



Are We There Yet?

Learn the difference between latitude and longitude by finding the location on a world map identified by a pair of map coordinates. Use the country names that match the latitude and longitude points to help you solve the riddle.

Grades: 4, 5, 6, 7, 8
Disciplines: Science, Social Studies

Materials Required

- World map or globe with longitude, latitude and country name
- Where in the World worksheet (included)
- Blank Bingo card, one per student (optional)

Procedure

Write on a board or a sheet of chart paper the terms *latitude* and *longitude*. Let students share what they know about the terms. Write down information that students share. Correct any misconceptions they might share.

Explain that the lines of latitude and longitude comprise an imaginary grid that has been placed over the globe.

- The lines that run across the grid -- the flat lines -- are lines of latitude. The Equator is an example of a line of latitude. The Equator is the latitude line that divides Earth into two hemispheres, the northern hemisphere and the southern hemisphere. The Equator is the 0 point of latitude. Latitude lines North of the Equator are referred to as North latitude; latitude lines South of the Equator are referred to as South latitude.
- The lines that run up and down on the grid -- the tall lines -- are lines of longitude. The lines of longitude are also called *meridians*. The Prime Meridian, which passes through Greenwich, England, is the longitude line that divides Earth into two hemispheres, the eastern hemisphere and the western hemisphere. The Prime Meridian is the 0 point of longitude. Longitude lines East of the Prime Meridian are referred to as East longitude; longitude lines West of the Prime Meridian are referred to as West longitude.

Help students further understand the concepts by giving them some hands-on practice. First, determine the latitude and longitude coordinates for your student's city and state.

If you are not sure of the coordinates, open Google in a web browser. Just type in Coordinates + your City, State (example: Coordinates San Diego, CA)

Write the latitude and longitude of your location on a board or chart. Help students use the Equator and Prime Meridian, and the lines of latitude and longitude, to find the location that matches the coordinates given. Students should land on *their town!*

Next, provide the following coordinates and have students use a map to identify the location that is identified by each set of coordinates:

- Latitude: 48 ° N Longitude: 2 ° E (France)
- Latitude: 19 ° N Longitude: 154 ° W (Hawaii)
- Latitude: 40 N Longitude: 116 ° E (China)
- Latitude: 12 ° S Longitude: 77 ° W (Peru)
- Latitude: 33 ° S Longitude: 151 ° E (Australia)
- Latitude: 43 ° N Longitude: 79 ° W (Canada)
- Latitude: 20 ° S Longitude: 50 ° E (Madagascar)

When most students seem to grasp the concepts of latitude and longitude, provide the Where in the World? worksheet as longitude and latitude practice. See the **Assessment** section below for work sheet answers.

Extend the Lesson

- Create a set of cards, one card per student. On each card write the coordinates of a location someplace in the world. Pass a card to each student and have them find and identify the location on a world map.
- Create a Coordinate BINGO game. Provide a list of 24 country names around the world for which you have coordinates. Have students write the name of each country in a block on their BINGO game card. Then call out the coordinates of one of the 24 countries. Players X the name of the country that matches those coordinates. The first player to get five Xs in a row is the winner.

Evaluation & Analysis

Assess students based on their understanding of the concepts.

Answers for the Where in the World? Worksheet:

1. CUBA, 2. GERMANY, 3. INDIA, 4. ARGENTINA, 5. SOUTH AFRICA, 6. JAPAN, 7. EGYPT, 8. AUSTRALIA.

Riddle Answer: A ROAD MAP.

Where in the World?

Read each pair of latitude and longitude coordinates. Then look at a world map.

Which country do you find at those coordinates?

Write the name of the country, one letter to a line.

Then rearrange the letters in the boxes to answer the riddle at the bottom of the page.

- Latitude: 20° N Longitude: 65° W _____
- Latitude: 50° N Longitude: 10° E _____ _____
- Latitude: 20° N Longitude: 80° E _____ _____
- Latitude: 40° S Longitude: 70° W _____ _____
- Latitude: 30° S Longitude: 20° E _____ _____
- Latitude: 40° N Longitude: 140° E _____ _____
- Latitude: 30° N Longitude: 30° E _____ _____
- Latitude: 30° S Longitude: 150° E _____

Now rearrange the letters in the boxes above to figure out the answer to this riddle.

Riddle:

What has cities without houses, rivers without water, and forests without trees?

Answer:

| BINGO | | | | |
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