# HIST&RY ALIVE

**NEW** Junior Cycle History

Gráinne Henry • Bairbre Kennedy • Tim Nyhan • Stephen Tonge

First published 2018
The Educational Company of Ireland
Ballymount Road
Walkinstown
Dublin 12
www.edco.ie

A member of the Smurfit Kappa Group plc

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ISBN: 978-1-84536-780-0

Cover: emc design; images: Alamy Stock Photos: David Lyons, Stephen Barnes;

Bridgeman Images: Vatican Museums and Galleries, Vatican City

Design: emc design

Editors: Jennifer Armstrong, Jane Rogers

**Layout:** emc design **Proofreader:** Neil Burkey

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### **Digital Resources**

The *History Alive* digital resources will enhance classroom learning by encouraging student participation and engagement. They support the New Junior Cycle Specification's emphasis on the use of modern technology in the classroom and are designed to cater for different learning styles.

To provide guidance for the integration of digital resources in the classroom and to aid lesson planning, they are **referenced throughout the textbook** using the following icons:



**PowerPoint** presentations provide a summary of every section of the student textbook, highlighting main themes and topics.



**Section summary** documents that highlight the learning intentions of each section.



Useful Weblinks documents provide links to additional material.

Teachers can access the *History Alive* digital resources via the *History Alive* interactive e-book, which is available online at **www.edcolearning.ie.** 



Students work in pairs or groups to complete the activity.



Every activity involves at least one of the eight key skills of Junior Cycle; direct links have been highlighted.



**Learning Outcomes:** Each section specifically addresses one or more of the Learning Outcomes. Some of the more general Learning Outcomes (1.1, 1.2, 1.3, 1.4, 1.7, 1.8, 1.9, 1.10, 1.11, 2.11, 2.13) are covered throughout the text.



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### INTRODUCTION

Welcome, history students, to the textbook *History Alive*! History is about how humans lived in the past and how their experience has shaped the world that we live in today. Our aim is to bring history alive for you. You are going to become a detective! Through clues called **sources** you will learn how to find out about the past and how to judge what happened at a particular time.

At the start of each section there is a list of **learning intentions**. These tell you what you will learn about in this part of the history course. You will be asked to think about what you already know about a topic and then examine relevant sources before being introduced to the main story. At the start of each section in the student activity book you will be asked to think about what you already know about the topics covered in that section.

Throughout the book there are **visual and written primary and secondary sources** which will help you to find out what happened at that time and why it happened. A lot of the activities can be done in pairs or groups. Detective work is more successful when you work as a team!

As you work with different types of sources you will develop new **historical skills**. You will learn how to collect information and put clues together. You will learn how to look at an event or person in the past from the point of view of people living at that time. You will learn to look at the past from different points of view. As you discover the stories of people who lived in the past you will understand more about how people live today. You will even find that learning about history helps you solve today's problems!

In the new Junior Cycle there are eight key skills, which you will also be learning throughout your history course. They are:

- Being numerate
- Being literate
- Being able to reflect on your own learning
- Managing information
- > Being creative
- Being able to communicate ideas
- Working with others
- > Staying well.

At the end of each section there is a list of **key terms** that you need to know to be able to talk or write about the topic. You can use the questions at the end of each section to check what you have learned about a topic and the skills you have acquired. These activities can be done on your own or you can work in pairs or with groups of other students. A good idea is to check each other's work. There are a wide variety of activities in the *History Alive Student Activity Book* (anticipation and reflection exercises; pair and group activities; key terms revisited and revised) and the *History Alive Graphic Organiser* (graphic organisers to help you summarise and revised information). These books will help you to remember what you have learned about a topic.

Good luck and happy investigating!

Gráinne Henry, Bairbre Kennedy, Tim Nyhan, Stephen Tonge



# WORKING WITH EVIDENCE



The job of the historian



The importance of archaeology

4

# THE JOB OF THE HISTORIAN

# **© LEARNING INTENTIONS**

At the end of this section, you should be able to:

- Opening the word 'history'
- Outline the types of evidence historians use
- Distinguish between primary and secondary sources
- Explain how historians examine and evaluate sources
- O Describe how historians record events in order.





