WESTON MUSEUM

Archaeology

Archaeology is the study of the past by looking for the remains and artefacts left by the people who lived long ago.

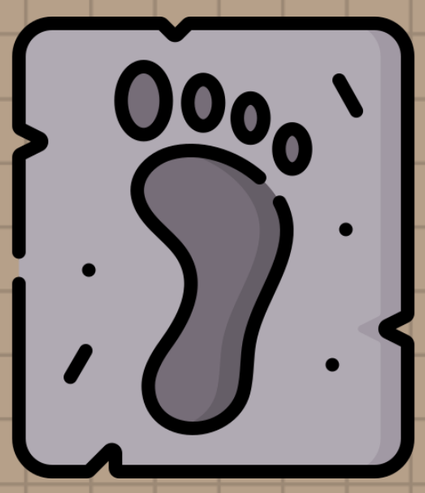
These remains can include old coins, tools, buildings and inscriptions. Archaeologists use these remains to understand how people lived. It is important to understand the past, because so many people use the past to know where they came from.

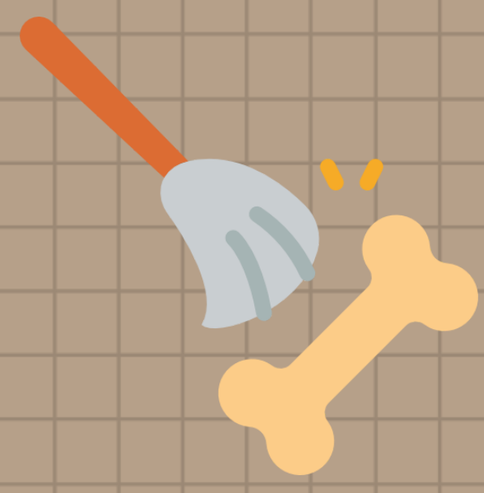
Throughout this activity pack, we will be exploring the different methods involved in an archaeological investigation. We will also briefly explore some of the different archaeological sites around England.

Stages of an Archaeological Investigation

Before any practical work can begin, a clear objective must be agreed upon to outline what the archaeologists are looking to achieve.

1. First Stage - a site is surveyed to find out as much as possible about the site and its surrounding area
2. Second Stage - an excavation may take place to uncover any archaeological features buried under the ground
3. Third Stage - the data collected from the excavation is studied and evaluated in an attempt to achieve the original research objectives of the archaeologists

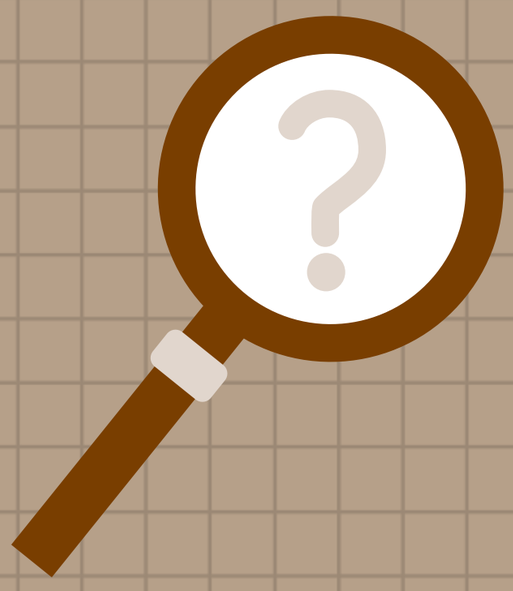




Remote Sensing

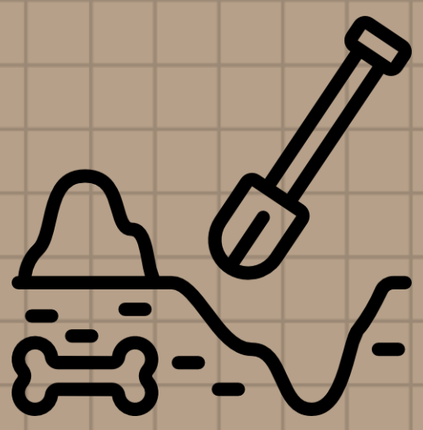
Before starting to dig in a location, remote sensing is used. Remote sensing can be used to provide more information about sites or regions.

