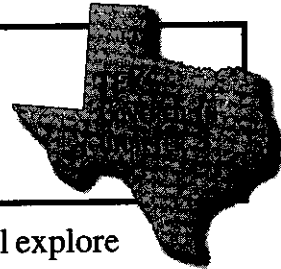
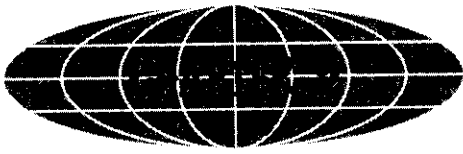


UNDERSTANDING MAPS: "The Language of Geography"



- **Social Studies Skills 21(A)** Analyze and evaluate the validity and utility of multiple sources of geographic information such as ... maps.
- **Social Studies Skills 21(C)** Create and interpret different maps to answer geographic questions, infer relationships, and analyze change.

In this chapter, you will learn to speak the language of geography. You will explore how to read maps and interpret map symbols.

AN ESSENTIAL QUESTION



● How do maps help us to represent geographic information?

- A. Different types of maps are used to show a variety of different information.
- B. Maps can be used to answer geographic questions, infer relationships, and analyze change.

GEOGRAPHIC TERMINOLOGY IN THIS CHAPTER

- | | | |
|----------------|----------------|------------------|
| ■ Maps | ■ Scale | ■ Longitude |
| ■ Legend | ■ Thematic Map | ■ Equator |
| ■ Compass Rose | ■ Latitude | ■ Prime Meridian |

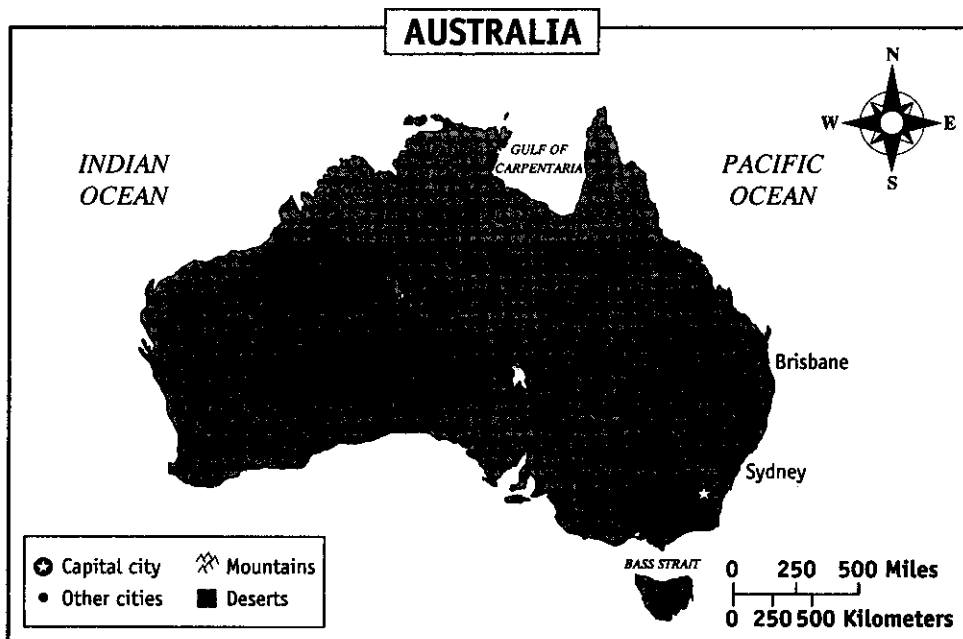
A famous geographer, Harm de Blij, once called maps "the language of geography." They help geographers communicate information and better understand the relationship of people to the places where they live. A **map** is a flat, two-dimensional representation of space. With maps, geographers can show how places are influenced by their location and how different places affect each other. Maps can be used to answer geographic questions, to make connections, to infer relationships, and to analyze change.

STEPS TO UNDERSTANDING A MAP

Each map is really a diagram of a larger area. It shows where things are located. Every map has certain features you should be familiar with.

TITLE

The title of the map describes the information it presents. For example, the title of the map below is: *Australia*. It shows the continent of Australia with many of its geographical features. These features include major cities, surrounding oceans, mountains, and deserts.