### What is history?

**History** involves the study of the past. It is the story of human activity. Events that happened before you came into class are now part of history.

History is not just about battles and the lives of kings and queens. **Historians** are also interested in answering questions about the lives of ordinary people. What were their homes like? What food did they eat? What jobs did they do? What did they wear? What games did they play?

Historians make a distinction between history and prehistory.

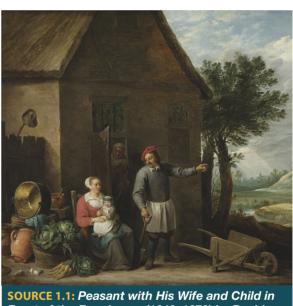
- The historic period is when people used writing. For example, we know a lot about the lives of ancient Romans because they wrote books.
- The prehistoric period is the time before writing was used. We rely on archaeology for our evidence from this period (see The Importance of Archaeology, page 9).

### What evidence do historians use?

Historians are similar to police detectives. Both try to piece together the story of what happened from the clues or evidence available. For historians, a clue about what life was like in the past is called a **source**. Sometimes the evidence is very good and so the story is accurate. Sometimes there are few sources and so our knowledge of an event remains poor.

A source could be a written document, a photograph or an object from the past. Archaeologists discover and examine objects from the past (see The Importance of Archaeology, page 9).





SOURCE 1.1: Peasant with His Wife and Child in Front of the Farmhouse (1640–1670) by David Teniers

1 In pairs, examine the picture and give four pieces of evidence about life at the time.

### **Archaeology**

The study of the remains left by people in the past.

### Source

Evidence used by historians to find out what happened in the past, e.g. a document, a picture.

### **Activity 2**

Examine this source and then answer the question below.



SOURCE 1.2:
The Irish Times
examines the
European
Commission (EU)
action ordering
Apple Inc. to pay
Ireland unpaid
taxes, 31 August
2016

1 How useful, do you think, are newspaper headlines and articles to historians?

Historians divide sources into two main types: primary sources and secondary sources.

- Primary sources come directly from the time of the event being studied. For example, a newspaper from 1900 could tell us a lot about the sports played at that time.
- > Secondary sources come from a later date. For example, a 2018 book about leisure activities in 1900 could tell us a lot about the sports played at that time. This book is a secondary source as it was written long after most of the events that it describes. The tables below list a selection of primary sources and secondary sources that historians use.

Secondary sources	Description
Biographies	The story of a person's life written by another person. Biographies have been written about most important people in history.
Movies	Some films tell the story of real people and historical events. They can give us some understanding about a subject; but teaching us about history is not their primary purpose.
TV or radio documentaries	An investigation into a particular event, person or period of history.
The Internet	Searching online is a popular way to research events. This is a very useful source, but historians must check the accuracy of the information they find.
History books	Most authors of history books lived many years after the events that they write about.

Primary sources	Description
Interviews	These are also called <b>oral sources</b> . An example would be an interview with an older person describing how their life has changed over the last fifty years.
Diaries	A record a person keeps of day-to- day events. Diaries give us evidence of personal events in the writer's life and important public events that were happening at the time.
Letters, emails	Written communications between people are very useful sources of evidence for historians. They include letters and emails.
Speeches	Formal and recorded talks can contain views on important events or government policies.
Government records	These include laws passed by parliament and reports carried out for the government. Probably the most important is the calculation of the population (number of people who live in a place) held every five years – the <b>census</b> . It gives us valuable information on the lives of ordinary people.
Autobiographies	An account of a person's life written by the actual person. These can be a very useful source for historians.
Photographs, posters, paintings	Visual records of the past. These sources reveal what people looked like, what they wore, where they lived, etc.
Newspapers, magazines	These are very useful sources. They contain reports on important political, social and sporting events, and reveal the interests of readers at the time.
Artefacts	Human-made objects found by