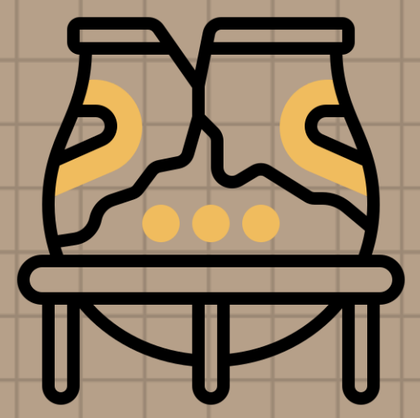
There are 2 types of remote sensing instruments - passive and active.



What type of energy to passive instruments detect?

Active instruments emit energy and record what is reflected. Satellite imagery is an example of passive remote sensing.



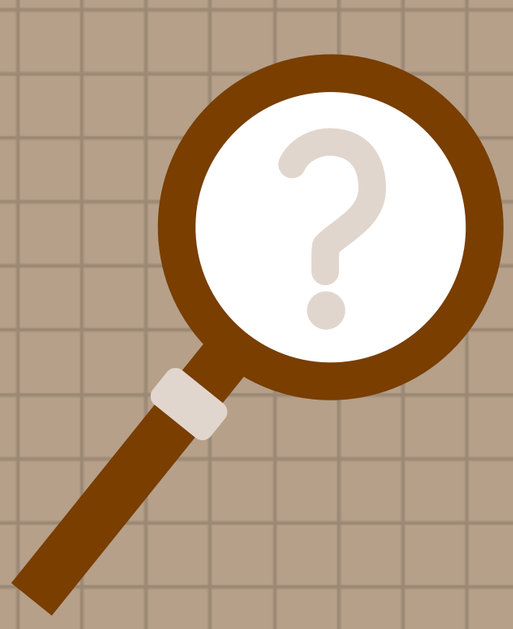


Field Survey

The archaeological project then continues with a field survey.

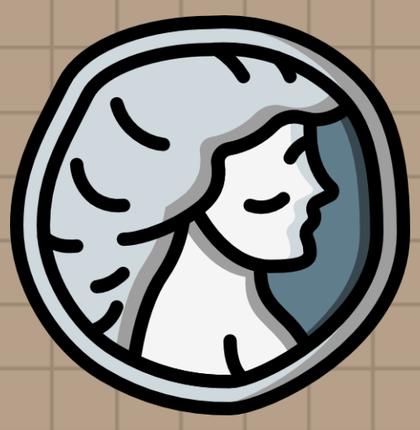
Regional survey is the attempt to systematically locate previously unknown sites in a region.

Site survey is the attempt to systematically locate features of interest - such as houses and middens - within a site.



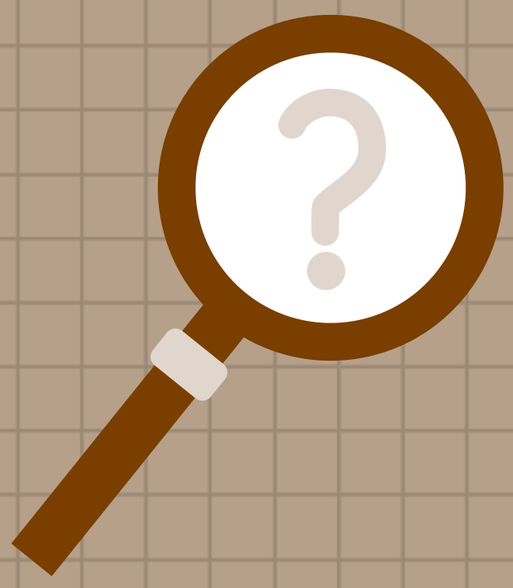
What is a midden?

The simplest survey technique is surface survey. It involves combing an area, usually on foot but sometimes with the use of mechanised transport, to search for features or artefacts visible on the surface.



Field Survey

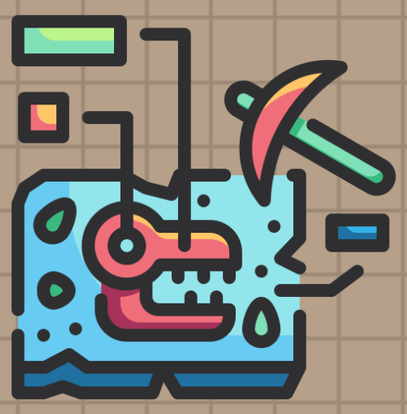
Aerial survey is conducted using cameras.