LEGEND

The legend lists the symbols used on the map, including any special colors or shading, and identifies what each symbol represents. For example, according to the legend on the map above:

- | | |
|---|---|
| <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-right: 10px;">☉</div> <p>This symbol represents the capital of Australia.</p> | <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-right: 10px;"> </div> <p>This symbol represents mountains.</p> |
| <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-right: 10px;">●</div> <p>This symbol represents other cities found in Australia.</p> | <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-right: 10px;"> </div> <p>This symbol represents deserts.</p> |

COMPASS ROSE

The compass rose shows where the four basic directions — *north*, *south*, *east*, and *west* — are found on the map. If a map has no compass rose, then you should assume that north is at the top of the map.

SCALE

A map would be impossible to use if it were the same size as the area it shows. **Cartographers** (*mapmakers*) reduce the size of the map to fit onto a page. The scale is used to show how much the map has been reduced. It shows the actual distance between places on the map. Map scales are often shown as a line marked: **Scale of Miles**. For example, on this map one inch represents 500 miles.

FINDING SPECIFIC INFORMATION

To find specific information on a map, you often have to use the legend and other map features. For example, if you want to find where Australia's capital city is located, here is what you would need to do:

- ★ Look at the legend to see how the capital city is represented. Here, you will see that a star inside a circle indicates the capital city.
- ★ Then examine the map to find the circled star. The capital city is Canberra, which can be found near the coastline in the southeast corner of Australia.

Use the map on page 32 and your knowledge of social studies to answer the following questions.

- 1 What is the approximate distance between Melbourne and Sidney?
A about 250 miles C about 500 kilometers
B about 475 miles D more than 500 miles
- 2 Based on the map, which statement about Australia is most accurate?
F Australia is the largest nation in the Pacific Ocean.
G Most of its major cities are located on or near the coastline.
H The city of Darwin is less than 500 miles from Brisbane.
J Melbourne, Sydney and Canberra are located on the west coast.

INFERRING RELATIONSHIPS

A map shows how different features of a place relate to one another. You can often infer relationships or draw conclusions from the map. For example, for the map on page 32:

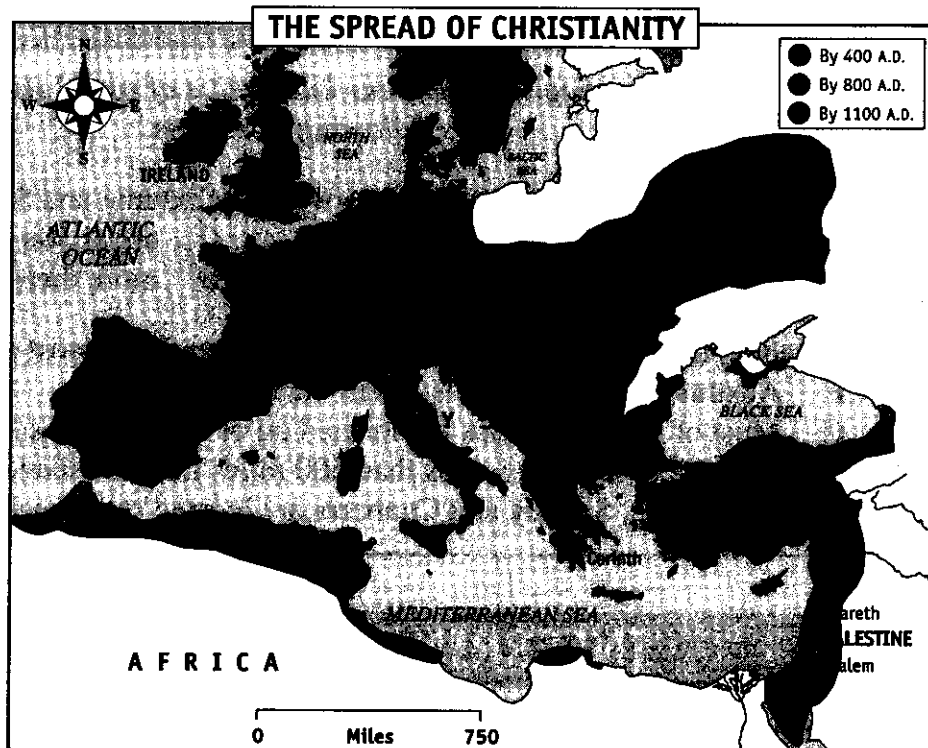
- ★ Based on the map, where are Australia's largest cities located?
- ★ Where are Australia's deserts located? Are any of its major cities found in desert areas?
- ★ What relationship can be inferred between the location of Australia's deserts and its cities?

