

Video 1

# Glendalough: Artefacts and Archaeology

Student Activities & Notes



**museum**

National Museum of Ireland

*Ard-Mhúsaem na hÉireann*



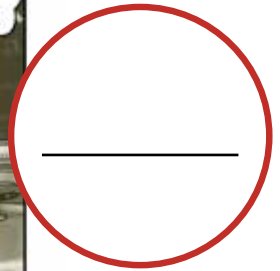
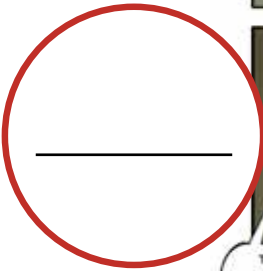
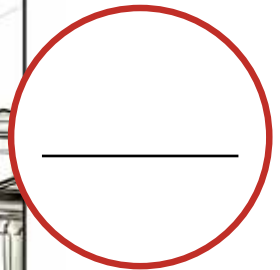
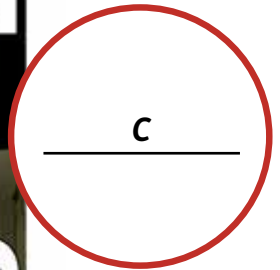
# Student Activities

## Section A) WHAT HAPPENS AT THE MUSEUM & ROLE OF THE NATIONAL MUSEUM OF IRELAND

The National Museum of Ireland is the home of archaeological objects that were found in Ireland. Name two artefacts that are in the museum that you saw in the video.

1. \_\_\_\_\_
2. \_\_\_\_\_

A few of the National Museum of Ireland's main roles are explained in the video. The list below explains some of the roles of the museum. Can you match the role description to the image? Read the sentences describing the museum's roles. Place in the circle the letter that matches the description and image.



## ROLES OF THE NATIONAL MUSEUM OF IRELAND

- a) The museum takes in artefacts that are found by the public and archaeologists
- b) The museum takes in donations of artefacts from the public
- c) The museum creates exhibitions showing artefacts so that everyone can see them
- d) The museum encourages people to research and study the artefacts
- e) The museum has an archive file on each object with all the different primary and secondary sources of information about an object.
- f) The museum safely stores the artefacts not on display so that researchers in the future can study them.
- g) The museum has conservators, scientists who take care of the artefacts so that they do not decay.
- h) The museum creates projects, events, workshops and tours for visitors, including school groups.

Here are two more images, can you explain the museum's role that is shown in the images?



