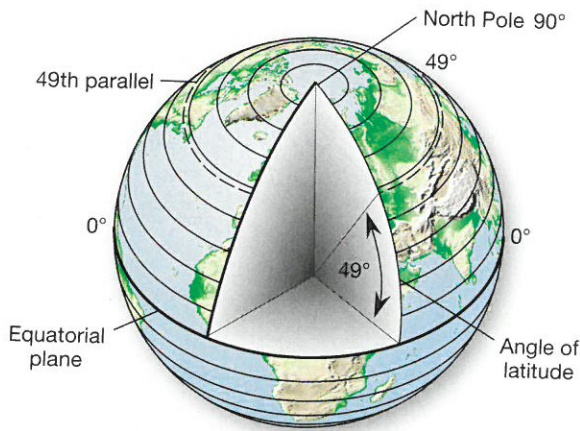
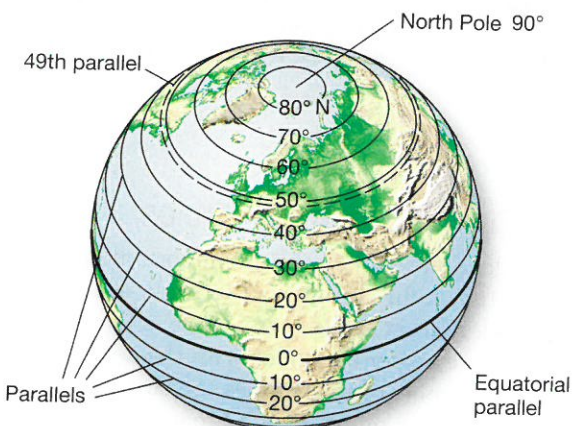




(a) Latitude is measured in degrees north or south of the Equator (0°). Earth's poles are at 90°. Note the measurement of 49° latitude.



(b) These angles of latitude determine parallels along Earth's surface.

▲Figure 1.10 Parallels of latitude. Do you know your present latitude?

the Tropic of Cancer and the Arctic Circle, in Chapter 2 as we learn about the seasons.

Longitude

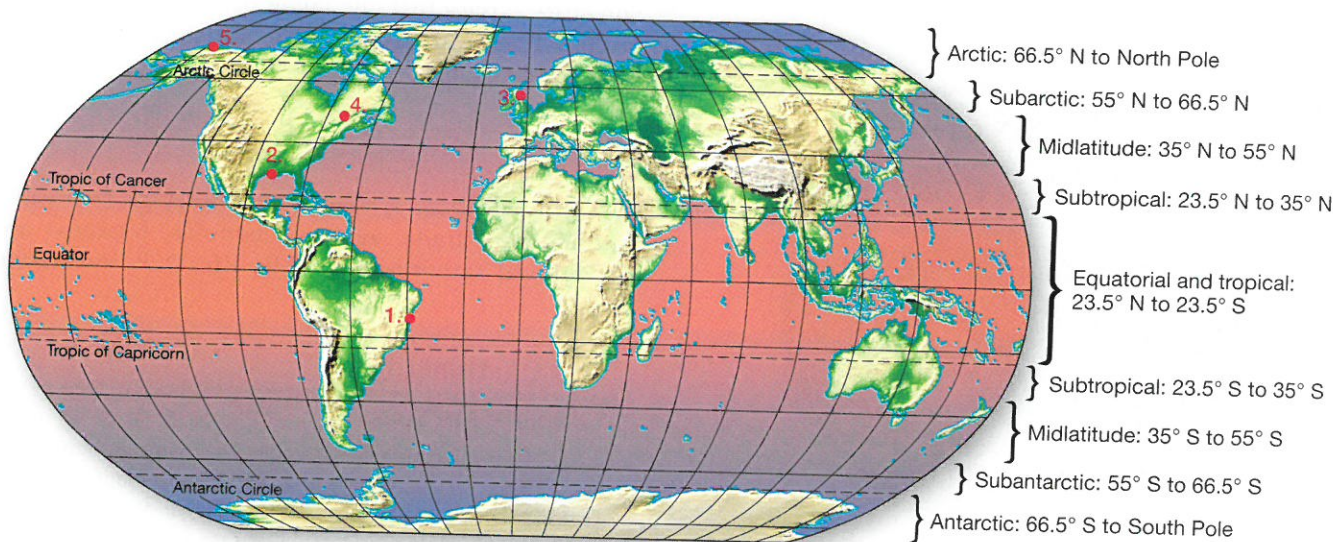
Longitude is an angular distance east or west of a point on Earth's surface, measured from the center of Earth (Figure 1.12a). On a map or globe, the lines designating these angles of longitude run north and south (Figure 1.12b). A line connecting all points along the same longitude is a **meridian**. In the figure, a longitudinal angle of 60° E is measured. These meridians run at right angles (90°) to all parallels, including the equator.

Thus, *longitude* is the name of the angle, *meridian* names the line, and both indicate distance east or west of an arbitrary **prime meridian**—a meridian designated as 0° (Figure 1.12b). Earth's prime meridian passes through the old Royal Observatory at Greenwich, England, as set by an 1884 treaty; this is the *Greenwich prime meridian*. Because meridians of longitude converge toward the poles, the actual distance on the ground spanned by

CRITICAL thinking 1.2

Latitudinal Geographic Zones and Temperature

Refer to the graph in Figure 3.14, which plots annual temperature data for five cities from near the equator to beyond the Arctic Circle. Note the geographic location for each of the five cities on the latitudinal geographic zone map in Figure 1.11. In which zone is each city located? Roughly characterize changing temperature patterns through the seasons as you move away from the equator. Describe what you discover.



▲Figure 1.11 Latitudinal geographic zones. Geographic zones are generalizations that characterize various regions by latitude. Numbered cities (see Critical Thinking 1.2): 1. Salvador, Brazil; 2. New Orleans, Louisiana; 3. Edinburgh, Scotland; 4. Montreal, Quebec; 5. Barrow, Alaska.