

## MAP GRIDS, CLIMATES AND HEMISPHERES

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### **Purpose**

To develop skills in using a map grid system, to introduce the longitude and latitude system as a way to locate places on a globe, to reinforce the use of direction as it applies to hemispheres and climatic regions; students will be able to use maps in traveling and research. Students will become familiar with the various climatic regions of the world and how a community revolves around the climate in which it is located.

### **Teaching level**

Grades 5-6

### **Geography Standards**

- #1 - How to use maps and other geographic representations, tools and technologies to acquire, process and report information from a spatial perspective.
- #2 - How to use mental maps to organize information about people, places and environments in a spatial context.
- #3 - How to analyze the spatial organization of people, places and environments on Earth's surface.
- #4 - The physical and human characteristics of places.
- #7 - The physical processes that shape the patterns of Earth's surface.

### **Objectives**

At the conclusion of the lesson, students will:

1. Group themselves according to where they live in the community. Students will label their group as being N, S, NW, SW, NE, SE, E, or W of the school. Students will name and label particular landmarks on a map of their community.
2. Compare/contrast the grid and latitude/longitude system used on a globe.
3. Describe the areas which are considered to be tropical, temperate, and polar, based on previous knowledge of climates near the equator. Students will try to determine what affect the earth's revolution would have on temperature/seasons.
4. Be able to decide in which hemisphere particular points would be placed, based on their location in regard to the equator and international dateline.

### **Materials required**

- maps
- atlases
- ditto of neighborhood map
- globes
- markers
- ditto of world map

## **Procedures**

1. Have tags to label the students' desks in climatic regions with a certain color and number. When the students arrive they are given a numbered tag to place on their desks.
2. Using a grid map of the students' desks, students then identify the children sitting in various locations in the room, such as red-3, yellow-1, blue-4, orange-3, and green-2.
3. Distribute maps of the school neighborhood made with grid lines showing. (See attached sample.) Have the children identify where they live on this map. Say to the children, "when you finish locating in which grid section you live, write the direction on the back of the paper indicating whether you live North, South, East, West, etc. on the back of your map. Now find up to three other students who live in the same grid area that you do."
4. Have the groups decide if they have identified themselves correctly by using other reference points on the map.
5. Continue activities with a world map, then a globe. Ask "What is the name of the line located at 00 which runs horizontally across the map and around the globe." Discuss how this line divides the world into a northern and southern hemisphere. Have students decide in which hemisphere the continents are located.
6. Now have students imagine standing on the equator. Discuss what types of plants and animals they might see. Discuss the climate at the equator. Continue this way with plants and animals in the temperate zones and the polar regions.
7. Divide the class into groups according to the three climate zones. Have each group research their climate zone, then make posters and write reports about the plants, animals, and human activities in each of those climate zones.
8. Finally, demonstrate and discuss how and why the seasons change because of the tilt and movement of the earth.

## **Evaluation**

Each child writes directions for another person who has never used a map or globe. Tell the person how to locate a particular place on each. Include details and helpful hints. Also include information about how to identify the four hemispheres.

## **Extensions/Adaptations**

Read I, Columbus, map the route, and chart Columbus's route to the new world. Have students write a diary similar to the one from the book describing what they might have seen, their thoughts, and their feelings about this new discovery. Research animals and the biomes in which they can be found. Make papier mache globes and draw the animals on a certain continent on the globe. Trade globes and have another student identify where each animal is located (continent, hemisphere, biome, longitude, latitude, etc.)

## **Reference**

The Science Library. J.G. Ferguson Publishing Company. vol. IV, pp. 4, 10 - 15, 37.