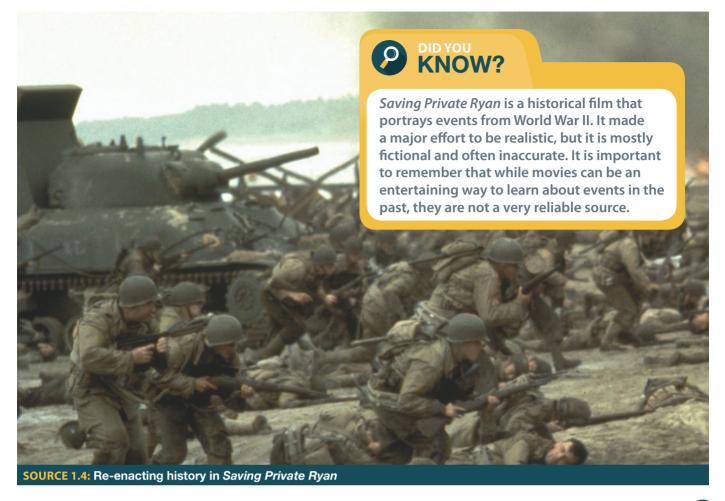
archaeologists.



Before the invention of the printing press, all books and documents were written by hand. These books were called manuscripts.







### How do historians examine sources?

Historians want to examine why an event happened (the *cause*), what happened (the *course*) and the effects of the event (the *consequences*). They are not just interested in the event itself; they also want to investigate how the event affected the people of the time and the people of later generations.

First, historians have to find sources of information about the event they want to study. They could visit a place where written sources are stored, such as archives, libraries and museums. They could interview participants or witnesses to the event. They could read books written by other historians. They could research the topic using the Internet. This is becoming an increasingly valuable resource as more and more documents in archives and libraries become available online.

When researching a source to gather evidence about the past, historians follow a number of steps. Here is an example for a written source:

### **Activity 3**

**Archives** are collections of documents and records that contain historical information. They are used by anyone doing historical research. The **National Archives of Ireland** contains many important documents about Irish history. However, many records are missing because they were destroyed during an attack on the Four Courts in Dublin in 1922, which marked the start of the Irish Civil War.



- 1 Why would historians visit the National Archives?

Read or look at the source carefully. Find out who wrote the source, what kind of information it has, when it was written, where the content came from and why it was written. These are called the 5 Ws. Establish whether the author of the source was present at the event being described and how soon afterwards the account was Interpret what evidence from the written. Historians call this the time and source is valuable and whether the place rule. An evewitness account written source can be trusted. No piece of days after the event is more useful than an evidence is taken at face value! account of the same event written decades later by someone who was not there. Look at many different sources and compare the findings to make sure that the story of the past is as

accurate as possible. This is called cross-checking.

### How do historians evaluate a source?

All sources have some use to historians, but they may also have limitations or weaknesses. To determine how useful a source is, historians have to judge its **reliability**. This involves considering factors such as:

- **Bias:** Is the source one-sided? Does it favour one side's version of events over another's? Sometimes authors or interviewees deliberately leave out facts or details that would not support their view of the event.
- Viewpoint: Does the source contain the personal opinions of the author? If the source gives no views about the event it is said to be objective. Historians have to be able to separate fact from opinion, especially when reading diaries, letters, speeches and newspapers.
- Accuracy: Some sources supply incorrect information. That is why historians use more than one source. For example, many history sites on the Internet contain errors and falsehoods.
- Exaggeration: This can be a major problem, especially with eyewitness accounts. Is the person being interviewed overstating his or her role in an event? The number of people claimed to have been involved in an event also has to be checked carefully as these figures are often inflated.
- Propaganda: Does the source make one side look good and another look bad? Propaganda is widely used during wars.

