquake. It affected the right-hand side of this section of earth. Layer A on the right-hand side dropped down to align with Layer D on the left-hand side.
 - a Draw a simple sketch to represent this drop in your workbook.
 - b Explain why it would be misleading for an archaeologist to say that the smashed disc on the right-hand side was older than the skeleton on the left-hand side.

Radiocarbon dating

Radiocarbon dating is an absolute dating technique. It uses complex instruments to work out how much Carbon-14, a particular form of carbon, is still present in once-living remains. All objects that were once living things – plants, wood, human remains, parts of animals – contain Carbon-14. The Carbon-14 drops at a constant rate after the item dies. Scientists can determine when an organism died and therefore how old it is by measuring the amount of Carbon-14 left in the organism's remains.



Source 1.24 Radiocarbon dating can determine the likely age of once-living remains, such as this mummified corpse.



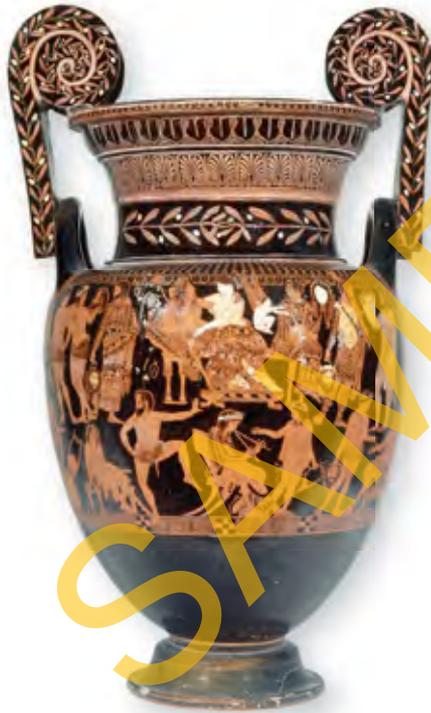
Dendrochronology

Dendrochronology dates a tree by counting the rings in a cross-section of its trunk. For each year in a tree's life, a new ring forms. The rings vary in shape and width depending on climate and weather conditions. Sometimes experts can calculate the relative age of wood artefacts, such as bowls or floorboards, by matching the ring patterns with the same species of locally growing trees.

Thermoluminescence dating

Thermoluminescence dating is used to date objects that contain particles of crystal, such as clay pots and stone objects. Scientists heat the objects to very high temperatures and measure the light that is released. They can then use these measurements to work out the relative age of the material.

Source 1. 25 A cross-section of a tree trunk, showing the new rings that grow each year.



Source 1. 26 A krater, a large pot from ancient Greece used to dilute wine by mixing it with water.

Fluorine dating

Bones can be dated using **fluorine dating**. Bones absorb fluorine from the surrounding soil and groundwater (water that lies below the surface of the ground). The longer they are immersed, the more fluorine they absorb, allowing scientists to assess their relative age.

DNA analysis

Historians often rely on **DNA analysis** to explore genetic links between ancient remains. For example, DNA analysis has been used as evidence to support theories about early human migration or family links when investigating the remains of bodies such as Egyptian mummies. More recently, new methods of DNA have identified plant DNA from the amphorae found in ancient shipwrecks. This new evidence has enabled archaeologists to change their theories about the types of goods carried by traders in ancient Greece.

EXTEND 1.2

- 1 With a partner, study the cross-section of the tree trunk shown in Source 1.25. Work out how old this tree is and share your findings with your partner. Discuss any differences.

REVIEW 1.4

- 1 Identify the experts whose skills can be used to locate an archaeological site.
- 2 Identify dating methods that determine:
 - a absolute dating
 - b relative dating.
- 3 Draw and label a diagram to show your understanding of what radiocarbon dating involves.
- 4 Identify the techniques that would be useful in analysing:
 - a the ancient human remains and possible artefacts found in Source 1.24
 - b the artefact shown in Source 1.26.
- 5 Draw a concept map to summarise your knowledge about techniques used by archaeologists and scientists to analyse sources of evidence. Include sketches and information about the types of sources relevant to each method and the evidence that can be gained.

1.2

CHECKPOINT

In this Rich Task, you will be learning and applying the following historical skills:

- » Analysis and use of sources
- » Research
- » Explanation and communication.

For more information about these skills, refer to 'The historian's toolkit'.

CHECKPOINT

WHAT TYPES OF SOURCES ARE USED IN HISTORICAL INVESTIGATIONS?

» List a range of sources used by archaeologists and historians

- 1 List the different types of sources used by archaeologists and historians in their investigations, including examples of tools and techniques used to identify and classify these sources. (50 marks)

TOTAL MARKS [/50]

RICH TASK

Unearthing Richard III

In February 2013, experts confirmed that a 500-year-old skeleton found under a car park in Leicester, England, was that of King Richard III, the last English king to die in battle. The burial place of the king had been long forgotten. In September 2012, archaeologists who had been searching for Richard discovered and excavated the battle-scarred skeleton.

Conduct research to find out how historians, archaeologists and scientists discovered and identified the remains of Richard III. Present your findings in a written report, including information and sources about:

- the range of experts involved in this investigation
- the dating and other techniques that were used to identify the remains..



