## Chapter Planning Guide

### Key to Ability Levels

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### Key to Teaching Resources

- Print Material
- Transparency
- CD-ROM or DVD

### Levels

#### Resources

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*Also available in Spanish

- ✓ Chapter- or unit-based activities applicable to all sections in this chapter.
### Teacher Resources

<table>
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### ASSESS

| BL     | Section Quizzes and Chapter Tests                                         | p. 37          | p. 38     | p. 39     | p. 40     | p. 41     |                |
|        | Authentic Assessment With Rubrics                                          |                |           |           |           |           | p. 34         |
|        | ExamView Assessment Suite                                                  | 4-1            | 4-2       | 4-3       | 4-4       | Ch. 4      |                |

### CLOSE

| BL     | Reteaching Activity, URB                                                  |                |           |           |           |           | p. 49         |
|        | Dinah Zike’s Reading and Study Guide Foldables                            | p. 46          |           |           |           |           |               |
|        | World Geography in Graphic Novel                                          |                |           |           |           |           | pp. 1–6       |
|        | Graphic Organizer Transparencies, Strategies, and Activities              | pp. 23–24     |           |           |           |           |               |

✓ Chapter- or unit-based activities applicable to all sections in this chapter.

*Also available in Spanish
Chapter 4
Integrating Technology

Using ExamView® Assessment Suite

Teach With Technology

What is ExamView® Assessment Suite?
Glencoe’s ExamView® Assessment Suite is a powerful assessment tool that enables you to create and customize tests for your students. Tests can be either printed or administered online.

How can ExamView® Assessment Suite help me?
ExamView® allows you to create your own test questions or choose from existing, fully editable banks of questions customized for this book. Question formats include true/false, multiple choice, completion, matching, short answer, and essay, and many questions are based on documents, maps, or graphs. The flexibility of ExamView® allows you to develop testing materials that:
• focus on specific skills or competencies
• address state or national standards
• are leveled for different abilities
• can be translated into Spanish in one click

ExamView® Assessment Suite is one of Glencoe’s technology resources available for teachers.

Geography ONLINE
Visit glencoe.com and enter QuickPass™ code WGC2630C4T for Chapter 4 resources.

You can easily launch a wide range of digital products from your computer’s desktop with the McGraw-Hill widget.

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• **Timed Readings Plus in Social Studies** helps students increase their reading rate and fluency while maintaining comprehension. The 400-word passages are similar to those found on state and national assessments.

• **Reading in the Content Area: Social Studies** concentrates on six essential reading skills that help students better comprehend what they read. The book includes 75 high-interest nonfiction passages written at increasing levels of difficulty.

• **Reading Social Studies** includes strategic reading instruction and vocabulary support in Social Studies content for both ELLs and native speakers of English.

• **Content Vocabulary Workout** (Grades 6-8) accelerates reading comprehension through focused vocabulary development. Social Studies content vocabulary comes from the glossaries of Glencoe’s Middle School Social Studies texts. [www.jamestowneducation.com](http://www.jamestowneducation.com)

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**Biography**

The following videotape programs are available from Glencoe as supplements to Chapter 4:

- **The Pueblo Cliffdwellers** (ISBN 0-76-700613-5)
- **The Stock Exchange** (ISBN 0-76-700562-7)

To order, call Glencoe at 1-800-334-7344. To find classroom resources to accompany many of these videos, check the following pages:

- [A&E Television: www.aetv.com](http://www.aetv.com)
- [The History Channel: www.historychannel.com](http://www.historychannel.com)

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**National Geographic**

**Index to National Geographic Magazine:**

The following articles relate to this chapter:

- “By the Numbers,” by Siobhan Roth, December 2006.

**National Geographic Society Products** To order the following, call National Geographic at 1-800-368-2728:


Access National Geographic’s new dynamic MapMachine Web site and other geography resources at:

- [www.nationalgeographic.com](http://www.nationalgeographic.com)
- [www.nationalgeographic.com/maps](http://www.nationalgeographic.com/maps)
Focus

More About the Photo

Visual Literacy Seafood is a major part of the Korean diet, as it is in much of Asia. However, with fishery production on the decline, Koreans rely more and more on imported fish and other seafood.

Teach

As you begin teaching this chapter, read the Big Idea out loud to students. Explain that the Big Idea is a broad, or high-level, concept that will help them understand what they are about to learn. Use the Essential Question for each section to help students focus on the Big Idea.

The Human World

The characteristics and distribution of human populations affect human and physical systems. A study of the human world—population, culture, political and economic systems, and resources—will help you understand the world around you.

Essential Questions

Section 1: World Population
What factors influence population growth in a given area or region?

Section 2: Global Cultures
How does the spatial interaction of cultures affect human systems?

Section 3: Political and Economic Systems
What types of human systems provide the power for groups of people to control Earth’s surface?

Section 4: Resources, Trade, and the Environment
How does the availability and use of natural resources affect economic activities and the environment?

Geography ONLINE
Visit glencoe.com and enter code WGC9952C4 for Chapter 4 resources.

Section 1

World Population

Essential Question What factors influence population growth in a given area or region? (death rate, birthrate, migration, suitable land and climate) Point out to students that in Section 1 they will learn about factors that affect population growth. OL

Section 2

Global Cultures

Essential Question How does the spatial interaction of cultures affect human systems? (Spatial interaction such as migration influences human systems as new ideas, languages, foods, etc. are brought from one place to another. New ideas can bring about changes in government and belief systems.) Explain to students that in Section 2 they will learn about the nature of culture and cultural change. OL
Section 3

Political and Economic Systems

**Essential Question** What types of human systems provide the power for groups of people to control Earth’s surface?

(Governments and economic systems provide the structure and power for people to take control of Earth’s surface.) In Section 3 students will learn about different political and economic systems. **OL**

Section 4

Resources, Trade, and the Environment

**Essential Question** How does the availability and use of natural resources affect economic activities and the environment? (In places where natural resources are abundant, economies thrive. Overuse and poor management of natural resources cause pollution.) Point out to students that in Section 4 they will learn about resources, trade, and environmental problems. **OL**

**Know-Want-Learn** Create a Trifold Book to help you keep track of what you know, what you want to learn, and what you learn about the geography of the human world.

**Reading and Writing** Before you read, make a list on your Foldable of what you know about world population, cultures, political and economic systems, and resources, trade, and the environment. Then make a list of what you want to learn about these topics. When you have finished reading the chapter, write down what you learned.

**Dinah Zike’s Foldables**

**Purpose** This Foldable will help students sort out their prior knowledge from what they want to know. It will also help them keep track of new material. Invite students to use more than one K-W-L sheet if necessary. The K-W-L sheet(s) will help students prepare for assessment.

**Geography ONLINE**

Visit glencoe.com and enter QuickPass code WGC2630C4T for Chapter 4 resources.
World Population

Explorer and conservationist J. Michael Fay’s flight across Africa showed that the effects of rapid population growth reflect the global challenge humans face today. How can people maintain conditions favorable to human life without endangering those very conditions through overpopulation?

Voices Around the World

“As we flew outside of the park, we saw African settlement areas where the land had been overused for mass cultivation and cattle grazing. There were wall to wall fields and masses of people on the ground. Little of the land could still be identified as wild. Further on, we hit white farm areas, where the land had been irrigated well. Although it looked like a giant oasis, I wondered what the cost was in terms of fossil fuel and ground water. Even farther out, we saw a great hole in the ground. This was Phalaborwa Mine, one of the biggest open pit mines in the world and extreme example of eliminating nature from the planet.”

—J. Michael Fay, Africa Megaflyover: Air Dispatches, National Geographic (online), June 14, 2004

To generate student interest and provide a springboard for class discussion, access the Chapter 4, Section 1 video at glencoe.com.
Population Growth

MAIN IDEA Population growth varies from country to country and is influenced by cultural ideas, migration, and level of development.

GEOGRAPHY AND YOU Do you have any siblings? If so, how many? Read to learn how changes in family size create challenges to population growth.

More than 6.8 billion people now live on Earth, inhabiting about 30 percent of the planet’s land. Global population is growing rapidly and is expected to reach 9 billion by the year 2050. Such rapid growth was not always the case. From the year 1000 until 1800, the world’s population increased slowly. Then the number of people on Earth more than doubled between 1800 and 1950. By 2006 the world’s population had soared to more than 6 billion.

The Demographic Transition

Scientists in the field of demography, the study of populations, use statistics to learn about population growth. The birthrate is the number of births per year for every 1,000 people. The death rate is the number of deaths per year for every 1,000 people. Natural increase, or the growth rate, of a population is the difference between an area’s birthrate and its death rate. Migration, or the movement of people from place to place, must also be considered when examining population growth.