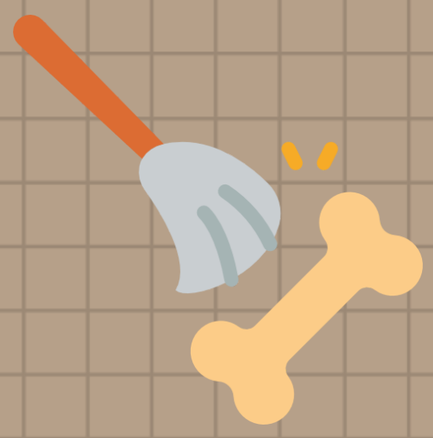
What can be used for aerial surveys?

A bird's eye view is useful for quick mapping of large and complex sites. Aerial photographs are used to document the status of the archaeological dig.

Geographical surveys can be the most effective way to see beneath the ground. Magnometers detect minute deviations in the Earth's magnetic field caused by iron artefacts, kilns, some types of stone structures, and even ditches and middens.

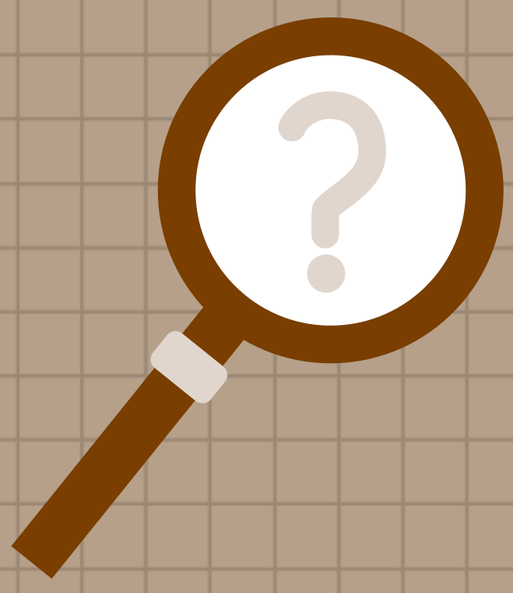


Excavation



Modern excavation techniques require that the precise locations of objects and features be recorded.

This involves determining their horizontal locations, and sometimes vertical position as well. Likewise, their association or relationship with nearby objects and features, needs to be recorded for later analysis.



What equipment can be used in excavations?

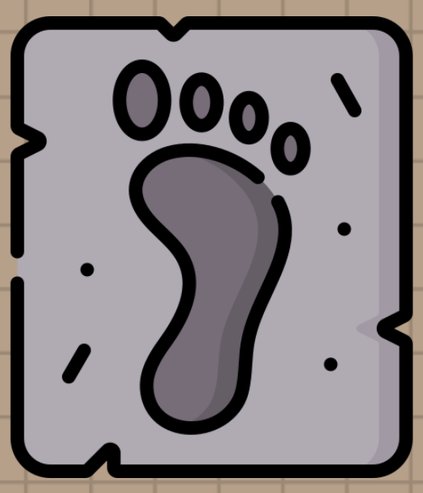
Excavation

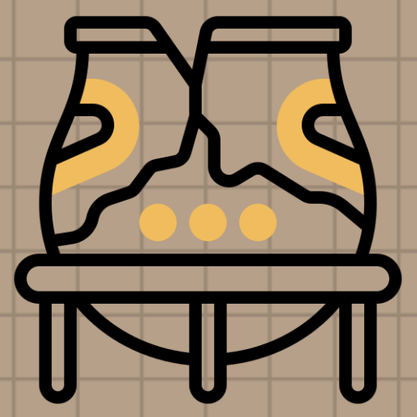
The next task is to form a site plan and then use it to help decide the method of excavation.

Scaled plans and sections of individual features are all drawn on site.

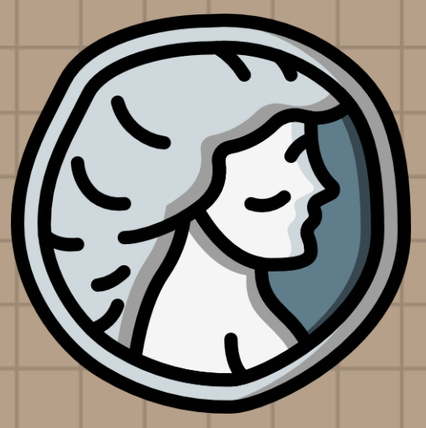
Black and white and colour photographs of them are taken and recording sheets and filled in describing the context of each.