There is almost no limit to the kind of information that can be shown on a map. For this reason, there are many types of maps:

- ★ **Physical maps** show the major physical features of an area, such as its rivers, mountains, vegetation and elevation (*height above sea level*).
- ★ **Political maps** show the major boundaries between countries or states.
- ★ **Historical maps** show political boundaries from the past. With a historical map, you should pay close attention to the names of countries, political borders, and the location of cities. These may be different than they are today.
- ★ **Thematic maps** show information relating to a specific theme, such as the spread of a religion, trade routes, or the industrial growth of a nation.
- ★ **Population density maps** show where people live in a specific area.
- ★ **Resource or Product maps** show the major natural resources and agricultural and industrial products of an area.

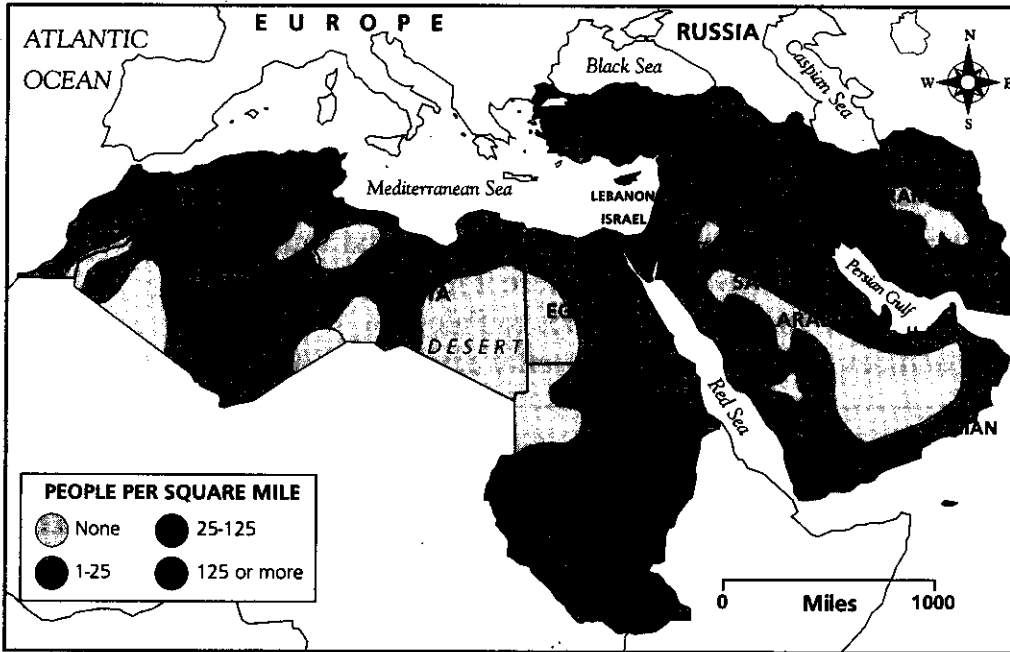
For example, the map to the right deals with the spread of a major religion in the ancient world. The title of the map, *The Spread of Christianity*, shows how Christianity spread across Europe, North Africa, and South-west Asia.

The legend can be found on the upper right corner of the map. Each shade of gray on the map indicates a further stage in the spread of Christianity. By 400 A.D., Christianity was already established in Italy, France, Spain, Asia Minor and parts of North Africa. By 800 A.D. the Christian religion had spread to include Britain and Germany.



36 MASTERING THE TEKS IN WORLD GEOGRAPHY

Now look at the map below. It shows where people live in the same area. You will learn more about population density maps later on in this book. The legend indicates that more people live in the areas with darker shading. By comparing this map with the one on page 35, a geographer can draw conclusions about the relationship of rainfall in an area and where people choose to live.