### Remember!

Primary sources are not necessarily more (or less) reliable than secondary sources. It depends on the source itself. In some cases, secondary sources can be more reliable as they are based on many primary sources.

### **Activity 4**

Read the following brief description of the American leader George Washington.

George Washington was born in 1732. He was the commander of the American army that defeated the French who ruled America. He was a great leader ... Afterwards he became the first president of the United States. He served as president for years. He was the best American president and the American people were very happy while he was president. He died in 1799.

- 1 Pick out two facts and two opinions.
- 2 Do you think this account is biased?
- 3 Research a biography of George Washington online to check the accuracy of this account.
- 4 From your research, write down four more facts about the life of George Washington.



### How do historians record events in order?

When historians find out information about the past, they must place the events in the right order. They usually use dates to do this. Date order makes it easier for people to follow the story of what happened.

There are a number of ways to put events in date order. For example:

- If the event happened over a short period of time, historians might use years, months, days or even hours.
- For events that happened over a longer period, they can use centuries. A century lasts 100 years. The twentyfirst century started in 2001 and will end in 2100.
- ) If the event happened over a very long period or a very long time ago, historians may use a millennium this is a period of 1,000 years.
- Events may be dated as taking place before or after the birth of Christ. The letters BC (Before Christ) or AD (Anno Domini – the year of our Lord) placed next to a date tell us this. For example, the first Roman emperor, Augustus Caesar, was born in 63 BC and died in AD 14. In recent years BC and AD have often been replaced by BCE and CE, which mean Before the Common Era and Common Era.

### **Activity 5**



Examine this source and then answer the questions below.



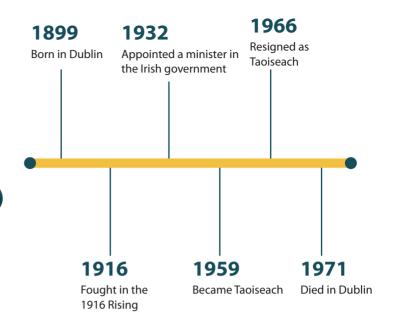
- **SOURCE 1.6:** Cork, 1900
- 1 Write down five pieces of information that you can infer from this photograph.
- 2 Consider how the picture would be different if taken today. Suggest three changes.

### **Timelines**

Historians can use **timelines** to show the order in which events happened. For example, when studying the lives of famous people it is useful to know the year they were born and the year they died. The important events in their lives can be placed in between these two dates. On the right is a short timeline of the life of the Irish politician Seán Lemass.

### **Activity 6**

- 1 Draw up timelines for **two** of the four countries below, showing five important events that happened in their history:
  - United States of America
  - United Kingdom
  - Germany
  - Russia.



**SOURCE 1.7: Timeline for Seán Lemass** 

### **Eras**

Historians also organise events into historical eras. This is often done when there are few or no written sources. The table below shows early Irish historical eras, which are based on the main materials used to make tools and weapons.



Mesolithic (Stone Age) people 8000 – 3500 BC

- > First people to settle in Ireland after the Ice Age
  - Hunters and gatherers
  - Tools and weapons made from stone



Neolithic (New Stone Age) people 4000 – 2000 BC

- First farmers
- Used stone tools
- Made pottery
- Built large stone tombs (megalithic tombs) including portal dolmens, passage tombs and court cairns



Bronze Age people 2000 – 500 BC

- > First people to use metal tools and weapons
  - Discovered how to make bronze from copper and tin
  - Built cist graves, wedge graves and stone circles



Iron Age (Celtic) people 500 BC - AD 500

- > First people to use iron
  - Brought a new language, new ringfort settlements, linen and woollen clothes

### **SOURCE 1.8:** Eras of early Irish history

The more recent historical eras are:

- **The Middle Ages:** This refers to events that happened between AD 500 and 1500.
- **Early Modern Period:** This covers events from 1500 until 1800.
- Late Modern Period: This refers to events after 1800.

about this family.



