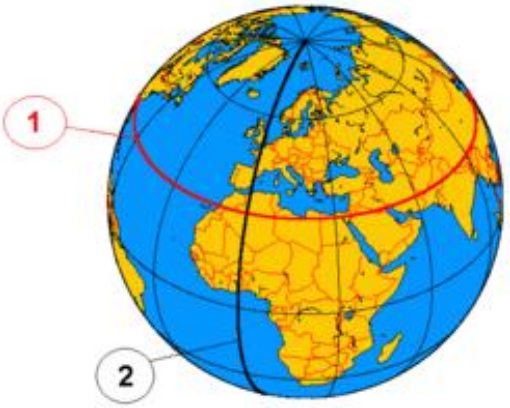
Name: _____

Where in the World Are You?



Caption: 1- circle of latitude, 2- Prime Meridian of longitude

Let's say you are at 61 degrees 13 minutes N, 149 degrees 54 minutes W. Where is THAT? Anchorage, Alaska! What, you don't see any lines of latitude and longitude intersecting around you? Of course not; they are imaginary.

Mapmakers, navigators, and others use lines of latitude and longitude to locate exact points on the Earth. To understand latitude, let's begin with the equator. This is an imaginary line around the middle of the Earth. It separates the globe into two halves called hemispheres. North of the equator is the northern hemisphere. South of the equator is the southern hemisphere.

Latitude is the distance in degrees north or south of the equator. Lines of latitude run parallel to the equator, which is labeled zero degrees latitude. The poles are at 90 degrees latitude. Distances between the equator and the North Pole are referred to as degrees north latitude, or N. Distances between the equator and the South Pole are referred to as degrees south latitude, or S. Each degree of latitude equals about 111 kilometers of distance.

Lines of longitude locate places in east and west directions. These lines are also known as meridians. They run from pole to pole (the LONG way). They are like the grooves on your Halloween pumpkin. The Prime Meridian is zero degrees longitude. It goes through Greenwich, England. This line separates the eastern and western hemispheres.

Lines of longitude are labeled from zero to 180 degrees east (E) and west (W) of the prime meridian. The 180-degree meridian is also known as the International Date Line. If you cross this line while traveling, you gain or lose one full day on your calendar.

Degrees of longitude do not all cover the same distance on the Earth's surface. The distance varies with location. Since they all meet at the poles, the distance there is about the width of a single point. At the equator, one degree of longitude is about 111 kilometers.

Degrees of latitude and longitude are also divided into smaller units called minutes. There are 60 minutes in a degree. Each minute is also divided into 60 seconds. Each represents a smaller distance. These divisions help you locate a specific spot on the Earth. The lines run in a grid-like pattern on a map or globe. To locate a point, we use coordinates, kind of like a graph. These coordinates represent the lines of latitude and longitude. At the intersection of the coordinates is the location we are looking for.

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For example, let's find Anchorage, Alaska, on a map or globe. First, find the equator and the Prime Meridian. Run your finger along the Prime Meridian toward the North Pole. Stop when you come to about 60 degrees north latitude. Anchorage could be anywhere along this latitude line. Now, run your finger west from the Prime Meridian until you come to about the 150-degree line of west longitude. Close to this intersection, you will find Anchorage, Alaska. Of course, navigation instruments are much more precise than your finger and can find the exact coordinates.

If you can read a graph, you can use latitude and longitude. Remember, latitude moves you north and south from the equator to the poles. LONGitude moves you east and west. The point where they meet corresponds to an exact location on the Earth. So, where are you right now?

Where in the World Are You?

Questions

_____ 1. The line of zero degrees latitude is the:

A. Prime Meridian
B. equator
C. International Date Line

_____ 2. Lines running parallel to the equator are called:

A. latitude
B. meridians
C. longitude

3. What does latitude measure?

_____

_____

4. Lines of longitude locate places in which directions?

_____

_____

5. In what two units are degrees of latitude and longitude divided?

_____

_____

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_____ 6. Latitude and longitude are written:

A. in words
B. like coordinates on a graph
C. in symbols

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How many of these can you write about? Think! Write! Check all the ones you answered.

- ☐ Explain how to locate 15 degrees S, 45 degrees W. Then, locate that spot on a map or globe. Where are you?
- ☐ Explain the differences between latitude and longitude.

Don't stop writing. Use a blank piece of paper to continue.