Source 1.27 Michael Ibsen, a descendant of King Richard III, with a facial reconstruction made from the recently discovered skull of the king



Source 1.28 A skeleton found buried under a car park in September 2012 was identified as the remains of England's King Richard III, after investigations by the experts at the University of Leicester.

1.3

SECTION

HOW DO HISTORIANS AND ARCHAEOLOGISTS INVESTIGATE HISTORICAL MYSTERIES?

In this section we will look at some of the historical mysteries that have puzzled modern historians and archaeologists. By examining these investigations, we can learn how historians and archaeologists went about solving some of the mysteries of the ancient past – in particular, those relating to the remains of ancient bodies. We also consider the key historical concepts that helped historians investigate and understand the past in order to solve these mysteries.

INVESTIGATING HISTORICAL MYSTERIES

EXTEND 1.3

1 Conduct research to find out how historians and archaeologists have investigated other ancient human remains and write a 200-word report that summarises:

- how they were discovered
- theories about how they died
- sources used in the investigation.

The mystery of Tollund Man

Tollund Man was found more than 2 metres below the surface of a peat bog near Tollund, Denmark, in 1950. (Peat is decomposed vegetable matter that can be burned as fuel when dried.) The eyes and mouth of the man were closed. He was about 150 cm tall, and appeared to have died around the age of 40. He was found wearing a pointed sheepskin cap and a belt made from animal hide. His body was in a foetal position (with his knees drawn up and his arms tucked in). A narrow strip of leather was tied around his neck. Historians are not completely sure why Tollund Man died, though most think he was sacrificed. Various scientific methods have been used to test the remains in an effort to find out more about this historical mystery. Some of the findings of this further research and testing are detailed in Source 1.30.



Source 1.29 Tollund Man's remains were so well preserved by the peat that the people who found him thought he was a recent murder victim. What is left of his remains is displayed in the Silkeborg Museum in Denmark.

Investigating Tollund Man

Source 1.30 Some of the findings about Tollund Man

Source of evidence	Findings based on historical investigations and dating methods
His remains	Radiocarbon dating confirmed he died about 350 BC.
Vegetable soup containing barley, weeds and seeds in his stomach	The food was in the large intestine, suggesting it was eaten less than 24 hours before death. Some of the seeds appear in the region only in spring.
Position of the body	The body was placed in a foetal position, with eyes and mouth closed after death – such care and respect is unlikely for a murder victim or an executed criminal.
Text of Roman writer Tacitus (AD 56–117). He said of Germanic people 'to the north': 'They hang traitors and renegades in trees; cowards, evaders and unnaturally immoral people they lower into filthy swamps and cover them with branches.'	Further research has confirmed that these same Germanic people worshipped a goddess of spring during ceremonies at which slaves were sacrificed.
Peat around the body	Radiocarbon dating confirmed this to be about 2000 years old.
Scars on the soles of his feet	He sometimes went barefoot.
Location of the body	Ancient Germanic people regarded watery marshes as places where they could talk to their gods and goddesses.

INTERPRET 1.3

Read the information in Source 1.30 to answer the following questions.

- Tollund Man appears to have been strangled.
 - What evidence is there that Germanic people hanged traitors?
 - Does the treatment of the body after death suggest Tollund Man was a traitor? Explain.
- It is believed that Tollund Man died in the spring.
 - How did researchers determine that he died in the spring?
 - Why was that timing significant when trying to understand why this man might have died?

Key concepts for historical inquiry

Historians use six concepts to help them investigate and understand the past. These are very useful when they are developing their inquiry questions, analysing sources of evidence, and forming their opinions and hypotheses

At times you will use one of these concepts to help with your historical inquiry, while at other times you may use several at once. As you learn to apply each concept, you will begin to think like a historian. The six historical concepts are:

- **continuity and change** – aspects of the past that have remained the same or have changed over time
- **cause and effect** – the reasons for a historical event or development, and the effects or outcomes of the event as a result
- **perspectives** – the points of view of historians analysing historical events or issues, which may lead to differing interpretations of the same event; historians also take into account the perspectives of people who wrote or created the source material they are analysing

- **empathetic understanding** – the ability to understand the points of view of others, which allows historians to enter into the world of the past and appreciate motivations and values that may be different from their own
- **significance** – the importance of an aspect of the past, such as an archaeological site or a past event
- **contestability** – different interpretations about the past.

These historical concepts are explained in more detail in ‘The historian’s toolkit’, which you can refer to throughout the year to help you with your study and understanding of historical inquiries.

APPLY 1.4

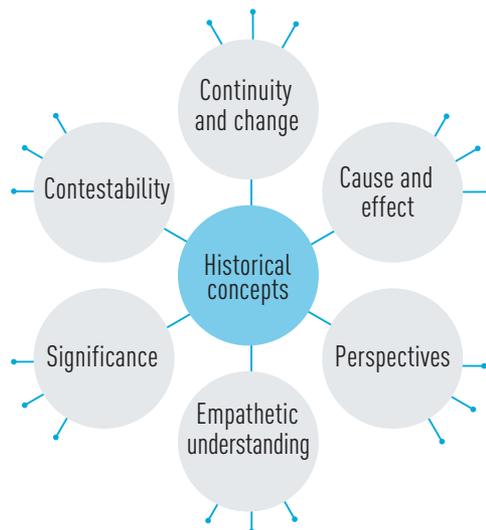
- 1 Understanding *perspectives*: write two or three paragraphs about what you remember happening in the classroom during your previous history class. Share what you have written with others in a small group. Then discuss what this exercise taught you about the situation historians face with presented with different recounts about an event in the class.