### CENSUS OF IRELAND, 1901.

(Two Examples of the mode of filling up this Table are given on the other side.)

### No. on Form B. FORM A. RETURN of the MEMBERS of this FAMILY and their VISITORS, BOARDERS, SERVANTS, &c., who slept or abode in this House on the night of SUNDAY, the 31st of MARCH, 1901. NAME and SURNAME RANK, PROFESSION, OR OCCUPATION. IRISH LANGUAGE. RELATION to RELIGIOUS PROFESSION. EDUCATION. AGE. SEX. MARRIAGE WHERE BORN. o Fersons arsent on the night of Swoday, March 31s extered here: Except those (not commercial clientle the may be out at Worx or Travelland, dw., duri that Fight, and who returns House on Mondar, Apail 1st. Dumb only; Blind; Imbecile or Idiot; or Lunatic. io can speak both langues. In other cases n 1) Jamie Co Doneyal Quim Roman Certolei cannot read 7 Quem re "unnot reds 40 married wife Do M Sorie 18 veas runte 7 Aum Do 16 Dough 6. zend tarreli Marrie Quim 13 m Lon De 6'um nu No Son xead rune Marrie Jane South De 7 Scholas. Aum real Lyum 100 4 ld manu Dought. cannot read Guen No recent rear m 11 **Activity 7** Do 7 10 Home 86 hum Working in groups: 12 1 Identify five pieces of information 13 from the census form. 14 15 2 Name two other types of source I hereby certify, as required by the Act 63 Vic., cap. 6, s. 6 (1), that the I belie foregoing Return is correct, according to the best of my knowledge and belief. that would help you learn more

### **DO YOU UNDERSTAND THESE KEY TERMS?**

archaeology propaganda timeline history autobiography reliability viewpoint manuscript secondary source bias millennium century prehistory source cross-checking primary source time and place rule

Signature of Inumerator.)

PowerPoint summary

**SOURCE 1.9: Census form from 1901** 

### **SELF-ASSESSMENT - CAN YOU?**

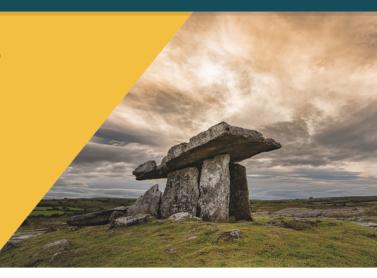
- 1 Explain the difference between prehistory and history.
- 2 Identify four things that interest historians besides famous people and battles.
- 3 Explain the difference between a primary source and a secondary source, and list three types of each.
- 4 List four places where historians go to find written sources.
- 5 Identify the 5 Ws and explain why they are important when studying a source.
- 6 Demonstrate why it is good practice for historians to cross-check sources.
- 7 Outline four reasons for agreeing or disagreeing with this statement: 'All sources are very reliable.'
- 8 Pick a historical figure you are familiar with and draw up a timeline containing five important events in his or her life.

# THE IMPORTANCE OF ARCHAEOLOGY

# **© LEARNING INTENTIONS**

### At the end of this section, you should be able to:

- Opening the word 'archaeology'
- Describe how archaeologists choose sites to investigate
- List the steps archaeologists take to investigate a site
- Outline the methods archaeologists use to date objects
- Recognise why the discovery of a skeleton is important
- Explain the role of DNA analysis in modern archaeology.



### What is archaeology?

**Archaeology** is the study of what has been left behind by people from the past. **Archaeologists** work closely with historians to build up a better picture of what life was like for people long ago. For example, thousands of years ago there was no writing, so historians need the evidence provided by archaeologists to find out what life was like then.

Archaeologists look to find clues left by our ancestors. These may be human or animal bones, buildings or objects that people have made. The man-made objects they find are called **artefacts**. These include jewellery, pottery, tools and weapons.

Archaeology is not about hunting for treasure. An old rubbish tip can often tell an archaeologist more about what life was like for our ancestors than a find of gold or silver.