All of this information then serves as a permanent record and is used in describing and interpreting the site.

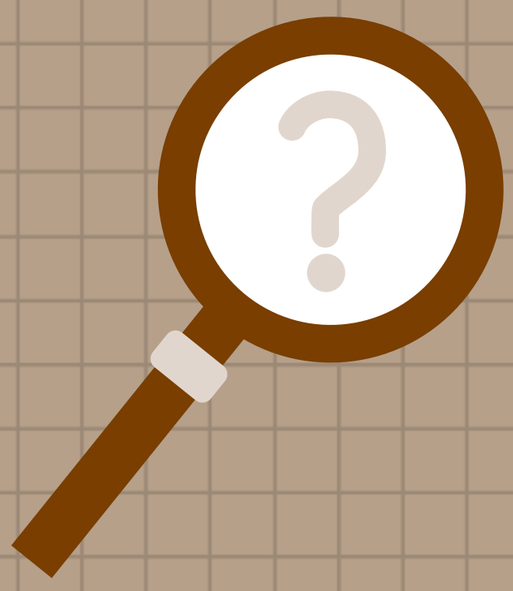




Analysis



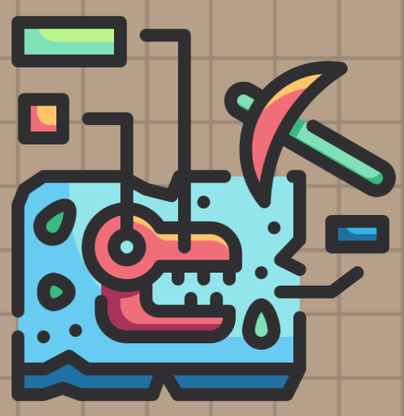
Once artefacts and structures have been excavated, or collected from surface surveys, it is necessary to properly study them.

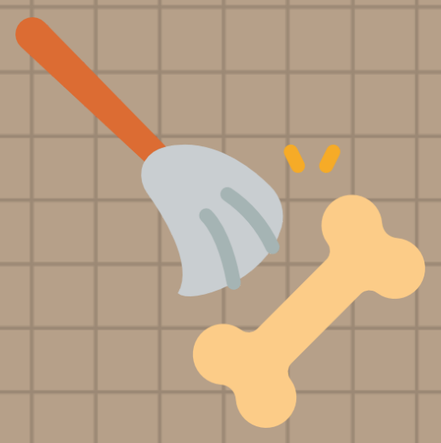


What is this process called?

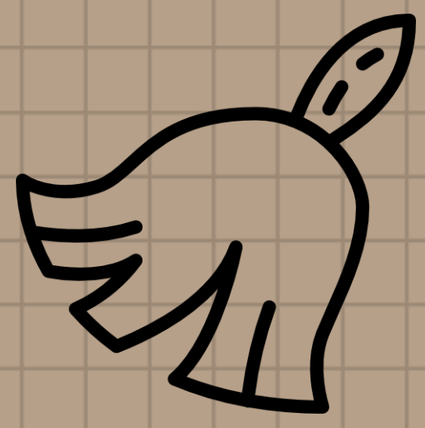
It is not uncommon for final excavation reports for major sites to take years to be published.

At a basic level of analysis, artefacts found are cleaned, catalogued and compared to published collections.