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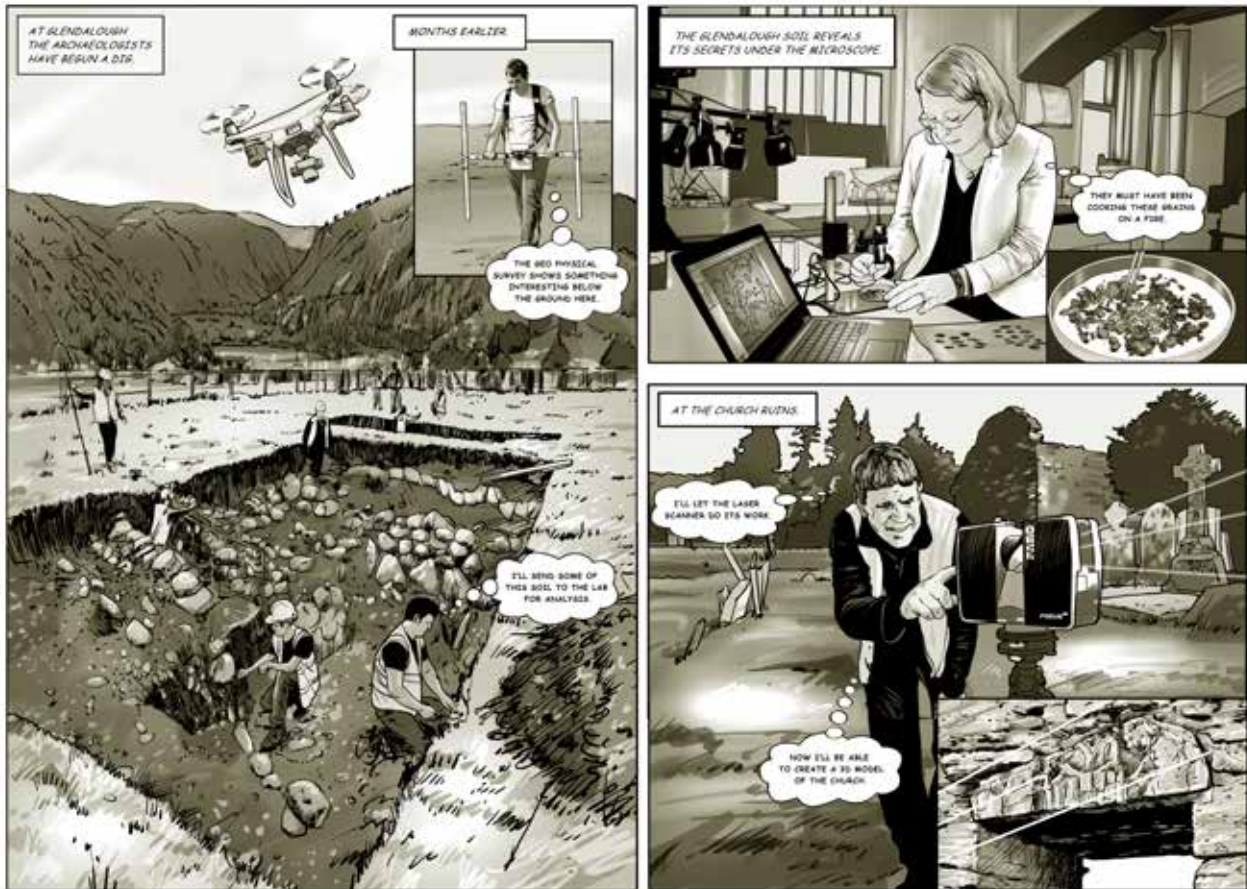
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## Section B) THE WORK OF ARCHAEOLOGISTS



The paragraph below explains the different stages and ways, an archaeologist decides where to excavate, how they excavate, and what happens after the excavation to the artefacts and evidence found. Use this word bank and the images to help you fill in the blanks in the paragraph on the following page.

### Word Bank to Use

Geophysical	Trowels	Aerial	Drone
Sieve	Laboratory	Microscope	Grains
Ate	Laser Scanners	3d Laser Scans	Artefacts
Wall	Object	Erosion	Excavation

The Archaeologists knew there had been a medieval monastery at Glendalough because of all of the ruins of the buildings that are there. However there are many buildings, and the valley is very big, so they had to decide where exactly to start digging to find new information about the monastic site.

Archaeologists when they are doing research excavations like this one, do surveys before they start to dig. To help them decide where to excavate they wanted to see above the ground and they did an \_\_\_\_\_ survey, using a \_\_\_\_\_. To help them understand what was underneath the ground, they did a \_\_\_\_\_ survey, this showed them the remains of a \_\_\_\_\_.

The archaeologists dug into the ground and used their \_\_\_\_\_ to scrape back the earth to uncover stones, the ruins of a medieval \_\_\_\_\_. Archaeologists study closely everything that is discovered during an \_\_\_\_\_. They also carefully looked through the soil, they used a \_\_\_\_\_ and found a tiny \_\_\_\_\_, which was a cross, which they sent to the museum. The soil was sent to a \_\_\_\_\_ for analysis by archaeologists who looked at the soil under a \_\_\_\_\_ and discovered \_\_\_\_\_. This was evidence showing what people grew and \_\_\_\_\_ at that time.

Archaeologists also work to protect the ruins of buildings, and use \_\_\_\_\_ to create \_\_\_\_\_. This means there is a record of the building and it will be noticed if the weather starts to damage the building and cause \_\_\_\_\_.

