LESSON PLAN

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Content Area: Social Studies  
Unit Topic: Geography

Today's Lesson: Latitude and Longitude  
Grade Level: Grade 5

Duration: 45 minutes

LESSON RATIONALE

New York State Learning Standards  
Social Studies: Geography

1. How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.

Instructional Objectives:

Students will be able to:
1. Estimate their hometown's latitude and longitude.
2. Locate their hometown and some major U.S. cities on a map.
3. Estimate the cities' latitude and longitude.
4. Use a Web site to find out the cities' actual latitude and longitude, and compare the real coordinates to their estimates.

Adaptations:

Special Education teacher, Cooperating Teachers, and Student Teachers will assist student with finding coordinates and cities on their maps and on the computer.

Materials:

GPS, Computers, Map Worksheets, Latitude/Longitude Charts, pencils, Gazetteer, Globe

LESSON OPENING

Anticipatory Set

Go over Vocabulary Homework. Ask for volunteers to read their definitions.
Say: In the last two classes we have located cities, countries, oceans, etc. by using latitude and longitude lines as guides. Who can tell me what tool we have been using to locate these places? Can anyone name something else that we can use, other than a map, to find places using latitude and longitude lines? (Globe, Gazetteer, GPS, Computer Website)

LESSON BODY

Activities:

1. Go over a description of each of the aforementioned tools used in finding latitude and longitude.
   - **Globe:** show example
   - **Gazetteer:** a dictionary or index of geographical names along with the latitude and longitude coordinates in degrees. Show example and tell what it gives (Name of city, population with year taken, town/country, page in the atlas where it can be found, and the quadrant code for finding it in the atlas). Other gazetteers, not connected to an atlas, show latitude and longitude degree coordinates for all geographic locations, including lakes, rivers, mountains, etc.
   - **GPS:** Global Positioning System, Shows:
     - where you are
     - other places in relation to where you are
     - altitude, speed, bearing (what direction you are moving)
     - plotted points of where you have been-stored in memory
   - **Website:** US Gazetteer: [http://www.census.gov/cgi-bin/gazetteer/](http://www.census.gov/cgi-bin/gazetteer/)

2. Pass out maps. Have students draw a compass rose on maps.

   On maps:
   - Label your hometown (where you live)
     - Rochester: 43°N, 77°W
   - Draw circles around these cities on your map: (write on board)
     - New York, New York
     - Seattle, Washington
     - San Francisco, California
     - Los Angeles, California
     - Dallas, Texas
     - Miami, Florida
     - Chicago, Illinois
     - Denver, Colorado
     - St. Louis, Missouri
-Estimate the latitude and longitude of these cities on your worksheet.

3. Computers: show US Census (Gazetteer) website (if internet is working today)
   - Have students check their coordinate estimates against the online US Gazetteer (round on-line coordinates to the nearest whole number).

*If internet is not accessible have students check their coordinates from the board (write them next to cities).

4. GPS
   While students are working, go around with or call students up to find one city on the GPS with its latitude and longitude.

5. Closing: Get back together....... 
   Ask: Did you make any mistakes?
   - How many had more than 5 coordinates right on?
   - How many had 3 or more coordinates right on?
   - Was everyone able to find at least one?

Think: Why is it important to have lat and long in degrees for all places in the world?

*If computer is not working, then check coordinates for each city by writing them on the board.

**LESSON FOLLOW-UP**

Independent Practice: Homework: “Packing My Bag” worksheet