



Mississippi Valley Archaeology Center  
1725 State Street  
La Crosse, Wisconsin 54601  
Phone: 608-785-6473  
Web site: <http://www.uwlax.edu/mvac/>

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: 6<sup>th</sup> – 8<sup>th</sup>

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:	<ol style="list-style-type: none"><li>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.</li><li>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.</li><li>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.</li></ol>
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: <a href="http://www.uwlax.edu/mvac/">http://www.uwlax.edu/mvac/</a>