

Section 2.1

Objectives

- Describe the difference between latitude and longitude.
- Explain why it is important to give a city's complete coordinates when describing its location.
- Explain why there are different time zones from one geographic area to the next.

Review Vocabulary

time zone: a geographic region within which the same standard time is used

New Vocabulary

cartography
equator
latitude
longitude
prime meridian
International Date Line

Latitude and Longitude

MAIN Idea Lines of latitude and longitude are used to locate places on Earth.

Real-World Reading Link Imagine you were traveling from New York City, New York, to Los Angeles, California. How would you know where to go? Many people use maps to help them plan the quickest route.

Latitude

Maps are flat models of three-dimensional objects. For thousands of years people have used maps to define borders and to find places. The map at the beginning of this chapter was made in 1570. What do you notice about the size and shape of the continents? Today, more information is available to create more accurate maps. The science of mapmaking is called **cartography**.

Cartographers use an imaginary grid of parallel lines to locate exact points on Earth. In this grid, the **equator** horizontally circles Earth halfway between the north and south poles. The equator separates Earth into two equal halves called the northern hemisphere and the southern hemisphere.

Lines on a map running parallel to the equator are called lines of **latitude**. Latitude is the distance in degrees north or south of the equator as shown in **Figure 2.1**. The equator, which serves as the reference point for latitude, is numbered 0° latitude. The poles are each numbered 90° latitude. Latitude is thus measured from 0° at the equator to 90° at the poles.

Locations north of the equator are referred to by degrees north latitude (N). Locations south of the equator are referred to by degrees south latitude (S). For example, Syracuse, New York, is located at 43° N, and Christchurch, New Zealand, is located at 43° S.

Figure 2.1 Lines of latitude are parallel to the equator. The value in degrees of each line of latitude is determined by measuring the imaginary angle created between the equator, the center of Earth, and the line of latitude as seen in the globe on the right.

