



Theme

Archeology gives us a glimpse into how people lived hundreds, even thousands, of years ago.

Grade Level

Grade 3-5th

Time/Location

2 class periods in the classroom

Goals

- How archeologists select sites for excavation.
- Demonstrate that different strata in the ground hold clues as to what happened during that time.
- Limitations of what information archeology can tell us about a culture.

Objectives

Students will:

- Understand how archeologist select sites for excavation.
- Understand different strata represent different periods in history.
- Articulate what questions archeology cannot answer and what might be some alternate sources which can be used to answer those questions.

Introducing Archeology

Background:

Archaeology is the branch of anthropology that scientifically studies the physical remains of past human life. Archaeology deals with things people have left behind them, their material culture. From this material culture, archaeologists try to put together a picture of how people lived in the past, what their overall culture was like.

Archaeologists begin by locating sites. This may involve looking for clues to past human occupation on the surface of the ground, or digging "test pits," small holes to sample the prospective dig site.

Once a site has been located and a decision made to excavate it, the dig area is mapped and the map is divided into squares by a grid. Each square is numbered for recording purposes. Similarly, each site has a number. The map of the state of Maine is divided into numbered squares and each site within a square is assigned a number when it is recorded in the state archaeological site database.

The squares to be excavated are all the same size; frequently they are one meter square. Sod is cut and carefully rolled back and the square is "dug" in 10 cm. levels. The primary digging tool is a mason's trowel with which dirt is carefully scraped away. Records are kept of the types of soil, and any artifacts found are drawn in on a map of the square, then put in separate bags with information as to where they were found. The dirt taken from the square is also sifted through screening to find small artifacts that may be missed in the digging.

Sometimes archaeologists find what are called "features," such as house pits or fire rings, and these are also carefully recorded on the map of the square. Features can add a lot to the understanding of a site. A single stone tool may be beautiful and exciting to find, but the same tool in context beside a fire ring and a collection of animal bones begins to tell a more complex story.

Accurate record keeping in the field is very important. A site is destroyed as it is dug, so careful record keeping is essential. For this reason, site excavation should be done by archaeologists who have been trained in appropriate methods and record keeping.

When archaeologists have finished digging a square, they draw a profile of one or more of the walls, recording the different layers or strata. By putting together profiles from many squares throughout the site, researchers can begin to get an overall picture of the underlying stratigraphy, or layering, of the site.



Abbe Museum

INSPIRING NEW LEARNING ABOUT THE WABANAKI NATIONS WITH EVERY VISIT

Essential Questions

- How are archeological sites selected?
- What can artifacts tell us?
- What can artifacts not tell us?
- What are strata?
- How are strata formed?

Academic Vocabulary

Strata
Artifact
Archeology
Features
Midden

Materials

A collection of artifacts which would represent the history of the school grounds.

Example of a level record

State Standards

English Language Arts
C1 Research

- Students create, identify, and answer research questions by gathering information from print and non-print sources and documenting sources and communicating findings.

Finally, the soil is put back into the squares and the sod is replaced. Ideally, in a few years, no sign of the excavation should remain at the site.

The artifacts are taken back to the lab where they will be cleaned, sorted, classified and analyzed. Together with the information from the records kept in the field, they will help archaeologists "tell the story" of the site.

Day One:

Engage:

If you wanted to figure out what happened hundreds of years ago how would you do it?

- Give the students a few minutes to brainstorm some ideas before making a list of suggestions on the board. If students do not come up with these ideas, you might gently steer them to these by asking leading question:
 - oral histories
 - looking at old maps
 - looking through newspaper articles.

One way we learn about the past is through archeology—the study of human history and prehistory through the excavation of sites and the analysis of artifacts and other physical remains. If you were an archeologist, how would you know where to dig? Archeologist begin by looking at old maps, talking to people who may have lived in the area a long time, consulting other peoples research.

Explore:

Pose this question to the students: how old is our school and how do we know? For example, many schools have a dated cornerstone which will direct the students to the year it was constructed. Show the students the cornerstone and then ask them what was here before the school was built. As a homework assignment have them interview older members of their family to see if they remember anything other than the school being at that location. Depending on the town you live in, it may be possible to consult public records or the town historical society to find deeds, land records, historical maps of the town. If students are relatively new to the area you can suggest they search the local paper's archives to see if they can find any articles about the building of the school, and if it mentions anything about what the lot was previously used for, who owned it, or if there were any major events in the town which might have impacted the area where the school is now (i.e. fire, flood, natural disasters).

Day Two

At the beginning of class the next day, have the students give a brief summary



E1 Listening

- Students use early active listening skills.

E2 Speaking

- Students use active speaking skills to communicate effectively in a variety of context.

Social Studies

- A1 Students identify and answer research questions related to social studies, by locating and selecting information and presenting findings.
- A2 Students make individual and collaborative decisions on matters related to social studies using relevant information and research and discussion skills.

of their findings from their homework assignment.

