



CHAPTER 1: Introduction to Geography

Note to Teachers

This chapter on geography falls into two divisions: reading maps, pages 1–7, and the elements of geography and climate, pages 8–19. Study and class presentation should emphasize memorization of the names and locations on a map of the continents, the oceans, major rivers, major mountain ranges, and the Mediterranean Sea. The study of history that follows in succeeding chapters requires a basic grasp of geography and the relative positions of world cultures around the globe. For this reason, the memorization of key terms and geographical facts (lists) is important at the beginning of this study.

Chapter Goals

- Learn the terms of geography.
- Read a map accurately.
- Know the continents and oceans.
- Understand the basic concepts having to do with climate and geography.

Chapter Overview

Reading Maps, pages 1–7

- The study of the earth is called *geography*, a word derived from two Greek roots: *geo* for “earth” and *graph* for “writing.”
- Maps are flat drawings of the world or of certain places on it. Maps can either display *physical geography* or *political geography*. To read a map, one should first look for the *compass rose*, a small circular symbol pointing to north, south, east, and west. A map usually has a *legend* or *key*, which can display symbols to represent features or symbols. A map’s *scale* is a horizontal bar that helps map-readers discover distances between places.
- Latitude and longitude are imaginary lines that crisscross a globe or other map. *Latitude* lines run east to west; *longitude* lines run north to south. The latitude line that circles the center of the globe, halfway between the North and South Poles, is called the *equator*. The longitude line from which all other longitude lines are reckoned (being 0 degrees) is called the *prime meridian*. It passes through the Royal Observatory at Greenwich, England.
- Scientists say the earth spins as it moves around the sun. The imaginary line around which the sphere of the earth spins is called the earth’s *axis*. The ends of the axis, north and south, are

called *poles*. The spinning of the earth makes it appear to us that the sun rises and sets.

Elements of Geography and Climate, pages 8–19

- The theory of *continental drift* or *plate tectonics* posits that, far back at the planet's beginnings, there was one huge landmass above water. About 120 million years ago, this landmass began to split into two parts as continental plates began to drift apart. Eventually, the earth's crust broke into plates whose drift created the continents as they are today. The drift of continents led to dramatic climactic changes.
- The earth's continents are seven in number: *North America*, *South America*, *Europe*, *Asia*, *Africa*, *Antarctica*, and *Australia*.
- The earth's *oceans* are four in number: the *Atlantic*, *Pacific*, *Indian*, and *Arctic*. Some *seas* are enclosed parts of oceans and are large bodies of salt water. Other seas are connected to larger oceans and are surrounded by land on three sides. Still other seas are really saltwater lakes. Other bodies of water are rivers and ice, such as the polar icecaps.
- Land geography includes *mountains*, some of which are *volcanoes*, and *plains*, including *steppes*, *savannahs*, and *plateaus*. A *desert* is a land with very little or no water.
- *Climate* refers to all weather conditions, including rainfall, cloud cover, and temperature. Various factors, including latitude, altitude, the amount of water, and wind patterns influence climates. The earth's climatic regions, called *zones*, are large climate belts that run around the earth. The coldest zones are the Arctic (north) and Antarctic (south), while those that run near the equator are the most temperate. Throughout human history, the

climatic regions have remained somewhat the same. The chief climate event in human history has been the coming and going of several Ice Ages, when the northern glaciers spread down over parts of Europe, Asia, and North America.

What Students Should Know

1. Since geography is the handmaiden to history, it is important that students learn how to read and interpret maps. Thus, it is important that students go away from this chapter with basic map skills—the ability to plot directions (north, south, east, and west) on maps, the ability to read map legends or keys, and the ability to measure distances on maps using a scale. Students should know such key terms as *latitude*, *longitude*, the *equator*, and *prime meridian*.
2. Students should be able to find the seven continents and the four oceans on a map. Students need not be required to know the names and locations of all the seas, though they should know the location of the Mediterranean because of its centrality to European history.
3. Students need not be required to learn all the mountain ranges but should be able to find on a map the following mountain ranges: the Himalayas, the Alps, the Urals, the Appalachians, the Rockies, and the Andes.
4. Students should be able to find on a map and know the names of the major rivers of the world: the Nile, the Rhine, the Danube, the Yellow River, the Yangtze, the Amazon, and the Mississippi.
5. Students should also know fundamental geographical concepts:
 - the difference between an island and a peninsula
 - the difference between oceans and seas