The demographic transition model uses birthrates and death rates to show changes in the population trends of a country or region. The model was first used to show the relationship of declining birthrates and death rates to industrialization in Western Europe. Falling death rates are due to more abundant and reliable food supplies, improved health care, access to medicine and technology, and better living conditions. Birthrates decline more slowly as cultural traditions change. Today, most of the world’s industrialized and technologically developed countries have experienced the transition from high birthrates and death rates to low birthrates and death rates. These countries have reached what is known as zero population growth, in which the birthrate and death rate are equal. When this balance occurs, a country’s population does not grow.

Although birthrates have fallen significantly in many countries in Asia, Africa, and Latin America over the past 40 years, they are still higher than in the industrialized world. Families in these regions traditionally are large because of cultural beliefs about marriage, family, and the value of children. For example, a husband and wife in a rural agricultural area may choose to have several children who will help farm the land. A high birthrate is needed in these regions to greatly increase population growth in these regions. As a result, the doubling time, or the number of years it takes a population to double in size, has been reduced to only 23 years in some parts of Asia, Africa, and Latin America. In contrast, the average doubling time of a developed country can be more than 300 years.

Creating an Almanac

The Demographic Transition Model

1. Place How does total population change from Stage 1 to Stage 4?
2. Place What happens to birthrates between Stage 2 and Stage 3? What influences this change?

Answers
1. It increases sharply then levels off.
2. Birthrates decrease because of social changes.

Student research should take into account such factors as birthrates, death rates, migration, land, and climate.

Putting It Together Allow time for each pair of students to introduce their city and share their findings with the class. Students will learn more about the culture of their city in Section 2.

(Chapter Project continues on page 76.)
**Challenges of Growth**

Rapid population growth presents many challenges to the global community. As the number of people increases, so does the difficulty of producing enough food to feed them. Fortunately, since 1950 world food production has risen on all continents except Africa. In Africa, lack of investment in agriculture, along with warfare and severe weather conditions that ruin crops, have brought hunger to this region.

In addition, populations that grow rapidly use resources more quickly. Some countries face shortages of water, housing, and clothing, for instance. Rapid population growth strains these limited resources. Another concern is that the world’s population is unevenly distributed by age, with the majority of some countries’ populations being infants and young children who cannot contribute to food production.

While some experts are pessimistic about the long-term effects of rapid population growth, others are optimistic that, as the number of humans increases, the levels of technology and creativity will also rise. For example, scientists continue to study and develop ways to boost agricultural productivity. Fertilizers can improve crop yields. Irrigation systems can help increase the amount of land available for farming. New varieties of crops have been created to withstand severe conditions and yield more food.

**Negative Population Growth**

In the late 1900s, some countries in Europe began to experience negative population growth, in which the annual death rate exceeds the annual birthrate. Hungary and Germany, for example, show change rates of –0.3 and –0.2, respectively. This situation has economic consequences different from, but just as serious as, those caused by high growth rates. In countries with negative population growth, it is difficult to find enough workers to keep the economy going. Labor must be recruited from other countries, often by encouraging immigration or granting temporary work permits. Although the use of foreign labor has helped countries with negative change rates maintain their levels of economic activity, it also has created tensions between the “host” population and the communities of newcomers.

**Population Distribution**

Not only do population growth rates vary among the Earth’s regions, but the planet’s population distribution, the pattern of human settlement, is uneven as well. Population distribution is related to the Earth’s physical geography. Only about 30 percent of the Earth’s surface is made up of land, and much of that land is inhospitable. High mountain peaks, barren deserts, and frozen tundra make human activity very difficult. As the world population density map on page 73 shows, almost everyone on Earth lives on a relatively small portion of the planet’s land—a little less than one-third. Most people live where fertile soil, available water, and a climate without harsh extremes make human life possible.

Of all the continents, Europe and Asia are the most densely populated. Asia alone contains more than 60 percent of the world’s people. Throughout the world, where populations are highly concentrated, many people live in metropolitan areas—cities and their surrounding urbanized areas. Today most people in Europe, North America, South America, and Australia live in or around urban areas.

**Population Density**

Geographers determine how crowded a country or region is by measuring population density—the number of people living on a square mile or square kilometer of land. To determine population density in a country, geographers divide the total population of the country by its total land area.

**Mathematics**

As students read this section, they will list the ways in which geographers use mathematical concepts and skills to analyze population change. **Ask:** How does mathematics help you understand population growth and distribution? (Geographers collect statistical information to analyze historic trends and predict future trends.) Each student will write an essay, no more than three pages long, describing these uses and explaining how mathematics might contribute to an understanding of global population trends. Graphs, tables, or mathematical equations may be used to illustrate the essay.
Population density varies widely from country to country. Canada, with a low population density of about 10 people per square mile (4 people per sq. km), offers wide-open spaces and the choice of living in thriving cities or quiet rural areas. In contrast, Bangladesh has one of the highest population densities in the world—about 3,227 people per square mile (1,246 people per sq. km).

Countries with populations of about the same size do not necessarily have similar population densities. For example, both Bolivia and the Dominican Republic have about 10 million people. With a smaller land area, the Dominican Republic has 541 people per square mile (209 people per sq. km). However, Bolivia has only 24 people per square mile (9 people per sq. km).

Because the measure of population density includes all the land area of a country, it does not account for uneven population distribution within a country. In Egypt, for example, overall population density is 205 people per square mile (79 people per sq. km). In reality, over 90 percent of Egypt’s people live along the Nile River.

The rest of Egypt is desert. Thus, some geographers describe a country’s population density in terms of land that can be used to support the population rather than total land area. When Egypt’s population density is measured this way, it is about 6,962 people per square mile (2,688 people per sq. km)!

Population Movement

The Earth’s population is moving in great numbers. People are moving from city to city or from city to suburbs. Others are migrating from rural villages to cities. The resulting growth of city populations brought about by such migration and the changes that come with this increase are called urbanization.

Differentiated Instruction

Below Grade Level

Have struggling students review the key on the map. Ask: What happens to the colors in the key as the population densities get larger? (The colors get darker.) Ask: Where on the map do you see lots of the darker colors? (South Asia, East Asia, parts of Africa, western Europe) What does this tell you about these areas? (They have a high population density.)

Differentiated Instruction Strategies

BL

Ask students to paste pictures of people from magazines on sheets of paper to represent the number of people per square mile in each of the two countries.

AL

Ask students to make a comparison table of other factors (natural resources, infrastructure, etc.) that show if the available land can support the population.

ELL

Ask students to review the differences between the terms natural increase and doubling time, and population distribution and population density.

Objective:

Students will create a visual demonstration of population density.

Focus:

Students will create a visual representation to compare population densities.

Teach:

Provide students with land area and population statistics for two countries with similar land areas.

Assess:

Evaluate drawings for accuracy.

Close:

Review work and discuss results.
Critical Thinking
Predicting Consequences
Have students hypothesize some of the effects on a rural community when many young people move to cities. 

For additional practice on this skill, see the Skills Handbook.

**Answer: jobs, wars, food shortages**

### Geography ONLINE

**Study Central™** provides summaries, interactive games, and online graphic organizers to help students review content.

### Close

**Identifying the Main Idea**

**Ask:** What are the four major causes of population changes? (change in birthrate, change in death rate, immigration, move to cities)

- The primary cause of urbanization is the desire of rural people to find jobs and a better life in more prosperous urban areas. Rural populations certainly have grown, but the amount of farmland has not increased to meet the growing number of people. As a result, many rural migrants find urban jobs in manufacturing and service industries.
- About half of the world’s people live in cities. Between 1960 and 2010, the population of metropolitan Mexico City rose from about 5 million to more than 19 million. The graph at the right shows that other cities in Latin America, as well as in Asia and Africa, have seen similar growth. Some of these cities contain a large part of their country’s entire population. For example, about one-third of Argentina’s people live in Buenos Aires.

Population movement also occurs between countries. Some people emigrate from the country of their birth. They are known as emigrants in their homeland and immigrants in their new country. In the past 40 years, economic pull factors have drawn millions of people from Africa, Asia, and Latin America to the wealthier countries of Europe, North America, and Australia. Some were forced to flee their country because of the push factors of wars, food shortages, or other problems. They are refugees, or people who flee to escape persecution or disaster.

**Movement**

What influences the migration of people from one country to another?

### Critical Thinking

1. **Vocabulary**

   1. Explain the significance of: birthrate, death rate, natural increase, migration, demographic transition, doubling time, population distribution, population density.
   2. Why is world population distribution uneven? What factors contribute to this uneven distribution?
   3. Describe how the demographic transition model is used to show a country’s population growth.
   4. Why does population growth vary? Use a table like the one below to help answer the question by filling in examples of the factors that influence population growth.