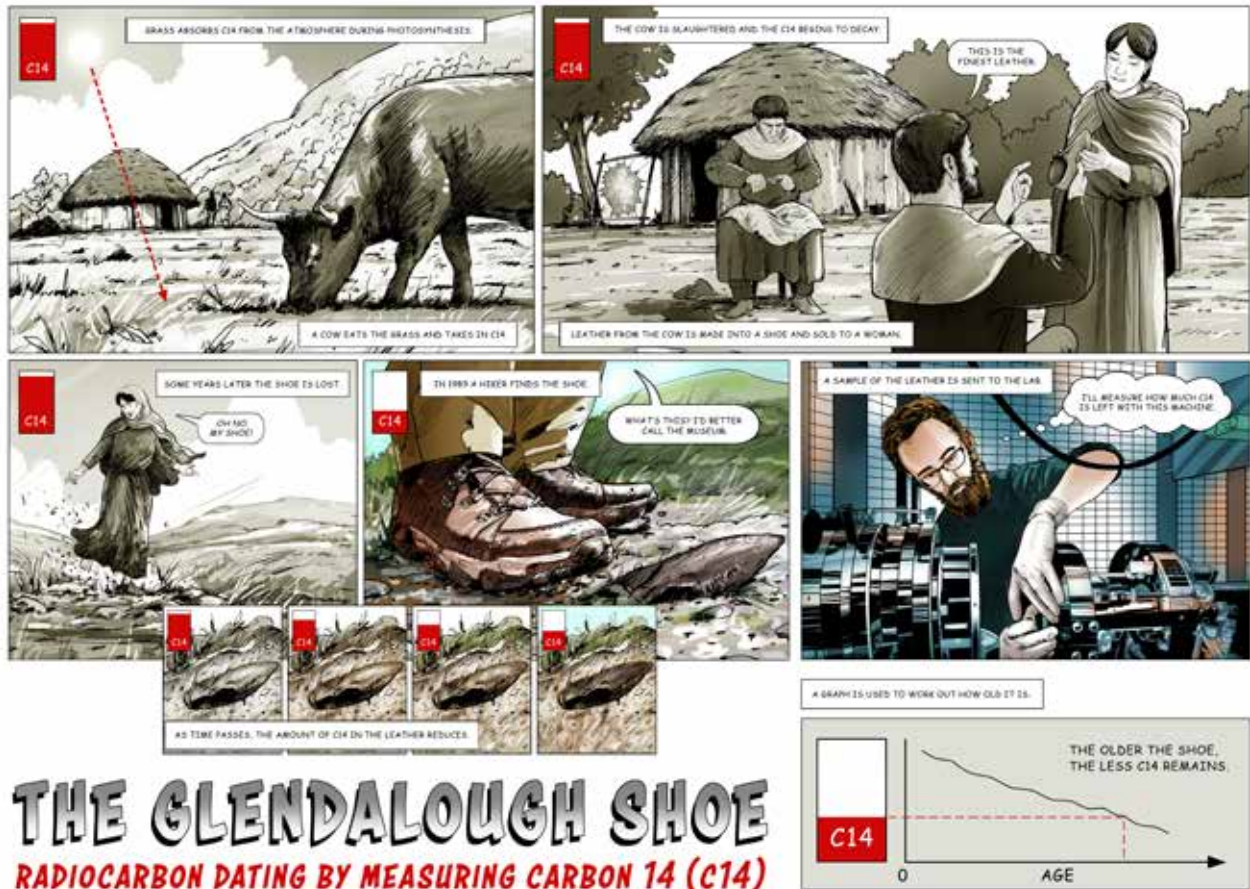
What three kinds of evidence did they find during the excavation?

1. Remains of a w \_\_\_\_, which showed the boundary of the area where people were living in that part of the valley
2. Remains of c \_\_\_\_\_, which is evidence for what people were eating at that time.
3. An o \_\_\_\_\_, which is a small jet cross, which is evidence of what people wore at that time and what religion they believed in.

What three kinds of surveys that archaeologists use are shown in the illustrations

1. L \_\_\_\_\_ S \_\_\_\_ Survey
2. A \_\_\_\_\_ Survey with a Drone
3. G \_\_\_\_\_ Survey

## Section C) RADIO-CARBON DATING



Archaeologists use scientific equipment, and work with scientists to discover information about objects such as how old something is. This drawing explains why radio carbon dating can be used to discover when the shoe was made. *Note: If you need to see a larger copy of the image there is one in the separate comic strip document.*

Imagine you are a tour guide in the Museum and explaining how we know the age of the shoe found near Glendalough. Use the information in the illustrations to A) Name the type of dating done on the shoe. B) Explain using the first two images why objects made from natural materials such as the shoe have radio carbon. C) Using the small graph explain what happens to carbon 14 as an object gets older.

