



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: Filling in the Picture
- Submitted by: Cheryl Awtrey
- Grade Level: With some minor changes, this lesson could be used with any grade level./
- Subjects: Science, Social Studies, Math
- Objectives: By planning what parts of a site to excavate and participating in the follow-up reading and discussion students will:
1. Discover some of the problems inherent in choosing sites and what parts are chosen for excavation.
 2. Evaluate and explain their choices for study.
 3. Articulate the process of archaeological research at a basic level.
- WI Standards: -Science A.8.3, B.8.3, C.8.4, C.8.6
-Social Studies B.8.4
-Math C.8.5
- Duration: One class period (40 - 45 minutes)
- Materials/Supplies: -10 x 6 grid with row and column labels (enough for 2 copies per student)
-Completed map and diagram for teacher
-Copy of "Current Science" magazine
-Observations worksheet for each student
- Vocabulary: -Site – A geographic place where there is evidence of past human activity.
-Hammerstone – The stone used to strike a core in order to detach flakes.
-Pot sherd – piece of broken pottery
-Midden – A surface used for trash disposal, often characterized by a dark stain or an accumulation of debris.
-Unit – A defined horizontal area that will be systematically excavated, such as a 2 X 2 meter square.
-Core – The parent stone material from which flakes are struck.
-Flakes – The pieces of stone struck off a rock in the reduction sequence

(flintknapping), each usually having a striking platform, bulb of percussion, and similar identifying features.

-Flint knapping – The process of chipping stone into shapes usable as tools or for expressive purposes.

Background: Archaeology is all about recreating something from the past based on the evidence. Because of the constraints of time and money, it is usually not practical for an archaeologist to excavate all of a site. Indeed, one of the more difficult tasks is to decide what parts of a site to explore thoroughly. Thanks to movies, television, and books most individuals know a little about the process of archaeology. Seldom do such popular works deal with the preliminary tasks of selecting a site and sifting through the material to begin to see where it might be best to investigate. Further, most individuals outside of the field do not realize the tremendous amount of history that is lost to development of roads and businesses.

Setting the Stage: Use the Mystery Photos page from the "Current Science" magazine. Have students try to guess what is in the picture so that they begin to see that how you look at an object or what part of an object you see influences how you interpret it.

Procedure:

1. Put a large copy of the 10 x 6 grid on the board or overhead. Explain to students that this area represents a native site in south central Wisconsin. As archaeologists, they have the time and money to explore only 25 (or one for each student in your class) sections of the site. They need to choose which sections they want to investigate. You can have the class work all together or in small groups to decide which sections to excavate.
2. Reveal the selected section contents. Have the students describe as much as they can about the site using the information given. This can be done orally as a group or as individuals in writing.
3. Announce that the group has just received a very generous grant allowing them to double the number of sections excavated. Have the students again select which sections to excavate.
4. Reveal the selected section contents. Have the students describe as much of the site as they can using this new information. Be sure to have them explain how the additional information changed their interpretation.

Closure: As a group, discuss the different interpretations made by the differing choices the group made. (If this lesson is undertaken in more than one class, it might be interesting to have students compare their results with those of another group.) Help students to reflect on the amount of historical information that has been lost through construction and agricultural processes.

Evaluation: Have students turn in their sheets explaining what they understand about the culture at each step and how their interpretations changed as

information was added.

Links/Extension: 1. Art or technical education teachers may want to be a part of this activity since both often use grids in the reproduction of information.
2. Intrigue of the Past: A Teacher's Guide for Fourth through Seventh Grades - Lesson 9: Gridding a Site

References: To use illustrations from Wisconsin history, access the Mississippi Valley Archaeology website:
<http://www.uwlax.edu/mvac/PreEuropeanPeople/EarlyCultures/index.html>

