

The Ancients Museum Education Kit

This pre-activity is designed to help students activate prior knowledge before they explore the kit of genuine artifacts. This activity should open the dialogue in class about what archaeologists do, and how they ask questions to uncover a story. Ultimately students are building an understanding of how studying our past helps us to better prepare for our future, while cultivating respect for natural and cultural resources.

Objectives:

Students will be able to:

- Interpret how an artifact was used based on observations,
- Explain how an archaeologist uses artifacts to uncover the history of an individual or group of people,
- Apply archaeological techniques to the excavation of middens (trash).

Connection to Colorado Social Studies Standards:

- 2nd grade: 1.1.a, 1.1.d
- 3rd grade: 1.2.a;
- 4th grade: Nature and skills of history 2
- 5th grade: Nature and skills of history 10

Materials: trashcans from other classrooms or areas in the school filled with non-spoiling trash (or trash can also be “manufactured” by the teacher to fit a story), newspaper to cover desks and floors, rubber gloves, aprons or old shirts, chalk, pencils, rulers or a yardstick, Trash Can Archaeology worksheet (see last page of lesson plan)

Time: 1 class period

This lesson was adapted from the Archaeological Institute of America <https://store.archaeological.org/sites/default/files/files/Trash%20Talks-edited.pdf>

Background

Archaeologists are the scientists who study the remains of past civilizations or groups of people. Archaeologists look at the things people from long ago have left behind. They are interested in how people lived, their houses, clothes, bones and even their garbage! In fact, a garbage site is one of the best places to find artifacts of the past. Artifacts are things made by human beings that are important clues to understanding what people did in the past. The places where ancient humans left behind these artifacts are often garbage sites. Scientists call them **middens**.

Archaeologists know that people need certain things to help them stay alive. These include easy access to water, trade and migration routes, and food sources. With this knowledge and some research, archaeologists can locate the most likely places where people may have lived. Archaeology is a bit like putting a puzzle together that has lots of pieces missing.

Prepare ahead of time: Teachers can manufacture their own trash to tell a specific story or ask teachers in other classrooms for permission to use their trash.* Trash must be carefully monitored so that it does not include materials that could pose a hazard to students such as broken glass, food items, used dental floss etc.

*Note: due to concerns over COVID-19, teachers should use trash from their own classroom or manufacture trash in order to ensure student safety

Suggested Procedure:

1. Show students the following video: <https://youtu.be/qMzpA5oCGNY>
2. Ask students where they think archaeologists are most likely to find artifacts.
 - a. A number of answers are acceptable, be sure that students understand the difference between archaeology and paleontology (the study of past animals and plants)
 - b. If students do not mention it, be sure to tell them that archaeologists can find a lot of information in the trash that people left behind in the past. Archaeologists call this trash middens.
3. Inform students that they will be doing their own archaeological investigation. Divide the class into small “excavation crews” of 3-4 students and have them cover their work area with newspaper or plastic sheeting.
4. Distribute trash cans and rubber gloves to each excavation crew.
5. Introduce the term stratigraphy, the study of soil or rock layers. Draw a simple diagram on the board showing three strata. The most recently deposited levels are on the top and the older levels are on the bottom. Point out the different strata or layers of soil and artifacts.

Ask your students to answer the following questions:

- Which is the newest layer? (Usually the top layer).
- Which is the oldest layer? (Usually the bottom layer).
- Why does this happen? (The layers of soil and artifacts build up over a long period of time due to the effects of human activity and to natural causes.)

Over time, things and places get covered up and buried. When something lays on the ground day after day, year after year, leaves fall on it, dust blows, and little by little it slowly gets covered up.

6. Explain to the class that they will excavate and compare three levels in each trash can. The depth of each level will depend on the size of the can. For example, a 15- inch trash can will have three 5-inch layers. You might want to draw chalk lines on each can to designate the three levels. These marks are simply guidelines, so your students should not be too worried about excavating a perfectly even level. They can also try holding a ruler or yardstick inside the can to help them keep track of their levels. They should be careful not to mix or stir the contents of the can with the yardstick.

7. Excavate each container piece by piece. Remind the students that they are a crew and must keep pace with each other. They should place all of the items from each level in three separate piles. Label the work surface using the chalk so that the piles for Level 1, Level 2 and Level 3 are distinct.
8. Instruct students to sort the artifacts found in each layer into categories. Many categories are possible.
For example:
 - material: plastic, paper, metal
 - color: red, white, multi-colored
 - type: food items, tools, sports equipment
 - theme: food-related items, tools
 - combinations of the above: plastic tools and food containers.

The point of categorizing is to make order out of a jumble of materials. Students may change their minds about their categories and, if so, should discuss why categorizing was difficult and why they changed their minds.

9. After excavation, have students fill out the Trash Can Archaeology worksheet.
10. Discuss the results with the students.
Discussion topics include:
 - a. What conclusions can the students draw from the excavations?
 - b. Is the information different or the same from each trash can? Does this indicate anything about the location of the trash cans when they were being filed?
 - c. How accurate do the students think their interpretation is, given the amount and type of information they recovered?
 - d. Do the trash cans provide all the information that they need to understand what took place? What information is missing?
 - e. Why is it important to keep the artifacts in each level together? What would happen if an archaeologist was not careful and combined the artifacts from different layers?
 - f. What would happen if someone removed an artifact from its original layer and brought it to an archaeologist? Would an archaeologist be able to gather as much information from that artifact as he or she would if it were left in place?

TRASH CAN ARCHAEOLOGY

1. What categories of artifacts did you find in each layer?

Layer 1:

Layer 2:

Layer 3:

2. What differences do you see among the layers?

3. Where did the trash can come from?

4. Who were the people who discarded the trash?

5. How many people were there?

6. What might be missing from the trash, and why?