<table>
<thead>
<tr>
<th>Influence</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural ideas</td>
<td>Migration</td>
</tr>
<tr>
<td>Migration</td>
<td>Level of development</td>
</tr>
</tbody>
</table>

2. **Main Ideas**

   1. Why is world population distribution uneven? What factors contribute to this uneven distribution?
   2. Why is world population distribution uneven? What factors contribute to this uneven distribution?
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</tbody>
</table>

5. **Critical Thinking**

   5. **Answering the Essential Question**

   How might the population growth rates of developing countries be affected as they become increasingly industrialized?

   6. **Comparing and Contrasting**

   How do the effects of zero population growth and negative population growth differ? How are they similar?

   7. **Analyzing Visuals**

   Compare the world population density map on page 73 to the world physical map on pages RA4–RA5 of the Reference Atlas. Identify three of the most densely populated areas on Earth. What physical features do they share?

   8. **Expository Writing**

   What physical features might be present in countries that have large numbers of people concentrated in relatively small areas? Write a paragraph with supporting details to explain your answer.

### Answers

1. Definitions for the vocabulary terms are found in the section and the Glossary.
2. Many people live where there is fertile soil, available water, and a mild climate; many people also live in large metropolitan areas. Fewer people live in mountainous areas, deserts, or tundra.
3. The model looks at birthrates and death rates and shows trends in population for a region.
4. **Cultural ideas:** Rural families have several children to help farm the land; **Migration:** People migrate from troubled areas to wealthier countries; **Level of development:** industrialized countries have low birthrates and low death rates, and population does not grow.
5. Population growth should slow as both birthrates and death rates decrease.
6. Negative population growth, where the death rate exceeds the birthrate, means there will not be enough workers to keep the economy growing. In a country with zero population growth, the birthrate and death rate are equal, and the population does not grow.
7. Answers may vary. Possible answers: Europe, India, and China all have population densities of 1,250 and over per square mile (500 and over per sq. km). The areas are all located on relatively flat terrain and have fertile soil and adequate rainfall. Each region has many urban areas.
8. Answers will vary, but students should take into account such features as fertile soil, a source of freshwater, and terrain.
Global Cultures

The world’s people organize communities, develop their ways of life, and adjust to the differences and similarities they experience. Many people struggle to maintain some elements of their traditional cultures while establishing ties with the global community.

Voices Around the World

“. . . Berber struggle for cultural recognition has grown stronger over time. The urban Berbers leading this revival movement are intellectuals who use French, a language they associate with culture and human rights, rather than Arabic, which they despise as the language of their oppressors. But the language they’re really pushing is Tamazight, or Berber. During the last decade of Hassan II’s rule (which ended with the monarch’s death in 1999), they founded Berber language and cultural associations, set up websites and newspapers, and, in 1994, won the right to broadcast news in Berber on national television.”

— Jeffrey Tayler, “Among the Berbers,” National Geographic, January 2005

Guide to Reading

Content Vocabulary
- culture (p. 76)
- language family (p. 76)
- ethnic group (p. 77)

Academic Vocabulary
- similar (p. 76)
- major (p. 78)

Places to Locate
- Egypt (p. 78)
- Iraq (p. 78)
- Pakistan (p. 78)
- China (p. 78)
- Mexico (p. 78)

Reading Strategy
Organizing As you read about global cultures, complete a graphic organizer like the one below by listing the world culture regions.

A Tuareg man belonging to the Berber ethnic group

Focus

Daily Focus Transparency 4.2

Guide to Reading

Answers to Graphic:

- United States and Canada
- Latin America
- Europe
- Russia
- North Africa, Southwest Asia, and Central Asia
- Africa South of the Sahara
- South Asia
- East Asia
- Southeast Asia
- Australia, Oceania, and Antarctica

To generate student interest and provide a springboard for class discussion, access the Chapter 4, Section 2 video at glencoe.com.
Geographers study culture, the way of life of a group of people who share similar beliefs and customs. A particular culture can be understood by looking at language, religion, daily life, history, art, government, and the economy.

**Religion**

Religious beliefs vary significantly around the world, and struggles over religious differences can be a source of conflict. In many cultures, however, religion enables people to find a sense of identity. It also influences aspects of daily life, from the practice of moral values to the celebration of holidays and festivals.

Throughout history, religious symbols and stories have shaped cultural expressions such as painting, architecture, and music. The feature on pages 80–99 discusses world religions.
Social Groups
A social system develops to help the members of a culture work together to meet basic needs. In all cultures the family is the most important group. Most cultures are also made up of social classes, groups of people ranked according to ancestry, wealth, education, or other criteria. Moreover, cultures may include people who belong to different ethnic groups. An ethnic group is made up of people who share a common language, history, place of origin, or a combination of these elements.

Government and Economy
Governments of the world share certain features. For example, each maintains order within the country, provides protection from outside dangers, and supplies other services to its people. Governments are organized by levels of power—national, regional, and local—and by type of authority—a single ruler, a small group of leaders, or a body of citizens and their representatives. When examining cultures, geographers look at economic activities. They study how a culture utilizes its natural resources to meet human needs. They also analyze the ways in which people produce, obtain, use, and sell goods and services.

Culture Regions
To organize their understanding of cultural development, geographers divide the Earth into culture regions. Each culture region includes countries that have certain traits in common. They may share similar economic systems, forms of government, and social groups. Their histories, religions, and art forms may share similar influences. The map below shows the culture regions you will study in this textbook.

Food for Thought

Objective: To understand that foods from the Americas influenced cuisines around the world.

Focus: Ask students to find recipes for foods identified with a country or region outside the Americas that are based on staples imported from the Americas (for example, Italian foods using tomatoes or corn).

Teach: Provide access to the Internet and library.

Assess: Evaluate student recipes.

Close: Display all recipes and discuss results.

Differentiated Instruction Strategies

BL Ask students to find a recipe for a familiar food and identify the origins of the ingredients.

AL Ask students to select a country and research the staples used for cooking before the first Europeans landed in the Americas, and the staples used 100 years after the Europeans arrived in the Americas.

ELL Ask students to review the term cultural diffusion.
Cultural Change

**MAIN Idea** Internal and external factors change cultures over time.

**GEOGRAPHY AND YOU** Have you ever moved to a new town or made friends with someone who has just moved into your community? Read to learn how the movement of people can change cultures.

Internal factors—new ideas, lifestyles, and inventions—create change within cultures. Change can also come through spatial interaction such as trade, migration, and war. The process of spreading new knowledge from one culture to another is called cultural diffusion.

**The Agricultural Revolution**

Cultural diffusion has been a major factor in cultural development since the dawn of human history. The earliest humans were nomads, groups of hunters and herders who had no fixed home but moved from place to place in search of food, water, and grazing land. As the Earth’s climate warmed about 10,000 years ago, many of these nomads settled first in hilly areas and later in river valleys and on fertile plains. They became farmers who lived in permanent villages and grew crops on the same land every year. This shift from hunting and gathering food to producing food is known as the Agricultural Revolution.

By about 3500 B.C., some of these early farming villages had evolved into civilizations, highly organized, city-based societies with an advanced knowledge of farming, trade, government, art, and science.

**Culture Hearths** The world’s first civilizations arose in culture hearths, early centers of civilization whose ideas and practices spread to surrounding areas. The map below shows that the most influential culture hearths developed in areas that make up the modern countries of Egypt, Iraq, Pakistan, China, and Mexico.

These five culture hearths had certain geographic features in common. They all emerged from farming settlements in areas with a mild climate and fertile land. In addition, they were located near a major river or source of water. The peoples made use of these favorable environments. They dug canals and ditches to irrigate the land. All of these factors enabled people to grow surplus crops.

Surplus food set the stage for the rise of cities and civilizations. With more food available, there was less need for everyone in a settlement to farm the land. People developed other ways of making a living. They created new technology and carried out specialized economic activities, such as metalworking and shipbuilding, that spurred the development of long-distance trade.

In turn, the increased wealth from trade led to the rise of cities and complex social systems. The people of a city needed a well-organized government to coordinate harvests, plan building projects, and manage an army for defense. Officials and merchants created writing systems to record and transmit information.