APPLY 1.5

- 1 In Apply 1.2 you developed inquiry questions about aspects of the Sphinx that particularly interested you.
 - a Choose one of the questions and write a hypothesis stating the most likely explanation in answer to the question.
 - b Use the Internet or library to locate and select sources that will be useful in providing evidence that will test your hypothesis.
 - c Classify your sources as either primary or secondary sources.
 - d Summarise the key points of any evidence that your sources provide.
 - e Confirm or modify your hypothesis, and present your findings and conclusions in the form required by your teacher. This may be an essay, oral presentation, PowerPoint display, audiovisual presentation or some other form.

REVIEW 1.5



- 1 Copy the graphic organiser on the left into your notebook and add an outer ring of bubbles in which you provide at least one example that relates to each of the historical concepts. Examples could come from your research into the Great Sphinx, or other investigations and material from this chapter. Add to your organiser as you progress through your depth study topics this year.

Source 1.31 Key historical concepts

1.3

CHECKPOINT

In these Rich Tasks, you will be learning and applying the following historical skills:

- » Analysis and use of sources
- » Perspectives and interpretations
- » Research
- » Explanation and communication.

For more information about these skills, refer to 'The historian's toolkit'.

CHECKPOINT

HOW DO HISTORIANS AND ARCHAEOLOGISTS INVESTIGATE HISTORICAL MYSTERIES?

» Examine a historical controversy or mystery using the process of historical investigation

- 1 Select one historical mystery of your choice and find out how the historians and archaeologists who have studied it so far have gone about conducting their investigations. Consider:
 - their hypotheses
 - the tools and methods they used
 - the sources of evidence they used. (50 marks)

TOTAL MARKS [/50]

RICH TASKS

Key historical concepts

Read about the key concepts *cause and effect*, *continuity and change* and *perspectives*. As a class, select any recent major event in the news that all class members are reasonably familiar with. Through discussion, identify:

- how this event might demonstrate the principles of cause and effect
- to what extent it is an example of continuity and change
- what different perspectives, or points of view, there might be about the event.

A history mystery: the Minoans and the bull-leaping fresco

The ancient Minoan civilisation flourished on the island of Crete between around 2000 and 1400 BC. Because we cannot read the written language of the ancient Minoans, their civilisation remains one of the great mysteries of the ancient world. The image below, known as the bull-leaping fresco (an image painted onto wet plaster), was found in the Knossos Palace on Crete.

- 1 Conduct research to find out more about the culture and customs of the Minoans.



Source 1.32

The bull-leaping fresco painted by Minoans around 3500 years ago.

- 2 Look at Source 1.32 and write a paragraph describing what you see.
- 3 Write a hypothesis stating your view on the question, 'Did bull-leaping actually take place in ancient Minoan society or is it a legend?'
- 4 Have a class discussion to share your ideas.
- 5 Confirm or modify your hypothesis and write a persuasive text based on your research, setting out what you think is being shown in the fresco.

1.4

SECTION

WHAT DO SOURCES REVEAL ABOUT AUSTRALIA'S ANCIENT PAST?

In this section, we will consider the particular issues involved in the study of ancient Australia, including the stories and artefacts of Aboriginal and Torres Strait Islander peoples who have the world's oldest continuous culture.

SOURCES FROM ANCIENT AUSTRALIA

There are two types of sources that can be used to investigate Australia's ancient past: oral accounts and archaeological evidence.

Oral accounts of the Aboriginal and Torres Strait Islander peoples

These are the collected stories that the first Australians used to tell their story and record their customs, rituals and laws. This oral tradition does not operate on a timeline from oldest to the most recent, rather their history centres on the importance of home, place and country. It tells stories about places rather than times or historical periods. For example, **Dreamtime** stories explain the origins of life and are passed on from generation to generation (see Source 1.33).

Archaeological evidence

Because there is no written evidence, archaeologists also rely on the remaining archaeological evidence. Sources of evidence include burial sites and middens, rock engravings and rock paintings, and artefacts such as tools and fossils. Sources 1.34 and 1.35 are examples of these archaeological sources. (Examples of ancient paintings can also be seen in Source 1.39.)

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, Kururwarri/Yuendumu Doors, Australian Institute of Aboriginal Studies, Canberra, 1987, Door 29, p. 127



Source 1. 34 Middens, such as this one at Boulder Point in Tasmania, are places where people have left the remains of their meals, such as shells and bones. The charcoal remains of fireplaces and artefacts such as tools can also be found at these sites.



Source 1. 35 Rock engravings at a site on the central coast, north of Sydney. This engraving depicts fish, an eel and a shield.

INTERPRET 1.4

Study Sources 1.34 and 1.35.

- 1 Describe each source in your own words.
- 2 Which scientific dating techniques could be useful in analysing each of these sources?
- 3 What might each source tell us about life in ancient Australia?
- 4 Use the sources and question starters such as *who*, *what*, *where*, *when*, *why* and *how* to develop three inquiry questions about ancient Australia.