Explain:

Based on what we found out, what types of artifacts might we find if we conduct an archeological dig on the school grounds? Remind the students to also think about what types of objects might be dropped or lost on the school grounds today. If the students are having a hard time coming up with suggestions, quickly review what an artifact is.

To introduce the concept of stratigraphy, ask students which of these artifacts would we encounter first if we started digging? Which ones would we encounter last?

Remind the students that Maine was part of the traditional homelands of the Wabanaki people, and introduce a discussion of what types of objects Wabanaki people might have left behind before the arrival of Europeans.

Elaborate:

During people’s daily activities, artifacts get lost, dropped, or discarded in trash piles. Then over time sediments blow in or wash over an object causing it to become buried under another layer of dirt—these layers are known as strata. Each strata relates to a different period in time. As archeologists conduct an excavation they remove one layer of soil at a time. The artifacts found together in a layer would all be of a similar age. The artifacts and the strata at the top are going to be younger (more recent) than those layers below it. This is called the Law of Superposition.

Explore:

Using the information you have gathered about your school area create a series of layers and group the artifacts the students have listed into those layers.

For example, these are archeological artifacts which might be found at the Abbe Museum’s Mt. Desert Street location.

2015	Stuff lost by visitors visiting the Abbe Museum
1991	Stuff lost by visitors visiting the YMCA
1945	Charcoal from the 1945 fire which swept across the Mount Desert Island
1880	Artifacts from a real estate office that was in the building
1700	Wabanaki-made artifacts



Explain:

Based on their initial research, archeologists can now formulate research questions about what they hope to learn from the site.

While the archeologists are excavating, they are looking not only for artifacts, they are also looking for features. For example a depression full of charcoal may be evidence of a fire pit, or a circular stain in the soil might be evidence of a fence post. Features are something which cannot be removed from a site, but are very important in helping to explain what the artifacts found near the feature might have been used for, as well as the overall history of what took place at that site. As the excavations are done, detailed records of where and at what depth an artifact is found are kept. As all the artifacts are cleaned and catalogued, the record of where they were found is tied to the artifact by giving each artifact a unique catalog number, and linking the data about the artifact to that number in a catalog database.

Explore:

Once the artifacts have been cleaned and numbered, archaeologists working in the lab begin classifying the objects and trying to answer their research question.

For the purpose of this lesson, the research question is: “What is the oldest/first use of this site?”

Hand out artifacts and have the students work in small groups to sort and categorize their objects.

Once they have grouped things together have them see if they can draw any conclusions about what events were taking place.

Elaborate:

Much of the archeological work done on Wabanaki sites helps us to get an understanding of how Wabanaki people made a living in this place. The remains of animal bones and burned seeds can show what they were eating. The types of stone and bone tools found can help us understand the technology for making tools, how they hunted, fished, and gathered various animals and plants, and how they traded for raw materials. Collected artifacts can also give us an idea of how the climate has changed over time. For example, archaeological sites in Maine used by the Wabanaki around 4000 years ago contain swordfish bones. At this time, the waters along the coast were much warmer, so swordfish swam close to shore and could be hunted from canoes. As the climate changed, and sea levels rose, the tides in the Gulf of Maine became much higher, bringing colder waters to the coast. This drove the swordfish offshore to the warmer waters of Georges Bank.



Paleobotanists can also examine soil cores for pollen samples, which give us a glimpse at what types of plants existed during various points of time and what the climate was like.

There are also many questions which archeology can never answer about any culture such as; how did they care for family members?, what was most important in their culture?, or how did they entertain themselves during the winter months? For the answers to these questions and more you often have to turn to oral traditions or modern descendants to fill in these gaps.

Possibilities for extension:

Discussion on absolute dating vs relative dating.

Research changing climate as seen by changes in pollen spores found in strata layers.

Evaluate:

Students are able to make rational conclusions and logical arguments for what events were taking place at the archeological site.

Students are able to effectively use the internet to find information about what has been at their school site historically.

Recommended References:

For simulated archaeological digs:

Brown, Shelby. "TRASH TALKS." Trash Talks. Accessed July 20, 2015. [https://www.archaeological.org/sites/default/files/files/Trash Talks-edited.pdf](https://www.archaeological.org/sites/default/files/files/Trash%20Talks-edited.pdf).

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"Lesson Plans: Simulated Digs - Archaeological Institute of America." Lesson Plans: Simulated Digs - Archaeological Institute of America. Accessed July 20, 2015.

General information for kids on archaeology

United States. National Park Service. "NPS Archeology Program: Archeology for Kids." Archaeology Program. Accessed July 20, 2015.



"Introduction to Archaeology - Archaeological Institute of America." Introduction to Archaeology. 2015. Accessed July 21, 2015. <https://www.archaeological.org/education/archaeology>.

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