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TEACHER'S CORNER: ARCHAEOLOGY FOR THE CLASSROOM

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[These activities come from a longer article about The Center for Human Origin and Cultural Diversity at the University of Missouri, St. Louis, published in the spring 2003 issue of *AnthroNotes*.]

CLASSROOM ACTIVITIES

Reconstructing Pots Activity (grade 6)

Show Me Standards M2, FA1

Goals: Students will calculate the diameter of a ceramic artifact and model the process of reconstruction.

Objectives: Students will work in teams to distinguish different ceramic types, calculate diameter, inventory pieces, reconstruct vessels, assess function, and draw their ceramic artifact.

Materials needed:

Black markers, white glue, plain paper, lined paper, colored pencils, regular pencils, copies of diameter chart, straight rulers.

Terra cotta flower pots of various colors

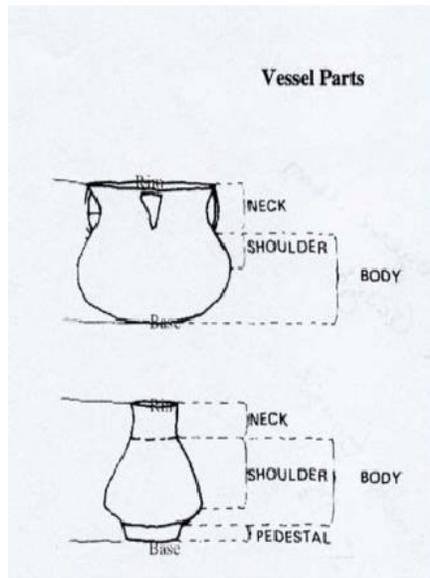
Stoneware cups of various colors

(Each cup or terra cotta pot should be a different color and the number of items needed is dependent on the number of groups).

Set up:

Prior to class, the teacher carefully breaks the ceramic items (make sure the pieces are not too small or too sharp) and mixes the sherds together in a box.

1. Introduce the idea that many artifacts are often found in pieces and archaeologists need to put them back together (reconstruct) in the lab. Pieces of pottery, called sherds, are common from both historic and prehistoric sites. Ask students: Why do you think that things like pots are often found in pieces? Using geometric relationships, archaeologists are sometimes able to reconstruct pots from pieces (even if some pieces are missing) to determine the original size and shape of a vessel. It is almost like putting together the pieces of a jigsaw puzzle! Ceramic pots are made up of several sections.

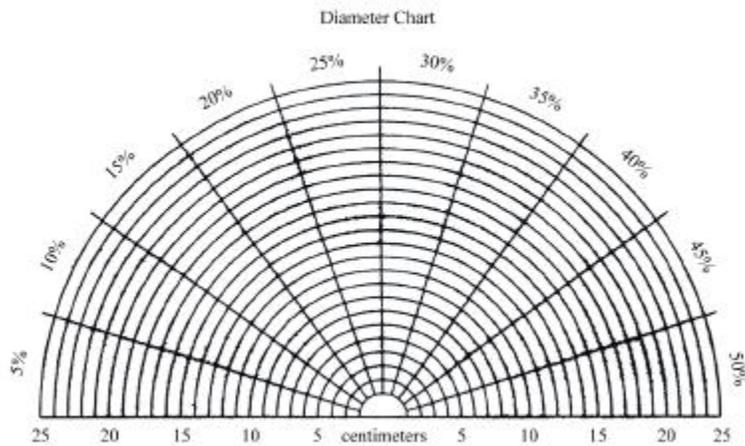


(Use the above diagram to draw the illustration of a vessel on a board or use as an overhead). The top of the vessel is called the rim, under the rim is the neck, under it the shoulder, and the body of the pot sits on the base. The base may be in the form of a pedestal (a platform that the pot sits on). If the students have just a rim piece, they can use a diameter chart (above) to figure out from the size of the curve of the rim piece how big the vessel opening was. From the chart, students also can estimate the percentage of the entire rim that their piece represents. They are now going to work to reconstruct a pot that will be assigned to their group. They will have to work together to identify the elements of the pot just identified and then use a diameter chart to calculate the diameter of the top (rim) of the pot. The diameter chart can be put on an overhead projector.

2. Divide students into archaeological teams of three students each.
3. Assign a particular terra cotta pot or stoneware cup (i.e. Stoneware Blue) and letter to each team.
4. Have each team retrieve the appropriate pieces of their pot or cup from the box.
5. Using black markers, ask students to label the pieces with their assigned letter plus a sequential number.

For example, the group assigned letter A will number their pieces A-1, A-2...

6. Students should sort pieces by rim, base, and body.
7. Next, have students inventory their ceramic pieces and list them on the inventory sheet.
8. Using the diameter chart, have each student calculate the diameter of their vessel using three different rim pieces (either the inside or outside of the curve of the rim piece should be matched to a curve on the diameter chart). Also have each student determine the % of the vessel their rim piece represents as indicated by the diameter chart.



