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This lesson was created by a teacher participating in the Eisenhower Professional Development Project/Elementary and Secondary Education Act Title II grant entitled *Using Archaeology as an Integrated Gateway to Teacher Professional Development*.

Title: Investigating the *Mammoth Mystery*

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Grade Level: 4

Subject: Social Studies

Objectives:

1. Operate a computer and proceed through a web activity.
2. Examine data collected on an archaeology dig.
3. Interpret the information and record it on a worksheet.
4. Formulate conclusions based on the data that is found.
5. Determine skills needed and appreciate the work of an archaeologist.

WI Standards:

History: A.4.4, A.4.5, A.4.8, B.4.a, B.4, B.4.10
Science: A.4.2, A.4.3, B.4.1, C.4.1
Math: D.4.1, E.4.1
Media and Technology: E.4.1

Duration: 2 class periods of an hour each or more if needed

Materials:

- Computer Lab with access to website: wisconsinhistory.org Click on Kids, then *Mammoth Mystery*.
- Student worksheet for *Mammoth Mystery*. I have made a guide sheet for students to use with *Mammoth Mystery*. There is also one available under School Services/Lesson Plans at the Historical Society's web site. It is a very general worksheet and could be used on any web site search. Mine is tailored specifically to the *Mammoth Mystery* activity.

Vocabulary:

- Paleo-Indians
- Mammoth
- Mastodon
- Radiocarbon dating
- Grid

-Excavate
-Archaeologists

- Background:** In 1964 a Kenosha county farmer uncovered mammoth bones in a low-lying field. They were given to the county museum. They sat there for thirty years when a curious archaeologist wondered if the cut marks on the bone were made by humans. This led to a thorough search of the original area where answers to the questions were found. The students will go on a virtual dig to see the amazing discovery.
- Setting the stage:** On the first day, guide a reading of the short passage in the text about archaeologists, artifacts, and Paleo-Indians. Using a timeline, help students to visualize how long ago this time period was.
- Procedure:**
1. Use a computer projector to introduce the web site, explaining the use of the icons: forward and backward arrow points, ear (replay audio), magnifying glass (to know more about it), and book page (glossary). Children will need headphones with their computer.
 2. Explain the sequential arrangement of questions on the worksheet and the asterisks that are intended for further exploration and challenge. (At this point, the teacher may wish to do “Number 5” listed below. I chose to read the story afterward in order to let students feel the suspense and anticipation of “discovery”.)
 3. Allow 30 to 45 minutes for students to go on their own “dig”. Some students may need extra time for reading and listening.
 4. On the next day, or when all are done, allow time to share their experience. Lead students to appreciate the persistence that is required of archaeologists. Ask them what other traits and skills an archaeologist needs.
 5. Read pages 13 to 17 in *Digging and Discovery*. This retells the story of the mammoth find and will help to fill in the gaps that some students may have in their knowledge, especially if they had difficulty with some worksheet questions.
- Closure:** Generate a list for the marker board or on a poster to display in the room. On this put the words “Mammoth Mystery” or a picture. On the left, list phrases that tell important findings from the web site search. On the right, list words that describe skills and traits that an archaeologist needs (e.g. curious, persistent, willing to take risks, thorough)
- Evaluation:** Teacher observation during closing discussion. Collect *Mammoth Mystery* worksheets.

Links: Math - grids, metric measurement in meters.
Science – careers in science, the inquiry process

Extension: Language – Invite students to create a story about making a special “find”
in their yard, farm, or neighborhood

References: Supplemental Resource
Digging and Discovery: Wisconsin Archaeology, State Historical Society
of Wisconsin - Office of School Services, 2000

Text
The Wisconsin Adventure, Apple Corps Publishers, 2000

Mammoth Mystery
An Online Archaeology Search

Directions: Go to www.wisconsinhistory.org. Click on “Kids” to find this activity. The * questions are challenge questions. They go with the blue magnifying lens icon.

1. Where can this huge mammoth bone be seen?

1* Explain how the teeth of a mammoth and mastodon are different.

1* Which of the two animals had a more sloping back?

2. Draw a sketch of the other side of the bone. Show what was found.

2* What are things that could cause marks on the bone?

3. When was the bone found?

4. What was Franklin Schaefer doing when he uncovered the bones?

5. Plat maps are useful because they show (finish the sentence)...

6. What did an archaeologist do in 1964 that helped archaeologists when they came back many years later?

6.* In the days of the mammoths, the land was not a soybean field. Describe what it was like.

7. The archaeologists were confused because in 1968 something had been moved. What had the farmer moved that year?

- a. field
- b. shovel
- c. fencepost

8. Joyce and Overstreet made a grid that was made of squares that were how many meters square?

- a. one
- b. two
- c. three

8* Why do archaeologists call the top 10 to 12 inches the plow zone?

9. Joyce and Overstreet saw that the bones were taken apart. It was a clue that the animal ... (which is the best one?)

- a. laid down and died right there
- b. was killed by humans
- c. was butchered by humans

10. The paleo kid said that the upright rib bone was used as a marker because... (explain why?)

11. Radiocarbon dating helps archaeologists to find out (circle it)

- a. how heavy things are
- b. how old things are
- c. how big things are

11.* When you click to get rid of the youngest and oldest years, what are the ages of the 2 bones that are left?

12. Match up the 4 kinds of evidence with the clues listed below:

- a. bone pile
- b. bone cuts
- c. stone tool flakes
- d. standing rib marker

(Write the letter in the matching blank.)

____people made these and left them behind

____people moved them around

____people left this signpost so they could come to it later

____people had been removing meat from the bones

12. *How did the archaeologists show that they were persistent? Give examples.

13. *What are other skills that archaeologists need to do their job?

14. *Look in the “Glossary” icon. After the glossary words, there is a “Cast of Characters” to read. Which person (or persons) do you think played the most important role in solving the Mammoth Mystery? Name that person and state the reason for your choice.