Key Terms at a Glance

physical geography: a study of the formation of the earth (mountains, valleys, rivers, lakes, etc.)

political geography: a description of the boundaries of states and regions, the location of cities and towns, and other aspects of human society that have to do with geography

latitude: an imaginary line used by mapmakers to indicate a distance north or south of the equator

longitude: an imaginary line used by mapmakers to indicate a distance east or west of the prime meridian

meridian: a longitude line

prime meridian: the only great circle of the earth that passes through both poles of the earth and the Royal Observatory in Greenwich, England. All other meridians are numbered from this meridian, which is the 0° (degree) meridian.

equator: an imaginary circle, equally distant from the two poles, around the middle of the earth

axis: the line around which a body rotates

tectonics: geological features of the earth's crust

magma: molten rock material beneath the earth's surface

isthmus: a narrow strip of land, having water on either side, that connects two large bodies of land

steppe: dry, level grasslands with few to no trees

prairie: a large area of flat or rolling land, with no mountains and few trees

savannah: grassland containing scattered trees

plateau: a large area of high land

climate: the characteristic weather of a locality; its normal temperature and normal rainfall

tropics: the regions close to the equator

- the definitions of desert, temperate zones, tropics
- the difference between a Mercator Projection map and a Robinson Projection map

Chapter Review

Answer Key to "Let's Remember"

1. What determines the directions east, west, north, and south?

The direction north determines the other directions. The apparent motion of the sun determines east (rising) and west (setting).

2. Name the seven continents.

The seven continents are Europe, Asia, Africa, North America, South America, Antarctica, and Australia.

Which continents touch another continent?

The continents that touch another continent are North America, South America, Europe, Asia, and Africa.

Which continents stand alone?

The continents that stand alone are Australia and Antarctica.

3. What is the difference between an island and a peninsula?

An island is surrounded by water on all sides, while a peninsula is surrounded by water on three sides alone. A peninsula is connected to another landmass, while an island stands alone.

4. How many oceans are there? What are they named?

There are four oceans. They are named the Atlantic, Pacific, Indian, and Arctic.

5. What is the longest river on the earth?

The longest river on the earth is called the Nile.

What is the second longest?

The Amazon in South America is the second longest river on earth.

What is the longest river in the U.S.A.?

The longest river in the U.S.A. is the Mississippi.

6. How can scientists tell how old a mountain range is?

The higher the mountain range is, the younger it is. As a mountain range ages, it is worn down by wind and rain and so becomes smaller.

7. What is a desert?

A desert is a land with very little or no water.

Where are the largest deserts of the world?

The largest deserts of the world are in Africa (the Sahara), in Asia (the Arabian and Gobi Deserts), in North America (the Southwestern Desert), in South America (the Coastal, or Andean Desert).

8. Where are the tropics?

The tropics are zones near the equator.

Where are the temperate zones?

The temperate zones lie between the frozen polar zones and the tropic zones.

Answer Key to "Let's Consider"

1. Why are deserts very hot in the daytime and very cold at night?

The presence of water creates a more stable temperature than air. Because deserts lack water, their temperatures can vary widely from night to day.

2. Why do you think so many ancient civilizations developed on one continent of Asia?

Asia has high mountain ranges (for instance, the Himalayas, with eight of the 10 highest mountains in the world), vast plains and great, barren deserts. These topographical phenomena helped keep peoples separated from one another and so they developed in unique ways.

3. Why do civilizations begin in major river valleys?

The great river valleys of the world have been hospitable to human life. They provide the abundant fresh water necessary to maintain the large population needed to form a civilization.

Additional Activities

1. Have students draw maps of their neighborhoods. They must decide which direction is north in their neighborhoods. Then they must draw a compass rose indicating north, south, east, and west; draw all roads in the directions they run; and indicate where the houses are. If there are streams or other natural features, such as hills, hollows, etc., these also should be drawn. Students may use colored pencils or markers to indicate different items: black for roads, blue for streams, brown for hills, etc.
2. On a map of their local area, have students determine the distances between local cities

- and towns, using a measuring string. Have them identify a legend or key on their maps.
3. Ask students to look at a map of the world and identify the seas that are enclosed pockets of oceans; those that are connected to oceans and surrounded by land on three sides (bays); and those that are inland saltwater lakes (e.g., the Aral Sea, the Dead Sea). (This exercise could be a homework assignment or an in-class exercise.)
 4. Memory Drill:
 - a) Make up large “flash cards” of this chapter’s key names and dates.
 - b) On the reverse side of the cards, write the “definition” of the term. Show the names and dates to the class and call on students to explain the concept on the flash card.
 - c) Repeat this activity by showing the definition and seeing if students can identify the name or date.
 - d) Modify this activity by using contests (with prizes), team contests, or favorite classroom games to incorporate and reinforce these concepts.