### Activity: Art Connection

**Cultural Contributions** Have students research world history and art history, and develop a visual display of the key cultural contributions of each of the world’s major culture hearths. Students should include examples of physical and cultural patterns associated with each hearth, and write a description of how these patterns influenced the development of innovations that later spread to other world regions. Students might focus on cultural developments or technologies that are still identifiable in U.S. culture today. Students may work in small groups with each group concentrating on a culture hearth. Combine their completed work into a class display.
Cultural Contacts  Cultural contact among different civilizations promoted cultural change as ideas and practices spread through trade and travel. Migration has also fostered cultural diffusion. People migrate to avoid wars, persecution, and famines. In some instances, as in the case of enslaved Africans brought to the Americas, mass migrations have been forced. Conversely, positive factors—better economic opportunities and religious or political freedoms—may draw people from one place to another. Migrants carry their cultures with them, and their ideas and practices often blend with those of the people already living in the migrants’ adopted countries.

Industrial and Information Revolutions  Cultural diffusion has increased rapidly during the last 250 years. In the 1700s and 1800s, some countries began to industrialize, using power-driven machines and factories to mass-produce goods. With new production methods, these countries produced goods quickly and cheaply, and their economies changed dramatically. This development, known as the Industrial Revolution, also led to social changes. As people left farms for jobs in factories and mills, cities grew larger.

SECTION 2 REVIEW

Vocabulary
1. Explain the significance of: culture, language family, ethnic group, culture region, cultural diffusion, culture hearth.

Main Ideas
2. Describe the elements of culture geographers use to organize the world into culture regions.
3. What are the internal and external factors that change cultures over time? Use a web diagram like the one below to list factors that influence cultural change.

Cultural Change

Critical Thinking
4. Answering the Essential Question  How did cultural diffusion influence the Agricultural Revolution?
5. Making Generalizations  Explain the factors that influence a country’s ability to control territory.
6. Identifying Cause and Effect  What cultural changes have resulted from the information revolution?
7. Analyzing Visuals  Study the map of culture hearths on page 78. What factors influenced their location?

Writing About Geography
8. Descriptive Writing  Use the Internet to find information about how various cultures view particular places or features. Then write an essay describing the similarities and differences you found.

Writing Support

Narrative Writing  Have students write a short story about a person using new technology in the context of his or her traditional culture.

Caption Answer: Computers and the Internet allow large quantities of information to be stored and distributed instantaneously around the world.

Reading Check  Answer: Middle America, Nile Valley, Huang He Valley, Indus Valley, and Mesopotamia

Assess

Geography ONLINE

Study Central™ provides summaries, interactive games, and online graphic organizers to help students review content.

Close

Outline  Have students outline the section, using the headings to help organize their outlines.

Answers
1. Definitions for the vocabulary terms are found in the section and the Glossary.
2. language, religion, social groups, forms of government, economic systems
3. Internal factors: new ideas, lifestyles, inventions; External factors: trade, migration, war
4. Nomads who were hunters and herders eventually settled in fertile areas and began growing crops.
5. its ability to protect its people from outside danger, the strength of the countries around it, the level of wealth in the country
6. People are able to talk freely and instantly with almost anyone around the globe. Businesses can expand globally and keep in contact with faraway branches. Ideas move faster than ever.
7. located near bodies of water and in low latitudes where the climate is warmer.
8. Answers may vary but should include statements about similarities or differences among cultures in terms of mythical, religious, economic, or historic associations.
A religion is a set of beliefs in an ultimate reality and a set of practices used to express those beliefs. Religion is a key component of culture.

Each religion has its own special celebrations and worship styles. Most religions also have their own sacred texts, symbols, and sites. All of these aspects of religion help to unite followers regardless of where in the world they live.

**TERMS**
- **animism**—belief that spirits inhabit natural objects and forces of nature
- **atheism**—disbelief in the existence of any god
- **monotheism**—belief in one God
- **polytheism**—belief in more than one god
- **secularism**—belief that life’s questions can be answered apart from religious belief
- **sect**—a subdivision within a religion that has its own distinctive beliefs and/or practices
We study religion because it is an important component of culture, shaping how people interact with one another, dress, and eat. Religion is at the core of the belief system of a region’s culture. The diffusion of religion throughout the world has been caused by a variety of factors including migration, missionary work, trade, and war. Buddhism, Christianity, and Islam are the three major religions that spread their religion through missionary activities. Religions such as Hinduism, Sikhism, and Judaism are associated with a particular culture group. Followers are usually born into these religions. Sometimes close contact and differences in beliefs have resulted in conflict between religious groups.

**Skill Practice**

**Visual Literacy** Remind students that every one of these groups can be further divided into subgroups. For example, Christianity is broadly divided into Catholics, Protestants, and Eastern Orthodox. Protestants includes many other subgroups, many of which have strikingly different beliefs. Ask: Why is it helpful to group such diverse religions under broad, or general, categories? (Generalizing helps us see a big picture. Even if that picture is not perfect, it is often a good place to begin, especially when examining a complex topic.)

**Drawing Conclusions** The text discusses some of the methods by which major religions have spread from their places of origin. Ask: Why have religious beliefs moved from one place to another? (Answers will vary but may include: missionaries view it as part of their religion to increase numbers of members of the faith; it is prescribed as part of the faith to share the beliefs with others; traders or invaders force their faith on new populations.) Why do some religious beliefs remain primarily in their places of origin? (Answers will vary but may include: beliefs might be tied closely to a culture group, ethnic group, or place of origin; converts are not regarded favorably; adherents may not be numerous enough or may not travel widely enough to be able to influence new groups of people.)

**Geographic Theme: Movement**
Siddhartha Gautama, known as the Buddha (“the Awakened”) after his enlightenment at the age of 35, was born some 2,500 years ago in what is now Nepal. The Buddha’s followers adhere to his teachings (dharma, meaning “divine law”), which aim to end suffering in the world. Buddhists call this goal Nirvana; and they believe that it can be achieved only by understanding the Four Noble Truths and by following the 4th Truth, which says that freedom from suffering is possible by practicing the Eightfold Path. Through the Buddha’s teachings, his followers come to know the impermanence of all things and reach the end of ignorance and unhappiness.

Over time, as Buddhism spread throughout Asia, several branches emerged. The largest of these are Theravada Buddhism, the monk-centered Buddhism which is dominant in Sri Lanka, Burma, Thailand, Laos, and Cambodia; and Mahayana, a complex, more liberal variety of Buddhism that has traditionally been dominant in Tibet, Central Asia, Korea, China, and Japan.

**Sacred Text**

For centuries the Buddha’s teachings were transmitted orally. For Theravada Buddhists, the authoritative collection of Buddhist texts is the Tripitaka (“three baskets”). These texts were first written on palm leaves in a language called Pali. This excerpt from the Dhammapada, a famous text within the Tripitaka, urges responding to hatred with love:

> Never in this world is hate appeased by hatred.
> It is only appeased by love—
> This is an eternal law.
> —Dhammapada 1.5

**Sacred Symbol**

The dharmachakra (“wheel of the law”) is a major Buddhist symbol. Among other things, it signifies the overcoming of obstacles. The eight spokes represent the Eightfold Path—right view, right intention, right speech, right action, right livelihood, right effort, right mindfulness, right concentration—that is central for all Buddhists.

**Statue of the Buddha**

At about 44 feet (13.4 m) in height, the Great Buddha of Kamakura is the second-largest monumental Buddha in Japan. The bronze statue was cast in A.D. 1252 and housed originally inside a temple. A tsunami at the end of the fifteenth century destroyed the temple but left the Giant Buddha in the open air, where it has remained ever since. Situated on the grounds of the Kotokuin Temple, the statue is one of the most visited sites in Japan. Like other giant statues of the Buddha, it is often referred to by the nickname Daibutsu (“Large Buddha”).

**Dharma Wheel and Deer Sculpture**

Many Tibetan Buddhists make pilgrimages to see this sculpture of the dharmachakra. It sits atop the entry to the Jokhang Temple, one of the holiest sites in Tibet. The deer are symbolic of the Buddha’s first sermon, which was held in a deer park.
Sacred Site  Buddhists believe that Siddhartha Gautama achieved enlightenment beneath the Bodhi Tree in Bodh Gaya, India. Today, Buddhists from around the world flock to Bodh Gaya in search of their own spiritual awakening.

Worship and Celebration  The ultimate goal of Buddhists is to achieve Nirvana, the enlightened state in which individuals are free from ignorance, greed, and suffering. Theravada Buddhists believe that monks are most likely to reach Nirvana because of their lifestyle of renunciation, moral virtue, study, and meditation.

Did You Know?