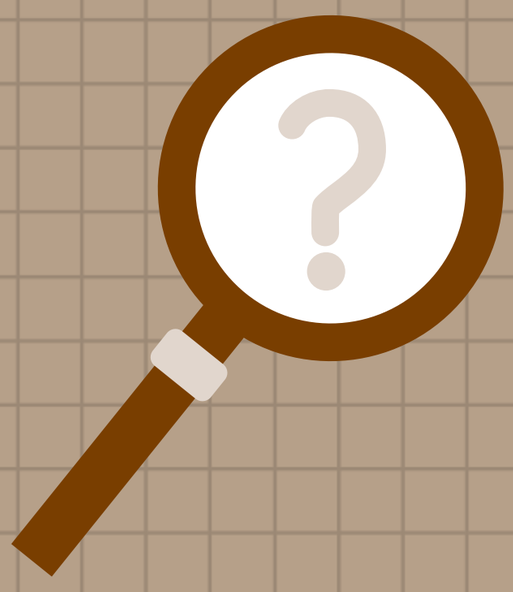


Drones

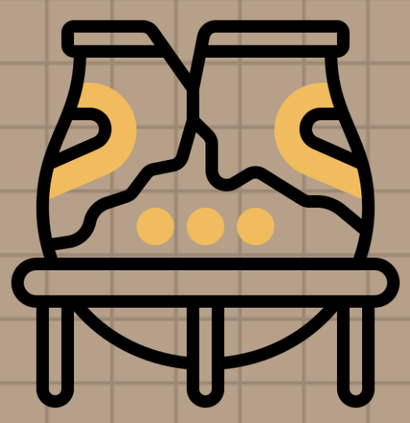


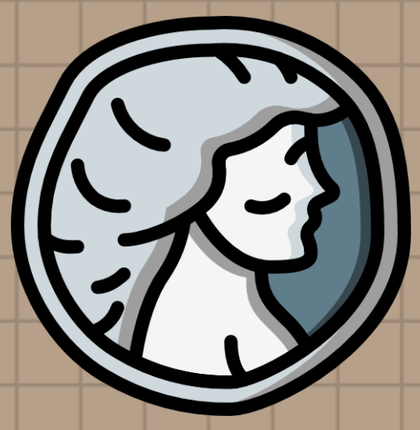
Archaeologists around the world use drones to speed up survey work and protest sites from squatters, builders and miners.

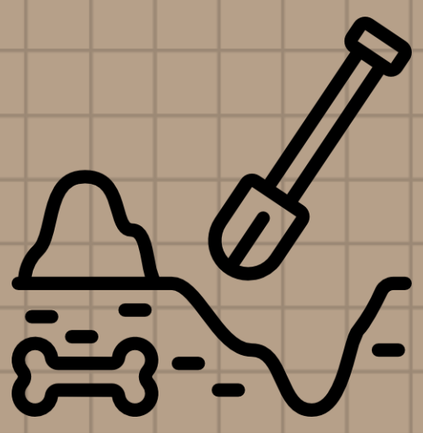
In 2013, drones flew over at least 6 Peruvian archaeological sites, including the colonial Andean town Machu Llacta, 4,000 metres above sea level.



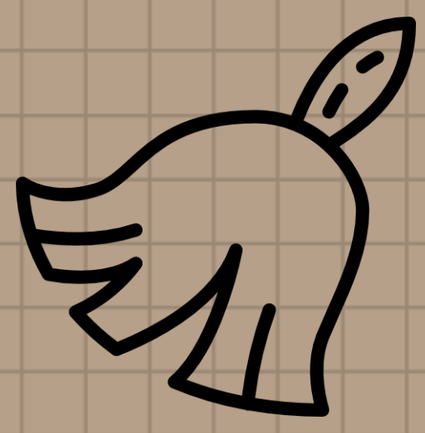
When were drones used for 3D mapping of the above-ground ruins of the Greek city of Aphrodisias?







British Archaeological Sites



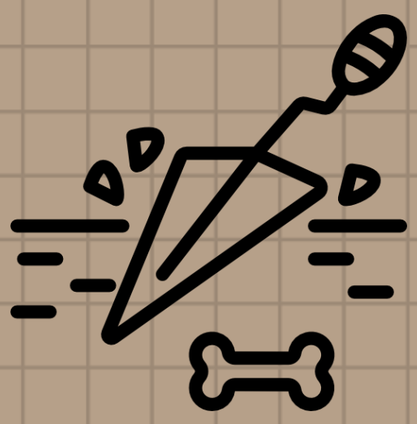
Stonehenge

Stonehenge is the most famous archaeological site in England. Stonehenge was built between 5,000 and 4,000 years ago, although there are signs of human activity as long as 10,000 years ago.

Precisely how it was built, and why, remains somewhat of a mystery.

Avebury

Less famous than Stonehenge, but no less important, is Avebury. This is another neolothic stone circle (dating to 2850 - 2200 BC). It is actually larger than Stonehenge, and uniquely, the stone circle actually contains a traditional English village, where you can have lunch, shop, and enjoy village life.