REVIEW 1.6

- 1 What are the two types of sources of evidence used to investigate the history of Australia's Indigenous people?
- 2 How is the Aboriginal and Torres Strait Islander tradition of recording history different from the Western/European tradition?
- 3 What are the similarities?

MYSTERIES OF ANCIENT AUSTRALIA

Human occupation in ancient Australia

Non-Indigenous Australian experts now agree that Australia has been occupied for at least 60 000 years. This theory is based on the idea that Indigenous Australians came to Australia from South East Asia during one of the last ice ages. During the ice age, sea levels were lower and it would have been easier for people to move from islands around what is now Indonesia into northern Australia. It is important to note that Indigenous Australians believe that their ancestors originated here, rather than that they arrived from elsewhere.

Archaeological evidence of humans in Australia

In the 1960s, experts suggested that Indigenous Australians had lived here for 9000 years. By 1980, that figure had extended to between 35 000 and 40 000 years, and since then archaeologists have continued to revise this estimate. Archaeologists today generally agree that the evidence for human occupation in Australia dates back to around 60 000 years ago. The results of thermoluminescence dating on rock sediments found around artefacts in the Northern Territory have even suggested a doubling of this estimate to around 120 000 years. We may never know for sure, as rising sea levels have covered what would have been the earliest occupation sites in northern Australia. However, new technologies and discoveries could provide new evidence in the future.

Important sources of evidence about ancient Australia are human remains found at Lake Mungo in New South Wales and Kow Swamp in Victoria, as well as the Bradshaw/Gwion Gwion paintings located in Western Australia's Kimberley region.

Source 1. 36 The Willandra Lakes, including the ancient lake bed called Lake Mungo, is one of Australia's World Heritage listed sites. Archaeologists have uncovered ancient burial and cremation sites and the fossils of giant marsupials at Lake Mungo.



Lake Mungo

In 1969, some burned bones were spotted by chance by a motorcyclist in the Willandra Lakes World Heritage Area in far western New South Wales. As the motorcyclist was also a scientist, he decided to investigate. The remains, later called Mungo Woman, were scientifically dated to about 25 000 years ago. The woman had been cremated and her bones buried, with evidence of ceremony. Five years later, another skeleton was found, this time intact. It was called Mungo Man. The man had been buried ritually after his remains were first smeared with red ochre. Some, but not all, scientists think that Mungo Man is about 60 000 years old.



Source 1. 37 Mungo Man

Kow Swamp

Kow Swamp is the location of the biggest ancient burial site in Australia so far found. A recent dating method called optically stimulated luminescence has found that the remains are around 20 000 years old, which is older than previously thought. About 10 000 to 12 000 years ago, Kow Swamp was a large lake. The grave site was located on its then south-eastern edge. The first of the remains (a partial skeleton) was found in 1968. Within four years, archaeologists had uncovered the remains of about 40 people.

The physical appearance of the Kow Swamp skulls puzzled scholars. They had wide faces; prominent jaws and teeth; flat and receding foreheads; and heavy brow ridges. In fact, they more resembled the distant human ancestor scientists call *Homo erectus*. The reality is that they are much younger than the human-looking remains found at Willandra Lakes. One recent theory is that the stocky, robust shape of the Kow Swamp people was a result of their adapting to climate stress. Some 20 000 years ago, the world was at the peak of its last **glacial** (an extremely cold time within an ice age). The research continues, with new tests applied and new theories put forward to find out more about these remains and their place in Australia's past.

Source 1. 38 Three skulls – front: *Homo habilis*, 1.88 million years old, from Kenya; centre: *Homo erectus*, 13 000 years old, from Kow Swamp, Victoria, Australia; back: *Homo sapiens*, 13 000 years old, from Kooragang Island, Victoria



The Bradshaw or Gwion Gwion rock paintings

The Bradshaw or Gwion Gwion rock paintings are located in Western Australia's Kimberley region. (Gwion Gwion is the name local Indigenous people use for the area.) A European cattleman, Joseph Bradshaw, spotted them in 1891 while looking for land for his animals. He noticed that they were quite different from other Indigenous art he had seen. In fact, he said, '[I]ooking at some of the groups, one might think himself viewing the painted walls of an Egyptian temple.'

Thermoluminescence dating indicates some of the paintings could have been made 17 000 years or more ago. Some experts think they are three times as old. They are dispersed over what scientists think could be up to 100 000 sites. Scholars contest who created these paintings. Many insist they were painted by ancient Indigenous people. Some argue that they reveal evidence of a farming culture, perhaps an ancient Asian culture pre-dating the last glacial.

The amateur archaeologist Grahame Walsh, who has studied these paintings in detail over a long time, holds this latter view. Some argue that his position is racist. His claims have upset some Aboriginal groups and are strongly contested by some academic scholars.

SOURCE STUDY

The Bradshaw or Gwion Gwion rock paintings

Source 1.39

... And the first site, I actually went to with a traditional owner. I knew it was a deeply religious ... experience to go there. As he approached the site he'd stop and he'd talk to stones – just boulders. Then I heard him mention my name ... He was giving my background to the Wandjinas [creator spirits of some Indigenous groups, which were believed to bring rain], as it turned out. Wandjina art ... [is] relative to living cultures of today, so it's the art that was practised at the time of European contact ... the Bradshaw art represents a culture of an unknown, vastly different time and different resources.