- **Forms of Buddha**  Buddhists believe that the Buddha has many forms. For example, there is the Buddha of infinite happiness, the Buddha of great vows, and so on.
- **The Dalai Lama**  In Tibetan Buddhism, the reincarnated Buddha of Compassion is a man known as the Dalai Lama. The name Dalai Lama means “Ocean of Wisdom.”
- **Spiritual Leader**  The Dalai Lama is the spiritual leader of the Tibetan people. The first Dalai Lama lived in the early fifteenth century. Each successive Dalai Lama is a rebirth of his predecessor.
- **Current Dalai Lama**  The current Dalai Lama is the fourteenth incarnation of the Buddha of Compassion. He was born Lhamo Thondup in 1935. When he was two years old, Lhamo was identified as the reincarnation of the previous Dalai Lama, who had died in 1933.
- **Leader in Exile**  In 1950, the Chinese government claimed Tibet as part of China. Their sovereignty threatened, Tibetans called the 15-year-old Dalai Lama to power. Nine years later, he was forced into exile, where he remains today.
- **Working for Peace**  The Dalai Lama symbolizes peace and compassion around the world. He teaches peace and reconciliation, and continues working for Tibet’s independence. In 1989, he was awarded the Nobel Peace Prize.
Christianity claims more members than any of the other world religions. It dates its beginning to the death of Jesus in A.D. 33 in what is now Israel. It is based on the belief in one God and on the life and teachings of Jesus. Christians believe that Jesus, who was born a Jew, is the son of God and is fully divine and human. Christians regard Jesus as the Messiah (Christ), or savior, who died for humanity's sins. Christians feel that people are saved and achieve eternal life by faith in Jesus.

The major forms of Christianity are Roman Catholicism, Eastern Orthodoxy, and Protestantism. All three are united in their belief in Jesus as savior, but have developed their own individual theologies.

Sacred Text The Bible is the spiritual text for all Christians and is considered to be inspired by God. This excerpt, from Matthew 5:3-12, is from Jesus’ Sermon on the Mount.

```
Blessed are the poor in spirit, for theirs is the kingdom of heaven.
Blessed are those who mourn, for they shall be comforted.
Blessed are the meek, for they shall inherit the earth.
Blessed are those who hunger and thirst for righteousness, for they shall be satisfied.
Blessed are the merciful, for they shall obtain mercy.
Blessed are the pure in heart, for they shall see God.
Blessed are the peacemakers, for they shall be called sons of God.
Blessed are those who are persecuted for righteousness’ sake, for theirs is the kingdom of heaven.
Blessed are you when men revile you and persecute you and utter all kinds of evil against you falsely on my account. Rejoice and be glad, for your reward is great in heaven, for so men persecuted the prophets who were before you.
```

Sacred Symbol Christians believe that Jesus died for their sins. His death redeemed those who follow his teachings. The statue Christ the Redeemer, located in Rio de Janeiro, Brazil, symbolizes this fundamental belief.

Monument of Christ the Redeemer One of the most famous statues of Jesus is the Monument of Christ the Redeemer. Situated on top of the 2,310-foot (704-m) Corcovado Mountain at the edge of Rio de Janeiro, Brazil, the statue is visible from every neighborhood in the city below.
- Roughly 100 feet (30 m) in height, the statue stands atop a pedestal approximately 26 feet (8 m) tall. The statue’s outstretched arms span almost 92 feet (28 m) from fingertip to fingertip.
- The statue was designed by Brazilian engineer Heitor da Silva Costa, and sculpted from soapstone in France by Polish sculptor Paul Landowski.
- Work on the statue began in 1926, and took five years to complete. The statue was inaugurated on October 12, 1931.
- Visitors to the monument can take a train to a terminal at the top of the mountain. From there, a 222-step stairway, three panoramic elevators, and four escalators are available for access to the statue. A chapel that can hold 150 people is located at the base of the monument.

Skill Practice Using Geography Skills Have students use library or Internet resources to create a time line showing when the major denominations of Christianity were established. The time line could also note the major tenets of each denomination.

Reading Strategy Analyzing Text Structure Ask: What form of writing does the Sermon on the Mount most resemble? (poem or song) Ask: How are the lines structured? (The Sermon uses repetition to reinforce its message of mercy and redemption. The word blessed begins almost every line, and introduces people in need of help or who are righteous. Each line then ends with the promise of a reward befitting their condition.)
The Gospels affirm that Bethlehem was the birthplace of Jesus. Consequently, it holds great importance to Christians. The Church of the Nativity is located in the heart of Bethlehem. It houses the spot where Christians believe Jesus was born.

Churches celebrate many events commemorating the life and death of Jesus. Among the most widely known are Christmas, Good Friday, and Easter. Christmas is often commemorated by attending church services to celebrate the birth of Jesus. As part of the celebration, followers often light candles.

Did You Know?

- **Sacred Place** The site where it is thought that Jesus was born was a cave. In AD 326, the Emperor Constantine commissioned a church to be built on the site. Although it has been destroyed and rebuilt more than once, much of the church structure has survived.

- **Worship and Celebration** The Russian Orthodox church uses a different liturgical calendar than that used by much of Christianity. For example, the Russian Orthodox Christmas is celebrated on January 7.

- **The Largest Church** The largest Christian church building is the Basilica of Our Lady of Peace, located in the capital city of Yamoussoukro, Côte d’Ivoire, Africa. Completed in 1989, the building holds 18,000 people, and cost $300 million to build.

- **Pilgrimage** Making a pilgrimage to a holy site has a long history in Christianity. A pilgrimage popular since the Middle Ages is El Camino de Santiago (The Road to Santiago). The pilgrimage consists of a journey to visit what are thought by some to be the remains of St. James. Pilgrims travel many ways—some on foot, others on horseback, or by bicycle—along a route spanning some 500 miles (800 km). The pilgrimage route extends through southern France and into Spain.
Confucianism began more than 2,500 years ago in China. Although considered a religion, it is actually a philosophy. It is based upon the teachings of Confucius, which are grounded in ethical behavior and good government.

The teachings of Confucius focused on three areas: social philosophy, political philosophy, and education. Confucius taught that relationships are based on rank. Persons of higher rank are responsible for caring for those of lower rank. Those of lower rank should respect and obey those of higher rank. Eventually his teachings spread from China to other East Asian societies.

Students studying Confucianism, Chungkak-dong, South Korea

Sacred Symbol
Yin-yang, associated with both Confucianism and Daoism, symbolizes the harmony offered by the philosophies. The light half represents yang, the creative, firm, strong elements in all things. The dark half represents yin, the receptive, yielding, weak elements. The two act together to balance one another.

Sacred Text
Confucius was famous for his sayings and proverbs. These teachings were gathered into a book called the Analects after Confucius's death. Below is an example of Confucius's teachings.

Confucius said:

"To learn and to practice what is learned time and again is pleasure, is it not? To have friends come from afar is happiness, is it not? To be unperturbed when not appreciated by others is gentlemanly, is it not?"

— The Analects

The Analects
Although it is sometimes referred to as a book, the Analects manuscript shown here is inscribed on a plaque. It was found in 1967, during an excavation at Turfan, Sinkiang, China. Expert examination of the find revealed that the plaque was part of a Tang dynasty manuscript called the Analects of Confucius with Annotations by Chang Hsuan.

Composed by students of Confucius over a span of almost 50 years, the Analects preserved Confucius's teachings about the proper relationship between a person and his or her community, country, and the natural world. The oldest known copy of the Analects was inscribed on a series of bamboo slips more than 2,000 years ago.
Sacred Site  The temple at Qufu is a group of buildings dedicated to Confucius. It is located on Confucius's ancestral land. It is one of the largest ancient architectural complexes in China. Every year followers gather at Qufu to celebrate the birthday of Confucius.

Worship and Celebration  Confucianism does not have a god or clergy, but there are temples dedicated to Confucius, the spiritual leader. Those who follow his teachings see Confucianism as a way of life and a guide to ethical behavior and good government.

Did You Know?

- **Confucius the Philosopher**  A teacher and politician, Confucius (551–479 B.C.) had a profound influence on Chinese thought and values. Many modern-day scholars have noted similarities between the teachings of Confucius and the Greek philosopher Socrates.

- **Confucian Temples**  The Temple in Qufu has served as a model for other Confucian temples all over China. Taiwan has approximately 30 Confucian temples—of these, the Tainan Confucius Temple is considered the most spectacular. It was finished in A.D. 1666, but was rebuilt more than 30 times, due to wars and other natural disasters.

- **The Unicorn**  As in many cultures, the Chinese associated the mythical unicorn with good fortune. The Chinese believe that before Confucius was born, a unicorn, or *qi-lin*, appeared before his pregnant mother and placed a piece of jade in her lap. An inscription on the jade revealed that she would have a son who would possess great wisdom.

