



Where in the World?

This lesson teaches the concepts of latitude and longitude with relation to the globe.

Grades: 4, 5, 6
Disciplines: Geography, Math

Before starting the activity, make sure each student has access to a globe or a world map that contains latitude and longitude lines.

Why Do We Use Latitude and Longitude?

The Earth is divided into degrees of longitude and latitude which helps us measure location and time using a single standard.

When used together, longitude and latitude define a specific location through geographical coordinates. These coordinates are what the Global Position System or GPS uses to provide an accurate locational relay.

Longitude and latitude lines measure the distance from the Earth's Equator or central axis - running east to west - and the Prime Meridian in Greenwich, England - running north to south.

What Is the Equator?

The Equator is an imaginary line that runs around the center of the Earth from east to west. It is perpendicular to the Prime Meridian, the 0 degree line running from north to south that passes through Greenwich, England.

There are equal distances from the Equator to the north pole, and also from the Equator to the south pole. The line uniformly divides the northern and southern hemispheres of the planet.

Because of how the sun is situated above the Equator - it is primarily overhead - locations close to the Equator generally have high temperatures year round. In addition, they experience close to 12 hours of sunlight a day. Then, during the Autumn and Spring Equinoxes the sun is exactly overhead which results in 12-hour days and 12-hour nights.

What is Latitude?

The lines of latitude run east and west, parallel to the Equator. They are used to define the North-South position of a location on the planet.

Major latitude lines include:

- Equator which is 0 degrees
- North Pole which is 90 degrees north
- South Pole which is 90 degrees south

- Arctic Circle is 66 degrees and 32' north
- Antarctic Circle is 66 degrees and 32' south
- Tropic of Cancer is 23 degrees and 30' north
- Tropic of Capricorn is 23 degrees and 30' south

What is Longitude?

The lines of longitude run north and south. They are used to define the East-West position of a location on the planet. They run perpendicular to the Equator and latitude lines.

Half of a longitudinal circle is called a Meridian, which is where the term comes from in the name Greenwich Meridian or Prime Meridian.

Contrary to latitude, there is no central longitude line. However, the Prime Meridian or Greenwich Meridian is used as the primary reference point because it is set to 0 degrees longitude. The Prime Meridian separates the east and west hemispheres of the Earth.

Because the Earth is essentially a spherical shape, it is considered to have 360 degrees. Therefore, the planet has been divided into 360 longitudes as a form of measurement.