Grahame Walsh,
www.abc.net.au/austory/transcripts/s696261.htm



Source 1.40 An example of the Bradshaw or Gwion Gwion rock paintings. Some show people with hair decorations, tassels and perhaps clothing. Some show boab tswit hr udders.

Source 1. 41

'No', they said 'no'. That was human long, long time before our time. But we can't tell the truth because we don't know they said. Not any Aborigines in the Kimberley know about Bradshaw painting.

Billy King, Ngarinyin Elder, www.abc.net.au/austory/transcripts/s696261.htm

Source 1. 42

... I, as an academic, would certainly say that we have two distinct groups of styles of art. I wouldn't doubt that both were painted by Aboriginal people ... Grahame does certainly genuinely believe that he's recording the art and he's interested in its conservation, preservation, and all else is outside it. But living in Australia in these years, that's just about impossible. In an area where there are land claims, where there are traditional Aborigines still living, I think to say that nothing else impinges [has an impact] is an impossibility. And a bit naïve, and a totally different world to, say, [the one] we were both living in when I met him in the 1960s.

John Mulvaney, <http://www.abc.net.au/austory/transcripts/s696261.htm>

Source 1. 43

Well, this, they call them Bradshaws, but by right it's Gwion Gwion. That's the figure – that word now people used to call them before white man came. Gwion Gwion. The people put it up there – our great, great ancestors, before you know. Through the past generation that picture was there before any European people came, and then they pass them from generation to generation. And now it's with us, in the 20th century.

Donny Woolagoodja, a Warwa man from Mowanjumb, in the far north-west of the Kimberley, http://www.abc.net.au/dimensions/dimensions_in_time/Transcripts/s578480.htm

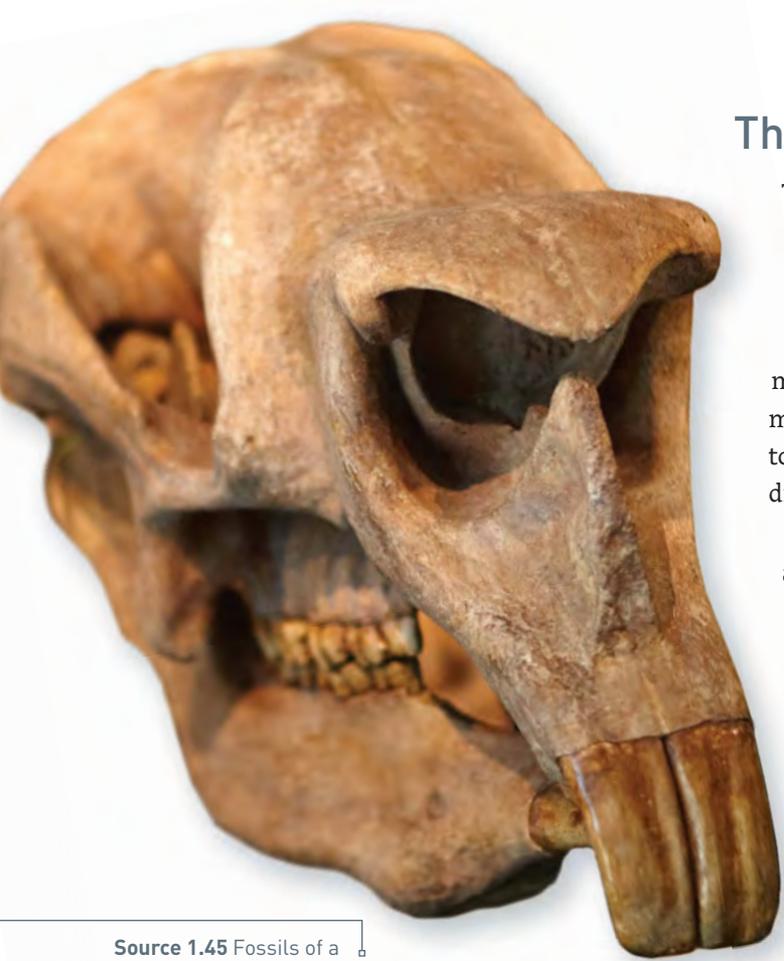
Source 1. 44

An indication of the types of boats that were used by Aboriginal people during the peak of the ice age can be gained from the ancient Kimberley rock paintings known as Bradshaw or Gwion Gwion art ... The Bradshaw paintings include graceful images of people, often with bent knees, long head-dresses, and decorative adornments, and commonly holding boomerangs or other objects... The dancers in a corroboree photographed at Pago (in the north Kimberley, near Kalumburu) during the 1930s are strikingly similar to those shown in Bradshaw paintings ... It therefore seems reasonable to conclude that the Bradshaw people were among the ancestors of modern Aborigines ...

Dr Phillip E. Playford, *Aboriginal Art and Culture in the Kimberley and Adjoining Areas: A Historical Perspective*, <http://www.kimberleysociety.org/past08.html>, 2 April 2008

INTERPRET 1.5

- 1 What is Grahame Walsh's view about the origins of these paintings? Why does he have this opinion?
- 2 Donny Woolagoodja contests Walsh's view. What is his perspective on the paintings?
- 3 What evidence does Dr Phillip Playford use to support a view that the Bradshaw people were among the ancestors of Aboriginal people?
- 4 Source 1.42 is a quote from John Mulvaney.
 - a What is his perspective on this issue?
 - b As a class, discuss why he might say that Walsh is being a 'bit naïve'.
- 5 What is Billy King's perspective?



