

[Cymraeg](#) / English

## Key Stage 2: Key Elements - chronological awareness/historical enquiry

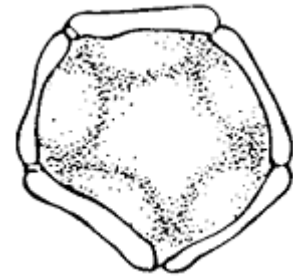


# Understanding Archaeology

Evidence for how people lived in the past comes from many different sources. Some of these are the kind of archaeology that you might see when you visit an excavation others involve research in the library or investigations in the laboratory. Different strategies are employed depending upon the period under investigation and the type of site or landscape.

The best known type of archaeology is **excavation**. This involves carefully removing the layers of material which have built up or been deposited over a period of time which may have been a few years or many thousands or years. In these layers are accumulated the possessions and rubbish belonging to former people. Under the accumulation of later years may be buried the walls of former buildings or the post-holes left by upright timbers which have rotted away. In some cases, where the ground is waterlogged, wood may have survived. By carefully recording and studying the complicated patterns of deposits and the material contained within them archaeologists are able to determine what kind of structures existed in the past, the types of people who lived there and what kind of life they led.

**Samples** are taken from excavations of the different soils and other deposits. From these the remains of **seeds, nuts, small bones, snails, insects and pollen** are extracted, identified and analysed to enable the environmental archaeologist to determine the former environment of the site as well as gaining an insight into peoples' diet and the wild and domestic animals that lived on the site. The identification of minute pollen grains, only visible under a microscope, makes it possible to know what types of plants grew in different periods. For example pollen evidence shows us that at the end of the last ice age (about 12000 years ago) some of the first trees to colonise Britain were dwarf birch and juniper. By the time the first farmers came to Britain (about 6000 years ago) most of the country was covered with mixed deciduous forest including trees such as lime, oak, ash and elm. In exceptional cases waterlogged **wood** has been excavated from these periods showing how man utilised the forests to provide timber for houses, farm equipment, trackways and tools. It is possible to identify the different tree species used and compare this evidence with that gained from pollen analysis.



**A Pollen grain - alder**  
(source: Somerset Levels Project)

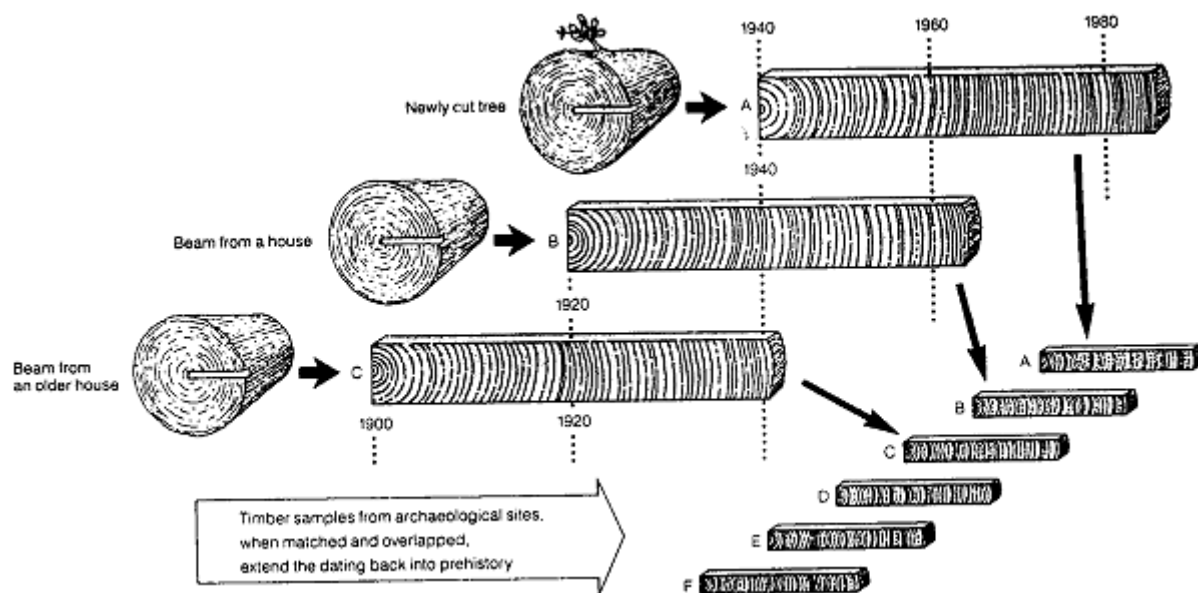


**A flint arrowhead**

**Finds** from excavations include any type of object used in the past. From the prehistoric period some of the main types of finds are metal containers, tools and weapons, pottery, stone tools and less commonly organic material such as leather shoes, textiles or wooden artefacts. As well as being interesting as objects used by former people it is possible to study the ways in which they were made and hence the **development of different crafts and industries**. During the neolithic period cutting tools were made exclusively from stone. From about 4000 years ago people in Britain first learnt the ways of working metal, first copper and later iron. Other materials such as wood have been used since man first used tools but new methods of working have continued to be developed up to the present day.

The styles and methods of manufacture of such objects have changed through time making it possible to **date** finds by their **typology**. This form of dating is particularly useful in periods when fashions, in for example pottery, changed rapidly. It is therefore possible to date some Roman sites to within a few years from the style of pottery found on them. Another type of find which is useful for dating in the historic period is coinage. Coins usually record the emperor, king or queen in whose reign they were minted as well as information which can be dated to specific years.

