

Location, Location, Location: Using a Grid to Determine Context



Subject and Grade Math and Social Studies, 5th grade

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Time duration One or two 45-minute class periods

Overview This lesson introduces students to making inferences about artifacts based on context, or where the artifact is located in relation to other artifacts or its surroundings. This lesson also reinforces the use of a grid system to find location.

Objective Students will use a grid system to study archeology, make inferences about artifacts, and make conclusions about the past lifeways of ancient Texas.

TEKS *Mathematics, Grade 5*
(1A), apply mathematics to problems arising in everyday life, society, and the workplace
(1D), communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate

(8C), graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table.

Social Studies, Grade 5

(5.23A), differentiate between, locate, and use valid primary and secondary sources such as technology; interviews; biographies; oral, print, and visual material; documents; and artifacts to acquire information about the United States

(5.24A), apply mapping elements, including grid systems, legends, symbols, scales, and compass roses, to create and interpret maps

Materials

- “Using a Grid System to Place Artifacts in Context” handout (included)
- “A Grid Map of the Artifacts” handout (included)
- “Archeological Site Analysis” handout (included)
- A set of clue cards for each group (included)
- Three signs that say “Area 1” “Area 2,” and “Area 3” respectively
- 11 signs with letters A through K (one letter on each sign)
- Tiled floor or taped grid on the floor

Activities and procedures

Step 1: Place the signs on the wall or around the room as follows: under “Area 1,” put the letters B, D, J, and K; under “Area 2,” put letters C, E, G, and I; under “Area 3,” put letters A, F, and H.

Step 2: Divide students into groups of four. Give each group the handout “Using a Grid System to Place Artifacts in Context.” Explain that archeologists learn important information from artifacts based on where they are found in relation to other artifacts and the surroundings.

Step 3: Designate a recorder, leader, materials person, and secretary. Students follow the procedure on their handout, “Using a Grid System.”

Step 4: Students prepare the handout “A Grid Map of the Artifacts” by numbering each block 1-15, across the top of the horizontal axis, and putting letters A-O along the vertical axis, with A at the top (therefore the top block on the left will be A1). Then students record the coordinates from each area and each artifact of the grid. As a guide to creating their grid map, they should use the floor tiles. Each floor tile should represent one square on their grid system. If some of the tiles are rectangular, ask the students to have two grid boxes for each tile or tape the grid onto the floor.

Step 5: Based on the information in their grip map, students arrange the artifact cards into three separate areas.

Step 6: Students then answer the questions on “Archeological Site Analysis” sheet.

Note: Even if the dimensions of the tiles are not exactly square, they should still be used to guide students in locating artifacts or items on their grid.

Closure Have students select one of the areas and discuss how the artifacts and clue items in that area tell them what happened in the past.

Extension Activities The group shuffles the clue cards and then selects three cards in random order. Students write down what they think might have happened in an area if these three clue cards were found close together.

Assessment Students will correctly complete the “Using a Grid System” handout, “A Grid of Artifacts” and “Coordinate recording table” handout, and “Archaeological Site Analysis” handout.

Archeological Site Analysis

1. Throughout the room, you will notice that there are three areas with specific artifacts and clue items. Describe what you have found in each area.

Area 1:

Area 2:

Area 3:

2. Based on the items found in Area 1, describe what you think happened here. What do you think happened to the animal?

3. Based on the relation of the items to each other, describe what kinds of activities took place in Area 2.

4. In Area 3, describe what you think happened. Why do you think there is a string of shells placed around the head of the human?

5. Imagine that in Area 3, you found no shell and cordage, but instead found an arrowhead near the bones. What would you think happened now?

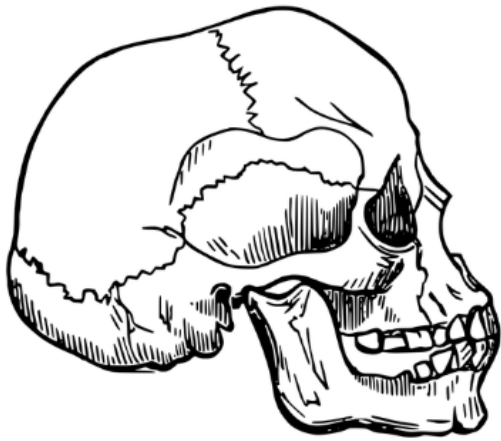
6. Based on the location of each item, what is the difference between the purpose of the rocks with sharp edges (item B) and the burned rock (item E)?