The fate of Australia's megafauna

The second mystery is the fate of the Australian megafauna, which were the giant marsupials – wombats, emus and kangaroos – that once lived in Australia but then became extinct. Source 1.45 shows an example of megafauna – the Diprotodon (di-PRO-toe-don). Its name means 'two forward teeth'. The Diprotodon was a herbivore measuring 3 metres long and 2 metres high. It is believed to have been widespread in Australia 1.8 million years ago, disappearing about 40 000 years ago.

In the past decade, one of the most intense debates associated with Australia's ancient past was the question of whether or not Indigenous Australian hunters were responsible for the disappearance of Australian megafauna. As noted above, megafauna were the giant marsupials that lived in Australia and died out around about the same time as the appearance of Indigenous Australians.

There are two sides to the debate about the fate of megafauna. On one side, it is thought that the evidence points to megafauna being hunted to extinction by the first Australians. The other view claims that the disappearance of megafauna had more to do with climate change.

Source 1.45 Fossils of a Diprotodon, discovered at Lake Callabonna, South Australia



Source 1.46 An artist's impression of Australian megafauna, with Diprotodon shown centre rear

Source 1.47 Arguments for and against the view that human activity was responsible for the extinction of megafauna in ancient Australia

The case for human activity	The case for climate change
<p>We have clear proof that human activity in the form of hunting led to the extinction of megafauna in other parts of the world, especially in North America.</p> <p>Even if the Indigenous Australians didn't hunt and kill off the megafauna, the Indigenous Australian practice of fire-stick farming (burning off large areas of bush) changed the environment to one less favourable for large animals.</p> <p>There is an archaeological site at Cuddie Springs in New South Wales that seems to offer evidence that Indigenous Australians cut up megafauna for food. We have bones with cut marks on them.</p>	<p>Drastic climate change during the last Ice Age resulted in extremely dry and windy conditions. It was a very cold drought. The megafauna had to stay close to the remaining limited supplies of water in order to survive. The result was that they ate all the food available near the water. This led directly to their extinction.</p> <p>Humans arrived in numbers around 50 000 to 60 000 years ago, but the megafauna only died out 25 000 years ago. That meant that megafauna and humans had lived together for 25 000 to 30 000 years without the megafauna becoming extinct. We need to look at something other than the arrival of human hunters to explain the extinction.</p> <p>All that the site at Cuddie Springs proves is that megafauna were butchered. It does not mean that they were killed by hunters. The animals could have died near the springs due to lack of food.</p>

APPLY 1.6

- 1 Conduct research to find out how Australian megafauna died out.
 - a Review the arguments set out in Source 1.47 that offer key parts of the case for both sides of the argument.
 - b Identify the strongest argument for each side and what you think is the weakest argument for each side.
- 2 Discuss the topic in class and at home. Share your thoughts and listen to the views of others.
- 3 Write a 100- to 200-word informative and persuasive text answering the question 'What caused the extinction of the Australian megafauna?'

EXTEND 1.4

- 1 The Willandra Lakes Region is one of Australia's World Heritage listed sites. On UNESCO's World Heritage List website, find the description and video for the Willandra Lakes Region then complete the following activities.
 - a List the types of archaeological evidence found in this region.
 - b What does this evidence tell archaeologists about the lives and beliefs of Australia's earliest inhabitants?

REVIEW 1.7

- 1 According to the archaeological evidence, what is the earliest agreed-upon date of Indigenous Australian occupation of the continent? How is this different from the version offered by the Indigenous Australian oral tradition?
- 2 Conduct research on Australian megafauna.
 - a What are megafauna?
 - b Find out about three different megafauna that lived in ancient Australia.
- 3 Outline three instances where archaeologists, historians or Indigenous peoples have differing perspectives or interpretations about ancient sources in Australia.

1.4

CHECKPOINT

WHAT DO SOURCES REVEAL ABOUT AUSTRALIA'S ANCIENT PAST?

» **Locate and describe a variety of sources for ancient Australia**

- 1 What types of sources have been found for evidence of ancient Australia's earliest people and animals? Give examples for each type and state where they were located. (20 marks)

» **Pose questions to investigate what these sources reveal about Australia's ancient past**

- 2 Choose one specific source of evidence from ancient Australia and develop a series of inquiry questions. Create a table, such as the one below, and use the question starters in the left-hand column (or others) to focus your thinking. (10 marks)

Question starters	Inquiry questions
Who	
What	
Where	
When	
Why	
How	

TOTAL MARKS [/30]

RICH TASKS

Investigating sources from ancient Australia

- 1 Read the information in this chapter about archaeologist evidence of ancient Australian people found at Lake Mungo in New South Wales, Kow Swamp in Victoria, and the Kimberley in Western Australia. Then conduct research to find out about five other significant sites.
- 2 Locate all the sites on a map of Australia. Add labels to provide a brief outline of each site, including the type of source found at the site, its estimated age and what it reveals about Australia's ancient past.
- 3 Work with a partner to conduct research about an Australian site that you both find interesting and want to learn more about.
 - a Choose one site to research and develop some inquiry questions.
 - b Conduct a historical investigation based on one of your inquiry questions, using the process of historical inquiry. Present the results of your investigation in a format approved by your teacher.