Chapter 1: Sample Test I

Please answer the following in complete sentences.

1. Use the map-scale and a string on the map of Connecticut and Massachusetts, below. What is the distance in miles between the following cities?

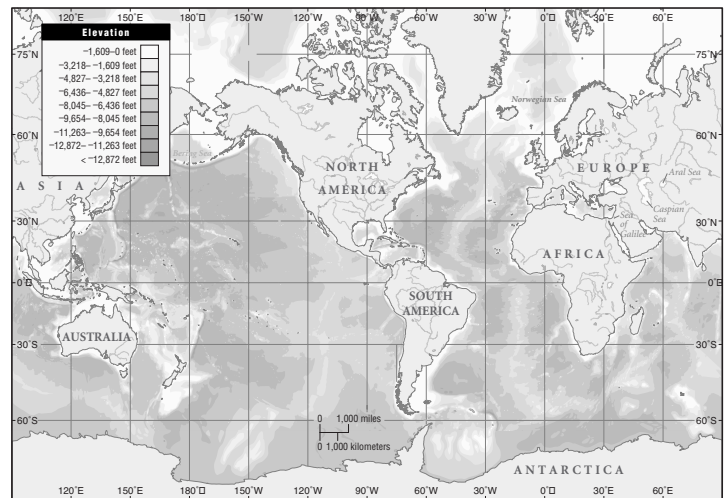
- a) Hartford and New Haven
- b) Waterbury and Worcester
- c) New Haven and Boston



2. Which of the imaginary lines, *latitude* or *longitude*, run east and west?
3. On the map, label the continents.



4. On the map, label the oceans and the Mediterranean Sea.
5. What is a desert? Name two of the largest deserts in the world.



For a free electronic file of all tests and quizzes included in the teacher manual, please contact sales@CatholicTextbookProject.com.

Answer Key to Chapter 1, Sample Test I

Students' answers should approximate the following.

1. a) 25–35 miles
b) 90–95 miles
c) 135–140 miles
2. latitude
3. See map
4. See map
5. A desert is a land with very little or no water. The largest deserts are the Sahara, the Arabian, the Gobi, and the Southwestern Desert of North America.

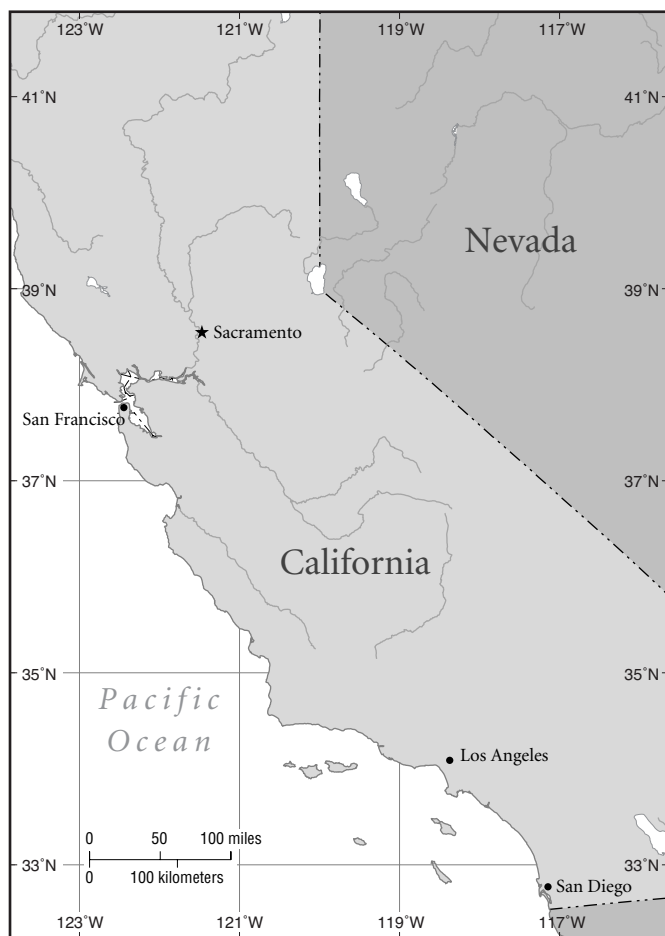


Chapter 1: Sample Test II

Please answer the following in complete sentences.