Critical Thinking

Making Inferences  Ask students if they have ever visited the birthplace of a public figure, such as a leader, an artist, or a political figure. **Ask:** Why is the birth site of an important leader often celebrated or designated as a landmark? (Answers will vary but should include a reasonable response, such as that the person’s ideas were formed in that place.)  **Ask:** What other locations in a public figure’s life often are honored or considered to be significant? (Places where particular achievements or milestones occurred, site of death, and burial site are examples of reasonable answers.)

For additional practice on this skill, see the *Skills Handbook*. 
Hinduism is the oldest of the world’s major living religions. It developed among the cultures in India as they spread out over the plains and forests of the subcontinent. It has no single founder or founding date. Hinduism is complex: it has numerous sects and many different divinities are honored. Among the more famous Hindu gods are Brahma, Vishnu, and Shiva, who represent respectively the creative, sustaining, and destructive forces in the universe. Major Hindu beliefs are reincarnation, karma, and dharma.

Hindus believe the universe contains several heavens and hells. According to the concept of rebirth or reincarnation, which is central to their beliefs, souls are continually reborn. In what form one is reborn is determined by the good and evil actions performed in his or her past lives. Those acts are karma. A soul continues in the cycle of rebirth until release is achieved.

Sacred Text The Vedas consist of hymns, prayers, and speculations composed in ancient Sanskrit. They are the oldest religious texts in an Indo-European language. The Rig Veda, Sama Veda, Yajur Veda, and Atharva Veda are the four great Vedic collections. Together, they make up one of the most significant and authoritative Hindu religious texts.

Now, whether they perform a cremation for such a person or not, people like him pass into the flame, from the flame into the day, from the day into the fortnight of the waxing moon from the fortnight of the waxing moon into the six months when the sun moves north, from these months into the year, from the year into the sun, from the sun into the moon, and from the moon into the lightning. Then a person who is not human—he leads them to Brahman. This is the path to the gods, the path to Brahman. Those who proceed along this path do not return to this human condition."
— The Chandogya Upanishad 4:15.5

Statue of Vishnu The Statue of Vishnu is part of the Sri Srinivasa Perumal Temple, a Singapore temple dedicated to this god. Vishnu is one of the most important gods in Hinduism. He is seen as the preserver of the universe. He is often portrayed with blue skin and many arms. The Perumal Temple is the starting point for a festival called Thaipusam, which takes place during the day of the full moon in the Hindu month of Thai (January or February). The festival involves prayer and fasting, and other acts of devotion. Some devotees pierce their flesh with large skewers, called vel, as an expression of faith and loyalty. During the ritual, the devotee is usually in a trance, which is thought to help control bleeding and lessen pain sensations.
Sacred Site  Hindus believe that when a person dies his or her soul is reborn. This is known as reincarnation. Many Hindus bathe in the Ganges and other sacred rivers to purify their soul and to be released from rebirth.

Worship and Celebration  Holi is a significant North Indian Hindu festival celebrating the triumph of good over evil. As part of the celebration, men, women, and children splash colored powders and water on each other. In addition to its religious significance, Holi also celebrates the beginning of spring.

Did You Know?

• Angkor Wat  Built in the twelfth century in what is now Cambodia, Angkor Wat is an architectural representation of the Hindu religion. The central tower of the temple symbolizes Mount Meru, the center of the universe according to Hindu mythology. The central tower is surrounded by a wall and moats to represent the mountains and oceans that surround Mount Meru.

• Mohandas Gandhi  Gandhi (1869–1948) was a devout Hindu and leader of the Indian nationalist movement against British rule. By embracing nonviolent resistance and insisting on peaceful solutions to injustices, Gandhi gathered millions of followers and eventually secured India its independence. His followers referred to him as Mahatma, a Hindu word meaning “great soul.”

• Ganges River  Even though the Ganges River suffers from increasing levels of pollution, tens of thousands of Hindu people bathe in the river every day as part of a ritual cleansing from sin.

Differentiated Instruction

Naturalist  Tell students that many religious texts feature important events involving water, which is used in many religious ceremonies. Ask: In everyday life, why is water important? (Our bodies need water to function and can survive only a few days without it.) Ask: What are some nonreligious uses of water? (drinking, washing, generating power, growing plants and crops, floating ships, moving nutrients through the oceans, cooling objects, moderating climates) Ask: In what ways can water be dangerous? (flash floods, ice storms, blizzards, hurricanes, drowning) Have interested students write a short essay on a positive experience and a negative experience they have had with water.
Followers of Islam, known as Muslims, believe in one God, whom they call Allah. The word Allah is Arabic for “the god.” The spiritual founder of Islam, Muhammad, began his teachings in Makkah (Mecca) in A.D. 610. Eventually the religion spread throughout much of Asia, including parts of India to the borders of China, and a substantial portion of Africa. According to Muslims, the Quran, their holy book, contains the direct word of God, revealed to Muhammad sometime between A.D. 610 and A.D. 632. Muslims believe that God created nature and without his intervention, there would be nothingness. God serves four functions: creation, sustenance, guidance, and judgment.

Central to Islamic beliefs are the Five Pillars. These are affirmation of the belief in Allah and his prophet Muhammad; group prayer; tithing, or the giving of money to charity; fasting during Ramadan; and a pilgrimage to Makkah once in a lifetime if physically and financially able. Within Islam, there are two main branches, the Sunni and the Shia. The differences between the two are based on the history of the Muslim state. The Shia believed that the rulers should descend from Muhammad. The Sunni believed that the rulers need only be followers of Muhammad. Most Muslims are Sunni.

Sacred Text The sacred text of Islam is the Quran. Preferably, it is written and read only in Arabic, but translations have been made into many languages. The excerpt below is a verse repeated by all Muslims during their five daily prayers.

“In the Name of Allah, the Compassionate, the Merciful, Praise be to Allah, the Lord of the World, The Compassionate, the Merciful, Master of the Day of Judgment, Only You do we worship, and only You Do we implore for help. Lead us to the right path, The path of those you have favored Not those who have incurred Your wrath or Have gone astray.” — The Quran

Sacred Symbol Islam is often symbolized by the crescent moon. It is an important part of Muslim rituals, which are based on the lunar calendar.

Dome of the Rock The Dome of the Rock in Jerusalem is a shrine that houses the rock from which it is said the Prophet Muhammad ascended to heaven. It was built between A.D. 688 and 691. The great dome of the shrine was originally made of gold. This was later replaced with copper and then with aluminum. Today the aluminum is covered with gold leaf.

Star and Crescent The use of the star and crescent as the official symbol of Islam is a relatively recent development. The star and crescent are an ancient symbol that dates back to ancient Sumeria, where it was associated with the Sumerian gods of the sun and moon. It was incorporated in the worship of similar deities in other civilizations as well. The symbol was not associated with Islam until the Ottoman Empire adopted it in the nineteenth century. Following the decline of the Ottomans in the early twentieth century, the symbol was adopted by Turkey for its flag. Parts of the symbol appear on flags of many other Islamic countries as well. Despite its widespread association with Islam, however, it is not an official symbol of Islam, and many Muslims reject its use as such.
Sacred Site  Makkah is a sacred site for all Muslims. One of the Five Pillars of Islam states that all those who are physically and financially able must make a hajj, or pilgrimage, to the holy city once in their life. Practicing Muslims are also required to pray facing Makkah five times a day.

Worship and Celebration  Ramadan is a month-long celebration commemorating the time during which Muhammad received the Quran from Allah. It is customary for Muslims to fast from dawn until sunset all month long. Muslims believe that fasting helps followers focus on spiritual rather than bodily matters and creates empathy for one’s fellow men and women. Ramadan ends with a feast known as Eid-al-Fitr, or Feast of the Fast.

Muslim Scholars  The eighth through eleventh centuries are widely considered a key period of scientific achievement in the Islamic Empire. Many contributions made by Muslim scholars during this period had a lasting impact on science, medicine, and mathematics.

- Jabir Ibn Haiyan  (c. 721–815) was an alchemist who made important contributions to modern chemistry. Among other advances, he introduced a systematic method for investigation, perfected laboratory techniques such as distillation, and established methods for making steel and preventing rust.
- Abu Abdullah Muhammad Bin Musa al-Khwarizmi  (c. 800–840) is credited with establishing algebra as a discipline. His methods for solving quadratic equations were outlined in his book al-Kitab al-mukhtasar fi hisab al-jabr w‘al-muqabala (The Compendious Book on Calculation by Completion and Balancing), from which the word algebra (al-jabr) was derived.
- Ibn Sina  (c. 980-1037) was known as the “doctor of doctors.” Among other achievements, he established the importance of proper hygiene, and pioneered the use of oral anesthetics in surgery. His book The Canon of Medicine was a standard medical text at many European universities for almost 500 years.