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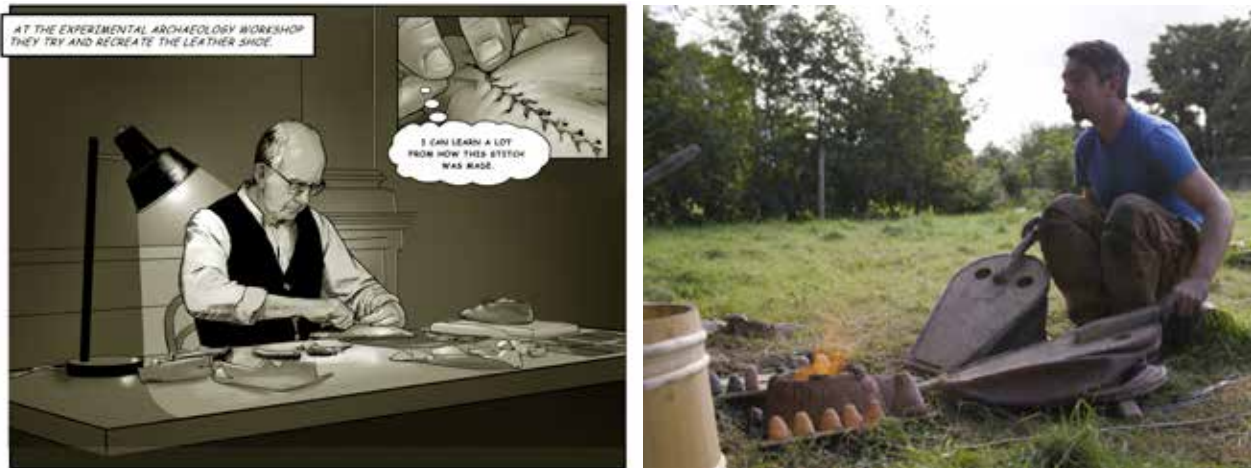
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## Section D) EXPERIMENTAL ARCHAEOLOGY

There are many different ways archaeologists study the past. One way they discover more about the past is to use Experimental Archaeology. Experimental Archaeology gives us secondary source information. It involves carrying our experiments to investigate how things were made in the past or how they were used.



This drawing and the photo show Experimental Archaeologists at work.

Have you ever made a LEGO car or house, or knitted a scarf or a hat? You follow the instructions. The archeologists do not have the instructions, so they use experiments to find out how something was made. Learning how something was made can tell you about the other objects or skills that the people had who made the object.

If you try and make something the exact same way, using the same tools, and kind of location, it can show you the marks made on the ground by the equipment or in the workplaces where people made things. There were two archaeologists interviewed in the video, John Nicholls, who is a Leather Finds Specialist and who created a shoe, and Dr. Brendan O'Neill, School of Archaeology, UCD, who was casting metal, who created a brooch.

Describe what one of the experimental archaeologists is doing in one of the above images and what they hope to find out.

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## Video 1 CROSSWORD

### Down Clue

- 1 We can tell the age of an object by doing this kind of dating, that is also called carbon-14 dating. Hint: Part of the name is something you might turn on to listen to music to in car.
- 2 A copy of an object.
- 3 Objects that were made and used by people in the past.
- 4 The name beginning with the letter m, given to man-made structures created in the past which can be, a building, a tomb, a fort, a castle or a carved stone.
- 5 A type of survey that investigates what is in the ground by using a machine similar to an x-ray to look at the soil underneath the surface.
- 6 Another name for an archaeological excavation, during which archaeologists discover, record and examine evidence of the past.

### Across Clue

- 1 A public display of objects exhibited in a museum.
- 2 This is the study of human and material remains, the buildings, monuments and objects made by people in the past.
- 3 A survey that is done from the air.

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2			3											
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## Video 1

### List of National Museum of Ireland Objects mentioned and Contributors

National Museum of Ireland Objects Mentioned in this video.