1. On the map of California, below, using the map-scale and a string, measure the distances between the following cities:

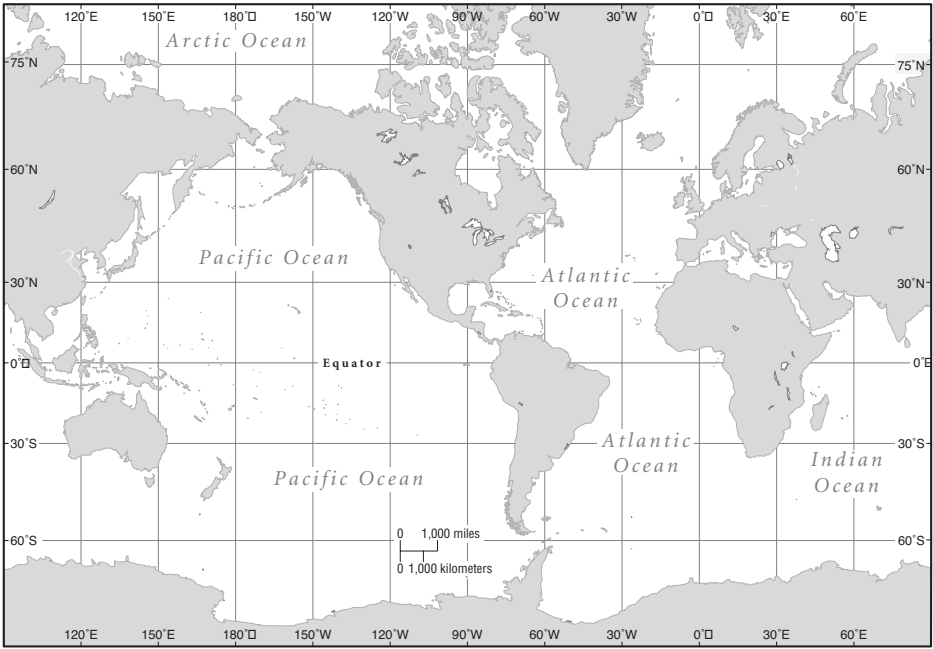
- a) Los Angeles and San Francisco
- b) San Diego and Los Angeles
- c) San Francisco and Sacramento



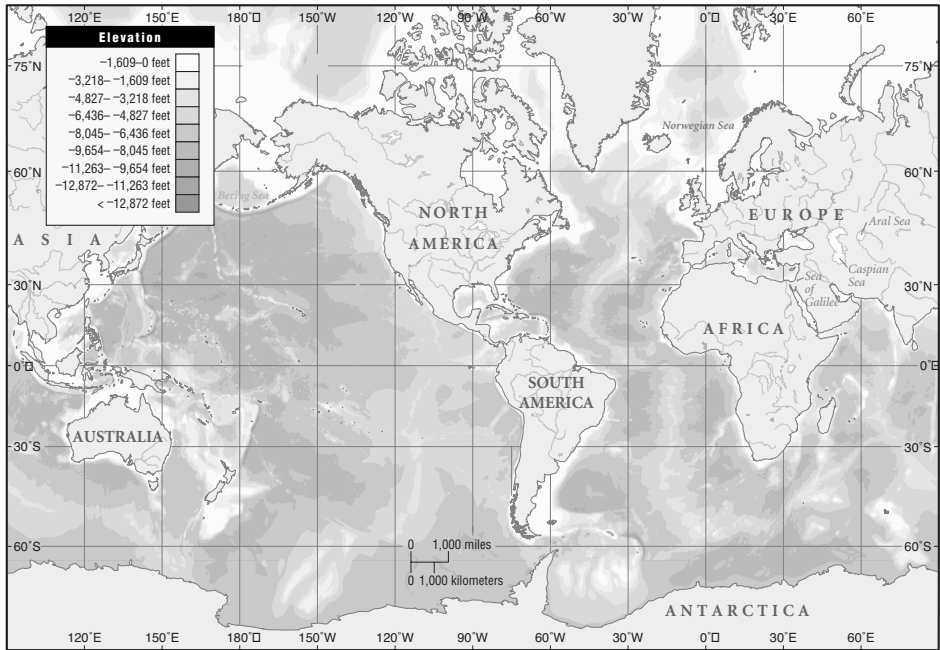
2. Match the term in column one with the definition in column two. (One term will not have a matching definition.)