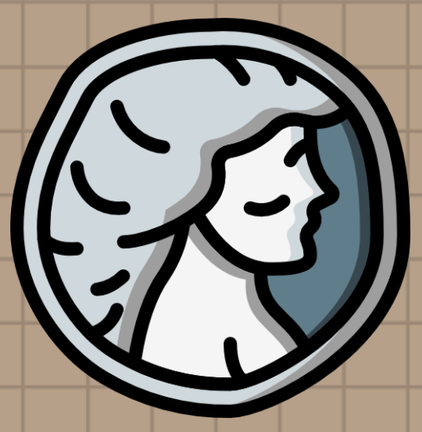
British Archaeological Sites

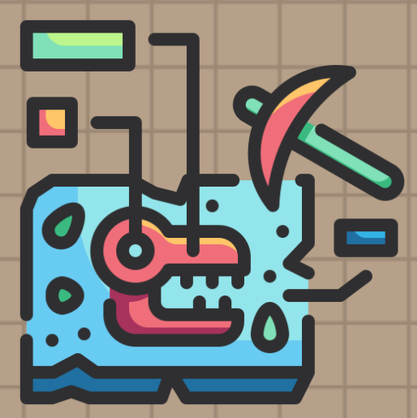
Hadrian's Wall

Hadrian - who ruled the Roman Empire from 117 - 138 AD, may have had the wall built to keep out hostile Scots, but it is actually more likely that the wall was merely a project to keep the soldiers busy, at a time when there were few military threats.

Now, it is possible to visit sites along the wall, such as Vindolanda, or to walk the entire length of the wall from coast to coast - a total of 74 miles.

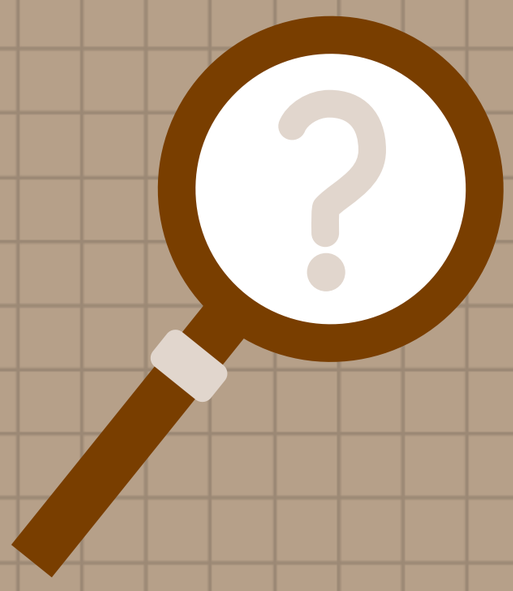
The Hadrian's Wall Path runs continuously along the wall, and along the way, walkers can observe the different construction materials and methods used in the wall as the landscape changes.





Answers

Remote Sensing

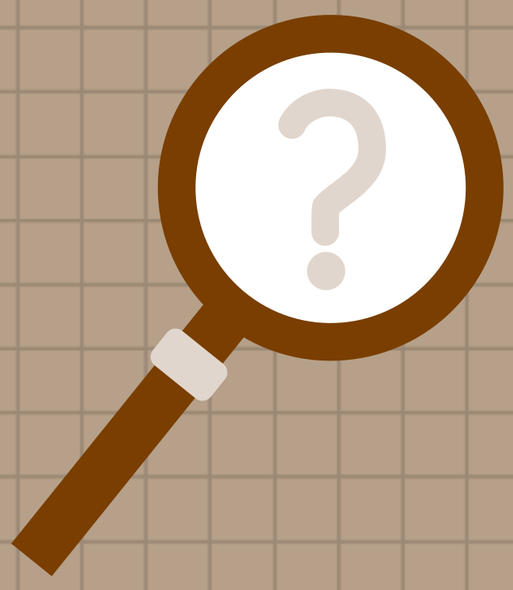


What type of energy do passive instruments detect?

Passive instruments detect natural energy that is reflected or emitted from the observed scene.

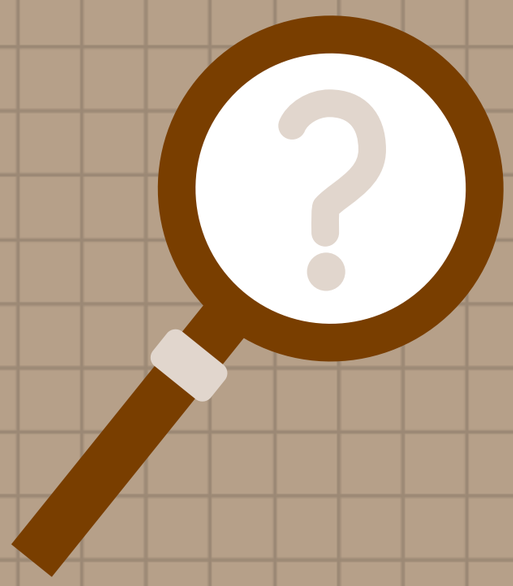
Answers

Field Survey



What is a midden?

