



Mississippi Valley Archaeology Center
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This lesson was created by a teacher participating in a Wisconsin ESEA Improving Teacher Quality grant entitled Inquiry Based Technology-Mediated Teacher Professional Development and Application.

Title: 2 X 2

Submitted by: Matt Regan

Grade Level: 6th – 8th

Subjects: Science, Math

Objectives: Students Will Be Able To:
1. Plot a 2 meter by 2 meter unit using the Pythagorean Theorem
2. Determine the location of artifacts on a unit surface
3. Create a map of the artifacts on a unit surface
4. Create a table and graph to record the artifacts on a unit surface

WI Standards: -Science C.8.1-8.4
-Math D.8.3-8.4

Duration: 3 days

Materials/Supplies: Day 1: Tape Measures, Calculators, Nails, String, Compass
Days 2 and 3: Computer Paper, Graph Paper, Pencil, Tape Measures

Vocabulary: -Datum - a specific spot assigned as the basis for measurement when doing an archaeological excavation
-Unit - a specific spatial area on a coordinate system, designated by the coordinate of one corner
-Artifacts - something made or used by humans
-Context - the relationship artifacts have to each other and the situations in which they are found

Background: Sites get disrupted during the excavation process, so archaeologists record them to preserve the context of the artifacts. Archaeologists preserve context on paper by creating a grid system and maps of the artifacts they find. One of the first step in excavation is to create a grid. Coordinates can be used to create the grid and to indicate the direction from the chosen

datum point (0, 0). Once the grid is set up, the artifacts within that grid can then be measured and mapped.

- Setting the Stage: At the start of Day 1, students will brainstorm ways that they can accurately map and record artifacts found at the surface of a site.
- Procedure:
1. Students will work in groups of three to plot a 2 meter by 2 meter unit on school grounds using the Pythagorean Theorem. The students unit must fit within the grid system laid out by the teacher and have one side facing due north.
 2. Students will create a map of the unit. They will measure and record the location of artifacts found on the surface of their unit. Then they will draw a picture and label each artifact on the map.
 3. Students will use their maps to create a table to count and name the artifacts found in their unit. When they complete the table, they will create a graph of the information.
- Closure: Students will share their ideas about the importance of gridding and mapping sites.
- Evaluation: Student's units will be checked for correct size and direction. They will hand in their maps, tables, and graphs. All three assignments will be graded.
- Links/Extension: This lesson could be linked to a lesson about context. This lesson would be a great lesson to team teach with the Math teacher.
- References MVAC website at: <http://www.uwlax.edu/myac/>