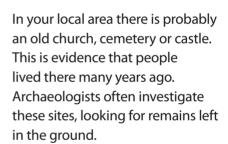
### Why do objects end up in the ground?

There are many reasons why evidence of human activity ends up in the ground. Here are some of the common ones:

- Some objects are lost. How many times have you lost something?
- Valuable objects were buried for safekeeping. There were no banks to store valuables.
- Food items were buried for preservation. There were no fridges to preserve food.
- In pre-Christian times bodies were buried with objects that it was believed the person would need in the afterlife. These are called grave goods and can provide a wealth of information.
- Old buildings are knocked down and new buildings may be built over them, especially in cities.
- Abandoned buildings are covered by soil over time.

Artefacts
Objects made by humans
(e.g. coins, axes and bowls).

### Activity 1



1 In groups of four, make a list of old buildings in your area that archaeologists might be interested in investigating for remains from the past.

### **Activity 2**

\*\*

1 In pairs, list ten items that you would bury today in a time capsule to be opened in 100 years. Explain how each object that you choose would tell somebody in the future about life today.





In most cases living things decay when buried in soil. That is why archaeologists usually find bones rather than bodies. However, this is not always the case. Bodies found in very wet soil conditions or in very cold climates are sometimes well preserved. In Ireland, well-preserved bodies have been found in bogs where the soil is waterlogged. They are called **bog bodies**.

# How do archaeologists choose sites to investigate?

An area of ground where archaeologists decide to dig is called a **site**. There are three main reasons that a site may be chosen:

- There is evidence that objects might be found at the site. There might be a ruined building there, or there might be an old document showing that a building once existed at the location. This is called **research archaeology**.
- Archaeologists often dig at a site before construction work on roads or buildings starts, especially if there is strong evidence that there may be remains of human activity. They want to make sure that no objects from the past are lost or damaged. This is called **rescue archaeology**.
- Many finds are discovered by accident by a member of the public. Archaeologists are then called in to investigate. This is called salvage archaeology.

# What steps do archaeologists take to investigate a site?

When archaeologists decide to investigate a site they are very careful to make sure that all evidence from the past is collected.

### **Preparing to dig**

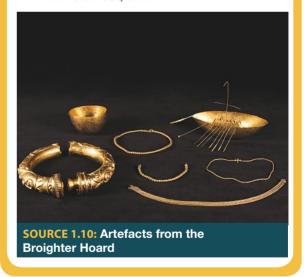
A **survey** of the site is carried out to help the archaeologists decide where to start digging. The survey may include:

- A geophysical survey, which involves using a machine like an X-ray to look at the soil underneath the surface. It shows how much the earth has been disturbed by human activity.
- Digging test trenches to get an idea of the amount of remains they can expect to find.
- Taking aerial photographs to determine the size of the site. These often reveal features that may be missed on the ground. Kites, balloons, model planes and, in recent years, drones have been used to take the images.

The archaeologists will then draw up a detailed plan of where they will dig. The site is divided into numbered squares measuring one metre by one metre. The archaeologists will follow this plan when investigating the site.

# P DID YOU KNOW?

- Large numbers of gold and silver objects are often found together. They were buried for safekeeping but their owners did not come back for them. Archaeologists call this type of find a hoard.
- In 2013, 50 kg of butter was discovered buried in a bog near Tullamore, Co.
   Offaly. Called bog butter, it was found to be 5,000 years old!
- Two of the most famous archaeological finds in Irish history were discovered by accident. The Broighter Hoard was found by two farmers ploughing a field near Limavady in Co. Derry in 1896; it was about 35 cm below the surface. The Ardagh Chalice (see page 43) was discovered by two boys digging for potatoes near Ardagh in Co. Limerick in 1868. Both of these finds are on view at the National Museum of Ireland in Kildare Street, Dublin.