A midden is an old dump for domestic waste, which may consist of animal bone, botanical material and other artefacts and ecofacts associated with past human consumption

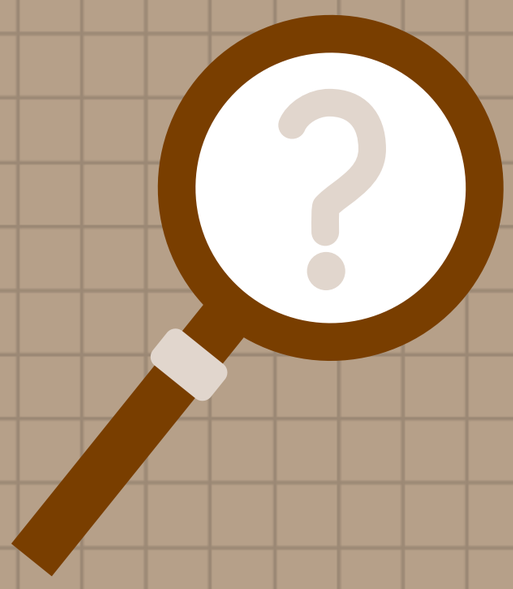


What can be used for aerial surveys?

Aerial survets are conducted using cameras attached to airplanes, balloons, UAVs or even kites.

Answers

Excavation

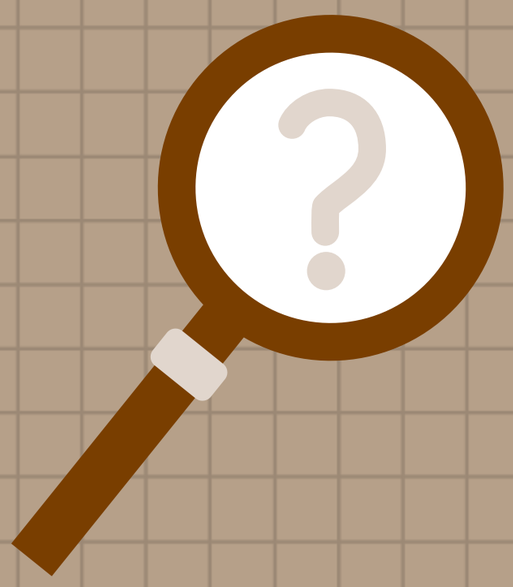


What equipment can be used in excavations?

Large mechanical equipment, such as backhoes, can be used to remote the topsoil. This method id used with great caution. Following this, the exposed area is usually hand-cleaned with trowels or hoes to ensure that all features are apparent.

Answers

Analysis

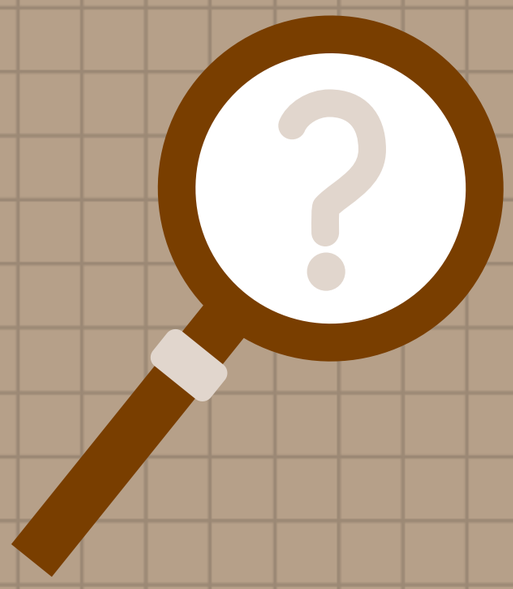


What is this process called?

This process is known as post-evacuation analysis.

Answers

Field Survey



When were drones used for 3D mapping of the above-ground ruins of the Greek city of Aphrodisias?

September 2014, with drones weighing approximately 11lb.