Ancient Australia site study

With your class or family, visit a historical Aboriginal site to see first-hand a source of evidence such as the rock engraving shown in Source 1.48. Write a report to describe the site and source, including sketches or photos, and develop some inquiry questions that could lead to further investigations.

To find an Aboriginal site, you can use a search engine to locate appropriate places to visit. Try using search terms such as 'aboriginal historical sites new south wales', 'aboriginal culture new south wales' or similar words. For example, the New South Wales government site Environment and Heritage has excellent resources, such as the 'NSW Atlas of Aboriginal Places'. This interactive map shows a large number of Aboriginal places of interest that will be a good start to your site study.



Source 1. 48 An Aboriginal rock engraving located north of Sydney. It depicts an ancestral hero wearing a headdress and carrying a club or woomera at his waist.

In these Rich Tasks, you will be learning and applying the following historical skills:

- » Analysis and use of sources
- » Research
- » Explanation and communication.

For more information about these skills, refer to 'The historian's toolkit'.

CHECKPOINT

1.5

SECTION

WHY IS IT IMPORTANT TO CONSERVE THE REMAINS OF THE ANCIENT PAST?

When people are affected by natural disasters such as fires, floods or earthquakes, they are often most upset by the loss of old family photos and other mementos. These items are part of every family's heritage and cannot be replaced. In a similar way, remains and sources from the ancient past are part of our world heritage. They reflect the hopes and dreams of past generations. They remind us where we have come from, and what has 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 also be entitled to enjoy the same appreciation of their heritage.

CONSERVING THE REMAINS OF THE ANCIENT PAST

The World Heritage List

UNESCO (the United Nations Educational, Scientific and Cultural Organization) identifies **World Heritage Sites** around the world to help safeguard them for future generations. Sites are nominated by countries that have signed an international agreement on the protection of the world's cultural and natural heritage. Currently, there are over 900 sites on the World Heritage List, including 19 sites in Australia that have been identified as cultural, natural or mixed sites. The Sydney Opera House and convict sites around Australia are cultural sites on the World Heritage List. Natural sites in Australia include the Greater Blue Mountains, the Great Barrier Reef and Kakadu National Park. The Willandra Lakes region is on the List to protect both the natural environment and archaeological remains.

Preserving the heritage of Aboriginal and Torres Strait Islander Peoples

In the case of Aboriginal and Torres Strait Islander peoples, their links to the remains of the past are perhaps even deeper and more spiritual. Indigenous Australians have a special connection with country and places. They associate these places with the spirits of all of their ancestors. The physical remains of the ancient past are, for them, forever linked to family and their relatives, no matter how distant in time.

Protected sites

Threats to World Heritage sites have been successfully averted. A proposed highway near the Giza Pyramids was not built after negotiations between UNESCO and the Egyptian government in 1995. Similarly, a planned aluminium plant near the archaeological site of Delphi in Greece in 1987 was moved elsewhere.

Angkor Wat is an example of a successful restoration that has saved one of the most important sites in South-East Asia from problems such as unauthorised excavations, theft and landmines. Other restoration projects have been international, multimillion dollar campaigns, such as the Abu Simbel project in the 1960s (see Source 1.49). The UNESCO-led campaign relocated the entire temple and monuments to save them from being submerged after the construction of a dam on the Nile River. It remains one of Egypt's most popular tourist destinations and is a significant part of Egypt's – and the world's – archaeological heritage.

Ancient sites under threat

Historical sources can be very fragile. Once exposed to the open air, pollution and humidity (water vapour in the air) can lead to deterioration over time. Artefacts and archaeological sites can also be lost or damaged for other reasons – from theft and careless handling, to natural disasters and climate change. The number of tourists visiting popular sites, such as Egyptian tombs and the ruins of Pompeii, can also be a threat to their conservation.

In recent times, important sites in Iraq and Syria have been lost or irreparably damaged by warfare and looting. In Iraq, the site of the once-great city of Babylon has been used as a military base. Relics and archaeological fragments have been damaged or destroyed as areas were levelled for parking lots; heavy vehicles crush relics buried near the surface and sandbags are filled with soil that includes archaeological fragments. A reproduction of the Ishtar Gate has also suffered damaged since the Iraq War.

APPLY 1.7

- 1 To be included on the World Heritage List, sites must be of 'outstanding universal value' and meet at least one out of the 10 selection criteria.
 - a Use a search engine to go to the UNESCO website. Once there, look for their selection criteria for inclusion on the UNESCO list.
 - b Select three examples of ancient sites, either from the text or your own research. Use the World Heritage criteria to propose why they should or should not be selected as World Heritage sites.
- 2 Conduct research using digital sources to identify ancient sites that have disappeared or are in danger of being lost through decay and deterioration.

Source 1.49 Detail from the temple of Rameses II at Abu Simbel in southern Egypt



How are sources conserved?

Many important sources are stored in museums, galleries and libraries around the world. For example, the Mitchell Library in the State Library of New South Wales houses a huge collection of Australian historical sources. These venues provide security and proper storage conditions. For example, paper records can rot or deteriorate unless they are stored at the right temperature and humidity, and away from pests and ultraviolet light. Conservators working at museums and libraries can also restore and repair damaged items.