- Hand-bell, Knockatemple, Co. Wicklow, 8<sup>th</sup> - 9<sup>th</sup> century AD
- Leather Shoe, Lugduff, Co. Wicklow, 899 - 1033 AD
- Jet Cross, Seven Churches or Camaderry, Co. Wicklow, 11<sup>th</sup> – 12<sup>th</sup> century AD
- Plaster Cast from 'The Priest's House' Glendalough Co. Wicklow, Original 12<sup>th</sup> century, Replica 19<sup>th</sup> century

We are very grateful to the following contributors who are listed in order of appearance:

- Matthew Seaver, Archaeologist, National Museum of Ireland:
- Siobhán Pierce, Education Officer, National Museum of Ireland Archaeology:
- Carol Smith, Archaeological Conservator, National Museum of Ireland:
- Dr. Gerard Barrett, 14CHRONO, Queens University, Belfast:
- Niamh O'Neill-Munro, 14CHRONO, Queens University, Belfast:
- John Nicholls, Leather Finds Specialist:
- Prof. Graeme Warren, School of Archaeology, University College Dublin:
- Dr. Meriel McClatchie, School of Archaeology, University College Dublin:
- Robert Shaw, The Discovery Programme:
- Dr. Brendan O'Neill, School of Archaeology, University College Dublin:

# Glendalough Video 1

## Key Terms and their links to Glendalough

<b>A Dig</b>	An excavation, during which archaeologists dig, record and examine evidence of the past.
<b>Aerial Survey</b>	A survey that is done from the air is called an aerial survey. It normally means taking photographs from a height by a plane or a drone. These photographs can show features, or the remains of human activity that cannot be seen from the ground.
<b>AMS</b>	An Accelerator Mass Spectrometre is a machine used to see how much radio carbon there is left in an object.
<b>Antiquarians</b>	A name that was given in the past to people who studied and collected very old objects and the ruins of buildings and monuments.
<b>Archaeological Feature</b>	An area which indicates human activity happened there in the past. It is the physical evidence in the landscape, the soil or in buildings that are evidence of where people lived, worked, worshipped or were buried. The feature excavated by the UCD School of Irish Archaeology was a wall.
<b>Archaeologists</b>	Archaeologists study human history and prehistory by researching the buildings, monuments and objects made by people in the past.
<b>Archaeology</b>	Archaeology is the study of human and material remains, the buildings, monuments and objects made by people in the past.
<b>Archive</b>	Archives are collections of documents and records that have information about history. They can contain letters, forms, maps, photographs, files and other types of records.
<b>Artefact</b>	Artefacts are objects that were made and used by people in the past. They are evidence and sources of information about the material culture of past societies. Artefacts are used by archaeologists as the primary source of evidence to investigate and understand what people did in the past. Examples of artefacts from the Glendalough area are a brooch, piece of a jug, and a shoe.
<b>Braised</b>	Braising is when metals are joined together by adding a filler metal.
<b>Casting</b>	Solid metal in a container, called a crucible, is heated until it becomes a liquid. The liquid metal is poured into a mould, which is the negative 3-d shape of the object you want to make. The metal will cool and take on the shape.
<b>Cereal grains</b>	Are the seeds, called grains, which come from edible grasses, called cereals such as oats, wheat and barley. The grain under the microscope was wheat. The grains in the Glendalough exhibition are oat and barley.

