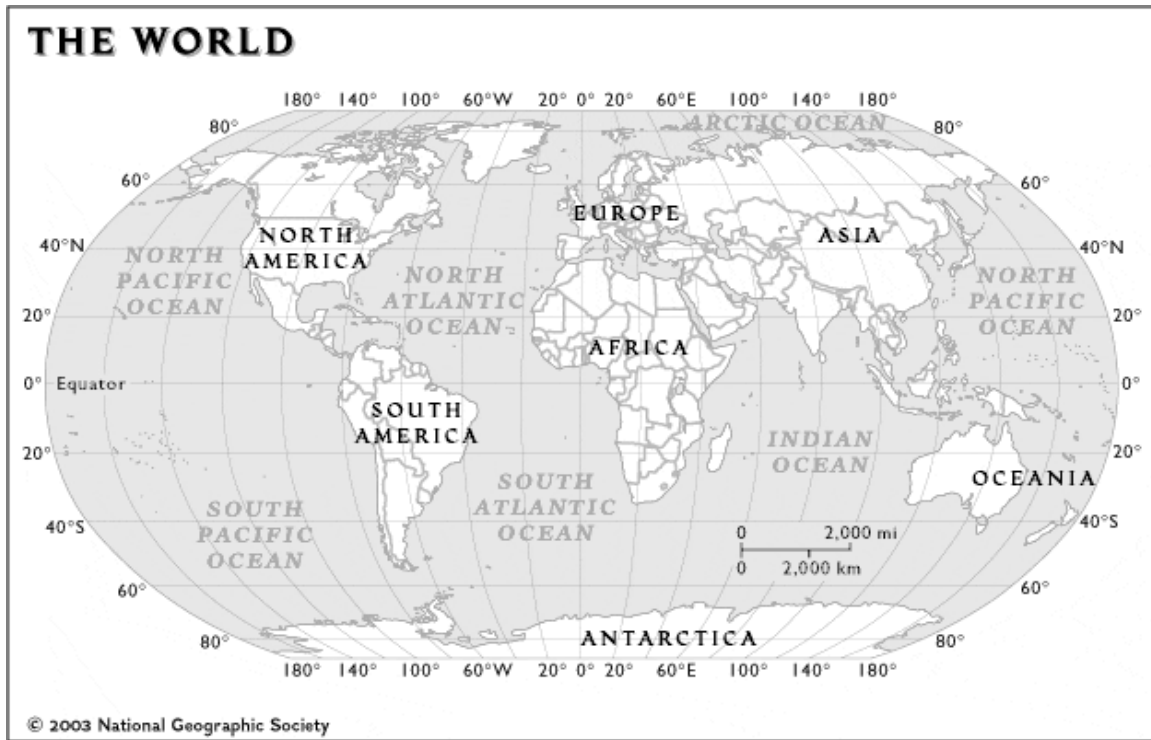


Mapping Weather



Latitude is distance north or south of the Equator, and longitude is distance east or west of the prime meridian. Both are measured in terms of the 360 degrees (symbolized by °) of a circle. Imaginary lines of latitude and longitude intersect each other, forming a grid that covers the Earth and helps us locate points on it.

The Equator is the line of 0° latitude, the starting point for measuring latitude. The latitude of the North Pole is 90° N, and that of the South Pole is 90° S. The latitude of every point in between must be some degree north or south, from 0° to 90°. One degree of latitude covers about 69 miles (111 kilometers).

Each line of latitude forms an imaginary circle around the Earth. Because these circles are parallel to the Equator, they are called parallels of latitude. The farther the circles are from the Equator, the smaller they are; at the Poles they are simply points.

Lines of longitude, which meet at the Poles, are known as meridians. The one that runs through Greenwich, England, is internationally accepted as the line of 0° longitude, or the prime meridian.

Longitude is measured in degrees east or west of the prime meridian. This means one half of the world is measured in degrees of east longitude up to 180°, and the other half in degrees of west longitude up to 180°.

For greater precision, degrees of latitude and longitude are divided into 60 minutes (symbolized by '), and minutes are divided into 60 seconds (symbolized by ").

Maps are often marked with parallels and meridians. The latitude and longitude of a point are called its coordinates. If you know the coordinates, you can use a map to locate any point on Earth.

1. Label the Prime Meridian on the map of the world above.
2. If you begin your journey from the Prime Meridian (0° longitude) and 40° N and travel 100° W, what continent would you be on? What if you had traveled 100° E?
3. Hurricane Camille hit the United States August 14-22, 1969 and brought 27 inches of rain and severe flash flooding to several states. Plot the coordinates below and connect with a line to map the course of Hurricane Camille:
 1. 18° N by 82° W
 2. 28° N by 88° W
 3. 34° N by 90° W
 4. 37° N by 85° W
 5. 42° N by 55° W



4. Using the map of Arizona, find the latitude and longitude of Tucson.

5. A major monsoon storm has resulted in a flash flood warning for the city at $32^{\circ} 53' \text{ N}$ and $112^{\circ} 43' \text{ W}$. What city should the National Weather Service issue a warning for?

6. Using the scale bar on the map, determine how far this city is from Tucson.