Skill Practice  Using Geography Skills  Have students use an atlas to locate Makkah (Mecca). (It is located in Saudi Arabia.) Ask: What direction do Muslims face when they pray? (The actual direction varies depending on where a Muslim is in relation to Makkah.) Explain that a Muslim determines what direction he or she must face based on the shortest route to Makkah from where he or she is. In the Northern Hemisphere, the shortest route is over the top of the globe, so Muslims use a Great Circle route to determine the correct direction for prayer. Invite interested students to determine the direction of prayer from various points on the Earth.

Reading Strategy  Using Word Parts  The word fast means to abstain from food. Ask students to use this information to infer the original meaning of the word breakfast. (to break the “fast” of the night)
Judaism is a monotheistic religion. In fact, Judaism was the first major religion to believe in one God. Jews trace their national and religious origins back to God’s call to Abraham. Jews have a covenant with God. They believe that God, who expects them to pursue justice and live ethical lives, will one day usher in an era of universal peace.

Over time Judaism has separated into branches, including Orthodox, Reform, Conservative, and Reconstructionist. Orthodox Jews are the most traditional of all the branches.

Sacred Text The Torah is the five books of Moses, which tell the story of the origins of the Jews and explain Jewish laws. The remainder of the Hebrew Bible contains the writings of the prophets, Psalms, and ethical and historical works.

Sacred Symbol The menorah is used in the celebration of Hanukkah, commemorating the rededication of the Temple of Jerusalem following the Maccabees’ victory over the Syrian Greeks.

Sacred Text I am the Lord your God, who brought you out of the land of Egypt, out of the house of slavery; you shall have no other gods before me.

— Exodus 20:2

In 167 B.C.E., the Syrian king outlawed the Jewish religion and seized the Holy Temple in Jerusalem. Two years later, a small band of Jewish warriors, the Maccabees, rose up and recaptured the Temple. They needed oil to light the temple Menorah, but only found enough to last for one day. Miraculously, this small amount of oil lasted for eight days and nights. This is commemorated each year at Hanukkah by lighting the 9-candle Menorah: one candle is used to light eight other candles, one for each night the oil lasted for the Maccabees.

The Torah scrolls read aloud in a synagogue are handwritten on sheets of parchment made from animal skins. This Torah is called a Sefer Torah. The scribes who transcribe a Sefer Torah are highly trained, and the skins they write on are specially prepared from animals (often cows) slaughtered under kosher rules. The text is written with a quill harvested from a kosher bird, usually a goose, and ink that is carefully made.
Sacred Site The Western Wall is what remains of the structure surrounding the Second Jerusalem Temple, built after the Jews’ return from the Babylonian captivity. It is considered a sacred spot in Jewish religious tradition. Prayers are offered at the wall morning, afternoon, and evening.

Worship and Celebration The day-long Yom Kippur service ends with the blowing of the ram’s horn (shofar). Yom Kippur is the holiest day in the Jewish calendar. During Yom Kippur, Jews do not eat or drink for 25 hours. The purpose is to reflect on the past year and gain forgiveness from God for one’s sins. It falls in September or October, ten days after Rosh Hashanah, the Jewish New Year.

Skill Practice Visual Literacy Ask: What kind of instrument is the shofar? (a wind instrument) Ask: What other wind instruments do you know of? (Answers may vary, but might include a saxophone, a flute, a recorder, and a clarinet.) Ask: Why did Jewish people use the shofar to make religious announcements? (It is very loud and is usually used to announce Jewish holidays. It is typically associated with Rosh Hashanah. In turn, Rosh Hashanah is called “Yom T’ruah,” which means “the day of the shofar blast.”)

Did You Know?

Branches of Judaism Reform Judaism was established in the nineteenth century in Germany by Jews who wished to assimilate into modern society. Reform Jews reject the strict dietary and dress codes of traditional Judaism, and conduct religious services in the language of their country rather than in Hebrew. Conservative Judaism, also founded in Germany, incorporates some modern practices, but is more closely aligned with traditional Judaism. Reconstructionist Judaism formed in twentieth-century North America. Its adherents follow many traditional practices, such as conducting services in Hebrew, but view the commandments and most traditional views as “folkways,” or customs, rather than literal laws.

Head Coverings Orthodox, Conservative, and Reconstructionist Jewish men wear a head covering such as the yarmulke worn by the man in the photo above. Covering the head is viewed as a sign of reverence for God.

Mezuzah Many Jewish homes have a mezuzah attached to their doorways. A mezuzah is a small vessel that contains a piece of paper with an important verse of the Torah written on it. The mezuzah itself may be made of metal, wood, or other sturdy materials. Some homes have a mezuzah attached to internal as well as exterior doorways. Some Jewish people touch the mezuzah as they pass through the doorway, to remind them of God’s importance in their lives.
Sikhism emerged in the mid-1500s in the Punjab, in northwest India, rising from the religious experience and teachings of Guru Nanak. The religion exhibits influences from Islam and Hinduism, but it is distinct from both. Sikh traditions teach that Nanak encountered God directly and was commissioned by Him to be His servant.

Sikhs (“students, disciples”) believe in one almighty god who is formless and without qualities (nirguna) but can be known through meditation and heard directly. Sikhism forbids discrimination on the basis of class, color, religion, caste, or gender. While over 80 percent of the world’s 23 million Sikhs live in the Punjab, Sikhism has spread widely as many Sikhs have migrated to new homes around the world.

**Sacred Text**

The great authoritative sacred text for Sikhs is the Adi Granth (“Principal Book,” also known as the Guru Granth Sahib). Compiled from the mid-1500s through the 1600s, it includes contributions from Sikh gurus and from some persons also claimed as saints by Hindus and Muslims, such as Namdev, Ravidas, and Kabir.

“Enshrine the Lord’s Name within your heart. The Word of the Guru’s Bani prevails throughout the world, through this Bani, the Lord’s Name is obtained.”

—Guru Amar Das, page 1066

**Sacred Symbol**

The sacred symbol of the Sikhs is the khanda. It is composed of four traditional Sikh weapons: the khanda or double-edged sword (in the center), from which the symbol takes its name; the cakkar (disk), and two curved daggers (kirpan) representing temporal and spiritual power, respectively Piri and Miri.

**More About the Photos**

**Adi Granth**
The sacred text of the Sikhs covers 1,430 pages. It is read aloud in its entirety for special occasions, such as births and weddings.

**Traditions**
Sikh tradition believes that hair is a gift from God. Accordingly, Sikh men do not cut their hair or shave. However, tradition mandates that they keep their beards neat and clean, and their hair neatly arranged under a turban.

**The Golden Temple**
The Golden Temple is considered by many to be one of the most beautiful buildings in the world. Amritsar, the original name of the lake on which the temple sits, means “a pool of ambrosial nectar.” The temple complex and the city are now called Amritsar, as well.
Sacred Sites  Amritsar is the spiritual capital of Sikhism. The Golden Temple (Harimandir Sahib) in Amritsar is the most sacred of Sikh shrines.

Worship and Celebration  Vaisakhi is a significant Punjabi and Sikh festival in April celebrating the new year and the beginning of the harvest season. Celebrations often take place along riverbanks with participants dancing and wearing brightly colored clothes.

Did You Know?

• India  Although 80 percent of the people in Punjab are Sikhs, they comprise just 2 percent of India’s total population.
• Prime Minister  In 2004, Dr. Manmohan Singh became India’s first Sikh prime minister.
• The Kirpan  Many Sikh men carry a kirpan, the curved sword symbolized in the khanda. The sword is carried not as a weapon, but as a symbol of the constant struggle in life between good and evil.
• Turban  The turban, or dastaar, worn by Sikh men is an important symbol of their faith. It must be worn at all times in public. When it is worn, it is not considered an article of clothing but rather, part of the wearer himself. The turban is donned each morning in a quiet ritual in which the wearer winds the long cloth around his head after carefully rolling up his hair. At night, the turban is removed before sleeping.
• Gender Equality  From the very beginning of the Sikh movement, Sikh women were considered equal to men spiritually and legally. Sikh girls were educated along with boys, and Sikh women could inherit property. These ideas were quite radical in India when first proposed. Some Sikh women wear turbans, though the practice is not widespread.
There are many varieties of religious belief that are limited to particular ethnic groups. These local religions are found in Africa as well as isolated parts of Japan, Australia, and the Americas. Most local religions reflect a close relationship with the environment. Some groups teach that people are a part of nature, not separate from it. Animism is characteristic of many indigenous religions. Natural features are sacred, and stories about how nature came to be are an important part of religious heritage. Although many of these stories have been written down in modern times, they were originally transmitted orally.