7. Based on Areas 1 and 2, what kinds of things do you think these people eat? What leads you to this conclusion?

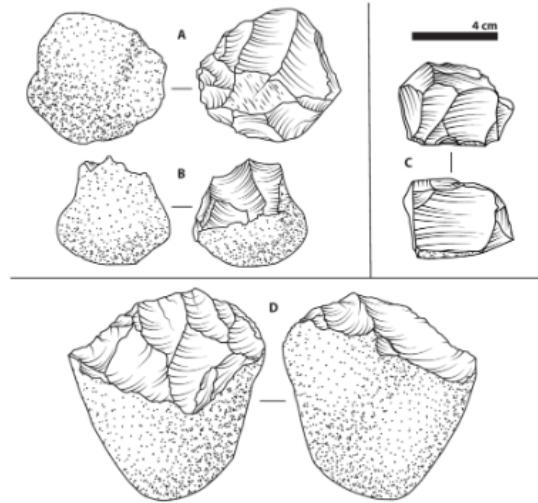
8. In what ways is context important to determining the function of artifacts?

Artifact and Clue Items

Clue Item A:
Human Skull



Artifact Item B:
Rocks with Sharp
Edges



Clue Item C:
Corn



Clue Item D:
Animal Skull



Artifact Item E:
Burned Rock



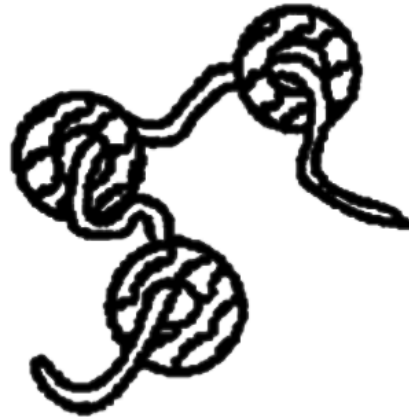
Clue Item F:
Bone



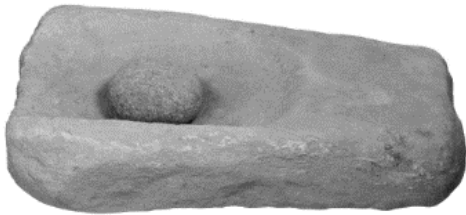
Clue Item G:
Mussel Shell



Artifact Item H:
Shells and Cordage



Artifact Item I:
Mussel Shell



Clue Item J:
Bone



Artifact Item K:
Arrowhead



Using a Grid System to Place Artifacts in Context

Introduction: In archeology, context refers to the relationship artifacts have to each other and the situation in which they were found. Context provides important clues about the artifact and what it was used for. Therefore, archeologists are careful to record the exact location where each artifact is found.

The purpose of this activity is to make you more aware of how important context is. You will make a grid map of the classroom and record the locations of several artifacts and clue items throughout the room. Please follow the instructions carefully.

Group Products:

1. A grid map of the classroom. This grid map should be drawn to scale using the floor tiles as your guide. Make sure that you are using the proper lengths according to the grids.
2. Draw artifacts and clue items where they are located on the grid.
3. Answer the analysis questions on the next page.

Activity:

Step 1: Have students get into groups of 3 or 4.

Step 2: Each person will receive a grid form. With the help of the other group members, everyone will plot and draw the location of the various artifacts and clue items in the classroom

Step 3. Along the top of the grid label each line (1-15). Make sure you begin with the very top line of the grid.

Step 4. Now, letter the grid along the left side with A, B, C, D, E, and so forth. This means that the top left corner of the grid should be marked 1A.

Step 5. There are several signs that represent an artifact or clue item located on particular places throughout the room. Some of them are on the desks, some elsewhere. **Do not touch or remove the signs.**

Step 6. Draw these signs on the grid system. The other group members should help locate each sign and make sure each person has drawn the artifact or clue items correctly on the grid. Write down the coordinates of each sign on the Coordinate Recording Sheet.

Step 7. Once the grid map is completed, arrange the clue cards in order of where they were found on the grid. Turn to the Archeological Site Analysis Form and answer the questions about each area.