

WHO IS IT FOR?

- ◆ Young Scientists . . .
- ◆ Evolving Mathematicians . . .
- ◆ Emerging Linguists . . .
- ◆ Sprouting Historians . . .
- ◆ Budding Artists . . .

TARGETED LEVEL:
(Second Grade)

THE CHALLENGE:

The students will . . .

- ⇒ understand how archaeologists “map” their finds.
- ⇒ classify objects based on given information.
- ⇒ interpret and use charts, graphs, and pictographs.
- ⇒ construct reasonable explanations and draw conclusions using given information and prior knowledge.

SAFETY ISSUES & CONCERNS:

- * None

WHAT'CHA NEED?

6. Site grid sheet from dig.
7. Activity sheet for each student.

**TIME NEEDED FOR
THE *post-visit* Activity:**
Minimum of 45 minutes.

Archaeology



Post-Visit Activity

Through the archaeological experience both with the *pre-visit* activity and within the dig site at the Elm Fork Education Center, the students learned the importance of accurate recording of information or data. The step beyond the recording of the data is the actual interpretation and/or use of that data.

The student archaeologists at the Elm Fork Education Center, probably uncovered two basic types of remains, artifacts, which are objects that were either made or modified by humans, or ecofacts, which are the remains of plants and/or animals which are objects from nature itself. Even though ecofacts are natural remains, they usually are found around other human artifacts as they were more than likely accumulated by humans for use as food, etc. Archaeologists attempt to determine the age of both artifacts and ecofacts and they also attempt to use them to make discoveries about the individuals who came before us.

Once the artifacts and ecofacts have been cataloged, cleaned, drawn (or photographed), classified and dated, archaeologists will use a process known as *spatial analysis* in order to examine how these materials are distributed across the entire site. *Spatial analysis* is the means by which archaeologists study how and why the remains that have been uncovered are spread out over a particular area. Archaeologists will attempt to determine whether the site that they have uncovered is a single structure, or whether it might be part of a settlement or whether it might even be part of a much larger picture, involving a series of sites spread over a larger area.

At the dig site, each group collected their data on their team grid sheets and then transferred that information onto the entire *site* grid sheet. In this *post-visit* activity the students will use the process of spatial analysis in order to interpret the data they collected from the dig site. The students will read their *site* grid sheet as a map and will communicate the locations of the artifacts using grid coordinates.



WORDS TO KNOW?

8. Archaeology
9. Archaeologists
10. Artifacts
11. Mapping
12. Grids and/or quadrants
13. Coordinates
14. Spatial Analysis

DID YOU KNOW . . .

A map's symbols are usually defined in a key or a legend, located somewhere on the map itself?

Lines of latitude and longitude form a map's geographic grid?

The scale to which a map is drawn usually represents the ratio of the distance between two points on the earth and the distance between the two corresponding points on the map?

EXTRA STUFF?

Related books/stories and on-line sources:

Archaeological Excavation:

www.civilization.ca/indexe.asp

Archaeology:

www.museum.upenn.edu

TEKS

CONNECTIONS:

Science TEKS - Second Grade:

2.2 (D) – Students will gather information using simple equipment and tools to extend the senses.

2.2 (E) – Students will construct reasonable explanations and draw conclusions using information and prior knowledge.

Denton ISD Science S.P.O – Second Grade:

S1.1 – The student will observe, ask questions, and follow the steps of simple investigations, listen, share ideas, and report on group findings with emphasis on collection of quantitative data.

S3.2 – The student will recognize, analyze, predict, illustrate, and demonstrate patterns and changes in organisms, objects, and events.

psst . . .

The data obtained from the archaeology site can be used in a variety of math applications! Feel free to use any and all of it for as many math lessons as you want or need!

PROCEDURES::

Ready, Set, Go . . .



1. Discuss with the students their experience at the Elm Fork Education center and begin a discussion about maps and **the uses** of maps.
2. Write on the board all of the maps that the students can think of. What are the differences between these map types? What are the similarities? Why is there a need for different types of maps?
3. What do the students think of the maps they created?
4. As the discussion begins to wind down, display the large *site* grid sheet (which was completed at the EFEC) at the front of the room.
5. Discuss the *grid coordinates* with the students and explain how to use those coordinates to communicate the location of an artifact.
6. Give the students the activity sheet (enclosed) and work the first quadrant with them. Have them complete the activity, either in groups or as individuals.
7. When the activity has been completed, go over the possible answers with the students. What is the value of using coordinates to locate items on a map?
8. As a final step, help the students extract information from the data. For instance, help the students find the relationship between once living organisms and nonliving objects – possibly, there were 5 artifacts from something that was once living in relation to 20 nonliving objects (combination of pottery, stone, and spear points). This relationship might be shown as 5/20 or, that for every 1 artifact from something that was once living, they found 4 objects that were nonliving.
9. If the students were successful with the activity, summarize the experience by discussing the importance of recording and mapping as they relate to archaeological sites. (The activity can be repeated to ensure success for all students.)
10. Take the students to the library and encourage them to check out books about archaeology or archaeologists or take the students to the computer lab and allow them to interact with the Virtual museums listed to the left under *Extra Stuff!*

Assessment:

Teacher observation
Activity Sheets



The Bottom Line: This post-visit activity is designed to provide an opportunity for the students to interpret the data they collected at the dig site, and to reinforce the use of maps and mapping.

Locations On A Grid Activity

Grid maps allow archaeologists to record the exact locations of the artifacts they uncover. Using the Site grid sheet, completed at the Elm Fork Education Center, see if you can name the grid squares/coordinates where the artifacts were found.

1. Pieces of grinding stone _____
2. Buffalo bones _____
3. Deer bones _____
4. Pieces of pottery _____
5. Spear points _____
6. Grinding tools _____
7. How many locations were there where nothing was found? _____
8. What are the grid coordinates of the locations where nothing was found? _____