

Playground Grid

Summary

Students will learn about latitude, longitude, and how to read a grid.

Main Core Tie

Social Studies - 4th Grade

[Standard 1 Objective 1](#)

Time Frame

1 class periods of 90 minutes each

Group Size

Large Groups

Materials

- 1.) Red Yarn
- 2.) Green Yarn
- 3.) Black Yarn
- 4.) Plastic Forks
- 5.) Boxes decorated to look like treasure chests and labeled 1-10 on the bottom of the box. (These boxes can be made from shoe boxes or pre-decorated treasure chest boxes can be purchased relatively inexpensively at most party supply stores)
- 6.) Small prize incentive for students (coupon for 5 minutes extra recess, coupon for the class to be able to listen to music during a work time, coupon for a class reading lock in)

Background for Teachers

People use hemispheres and latitude and longitude lines to identify specific locations on earth's surface. The earth has four hemispheres: Northern Hemisphere, Southern Hemisphere, Eastern Hemisphere, and Western Hemisphere. We use the Prime Meridian, which runs north/south, to divide the earth into the eastern and western hemispheres and the equator, which runs east/west, to divide the earth into the northern and southern hemispheres. Longitude lines, like the Equator, run east/west. Latitude lines, like the Prime Meridian, run north/south. Each line of longitude or latitude is assigned a degree. Thus a sample latitude longitude reading is (40° N, 111° W) or the location of Salt Lake City, Utah. Both the Prime Meridian and the equator are zero degrees.

Instructional Procedures

Preparation:

- 1.) Number the boxes 1-10. Make sure to put the number on the bottom of the box.
- 2.) Print attached clues and put clues in corresponding box (clue one in box one, clue two in box two, etc).
- 3.) Put the prize or a coupon for the prize in box ten.
- 4.) Steps 4-10 must be done on the day of the activity and will take approximately 45-60 minutes to complete. Begin by laying out your Equator using red yarn. Make sure your Equator is long enough that all 11 lines of latitude will be able to cross it.
- 5.) Using the green yarn lie out your Prime Meridian so that it crosses the Equator at approximately the midpoint. Make sure your Prime Meridian is long enough that all 11 lines of longitude will be able to cross it.

- 6.) Use the plastic forks to stabilize the intersection point by stabbing the forked end into the ground over the intersection point.
- 7.) Secure the ends of the Equator and the Prime Meridian by stabbing a plastic fork into the ground at each endpoint and then tying the end of the yarn around the fork handle.
- 8.) Now lie out 5 lines of latitude south of the Equator and 5 lines of latitude north of the Equator using the black yarn. Make sure to secure each intersection and endpoint with a plastic fork.
- 9.) Next lie out 5 lines of longitude east of the Prime Meridian and 5 lines of longitude west of the Prime Meridian using the black yarn. Make sure to secure each intersection and endpoint with a plastic fork.
- 10.) Put chests with the clues inside at the following locations:

Box One: off to the side of the grid

Box Two: 4 South, 1 West

Box Three: 0 (Equator), 1 West

Box Four: 3 North, 4 East

Box Five: 3 South, 4 West

Box Six: 2 South, 2 West

Box Seven: 1 South, 0 (Prime Meridian)

Box Eight: 5 South, 5 East

Box Nine: 3 South, 5 East

Box Ten: 3 South, 3 East

Lesson:

- 1.) Gather students by the grid and read the first clue.
- 2.) Allow students to discuss what coordinates they should go to.
- 3.) Once they have reached a specific set of coordinates send one student to retrieve the clue.
- 4.) Read the new clue.
- 5.) Repeat until the students have completed the coordinate hunt.

Caution:

A large grid made out of string is a serious tripping hazard. Make sure to only send one responsible student into the grid at a time and remind them to watch their step.

This activity works best in a group of approximately five students and could be used as part of a center rotation.

Assessment Plan

Using a map have students identify three locations by longitude and latitude or give students coordinates and have them identify locations falling at given coordinates.

Authors

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