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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:	Gridding a Site
Submitted by:	Robin Hosemann and Andrea Christopherson
Grade Level:	Adaptable for grades 6-8
Subjects:	Math, Reading/Language Arts, Science, Social Studies
Objectives:	 Students will: 1. Make detailed observations of effigy mounds 2. Log sketches, observations, and measurements in science notebooks 3. Determine a scale measurement 4. Create a grid to scale of a set of mounds from Effigy Mounds National Monument on graph paper 5. Re-create drawings at larger scale in school parking lot 6. Use handheld GPS unit to measure mounds
WI Standards:	-Math A.6.1, A.6.3, B.6.1, B.6.2, B.6.3, B.6.5, B.6.7, C.6.2, C.6.3, C.6.5, D.6.1, D.6.2, D.6.4 -Language Arts/Reading A.6.1, A.6.3, A.6.4, B.6.1 -Science A.6.3, C.6.8, G.6.7, G.6.6 -Social Studies B.6.1, B.6.12
Duration:	3 Class Periods
Materials/Supplies:	-Graph Paper -Science/Naturalist's Notebook -Effigy Mound Guides -Side walk chalk -Yardsticks, rulers, tape measures, meter sticks -Handheld GPS units (1 per group of students)
Vocabulary:	Effigy, scale, mound builders, earthworks, conical, symbol, culture, extended burial, cremation, flexed burial, bundle burial, linear, compound

Background:	Teachers and students should have a basic familiarity with Pre-European cultures in Wisconsin and the surrounding areas. Students should also have basic measuring skills. Students will have had prior practice using handheld GPS units.
Setting the Stage:	Students will be introduced to a variety of mounds through the informational video at the visitor's center at Effigy Mounds National Monument. Each student will receive a map and guide of a particular trail, and portions of the guide can be read aloud or in partners.
Procedure:	 Students will view the mounds on the trail in small groups of 3-4, led by an adult chaperone. After all mounds are viewed, students will select one mound or a set of mounds for their project. Students will work together to measure the mounds with the handheld GPS units (as accurately as possible from a reasonable distance, respecting park rules) and they will record their data, the arrangement of the mounds, sketches, and observations of the locale in their science notebooks. When students return to the classroom, teacher will guide them to use graph paper to sketch the arrangement of the mound. They must determine the scale for one unit on the graph paper to equal a unit of actual measurement.
Closure:	In a separate class period, groups will recreate their mounds on in the school parking lot using sidewalk chalk. Students will be able to view each others' work.
Evaluation:	Teacher will evaluate the scale drawings for accuracy and the science notebook entries for detail and accuracy.
Links/Extension:	Extensions include asking students to design a scale drawing of their own effigy mound and explain the significance of their symbol or shape choices in a journal entry.
References:	<u>Effigy Mounds National Monument Fire Point Trail Guide</u> , Eastern National Parks, 1999.