The following case studies describe how archaeologists and conservators have worked to preserve sources from the ancient past in Iraq and Egypt.

Conservation case study: the ruins of ancient Babylon

Reconstruction is one way of conserving the remains of the past. This has happened in the case of the Ishtar Gate, a double-gateway to in the ancient walled city of Babylon. Babylon was the busy hub of the neo-Babylonian and Persian empires, and its ruins are a vital part of Iraq's heritage.

The Ishtar Gate was built around 2500 years ago. The gate's foundations were excavated in the 20th century. The front gate was reconstructed in Berlin's Pergamon Museum, using the glazed bricks that could be found on the site. These glazed bricks recreated a blue wall with rows of bulls and dragons – symbols of two Babylonian gods. Because not all bricks were recovered, the Berlin reconstruction is shorter than the original front gate. A smaller reproduction of the front gate was also built in Iraq by the former leader Saddam Hussein.

Source 1. 50 A paved Processional Way that ran through the Ishtar Gate was lined with glazed-brick reliefs of animals, including this lion. Some of these reliefs are now housed in various museums around the world.





Source 1. 51 The remains of the Processional Way at the start of the 20th century

Source 1. 52 The reconstructed Ishtar Gate in the Pergamon Museum, Berlin

Computer scans have identified that the original gate foundations that remain are under threat. Salts in groundwater are eroding the brick reliefs at the base of the mud-brick gate. A conservation plan developed by the World Monument Fund and Iraq's State Board of Antiquities and Heritage includes diverting water away from these ruins. In the longer term, they hope to generate wide-scale interest in the conservation of the ancient area of Mesopotamia and attract scholars and tourists.

Conservation case study: the Tomb of Menna, Egypt

The Tomb of Menna is one of 146 tombs dug into a hill on Egypt's West Bank at Luxor (formerly the ancient city of Thebes). They are the tombs of nobles and officials. Menna died about 3400 years ago, during ancient Egypt's 18th dynasty. As a scribe, he had high social status and probably a great deal of wealth. This conclusion is supported by the evidence found in his tomb, which is beautifully painted. Scenes throughout the tomb feature detailed depictions of members of his family. There are also many farming and riverside scenes that provide information about agricultural practices and about life along the river at that time.



Source 1. 53 One of the paintings from the wall of Menna's tomb

Menna's tomb has proved to be very popular with tourists. Over time, the continuing stream of visitors and changing environmental conditions have begun to damage the precious wall paintings. The Tomb of Menna Project began in 2006. It aimed to document, and so help to preserve, the tomb's art. A number of universities and conservation agencies were involved. Using advanced scientific methods, the conservators' strategy included:

- cleaning parts of the paintings
- analysing the properties of the paint used on the wall
- taking high-resolution digital photos and joining them to create an exact visual record of the tomb's art; conservators are able to compare this photographic record with the paintings to quickly detect any deterioration
- building a new wooden floor and rails to stop people getting too close to the paintings
- installing low-impact lighting.

REVIEW 1.8

- 1 Why are the remains of the ancient past important?
- 2 Explain why the physical remains from ancient Australia are significant for Indigenous Australians.
- 3 What is the World Heritage List?
- 4 Identify sites on the World Heritage List in Australia.
- 5 What roles do museums, galleries and libraries play in conserving the remains of the past?
- 6 Identify methods used by archaeologists and conservators to preserve the remains of the ancient past.

1.5

CHECKPOINT

In this Rich Task, you will be learning and applying the following historical skills:

- » Analysis and use of sources
- » Perspectives and interpretations
- » Empathetic understanding
- » Research

For more information about these skills, refer to 'The historian's toolkit'.

CHECKPOINT

WHY IS IT IMPORTANT TO CONSERVE THE REMAINS OF THE ANCIENT PAST?

» **Identify ancient sites that have disappeared, are threatened or have been protected**

- 1 Select and give a brief report about three ancient sites that are of interest to you:
 - a one that has disappeared
 - b one that is threatened
 - c one that has been protected.For each site, provide information about its location and current status (what condition it is in and why). (30 marks)

» **Identify how archaeological and historical records are preserved**

- 2 Outline how archaeological sites can be preserved. (10 marks)
- 3 Outline how historical records and artefacts can be preserved. (10 marks)

» **Describe an Australian site that has preserved the heritage of Aboriginal and Torres Strait Islander peoples**

- 4 Identify a site that has preserved the heritage of Aboriginal and Torres Strait Islander peoples (refer to section 1.4 'What do sources reveal about Australia's ancient past?'). Include information about:
 - a its location
 - b a brief description of the sources found there
 - c what it reveals about life in ancient Australia. (10 marks)

» **Examine the UNESCO World Heritage criteria and explain why it is important to preserve and conserve an ancient site**

- 5 Select one ancient site and explain why and for whom it is important to preserve and conserve it. (10 marks)
- 6 Outline the criteria for a site to be included on the World Heritage List. (10 marks)

TOTAL MARKS [/80]

RICH TASK

World Heritage List

Using a search engine, go to the current World Heritage List, and find the interactive map of the sites.

- 1 Select an ancient site and conduct research to find out why it is significant to world heritage.
- 2 Present your findings as a written, digital or oral presentation.