Where there are no closely dateable objects other methods of dating have to be employed. There are now a range of scientific methods in use: the most commonly employed are radiocarbon dating and dendrochronology. **Radiocarbon dating** is a technique which measures the amount of carbon 14. Carbon is present in all objects composed of material which was once living ie. plant or animal remains. Once death occurs the amount of carbon decreases at a defined, measurable rate. The measurement of the amount of carbon 14 provides us with a date range rather than a precise date. **Dendrochronology** is the measurement and analysis of the tree ring pattern which is present in most trees growing in temperate climates. In Britain the tree which produces the most successful results is oak. The growth patterns reflect the climate prevailing at the time the tree was alive and by studying these patterns in thousands of different trees, from the present day back to the post-ice age forests, dendrochronologists are now able to date samples from trees which grew during the last 10000 years or so. If the sapwood (outer rings) is present on the sample it is possible to determine the exact year the tree was felled.

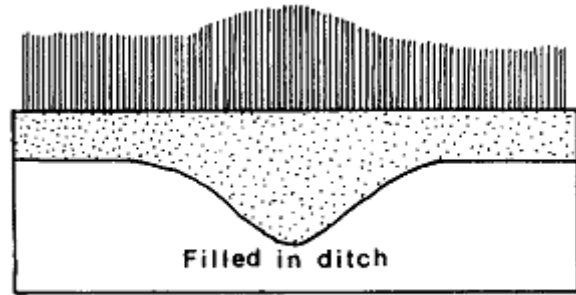


(reprinted with kind permission of *Archaeology: Theories, Methods and Practice* by Colin Renfrew and Paul Bahn. Thames and Hudson: London, 1991)

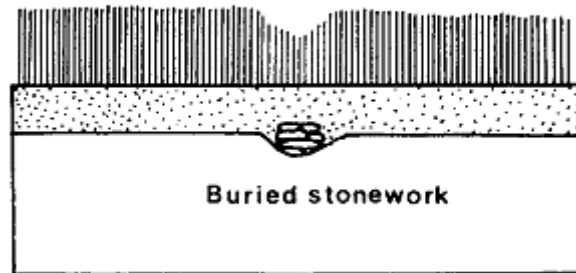
Other methods of learning about the past are becoming increasingly important as we are trying to protect the physical evidence of our past. Many sites which are not visible from the ground show up from the **air** as **cropmarks**. For example a crop of wheat will grow taller and stronger over a ditch which has become infilled with silt and which retains moisture than it will over the remains of a stone wall. In this way it is possible to detect sites such as Roman forts or Iron Age enclosures. Other sites with slight **banks and ditches** may show up well under slight snow or when shadows are thrown by low sunlight. Such sites will include the remains of deserted settlements and field systems. Photographs of sites can be accurately plotted on maps enabling us to build up a picture of former **landscapes**.

Sites can be found also by **fieldwalking** across broken ground such as ploughed fields, cut peat bogs or land disturbed during afforestation. Finds disturbed during these processes can be found lying on the surface, their distribution and nature can be plotted sometimes indicating the site of

former settlements or working areas. In other cases sites are not buried below the ground but remain as upstanding monuments such as the walls of buildings or fields. Sometimes, particularly in upland areas with low population densities, these sites are not known about or are poorly recorded. Programmes of identification and **survey** are undertaken by archaeological organisations to improve our knowledge in these areas.



Further information about sites and landscapes can be gained from the study of **maps and documents**. In Britain the oldest maps showing details of the landscape were made by landowners from the sixteenth century onwards. The first edition of the Ordnance Survey also show sites many of which have now been destroyed or damaged. Other information comes from early antiquarian writings and town or estates records such as charters or lists of port dues.



It is not sufficient to accumulate knowledge about the past, **it is also the responsibility of the archaeologist to disseminate this information by publication and presentation**. This is done by academic publication of the results of excavation and survey as well as less detailed presentations in leaflets, books, **museums** and interpretation centres aimed at the general public and at those involved in education.

**Some of the sites and landscapes of former times are protected by legislation**. The nationally important ones are **scheduled ancient monuments** protected by law. Monuments in guardianship are owned and maintained by **Cadw: Welsh Historic Monuments**. Many are open to the public. Other sites are not protected by the law but rely on the efforts of archaeologists, planning authorities and members of the public to safeguard them from destruction or damage. To aid in this work a computerised register of Sites and Monuments has been built up for all the counties in Wales and is maintained by the four Welsh archaeological trusts. Access to the **Sites and Monuments Record** is available to members of the public.

**Learning about the past is an integral part of the National Curriculum** which can be greatly assisted by an understanding of the local environment, history and archaeology. The Sites and Monuments Record can provide details of local sites of relevance to area of National Curriculum study. **Practical classroom activities** using finds from excavations can be arranged with the Clwyd Powys Archaeological Trust as well as **accompanied site visits**.

Archaeology utilises many different skills and disciplines in interpreting the past: **archaeological data can be used in many areas of the National Curriculum** other than history. For example in maths (eg. use of statistics and graphs), science/environmental studies (pollen and macro-fossil identification and analysis of changing vegetation), language (eg. placename evidence), design and technology (eg. measured drawing of finds), information technology (eg. use of databases in archaeology), geography (eg. locational studies), art (eg. looking at early pattern and art on archaeological artefacts).

#### **Further reading:-**

**Barker, P.** 1977. *Techniques of Archaeological Excavation*. Batsford, London.

**Howell, R** (ed) *Archaeology and the National Curriculum in Wales*. CBA/National Museum of Wales/Cadw.

**English Heritage**. *Resources 1994* (practical materials for teachers to use the historic environment for any subject).

**English Heritage**. *The Archaeology Resource Book 1992*.

**Renfrew, C. and Bahn, P.** 1991. *Archaeology: Theories Methods and Practice*. Thames and Hudson, London.

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