- | | |
|-------------------|---|
| 1. equator | A. geological features of the earth's crust |
| 2. prime meridian | B. dry, level grassland with few to no trees |
| 3. steppe | C. the only great circle of the earth that passes through both poles of the earth and the Royal Observatory in Greenwich, England |
| 4. tectonics | D. the line around which a body rotates |
| 5. savannah | E. grasslands containing scattered trees |
| 6. axis | |

- 3. On Map A (page 18), label the continents.
- 4. On Map B (page 18), label the oceans and the Mediterranean Sea.
- 5. The Himalayas is the highest mountain range in the world, having eight of the highest mountains in the world. The Appalachians, in the eastern United States, is a rather low mountain range. Based on these facts, which mountain range would scientists think is older? Why?
- 6. How do mountain ranges and deserts make it possible for nations to develop different civilizations?
- 7. What is a desert?



Map A



Map B

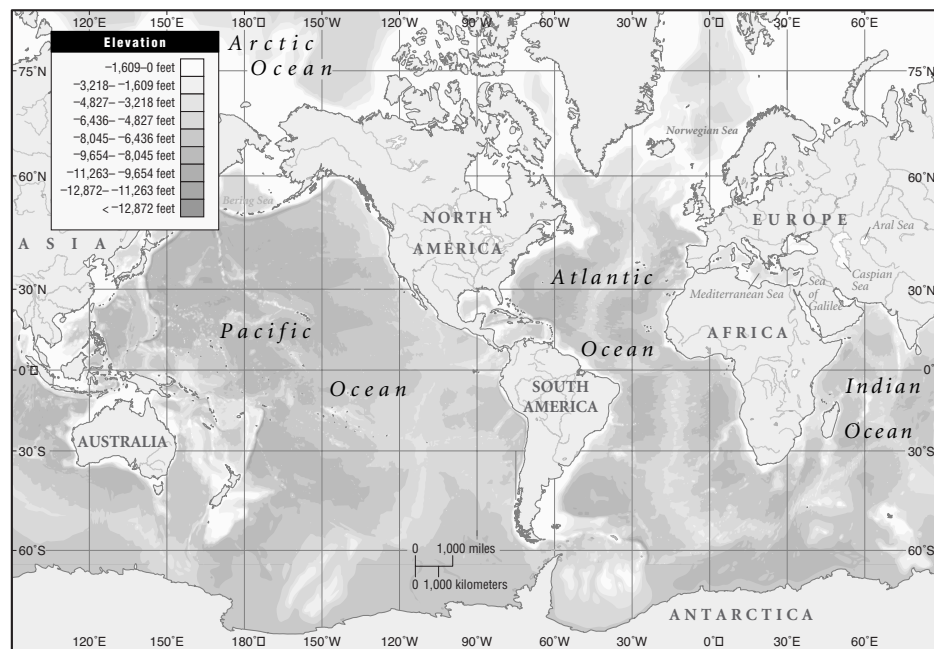
Answer Key to Chapter 1, Sample Test II

Students' answers should approximate the following.

1. a) 380 miles
b) 120 miles
c) 85 miles
2. 1. no match 4. A
2. C 5. E
3. B 6. D
3. See map
4. See map
5. Scientists would think the Appalachians older because older mountain ranges have had more time to be worn down by wind and rain and so have become smaller.
6. Because they provide barriers to contact between peoples and nations, mountain ranges and deserts make it possible for nations to develop different civilizations.
7. A desert is land with very little or no water.



Map A



Map B

Resources for Further Reading

National Geographic Internet site: <http://maps.nationalgeographic.com/maps>

Golden Guide books: *Weather and Geology*.
Golden Press, New York.

Isaac Asimov, *Isaac Asimov's Guide to Earth and Space*. Ballantine Books.

Introduction, "Our World at the Millennium," in *Millennium World Atlas*. Rand McNally.