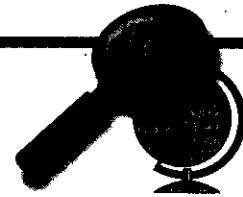
ACTING AS AN AMATEUR GEOGRAPHER

★ Describe the pattern of rainfall in Algeria shown on the first map.

★ Now describe where most people in Algeria live, based on the map above:

★ What relationship do you see between annual rainfall and where many people in the Middle East and North Africa live?

★ Egypt has very little rainfall, yet parts of it are densely populated. Why?

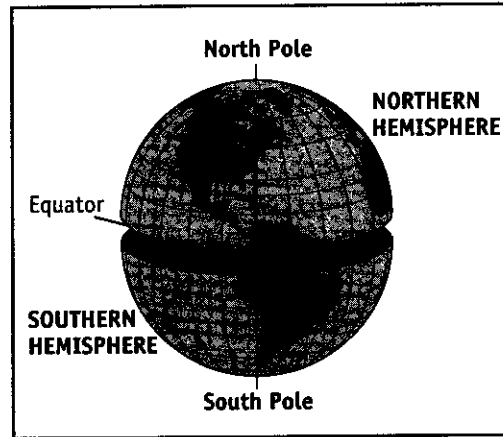


LATITUDE AND LONGITUDE

Geographers have created two sets of imaginary lines — **latitude** and **longitude** — to make it possible to identify every location precisely on Earth's surface.

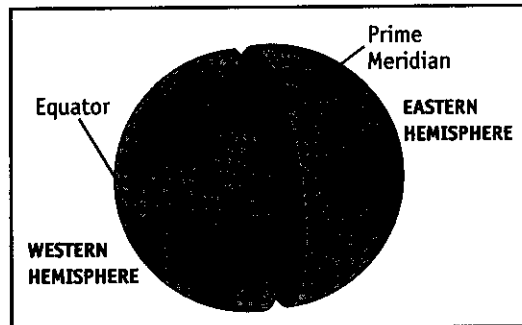
LATITUDE

Latitudes are imaginary horizontal lines that run parallel across the Earth. The equator is the most important latitude line. The **equator** (*identified as 0°*) stretches around the middle of the Earth. All other latitude lines are identified by how far north or south of the equator they are. Each latitude line is assigned a number in degrees to show its distance from the equator, from 1° to 90° . An "N" or "S" is added after the number of degrees to show if the line is **north** or **south** of the equator. For example, a latitude 37 degrees north of the equator would be written as 37°N .

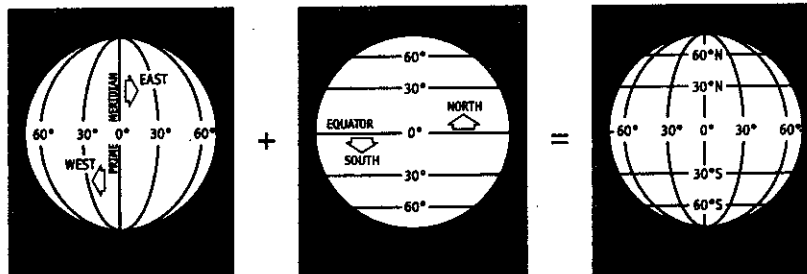


LONGITUDE

Longitudes are imaginary lines that run up and down the Earth. All the longitude lines meet at both the North and South Poles. The **Prime Meridian** (*identified as 0°*) is the most important longitude line, since it divides Earth into two hemispheres. The half west of the Prime Meridian is the **Western Hemisphere**; the half to the east is the **Eastern Hemisphere**. Going in either direction from the Prime Meridian, longitude lines increase from 1° to 180° . Geographers add "E" or "W" to show if the line is east or west of the Prime Meridian. For example, 100°E .



When latitude and longitude lines are shown on a map, they form a grid pattern. By knowing where latitude and longitude lines meet, we can identify the location of any place on Earth.





Complete the graphic organizer below. Define or describe each term.

The graphic organizer consists of a central square box containing a map of South America with the word "MAPS" written across it. Six rectangular boxes with horizontal lines are arranged around the central box, connected to it by lines. The boxes are positioned as follows: three at the top, two on the sides, and one large one at the bottom.