

2.1 Elements of a Map

TECHTREK

myNConnect.com For online maps of geographic regions and photos of antique maps

Maps and
GraphsDigital
Library

Main Idea Globes and maps are two different tools used to study places on Earth.

Have you ever needed to figure out how to get to a friend's house? Imagine that the only resource you had was a globe. In order to see enough detail to find your friend's house, the globe would have to be enormous—much too big to carry around in your pocket!

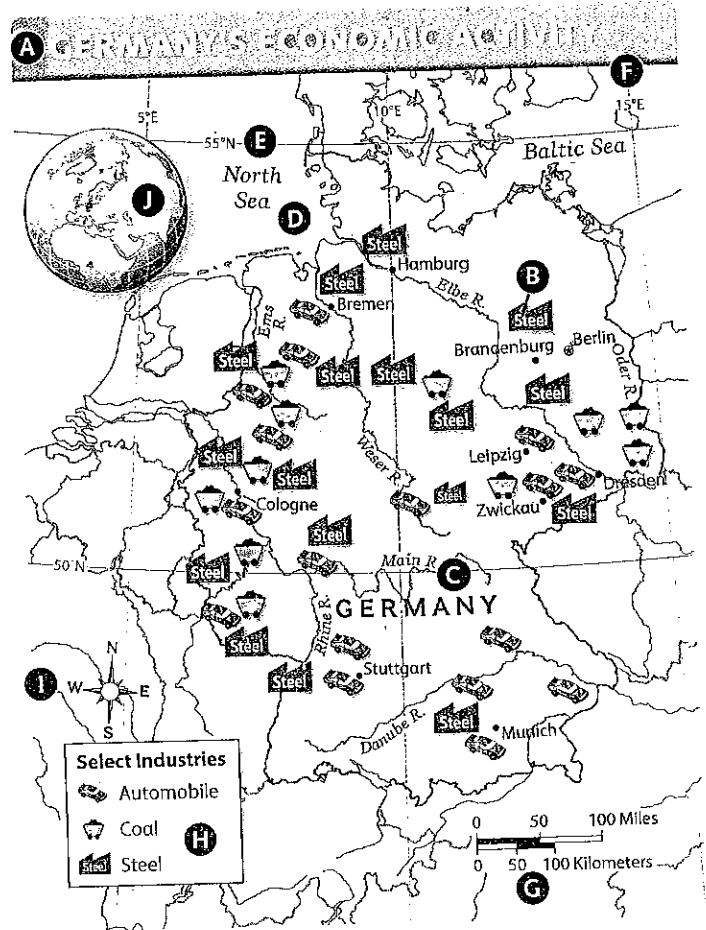
Globes and Maps

A three-dimensional, or spherical, representation of Earth is called a **globe**. It is useful when you need to see Earth as a whole, but it is not helpful if you need to see a small section of Earth.

Now imagine taking a part of the globe and flattening it out. This two-dimensional, or flat, representation of Earth is called a **map**. Maps and globes are different representations of Earth, but they have similar features.

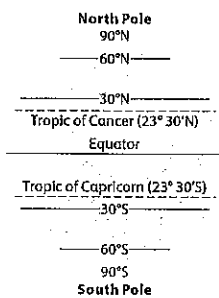
Map and Globe Elements

- A** A **title** tells the subject of the map or globe.
- B** **Symbols** represent information such as natural resources and economic activities.
- C** **Labels** are the names of places, such as cities, countries, rivers, and mountains.
- D** **Colors** represent different kinds of information. For example, the color blue usually represents water.
- E** **Lines of latitude** are imaginary horizontal lines that measure the distance north or south of the equator.
- F** **Lines of longitude** are imaginary vertical lines that measure the distance east or west of the prime meridian.
- G** A **scale** shows how much distance on Earth is represented by distance on the map or globe. For example, a half inch on the map above represents 100 miles on Earth.
- H** A **legend**, or key, explains what the symbols and colors on the map or globe represent.
- I** A **compass rose** shows the directions north (N), south (S), east (E), and west (W).
- J** A **locator globe** shows the specific area of the world that is shown on a map. The locator globe on the map above shows where Germany is located.



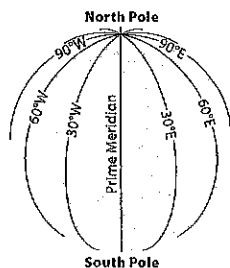
Latitude

Lines of **latitude** are imaginary lines that run east to west, parallel to the equator. The **equator** is the center line of latitude. Distances north and south of the equator are measured in degrees ($^{\circ}$). There are 90 degrees north of the equator and 90 degrees south. The equator is 0° . The latitude of Berlin, Germany, is 52° N, meaning that it is 52 degrees north of the equator.



Longitude

Lines of **longitude** are imaginary lines that run north to south from the **North Pole** to the **South Pole**. They measure distance east or west of the prime meridian. The **prime meridian** runs through Greenwich, England. It is 0° . There are 180 degrees east of the prime meridian and 180 degrees west. The longitude of Berlin, Germany, is 13° E, meaning that it is 13 degrees east of the prime meridian.



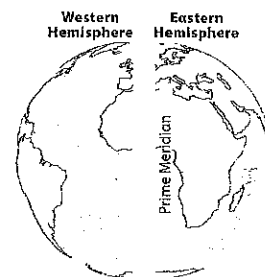
Remember that absolute location is the exact point where a place is located. This point includes a place's latitude and longitude. For example, the absolute location of Berlin, Germany, is 52° N, 13° E. You say this aloud as "fifty-two degrees North, thirteen degrees East."

Hemispheres

A **hemisphere** is half of Earth. The equator divides Earth into the **Northern Hemisphere** and the **Southern Hemisphere**. North America is entirely in the Northern Hemisphere. Most of South America is in the Southern Hemisphere.



The **Western Hemisphere** is west of the prime meridian. The **Eastern Hemisphere** is east of the prime meridian. South America is in the Western Hemisphere. Most of Africa is in the Eastern Hemisphere.



Before You Move On

Monitor Comprehension How are maps and globes different? How is each one used?

ONGOING ASSESSMENT

MAP LAB

- 1. Interpret Maps** What types of industry are located in Germany? What map elements did you use to find the answers?
- 2. Make Inferences** What is the main industry in southern Germany? Why might this industry be located there?
- 3. Location** What is the difference between lines of latitude and lines of longitude?