



## Geography: Introduction to Mapping

### Grade Level:

Grade 5-8 (adaptable to other grades by modifying difficulty).

### Time Frame:

35 minutes

### Learning standard:

- Locate, describe, and explain places, regions and features on a map.
- Use maps and other geographic representations and instruments to gather information about people, places, and environment.

### Goals:

- Understand geography with an emphasis on the school map.
- Use paper maps to answer and ask geographic questions.
- Analyze how various map projections distort shape, area, distance, and direction.
- Interpret patterns in a variety of maps, charts, and graphs to display geographic information (contour, cartogram, population, natural resource, historical maps).

### Purpose:

The lesson builds up slowly to read Map Grid References for later learning and practice orienteering. Orienteering is a navigation and sport activity that incorporates walking or jogging, determining directions, and map reading. The object of the activity is to use a map and compass to locate specific points in each area.

### Game Objective(s):

Students will:

- Locate places on a map
- Use the map with grids to find a place and/or clue/s
- Identify and plan the efficient and safe way to move from one place to another on the map.

### Materials

- Map Grid References of the school with 'northings' and 'eastings'.
  - (Make a copy of the map for each group of 2-4 students)
- Clue/s inside an envelope
  - (one set for each group)
- Compass
  - (as many as groups)
- Treasure
  - (one set for each group)

### Pre-work:

- Hide between 6-8 Clues (each inside an envelope) with the coordinates numbers (eastings and northings) in different places on the school area that is drawn on the map.
- Hide some candies in the last envelope as treasure. We can use different colors or numbers on the envelope to identify the group/s.



- Ask the students to look at the map and using their compass, and identify North. Identify which direction the wind is coming from.
- To learn more about grid systems
  - [How are UTM coordinates measured on USGS topographic maps? | U.S. Geological Survey](#)

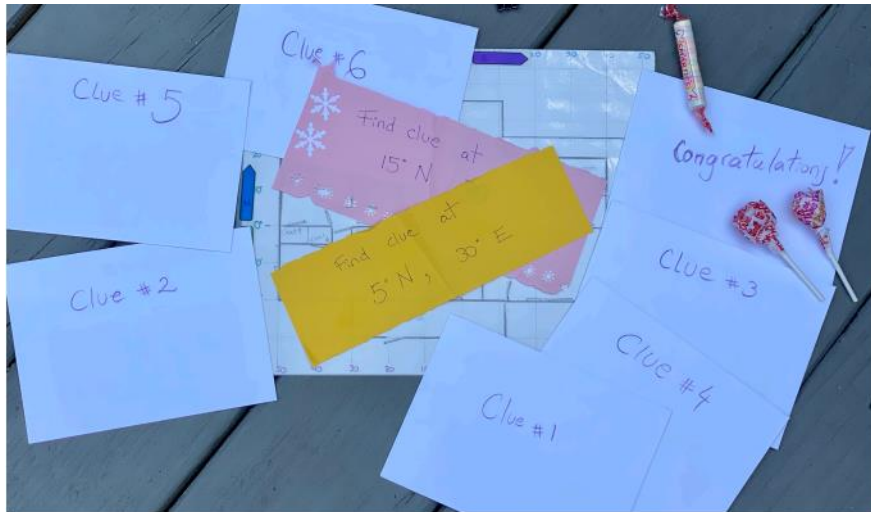
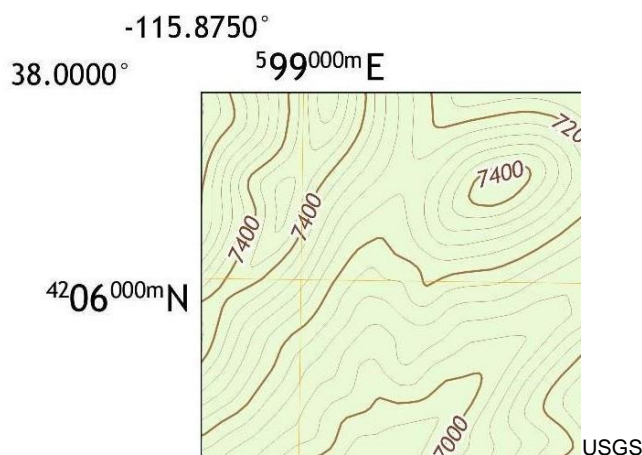


Photo Credit: Karina Guzman

## Activity Steps:

1. I will ask students what places are in the map and let them identify a specific place with the Map Grid Reference.
2. I will explain to the students: What is the main purpose of grid reference? - A grid of squares helps the map-reader to locate a place.
  - a. The vertical lines are called 'eastings' and the horizontal lines are 'northings'. - Grids are numbered, and the numbers increase to the east and north.



- b. Grid references are useful for helping a map user to find specific locations.
3. Explain to the students that we are going to talk about the map to understand the features and how to find them.
  4. Ask the students about locations or places and guide a discussion using the interpretation of the map. Questions that I will ask to the students will include:
    - a. Where is located the school entrance, gym, etc.?



- b. What is the fastest and secure way to go to the parking lot?
  - c. What other things do you see on the map? ...
5. Explain the activity to the students: **The Treasure Hunt Geography Game.**
6. Write the first clue on the map leading to the envelope with the next clue and so forth
7. Before beginning, talk about:
  - a. Working as a team
  - b. Safety, reduce the risks of accidents!
8. Then, ask if the students have any questions before starting our game.
9. Explain that at the end of the activity there will be a wrap up or conclusion conversation.
10. Give the groups their map and tell them to read the 'easting' and 'northing' coordinates at the bottom of the map to find their next first clue.



NPS Photo/S.Geiger

Have fun!

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