<b>Charcoal</b>	The remains of wood that has been burnt with little air. It is used as fuel and will burn to give a very high temperature.
<b>Conservators</b>	Conservators are people who take care of objects, they work to protect and preserve them. They ensure the objects are protected from too much light, or anything that might make them become very weak and fall apart. They also research, or investigate objects and repair objects, and get them ready for display in exhibitions.
<b>Curators</b>	Curators are responsible for managing and keeping safe, collections of objects. They also create exhibitions, like the exhibition about Glendalough.
<b>Drone</b>	A remote controlled, flying robot, often containing a camera, or other equipment.
<b>Erosion</b>	When erosion occurs to a ruin or building it is, when it is worn away, by water or the weather, such as wind, rain or ice.
<b>Excavation</b>	An excavation is when the remains of human activity are dug up, recorded and examined.
<b>Excavation trench</b>	An excavation trench is a smaller test area of the entire site. It is dug at the beginning of excavations to see if there is something underneath the earth in that particular area.
<b>Exhibition</b>	A public display, a museum exhibition is a public display of objects.
<b>Experimental archaeology</b>	The study of the past by doing experiments to recreate objects and buildings, and discover the ways they were made and used. The experiments are based on information from research and evidence.
<b>Geophysical Surveys</b>	Investigating what is in the ground by using machines which measure magnetic particles in soil, or its resistance to electrical currents, which can be shown on a map of whats beneath the surface. People in the past when creating buildings or monuments or living in a place disturbed the soil and these can be discovered by the geophysical survey. These changes in soil patterns are what is called a geophysical anomaly.
<b>Graphite</b>	Graphite is a type of carbon, the crystalline form of it. During Radio-carbon dating, the carbon in an object is removed and converted into graphite, which can be measured.
<b>High-status Object</b>	High Status Objects are so called as they are made from rare materials that are hard to find, such as expensive metals like silver or gold, or materials that came from a long distance such as amber, or that would have taken a skilled person a long time to make. Such an important object was a symbol that the user was important, powerful or wealthy.
<b>Hoard</b>	Used in archaeology to refer to a collection of objects that were put away out of sight of other people.
<b>Jet</b>	Jet is a type of gemstone. It originally was dead wood, but over millions of years has been transformed into stone. It is warm to touch. The small black cross on display in the Glendalough exhibition is made from jet from Whitby in Yorkshire in England.
<b>Microscope</b>	A piece of equipment that enables scientists to see the details of something better, it makes small objects bigger, or magnifies them.

<b>Monastery</b>	A religious community, where people are following the rules of the religion and live apart from the general population.
<b>Monument</b>	A monument can be a landmark or area, or a man-made structure, a building, a tomb, a fort, a castle, wall, or carved stone. Megalithic tomb, medieval churches and castles, industrial mills and important historic buildings can all be defined as monuments. National Monuments are owned by the Irish State and the buildings at Glendalough are National Monuments.
<b>Museum</b>	A museum is a public place that collects and takes care of objects. Exhibitions, events and projects inspired by those objects are held at museums.
<b>NMI- National Museum of Ireland</b>	The National Museum of Ireland is a state-owned museum that takes care of objects on behalf of the Irish people. It has exhibitions at four different locations of everything from archaeology to zoology. The Glendalough exhibition is in the National Museum of Ireland – Archaeology on Kildare Street in Dublin.
<b>Organic material</b>	Organic material is wood, leather, bone, antler, something that was once alive, or came from a living organism, such as an animal or plant.
<b>Photosynthesis</b>	The process by which green plants and some other organisms absorb light energy, and create a chemical reaction which produces food and helps them survive.
<b>Plaster cast</b>	A replica, or cast of an object, building or decoration. These replicas were created for and used a lot in museums from the late 19th century to record what a structure looked like, and to teach people what the original monument or structure looked like.
<b>Radioactively decays</b>	Carbon 14 is radioactive, so when radioactive decay is mentioned in the video, it is referring to the automatic decline and loss of carbon-14 from an object.
<b>Radiocarbon dating</b>	We can tell the age of an object by doing radiocarbon dating, also called carbon-14 dating, which is testing the amount of carbon 14 in an object. It can be used on objects that were once alive, or made from something that was once alive, such as a wood from a tree or leather from a cow. All living things contain carbon 14 but once they die this begins to decline. The older an object the less Carbon 14 it has.
<b>Replica</b>	A copy of an object is called a replica object. Touching or handling an object can damage it. Replicas are used instead in teaching instead of original objects and can be handled. By creating a replica by closely following how we think the original object was made experimental archaeologists can also learn a lot about the past.
<b>Research Archaeology</b>	This is the name given to archaeology that is researching an area that is protected by the state. It normally means excavating the ruins of a monument or an area where a monument once was. The excavations at Glendalough are an example of Research Archaeology.
<b>Sieve</b>	A sieve is often used by archaeologists to carefully examine the soil that was dug out and to make sure nothing is missed. Small objects, either whole or in parts, and grain can be discovered this way. At Glendalough the small jet cross and cereal grains were discovered by sieving soil.
<b>Textile</b>	Textile is the name given to man-made cloth, normally it is used to refer to woven cloth or even to something that is knitted.