Filling in the Picture Completed Grid Contents

	1	2	3	4	5	6	7	8	9	10
A	2 potsherds 1 core 156 waste flakes- secondary and tertiary	5 potsherds 2 cores 1 hammerstone 1 stage 2 bifaces 146 waste flakes- secondary and tertiary	9 potsherds 2 cores 1 hammerstone 1 stage 2 biface 229 waste flakes- primary, secondary and tertiary	6 potsherds 1 core 3 stage 2 bifaces 155 waste flakes- primary, secondary and tertiary 29 bones	5 potsherds 2 modified flakes 9 waste flakes- tertiary 22 k g. FCR 12 g. charcoal 58 bones	6 potsherds 3 modified flakes 14 waste flakes- secondary and tertiary 26 kg. FCR 15 g. charcoal 26 bones	5 potsherds 18 modified flakes 44 waste flakes- tertiary 25 kg. FCR 15 g. charcoal 38 bones	2 potsherds 12 kg. FCR 5 g. charcoal edge of shell midden 2 bones	3 potsherds dense layer of mussel shells 6 cm. thick	2 waste flakes- tertiary dense layer of mussel shells 8 cm. thick
B	6 potsherds 2 points 1 hammerstone 3 stage 3 bifaces 224 waste flakes- secondary and tertiary	9 potsherds 1 hammerstone 2 stage 3 bifaces 119 waste flakes- secondary and tertiary	13 potsherds 1 core 1 stage 2 biface 339 waste flakes- primary, secondary and tertiary	8 potsherds 2 stage 2 bifaces 1 stage 3 biface 1 hammerstone 228 waste flakes- primary, secondary and tertiary 15 bones	6 potsherds 1 point 1 core 2 stage 2 bifaces 112 waste flakes- secondary and tertiary 15 kg. FCR 8 g. charcoal 38 bones	14 potsherds 1 point 2 cores 3 stage 3 bifaces 146 waste flakes- secondary and tertiary 26 kg. FCR 12 g. charcoal 6 bones	12 potsherds 29 modified flakes 33 waste flakes- secondary and tertiary 29 kg. FCR 18 g. charcoal 15 bones	3 potsherds 6 kg. FCR 6 g. charcoal edge of shell midden	1 potsherds 2 modified flakes dense layer of mussel shells 7 cm thick	1 point 21 waste flakes- tertiary dense layer of mussel shells 9 cm thick
C	15 potsherds 3 points 110 waste flakes- secondary and tertiary	9 potsherds 2 points 166 waste flakes- secondary and tertiary	15 potsherds 3 points 1 stage 1 biface 1 hammerstone 442 waste flakes- primary, secondary and tertiary	16 potsherds 5 modified flakes 133 waste flakes- secondary and tertiary 5 bones	22 potsherds 6 modified flakes 22 waste flakes- secondary and tertiary 3 bones	17 potsherds 11 modified flakes 68 waste flakes- secondary and tertiary	31 potsherds 2 knives 15 modified flakes 98 waste flakes- secondary and tertiary	11 potsherds 1 knife 5 modified flakes edge of shell midden	1 potsherds 2 waste flakes- tertiary dense layer of mussel shells 6 cm thick	Dense layer of mussel shells 8 cm thick
D	6 potsherds 6 modified flakes 56 waste flakes- secondary and tertiary	8 potsherds 11 modified flakes 116 waste flakes- secondary and tertiary	6 potsherds 5 modified flakes 345 waste flakes- secondary and tertiary	9 potsherds 1 scraper 3 modified flakes 1 hammerstone 89 waste flakes- secondary and tertiary	16 potsherds 1 knife 11 modified flakes 89 waste flakes- secondary and tertiary	8 potsherds 14 modified flakes 78 waste flakes- secondary and tertiary	15 potsherds 1 knife 15 modified flakes 55 waste flakes- secondary and tertiary	11 potsherds 6 modified flakes 54 waste flakes- secondary and tertiary edge of shell midden	1 potsherds 1 waste flake- tertiary dense layer of mussel shells 5 cm thick	3 waste flakes- tertiary dense layer of mussel shells 8 cm thick
E	8 potsherds 5 modified flakes 142 waste flakes- secondary and tertiary 4 kg. FCR 6 g. charcoal 28 bones	15 potsherds 3 modified flakes 52 waste flakes- secondary and tertiary 8 kg. FCR 6 g. charcoal 29 bones	11 potsherds 6 modified flakes 32 waste flakes- secondary and tertiary	3 potsherds 1 point 9 modified flakes 49 waste flakes- secondary and tertiary	9 potsherds 5 modified flakes 56 waste flakes- secondary and tertiary	8 potsherds 9 modified flakes 32 waste flakes- secondary and tertiary	14 potsherds 1 knife 8 modified flakes 48 waste flakes- secondary and tertiary	6 potsherds 6 modified flakes 34 waste flakes- secondary and tertiary edge of shell midden	5 potsherds 3 modified flakes dense layer of mussel shells 6 cm thick	1 potsherds 8 waste flakes- tertiary dense layer of mussel shells 8 cm thick
F	15 potsherds 9 modified flakes 21 waste flakes- secondary and tertiary 5 kg. FCR 6 g. charcoal 16 bones	14 potsherds 1 drill 5 modified flakes 45 waste flakes- secondary and tertiary 11 kg. FCR 2 g. charcoal 18 bones	6 potsherds 1 knife 3 modified flakes 55 waste flakes- secondary and tertiary	15 potsherds 1 drill 9 modified flakes 78 waste flakes- secondary and tertiary	8 potsherds 2 scrapers 5 modified flakes 36 waste flakes- secondary and tertiary	9 potsherds 1 knife 3 modified flakes 47 waste flakes- secondary and tertiary	5 potsherds 2 knives 1 drill 1 scraper 9 modified flakes 32 waste flakes- secondary and tertiary	12 potsherds 3 modified flakes 32 waste flakes- secondary and tertiary edge of shell midden	2 waste flakes- tertiary dense layer of mussel shells 5 cm thick	dense layer of mussel shells 7 cm thick

FCR – Fire Cracked Rock