ARCHAEOLOGY: KNOWLEDGE OF THE ANCIENT WORLD

Archaeological Research

Preparatory work before an archaeological excavation

In order to determine the area to be excavated, archaeologists first select the region they want to investigate, study publications related to previous archaeological work in that region and carry out a survey. A survey involves examining finds on the surface of the ground. At this stage, archaeologists also make use of satellite and aerial photographs.

Methods that enable underground finds to be detected without an excavation being conducted

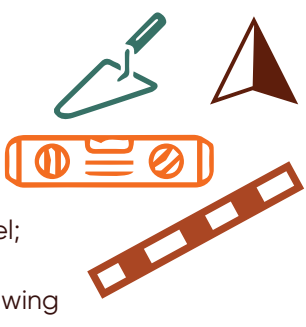
Since excavations cause irreparable damage to archaeological layers, today different methods are resorted to before an excavation takes place. For example, by looking at the magnetic variations beneath the ground, it is possible to detect **metal objects** or **pieces of pottery** baked at high temperatures. By applying a limited electric charge beneath the soil, it is possible to identify which finds are not conductors and which consist of **stone**. By transmitting radio waves, it is possible to spot the traces of large-scale structures.

Organic substances that may still emerge in archaeological excavations today

Examples of such remains are residues of leather and wood, and the seeds of various fruits and vegetables.

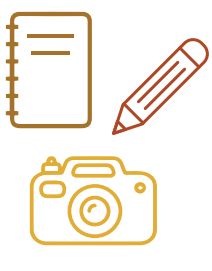
Tools used by archaeologists in excavations

The main tools that archaeologists use in the course of an excavation are as follows: trowel; brush; wheelbarrow; pick; hoe; shovel; chisel; drilling equipment; "total station", used for detecting locations and for making fine measurements; spirit level; tape-measure; levelling rod (for measuring); archaeological north arrow; camera and drawing instruments.



Methods used by archaeologists to record finds

Archaeologists keep notes about their finds and take photographs of them. In addition, to get as much information as possible about the excavation site, they also extract soil samples from the terrain, draw plans and take various measurements. From the beginning to the end of an excavation, they document every stage of this process in great detail.



Methods for dating finds

In archaeology, there are two main dating methods, namely the **relative** method (based on comparison) and the **absolute** method. Relative dating is carried out by dating items of pottery or architectural structures based on the materials used in them, their styles, and the ways in which they are decorated. Such details enable an approximate dating to take place. Absolute dating, based on scientific analysis of the unearthed materials, makes use of the methods such as numismatics, that is, the branch of archaeology concerned with **coin**s. When archaeologists find coins at an excavation site, the date written on the coin may help them to establish the latest period in which human activity existed in that area. It can also deploy radiocarbon dating. By measuring how long it took for the radioactive C14 atoms contained in organic substances to reach their half-life, it is possible to determine how many years ago they existed.

Coin: Madeni para.

Other branches of science used by archaeology

Archaeological research draws on numerous other disciplines, including **anthropology**, **sociology**, history, **epigraphy**, **geology**, **zoology**, **botany**, chemistry, and **genetics**. Archaeology is a multidisciplinary branch of science: a variety of disciplines contribute to the research process.

Anthropology: The study of human beings.
Sociology: The study of societies.
Epigraphy: The study of inscriptions.
Geology: The study of the earth.
Zoology: The study of animals.
Botany: The study of plants.
Genetics: The study of heredity.

"Firsts" in the History of Archaeology

The first known excavation in history

The first person in history known to have commissioned an excavation was the last Babylonian king, **Nabonidus**, who lived about 2600 years ago. Nabonidus discovered works belonging to Mesopotamian cultures that predated him by 2000 years, and he exhibited these items in his collection.

Nabonidus: "Nabonidus" is a Latin adaptation of the Akkadian name *Nabû-Na'id*.

The world's first archaeological excavation involving documentation

In 1784, Thomas Jefferson, who would be the third president of the USA, organised the excavation of a burial mound on his own land in the state of Virginia. This is recognised as the first ever scientific excavation that involved documentation.

The Turkish archaeologist who conducted the first ever archaeological excavations in the Ottoman Empire

The first Turkish archaeologist, Osman Hamdi Bey, carried out excavations in places including Sidon (Lebanon, 1887-88), Mount Nemrut (Turkey, 1883), Alacahöyük (Turkey), Raqqa (Syria) and Rhodes (Greece).

DID YOU NOW?

Having been appointed in 1881 head of the Ottoman Empire's first archaeological museum, the Müze-i Hümayun (Imperial Museum), Osman Hamdi Bey was instrumental in having the Law on Antiquities (Âsâr-ı Atîka Nizamnâmesi) enacted in 1884. This law imposed restrictions on the export of historical artefacts, with such works being recognised as property of the state. This law remained in force in the Republic of Turkey until 1973. Today, Law No. 2863 on the Protection of Cultural and Natural Assets is in force, having been enacted in 1983.

The first Turkish women archaeologists

Jale İnan and Halet Çambel were the first Turkish women archaeologists. Through their excavations, Jale İnan and Halet Çambel contributed enormously to a richer understanding of Anatolian cultural history, as well as boosting the cause of cultural heritage preservation. While Jale İnan excavated in Perge and Side (Antalya), Halet Çambel worked in Çayönü (Diyarbakır) and Karatepe (Adana).

Archaeology and Cultural Heritage

Unauthorized/illegal excavations

It is not just archaeologists and academics who carry out excavations; unauthorized or illegal excavations are also conducted by people looking for 'treasure'. Since illegal excavations are generally undertaken for the purposes of looting and gaining possession of so-called treasure, no systematic records are kept of them and the sole focus of their perpetrators is on the items themselves. For these reasons, items tend to be wrenched from their natural setting (and therefore their context). The upshot of this is that they lose their value as pieces that can tell us something about the history of civilization, a process which cannot be undone. Cultural assets can also be harmed when construction activity is undertaken without any attention being paid to archaeological remains.

DID YOU NOW?

Anyone found guilty in Turkey of carrying out an unauthorized excavation or sondage aimed at finding historical artefacts is punished with imprisonment for between two and five years. Those involved in treasure hunting without a permit are faced with a prison term of between three months and two years.

How do archaeological museums form their collections?

The artefacts that make up the collections of archaeological museums are gathered in various ways. Some of them come from archaeological excavations and surveys. Others are donated to the museum or purchased from citizens or collectors or bought at auction. There are also artefacts that end up in museum collections when they are confiscated from people who have obtained them through illegal means.