NOTE: A diameter chart can be made by using a protractor and drawing concentric circles 1 cc apart. If a half circle is used, as is shown in this diagram, then the calculation is based on the radius of the opening to calculate the diameter, the value of the radius has to be doubled. Diameter gauges can be ordered from www.archaeogear.com

9. Have the students reconstruct their vessel using white glue.

10. Have each student draw their reconstructed vessel and write a description of it. This should include color, mention of any design elements, and measurements of its size (height and diameter of top). Students can then write a story that describes what their pot was used for (its function).

[See diagram on the next page.]

Inventory Sheet

	Number of Pieces		
Sherds			
Handles			
Bases			
	<i>List each rim Separately</i>	Diameter (rim)	% of Vessel (rim)
Rim 1	1		
Rim 2	1		
Rim 3	1		
Rim 4	1		

Excavation of Room ____ (Grade 7)

Show Me Standards MA2, SS7

Goals: Students will properly measure and grid artifacts in a unit. Based on the kinds of artifacts and their patterning in a unit students will interpret human behaviors.

Objectives: Students will work in archaeological units to map the location of artifacts located within an excavation unit. Students will make assessments as to the type of activity that might have occurred in their unit.

Materials Needed:

Yardsticks, masking tape, photocopies of pictures of artifacts, graph paper, rulers, pencils, and copies of a worksheet.

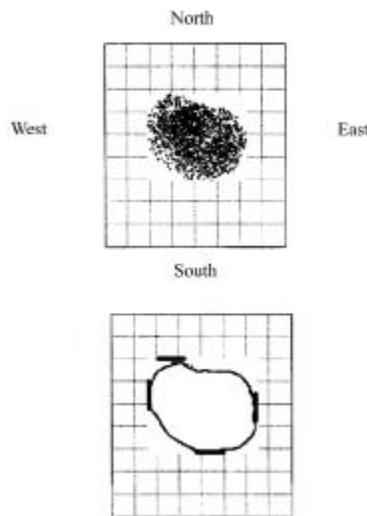
Set up:

Before class, mark the classroom floor with masking tape in rectangular units of 2'x3', one unit for each group of students. Inside these units tape pictures of artifacts (flakes, projectile points, ceramic sherds, worked shells, and/or bones). Pictures of artifacts can be easily found in issues of *National Geographic* magazine. Try to select artifacts from a particular culture *i.e.* Navajo of the Southwest and also try to create a pattern with the artifacts, such as flakes in the same section as stone tools.

1. Explain to the students that artifacts can be pretty to look at (have pictures to show), but that we really need to know about the physical distribution (location) of artifacts in time and space. When archaeologists find artifacts, they need to know precisely where in the excavation unit the artifacts are located. Ask the students to think about a police detective who is trying to solve a robbery case. The detective needs to look for clues at the crime scene and needs to see where everything was when the

crime was committed. These clues might enable the detective to find the evidence needed to solve who committed the crime and when.

Archaeologists attempt to figure out how people of the past used a particular place. What activities did they engage in? How did they live their lives? The evidence for this is, in part, to be found in the artifacts that have been left behind. The types of artifacts and the pattern of how they are laid out in space will help archaeologists to determine what types of activities occurred in specific locations. Archaeologists have to be able to recreate on a piece of paper in the lab where all of the artifacts in their excavation unit were found. Show students on the board or overhead how to measure the location of an artifact in a unit.



NOTE: To gauge (measure) an artifact in your archaeological unit, measure from the edge of the unit to the artifact. Measure the distance from the northern edge of the unit to the closest edge of the artifact. On the graph paper make a mark where that distance would be. Next measure from the eastern edge of the unit to the closest edge of the artifact and make a mark on the graph paper where that would be. Continue until you have a mark for all sides of the artifact. Finally look at the artifact and draw within your marks the shape of the artifact. See diagram below.

2. Explain to the students that their classroom has been turned into an archaeological excavation. Students will work in groups of two to four.
3. Each group will identify the northern “wall” of their unit. Using rulers, students will measure the unit and the location of the artifacts and draw them on their graph paper. One inch will represent one square.
4. Students will label each artifact on their graph paper.
5. Finally, they will write the names of their group members and answer the following questions on their worksheet:

Room ___ Excavation

1. What kind of artifacts did you find in your unit? What did you notice about the locations of the artifacts in your unit? Are they spread out or are they all together?

2. What do you think the artifacts were used for? What kind of activity do you think went on in your unit? Why do you think this?

Further Reading

Amarento, Beverly J. et al. 1997. *A Message of Ancient Days*. Houghton Mifflin Co.

Joukowsky, Martha. 1980. *A Complete Manual of Field Archaeology: Tools and Techniques of Field Work for Archaeologists*. Prentice Hall.

U.S. Department of the Interior Bureau of Land Management. 1996. *Intrigue of the Past: A Teacher's Activity Guide for Fourth through Seventh Grades*. Bureau of Land Management.

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