

CHAPTER 2, Lesson 1

Studying Geography

V₁ Visual Skills

Reading a Map Provide students with several locations (expressed in terms of latitude and longitude), and have them find these locations on a globe or map. Ask students to locate the city or major geographic feature that is closest to those coordinates. **Visual/Spatial**

- What city is located at latitude 41° 52' North, longitude 87° 37' West? (*Chicago, Illinois*)
- What island is located at latitude 18° 55' South, longitude 47° 31' East? (*Madagascar*)
- What continent is located at latitude 90° South, longitude 0° West? (*Antarctica*)

T Technology Skills

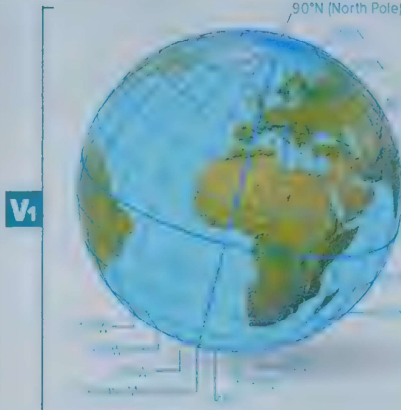
Analyzing Data For a whole-class activity, select a volunteer to call out coordinates. The rest of the class will search online to find a city on or near the coordinates. The first student to identify the city then selects the next coordinates for the class to find. **Interpersonal**

V₂ Visual Skills

Visualizing Provide students with oranges, and instruct them to re-create the orange peel experiment described in the text on the next page. See if students can remove the peel in a single piece and lay it flat on a table. They may wish to use markers to draw representations of the various continents, following Goode's Interrupted Equal-Area projection as a guide. Then ask them to restore the peel to a spherical shape and compare their "globe" to an actual one.

Kinesthetic

Latitude and Longitude



Finding the intersection of latitude and longitude allows geographers to pinpoint absolute location. At what degree point is the Prime Meridian?

Finding Places on the Earth

The Equator and Prime Meridian are two of the lines on maps and globes that help you find places on the Earth. All the lines together are called latitude and longitude. Latitude and longitude lines cross one another, forming a pattern called a grid system.

Lines of **latitude** (LA·tuh·tood) circle the Earth parallel to the Equator. They measure distance north or south of the Equator in degrees. The Equator is at 0° (zero degrees) latitude, while the North Pole is at latitude 90° N (90 degrees north).

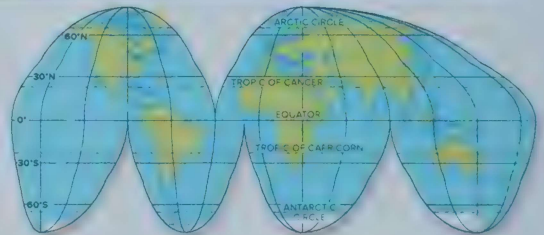
Lines of **longitude** (LAHN·juh·tood) circle the Earth from Pole to Pole. These lines measure distances east or west of the Prime Meridian, which is at 0° longitude.

The grid system formed by lines of latitude and longitude makes it possible to find the absolute location of a place. This is the exact spot where a line of latitude crosses a line of longitude. An absolute location is written in special symbols called degrees (°) and minutes (') (points between degrees). For example, the Empire State Building in New York City is located at

a latitude of 40° 44' North and a longitude of 73° 59' West (40 degrees 44 minutes North and 73 degrees 59 minutes West).

Goode's Interrupted Equal-Area Projection

Goode's Interrupted Equal-Area projection shows a realistic representation of continents' sizes and shapes.



ReadingHELPDESK

latitude Imaginary lines that circle the Earth parallel to the Equator

longitude Imaginary lines that circle the Earth from Pole to Pole, measuring distance east or west of the Prime Meridian

projection a way of showing the round Earth on a flat map

Academic Vocabulary

distort to twist out of shape or change the size of

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networks

Online Teaching Options

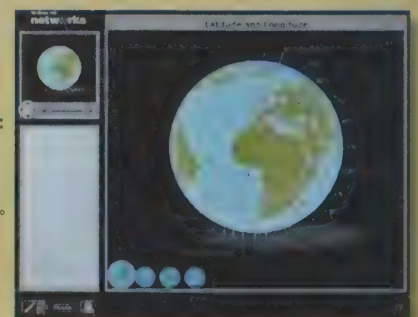
MAP

Latitude and Longitude

Analyzing Data Allow students to explore the interactive latitude and longitude maps of the various hemispheres. **Ask:**

- What are the latitude and longitude coordinates for Moscow, Russia? (latitude 55° 45' N, longitude 37° 36' E)
- What are the coordinates for Tokyo, Japan? (latitude 35° 41' N, longitude 139° 44' E)
- What city is found at latitude 34° S, longitude 151° E? (Sydney, Australia)

See page 25C for other online activities.



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The Prime Meridian is at 0° longitude.