Garbage Excavation Project

Grade-levels targeted: 7th grade +

Background: This project demonstrates the basic concepts and methods of archaeological excavation to students. On its most basic level, archaeology is the study of people's garbage, or as we like to say, the discarded material culture of past human groups. By looking at the discarded remains of a culture piece by piece, their trash, it is possible to gain insight into what daily life might have been like for that group of people. In fact, some archaeologists today study modern trash to examine consumer trends and habits (Landes and Moyar 1996).

This project can be adapted to various age groups and can be made more or less complex. This version will be written for older students (middle school or high school level) with the hope that teachers will be able to make it more or less complex, depending on their classroom.

Objectives: The students will:
1. "excavate" prepared garbage "units" in order to identify cultural characteristics of the people who produced the trash (e.g., middle school students, early 21st century, southeast Louisiana).

2. recover the trash materials in a systematic way, sort the materials, and state the concepts of the systematic archaeological approach

Teacher Preparation:
Supplies

- Several filled trashcans (a week's worth or so) from different areas of the school or specially prepared by you.
- Newspaper, shelf paper, or plastic to cover desks or floors where you and your students will be working.
- Rubber gloves--especially if there is organic material in the trash.
- Aprons or old shirts
- Pencils and chalk
- A ruler or yardstick--a straight edge

Collect several cans of garbage from various areas/grade levels around your school or, if you prefer, specially prepare garbage bags or cans with a week's worth of garbage. Decide whether you are going to have students excavate by arbitrary soil levels (that is, you divide the garbage cans into even levels or layers by marking the outside of can with chalk at regular intervals) or by natural soil levels (having students decide on the layers while excavating, explaining their choice later). The garbage amount and variety of garbage should show change over time, and the goal is that the students will recognize this. Try to use

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1 This project is adapted from Landes and Moyar, Archaeologists at Work: A Teacher's Guide to Classroom Archaeology, 1996.
garbage cans or bags of uniform size, not too large to complete the project within desired time limits. It may also be wise to inform the custodial staff and/or administration at your school about your project, especially if they normally empty the trash in the classrooms every night. This way, the strata will not be disturbed while awaiting excavation.

**Procedure:**
1. Familiarize yourself and your students with the terms **stratigraphy** and the **law of superposition**. Stratigraphy is the study of soil layers and the law of superposition states that soil (or trash) layers build up naturally over time from the bottom to the top such that the lowest layers are the oldest, while the layers nearest the surface are the most recent:

   ________________ LAYER 1: newest layer
   ________________ LAYER 2: middle layer
   ________________ LAYER 3: oldest layer

   Draw a simple diagram on the board that shows three strata, or layers. The most recently deposited layers are on the top and the oldest are on the bottom (see the activity website www. for other stratigraphy diagrams). The numbers represent not only soil levels, but also the artifacts that pertain to each layer. Examples of stratigraphic layers that are easy to visualize are stacks of newspapers, pancakes, lasagnas, or pizza, etc.

2. Ask students these 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 natural causes. Archaeologists look for change over time by examining changes in the color and type of the soil and artifacts in different layers. This is why it is important to keep all artifacts from the same level together during excavation--*remove them together and keep them together*.

3. Divide the class into excavation crews of 3 or 4, give each crew gloves, aprons, a trashcan or garbage bag, and a ruler or yardstick to keep their levels straight and their excavation systematic. Mark the levels of the trashcans (arbitrary levels) or not in the case of natural levels. If possible, define different spaces on the floor or table where students can keep artifacts that they excavate from different layers in the trash separate.

4. Explain to the class that the units (or trashcans) they will be excavating come from southeast Louisiana and/or your school. Each trashcan or container represents a week or so of time. They must carefully and systematically excavate, or remove the artifacts, layer by layer (top to bottom), and each member of the crew must keep pace with the others. If it helps, they can use the
ruler or yardstick to see the levels better from the inside of the can, but it is not necessary to maintain a perfectly even level. More importantly, they should try not to stir or mix up the contents of the trash.

5. Excavate each unit (can/bag) piece by piece and place the items from each level in separate piles. If there are 3 layers, the artifacts should be separated into a labeled level 1 pile, level 2 pile, and level 3 pile outside the unit.

6. After excavating, each crew should analyze their levels, answering the questions on the "Trash-can Archaeology Worksheet" (created by Landes and Moyar 1996).

7. Discuss the results. Have one student from each group tell the story of their unit, explaining how the crew divided their unit into layers (if natural levels) and why they chose those layers. What artifacts were removed from each level? What time period do the artifacts relate to? What does each level tell about what the people were like that deposited it? Did things change over time from the bottom layers to the top? What activities took place at the beginning of the week and what took place at the end of the week based on the garbage recovered?

**Discussion Topics:**

What conclusions can be drawn about the people from the school, or the larger southeast Louisiana area based on what was found in the trashcans?

Does the garbage tell us everything about the people? What information about the people is missing? What can we NOT tell from the trash?

Why is it important to keep the artifacts of a level together? What would happen if an archaeologist was not careful and accidentally mixed up the layers of the trashcan?

How accurate do you feel your interpretation of the trash is?

**Vocabulary:**

*Archaeology* - the study of culture based on the analysis of artifacts, or material culture made and used by human groups.

*Artifacts* - anything made and used by people.

*Culture* - customs, beliefs, and behavior of a people that are learned, shared, and transmitted over generations.

*Excavation* - the systematic removal of artifacts from an archaeological site level by level.

*Law of Superposition* - the idea that levels on the top were deposited more recently than levels on the bottom.

*Stratigraphy* - the study of strata, or soil levels that naturally build up over time.
Additional Resources:

Deetz, James  

Landes, Robin S. and Joanna T. Moyar  

McIntosh, Jane  
“TRASH CAN ARCHAEOLOGY” WORKSHEET

WHAT DID YOU FIND IN EACH LAYER?
• LEVEL 1 _____________________________________________________________
• LEVEL 2 _____________________________________________________________
• LEVEL 3 _____________________________________________________________

WHAT ARE MOST OF THE ARTIFACTS MADE OF? ________________________________

WHERE DID THE TRASH CAN COME FROM? __________________________________

WHAT ACTIVITIES TOOK PLACE THERE? ____________________________________

WHAT DIFFERENCES DO YOU SEE BETWEEN THE THREE LAYERS? ________________

WHAT IS THE NEWEST ARTIFACT? ___________________________________________
WHAT LEVEL WAS IT FOUND IN? ____________________________________________
WHAT IS THE OLDEST ARTIFACT? ___________________________________________
WHAT LEVEL WAS IT FOUND IN? ____________________________________________

HOW LONG DID IT TAKE TO FILL THE TRASH CAN? ____________________________