### **During the dig**

The excavation or **dig** starts by removing the topsoil, often with a digger. Spades and pickaxes are also used. With this cleared, the archaeologist can begin to look for remains from the past.

Archaeologists use a large number of tools to look for objects. For example:

- **>** Layers of earth are scraped away using a **trowel**.
- **A hand-pick** is used to loosen soil.
- Archaeologists have to be careful not to damage any objects they discover, as they can be very fragile. They use **brushes** and even toothbrushes to help unearth them.
- As some objects are very small, the soil is often put through a **sieve** to make sure that nothing is missed.

Once an object has been uncovered, a **photograph** will be taken of it.

Even if no objects are found, the soil itself can tell an archaeologist a lot about the past. For example:

- Wooden poles that were used for building houses will have decayed but they will have left dark round patches called **post-holes**.
- A fireplace will leave a square-shaped dark patch in the soil.
- > Evidence that the site may have been destroyed by fire will be seen by a dark layer of soil between two lighter ones.

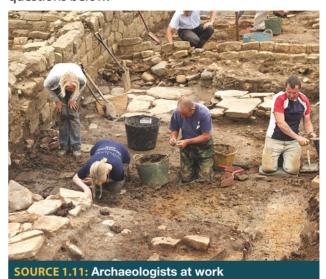
Careful records are made of all objects found. The objects are cleaned and put into labelled bags to record where they were found on the site. Computers are used to help to record this information.

The objects discovered are then sent to a university or a museum. Some will go on display to the public.

### **Activity 3**



Examine this source and then answer the questions below.



- 1 Outline the activities being carried out in the picture.
- 2 Identify the main tools being used.





- 1 Who carries out an excavation?
- 2 List two reasons why these kinds of excavation are so useful to historians.



# What methods do archaeologists use to date objects?

One of the biggest challenges archaeologists face is working out the age of the artefacts they have found.

If artefacts do not have a written source to help with dating, archaeologists can use some of the following indicators:

- Coins: Finding a coin with artefacts is a great help. Coins usually have dates on them and this can help the archaeologist to determine how old an object is.
- **Depth:** As a rule, the deeper an object is found, the older it is. This is called **stratigraphy**.
- **Design:** An object's design or the decoration on it (e.g. on a piece of pottery) can indicate its age.
- Carbon 14: Carbon or radiocarbon dating is a scientific method used to find the age of an object that was once alive. All living objects (humans, plants and animals) contain carbon 14. After death the amount of carbon 14 begins to decline – the older an object, the less carbon 14 will be present.
- Tree rings: Each year a tree grows a new ring. The number of rings inside the trunk tells you the age of the tree. By studying the pattern of these rings, known as dendrochronology, archaeologists can estimate the age of wooden objects such as parts of buildings or ships.

# Why is the discovery of a skeleton important?

Archaeologists can learn a lot from human bones when they are discovered. Analysis of the bones enables them to piece together a picture of the person's life. For example, damage to a bone could prove that the person died from a wound. The bones can be examined scientifically and this can tell us about the person's diet.

- 1 The pelvic bone and the skull reveal whether it was a man or a woman.
- 2 The femur (thigh bone) indicates the person's height.
- 3 The teeth can help tell the person's age at death.
- 4 A well-preserved skull can help archaeologists to reconstruct the face, showing us what the person looked like.



Artefacts found at Mount Sandel near Coleraine in Co. Derry were clearly very old, but how old? Archaeologists used carbon dating on burnt hazelnut shells and discovered that the site was 9,000 years old. Radiocarbon dating of butchered bear bones found in Co. Clare showed that people lived in Ireland 12,500 years ago. Previously it had been thought that Mount Sandel was the oldest site in Ireland.

# P DID YOU KNOW?

A painting of Mary Queen of Scots (1542–1587) in the National Gallery in London was thought to be an eighteenth-century copy. Dendrochronological analysis of the wooden panel around the painting proved it was actually from the sixteenth century when Mary lived.



