As you learned in "Thos. Jefferson, Slavemaster" archeologists such as Frasier Neiman, have uncovered numerous pits - often as large as baggage trunks - dug into the ground beneath slave quarters. Although some of these sub-floor pits may have served as root cellars, some also served as places where individuals stored valuables. By excavating these long buried pits, archeologists have uncovered a range of items that offers a glimpse into the lives of the quarters' inhabitants.

Uncovering Artifacts In this activity, you'll work in a team to prepare a model of the ground beneath a slave's quarters. The model will include a sub-floor pit and an assortment of artifacts. Once the pit has been filled in and the artifacts covered, you'll exchange your model with another team of students. Then, you'll keep a log and record the positions of the items you unearth.

This activity page will offer:

- experience in constructing models of sub-floor pits
- opportunity to model the work of archeologists in uncovering artifacts
- experience in identifying and recording positions of buried artifacts

**MATERIALS**

- Deep plastic bin (or shoe box)
- Soil that is not dry or crumbly that can be compacted easily
- Small shovel
- Artifacts (plastic charms, coins, toothpicks, etc.)
- Graph paper
PROCEDURE

1. Work in teams of two. Prepare your archeological site by filling a plastic bin four inches (10 cm) deep with soil.
2. Pat down the soil to make a flat, level surface.
3. Select a location for your sub floor pit and excavate a rectangular pit roughly the size of a deck of playing cards - roughly 4 by 3 inches (10 by 7.5 cm) Pat the walls and bottom of the pit to form a firm impression in the soil.
4. On a sheet of graph paper, draw a map of the entire soil surface. Number the grid lines and use them as a coordinate system to record locations on your map. Include a sketch of your pit's location on the map.
5. Scatter several artifacts in the pit. Record their exact location on your sketch. Continue filling the pit as you scatter several additional items in the storage space. Don't forget to record the exact location of each item. Also include the relative depth of the artifact. Think about it: how someone would know that one object was to the left and deeper than another object.
6. Once the pit is completely filled (it should be level with the surrounding soil) scatter several more artifacts across the entire surface of the plot (beyond the limits of the pit). After recording the location of these items, cover this level with several inches of soil.
7. Exchange archeological sites with another team. On a separate sheet of graph paper, make a sketch of this new plot. Carefully excavate the site. Record the positions and relative depths of any items that are uncovered during the "dig".
8. Locate the position of the buried sub-floor pit. Excavate the pit and record the locations of all recovered items.
9. When you are finished obtain the plot diagram from the original team and compare and contrast the sketches that you made with those made by the original creators of the site. Did you correctly identify the positions of all objects and their relative depths? Why or why not? How did you show the various depths? What made it difficult to map the objects?
10. When the activity is complete, clean your desktop. Be sure to dispose of the soil as directed by your instructor.
Questions

1. How does the depth of a recovered item relate to the relative time of its burial?
2. How did you uncover the location of the sub-floor pit?
3. Did the process of excavating the artifacts affect their placement? Why or why not?

EXTENSIONS

Bed and Breakfast Controversy
Some former slave quarters are being used as bed and breakfast lodgings. Some people feel that this is an indignity to the former slaves who were forced to live in these structures. Others believe it is a way of connecting us to the past. What do you think? For more information about this controversy, visit the following URL:
http://bandb.about.com/library/weekly/aa-slavequarters.htm

Build A Model
Research the web to find photographs and models of slave quarters. Based upon these illustrations, construct a model of a slave quarters using cardboard, paper, and other materials. Don't forget to include the sub-floor pit that acted as a storage area.

Transparent Model
Suppose you were supplied with several small rectangles of Lucite (a thick transparent plastic). Using a wax marking pen, how would you assemble a stack of these sheets to produce a 3D model of an excavation of slave quarters with its sub-floor pit. (Use each sheet to represent a different depth of the excavation. On each sheet, identify the location of the artifacts uncovered at that level.)
Living Space
How much living space does each person in your home have? Use a ruler to measure the dimensions of your home's entire floor space. Calculate the total area of space in your home. Then, divide it by the number of people sharing this space. (This is the area of space for each person) Now consider field slaves' quarters measuring twenty feet by ten feet and shared by a family of five. What was the area of living space allotted to each of these slaves? (Remember that you are calculating area per person)

Map Making
Can you create a scale map of your soil plot? Most of the time, scale maps illustrate a "scaled down" version of a full size area. For this challenge, however, create a scale map that is larger than the actual area you a working with. You might need to attach several sheets of drawing paper together in order to produce a large enough canvas.

WEB CONNECTION

Digging Up The Past: Grave Sites Marked And Slave Quarters Being Excavated
http://blackstocks.com/in_news/9298d/page2595.htm
A personal view of the joys and frustrations associated with slave quarters archeology

Archaeology at Slave Quarter Sites
http://www.poplarforest.org/archcommunity.htm
Archeology of the slave quarters maintained on Jefferson's Poplar Forest estate.

American Slave Narratives: An Online Anthology
http://xroads.virginia.edu/~HYPER/wpa/wpahome.html
A collection of American slave narratives that offer personal insight into the life of slaves.

The activities in this guide were contributed by Michael DiSpezio, a Massachusetts-based science writer and author of "Critical Thinking Puzzles" and "Awesome Experiments in Light & Sound" (Sterling Publishing Co., NY).

Academic Advisors for this Guide:
Corrine Lowen, Science Department, Wayland Public Schools, Wayland, MA
Suzanne Panico, Science Teacher Mentor, Cambridge Public Schools, Cambridge, MA
Anne E. Jones, Science Department, Wayland Middle School, Wayland, MA
Questions

1. How does the depth of a recovered item relate to the relative time of its burial?
   (The deeper the object, the more likely that it was buried a longer time ago. This would allow more time for dirt and soil to pile atop of it.)

2. How did you uncover the location of the sub-floor pit?
   (Accept all reasonable answers such as a greater number of artifacts helped identify the pit area or a change in the surface firmness suggested the depression.)

3. Did the process of excavating the artifacts affect their placement? Why or why not?
   (Accept all reasonable answers. Student should be aware that excavation process could change the location of items.)
CURRICULUM LINKS

Archaeology:
- Evidence
- Theory
- Modeling

NATIONAL SCIENCE STANDARDS  (Grades 5-8)

Science as Inquiry- Content Standard A

Students will think critically about the relationship between evidence and scientific explanation.

Students will explore the value of models in a scientific investigation.

Students will communicate explanations while learning to appreciate the importance of respecting all opinions.