SOURCE 1.13: The remains of a human skeleton

### Ötzi

In 1991 two hikers stumbled on a body sticking out of a melting glacier high in the Ötztal Alps on the Italian–Austrian border. The body had been well preserved by the ice and it became a very important discovery for archaeologists.

Nicknamed Ötzi, or the Iceman, carbon dating showed the body to be 5,300 years old. Examination of the body provided a lot of evidence about life at that time. For example:

It could be the oldest murder case in history. An X-ray revealed that he had been killed by an arrow to the shoulder. It is likely that he was being pursued by his killers high into the mountains.

He was about 1.7 metres tall and between forty and forty-five years old.

Analysis of pollen found on the body established that he died in the early summer.

 Examination of his stomach found that his last meal consisted of deer and a type of bread.

 His clothes were made from a variety of animal hides – sheep, goat and bear.

A backpack discovered beside his body contained items he needed for his journey, including a first-aid kit to help treat the stomach problems he suffered from.

He also had a mixture of copper and stone tools and weapons

 a copper-headed axe, a flint dagger and a bow made of wood.

 Copper tools were rare at the time and this find suggests he was an important person in his village.

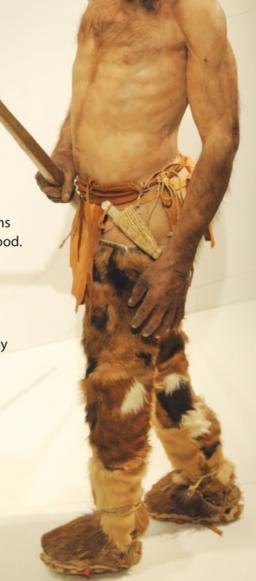
- > He had sixty-one different tattoos on his body.
- He had no wisdom teeth and was missing two ribs.
- DNA testing found that nineteen men living in the Alps today could be descended from Ötzi.

A reconstruction was made (pictured here) to show what Ötzi looked like.

### **Activity 5**

Use the Internet to research more details about Ötzi and to answer the following questions:

- 1 How was the body discovered and removed from the ice?
- 2 What was discovered by examining his body?
- 3 What was learned from Ötzi's clothing and equipment?



**SOURCE 1.14:** Ötzi reconstruction



# What is the role of DNA analysis in archaeology?

Archaeologists make use of modern scientific methods to investigate artefacts. One of these is **DNA analysis**, which they use to discover more evidence from skeletons. DNA is present in the cells of our bodies. It is passed from generation to generation. DNA samples taken from bones can be matched with the DNA of living relatives to identify a body.

### **Activity 6**

In 2013 a skeleton found in England helped solve a historical mystery. It was identified as King **Richard III**. He had been killed in a battle in 1485, but it was not known where he had been buried. He was identified through DNA testing of living descendants. Archaeologists were also able to use his skull to reconstruct what he looked like.





- 1 What historical mystery was solved in 2013?
- 2 How was the skeleton identified?

### **DO YOU UNDERSTAND THESE KEY TERMS?**

artefact a dig post-hole stratigraphy bog body DNA analysis research archaeology survey carbon dating excavation rescue archaeology test trench dendrochronology hoard salvage archaeology







PowerPoint summary

### **SELF-ASSESSMENT - CAN YOU?**

- 1 Explain why archaeology is important.
- 2 Explain how objects such as bodies can be well preserved in certain conditions.
- 3 Demonstrate two ways in which sites are chosen to be excavated.
- 4 Explain why archaeologists survey a site before they dig.
- 5 Identify three tools that archaeologists use during excavations.
- 6 Explain why archaeologists have to be careful with objects that they find.
- 7 Identify and explain two methods archaeologists use to date objects they discover.
- 8 Describe what information an archaeologist can discover from a skeleton.
- 9 Identify and explain two examples from this section where archaeology has improved our knowledge of the past.
- 10 List four examples to support this statement: 'Archaeologists use a lot of modern technology to help them.'