Africa

The continent of Africa is home to a variety of local religions. Despite their differences, most African religions recognize the existence of one creator in addition to spirits that inhabit all aspects of life. Religious ceremonies are often celebrated with music and dance.

1 These Turkana women from Kenya are performing a traditional jumping dance.
2 Rituals are an important part of African religions. These Masai boys are wearing ceremonial dress as part of a ritual.
3 Masks are a component of ritual and ceremony. This mask from Cameroon is used to celebrate harvest.

Turkana Women

In the Turkana tradition, women are ushered into adulthood when they marry, which occurs usually between the ages of 15 and 20. The joining of the couple in marriage takes place over a three-year period. The first stage of a woman’s adulthood begins with the marriage ceremony, which is celebrated with feasting and rituals over several days. The second stage of her adulthood occurs when her first child is born. The third stage occurs when the child begins to walk. This is when the marriage is ratified, often marked with the sacrifice of a bull.

Masai Rituals

Masai men are classified by age into three categories: boys, warriors, and elders. The boys shown here are about to begin living in isolation, subsisting off the land at some distance from their village. This is one of several rites of passage boys must undergo before they can be considered warriors.

Reading Strategy

Previewing

Suggest that students use a previewing strategy for this part of the special feature. Before reading each chunk of text, students should look at the numbered photograph that accompanies it. Then have the students read the text slowly, referring back to the photograph if necessary. Remind students to underline unfamiliar words in each passage and look these up before moving on to the next page.

Critical Thinking

Making Generalizations

Ask: What might be the role of masks in a ritual or ceremony? (Answers will vary, but should reflect logical reasoning, such as they allow one wearer to assume many identities; they hide the identity of the wearer, which allows adherents to focus on who the mask represents.)

For additional practice on this skill, see the Skills Handbook.
Australia The Australian Aboriginal religion has no deities. It is based upon a belief known as the Dreaming, or Dreamtime. Followers believe that ancestors sprang from the Earth and created all people, plant, and animal life. They also believe that these ancestors continue to control the natural world.

6 These Aborigine women are blessing a newborn with smoke during a traditional ritual intended to ensure the child’s health and good fortune.

7 Aborigines, like these young girls, often paint their faces with the symbols of their clan or family group.

Japan Shinto, founded in Japan, is the largest indigenous religion. It dates back to prehistoric times and has no formal doctrine. The gods are known as kami. Ancestors are also revered and worshiped. Its four million followers often practice Buddhism in addition to practicing Shinto.

4 This Shinto priest is presiding over a ritual at a Japanese temple. These priests often live on shrine grounds.

5 Shinto shrines, like this one, are usually built in places of great natural beauty to emphasize the relationship between people and nature.

Did You Know?

- Shamans and Modern Medicine The member of an indigenous group with the skills and knowledge to promote healing is called the shaman. A shaman is often both a medical resource and a religious leader.
- Ritual Potions Shamans often know a great deal about the plants and animals in their region, specifically plants and animals that have medicinal properties. In many cases, these substances are used in rituals and ceremonies.
- Ethnobotany The scientific study of native plants used in indigenous medicine is called ethnobotany. Many ethnobotanists work with shamans in rain forests around the world to identify plants that might provide useful medicines for the outside world.
- Endangered Knowledge Because so much rain forest is being destroyed, scientists fear not only the extinction of valuable plants, but also the loss of shamans and indigenous communities.
Native Americans The beliefs of most Native Americans center on the spirit world; however, the rituals and practices of individual groups vary. Most Native Americans believe in a Great Spirit who, along with other spirits, influences all aspects of life. These spirits make their presence known primarily through acts of nature.

The rituals, prayers, and ceremonies of Native Americans are often centered on health and good harvest and hunting. Rituals used to mark the passage through stages of life, including birth, adulthood, and death, are passed down as tribal traditions. Religious ceremonies often focus on important points in the agricultural and hunting seasons. Prayers, which are offered in song and dance, also concentrate on agriculture and hunting themes as well as health and well-being.

Rituals are passed down from generation to generation. These Native Americans are performing a ritual dance in Utah.

There are many different Native American groups throughout the United States and Canada. This Pawnee is wearing traditional dress during a celebration in Oklahoma.

Totem poles, like this one in Alaska, were popular among the Native American peoples of the Northwest Coast. They were often decorated with mythical beings, family crests, or other figures. They were placed outside homes.

Pawnees This Pawnee man is at the Red Earth Indian Festival in Oklahoma City, Oklahoma. The Pawnee lived on the North American Plains, along the Platte River in what is now Nebraska. The Pawnee equated the stars with heavenly gods. The most important Pawnee god was Tirawahat, who was thought to have created the universe, and who ruled the universe through lesser gods. The Pawnee believed that woman was created first and that she was the bringer of life for all human things.

Totems The pictured totem is from the Tlingit, a Native American people that live in the southeastern Alaska panhandle. Although they were not worshipped, totem poles formed an important part of certain Native American cultures. Some were carved to represent shamanic powers or relate a story, while others were used to commemorate historic people or figures.
Assessment

Reviewing Vocabulary
Match the following terms with their definition.
1. sect a. belief that spirits inhabit natural objects and forces of nature
2. monotheism b. belief in one God
3. polytheism c. a subdivision within a religion that has its own distinctive belief and/or practices
4. animism d. belief in more than one god
5. atheism e. disbelief in the existence of any god

Reviewing the Main Ideas
World Religions (pp. 80–81)
6. Which religion has the most followers worldwide? Which has the second-largest group of followers?
7. Analyzing Visuals Compare the maps at the bottom of pages 80 and 81. Which religions have spread throughout the world? What factors may have contributed to this spread?
8. On a separate sheet of paper, make a table of the major world religions. Use the chart below to get you started.

<table>
<thead>
<tr>
<th>Name</th>
<th>Founder</th>
<th>Geographic distribution</th>
<th>Sacred sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buddhism</td>
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<td>Christianity</td>
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<td>Confucianism</td>
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<td>Sikhism</td>
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<tr>
<td>Indigenous</td>
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</tbody>
</table>

World Religions (pp. 82–83)
9. According to Buddhism, how can the end of suffering in the world be achieved?
10. What is Nirvana? According to Buddhists, who is most likely to achieve Nirvana and why?

Christianity (pp. 84–85)
11. In what religion was Jesus raised?
12. Why do Christians regard Jesus as their savior?

Confucianism (pp. 86–87)
13. What is Confucianism based on? Why might some not consider it a religion?
14. What does yin-yang symbolize?

Hinduism (pp. 88–89)
15. What type of religion is Hinduism? Where did it develop?
16. Describe reincarnation. What role do Hindus believe karma plays in this process?

Islam (pp. 90–91)
17. What are the two branches of Islam? What is the main difference between the two groups?
18. What role does Makkah play in the Islamic faith?

Judaism (pp. 92–93)
19. What is the Torah?
20. What is the purpose of Yom Kippur?

Sikhism (pp. 94–95)
21. Where do most Sikhs live? Why?
22. What other religions have contributed to the Adi Granth?

Indigenous Religions (pp. 96–98)
23. Many of the sacred stories in local religions explain the creation of people, animals, and plant life. Why would religions feature such stories?
24. Which of the indigenous religions has the largest membership?

Critical Thinking
25. Drawing Conclusions How are major religions similar? How are they different?
26. Analyzing Information How do people’s religious beliefs affect what people eat and how they dress?
27. Making Inferences How do religious beliefs influence a society’s laws?

Problem-Solving Activity
28. Research Project Use library and Internet sources to research the role of food and food customs in one of the world’s major religions. Create a presentation to report your findings to the class.

Answers
1. c; 2. b; 3. d; 4. a; 5. e
6. Christianity; Islam
7. Christianity, Islam, Judaism, Hinduism, and Buddhism. Answers will vary; possible answers include: colonization, missionaries, migration due to various factors, and trading.
8. Buddhism: Siddhartha Gautama, across Asia, Bodh Gayā; Christianity: Jesus, Europe, Russia, U.S. and Canada, Latin America, South Africa, Australia and Oceania, Bethlehem; Confucianism: Confucius, East Asia, Temple at Qufu; Hinduism: no single founder, Indian subcontinent, Ganges; Islam: Muhammad, North Africa, Southwest Asia, Central Asia, Southeast Asia, Makkah; Judaism: Abraham, Israel, Europe, Russia, and the United States, Western Wall; Sikhism: Shri Guru Nanak Dev Ji, Punjab, India, Golden Temple in Amritsar; Indigenous: varies (almost always unknown), Africa, Japan, Australia, and the Americas, varies
9. by achieving Nirvana
10. the enlightened state in which individuals are freed from ignorance, greed, and suffering; monks, through a lifestyle of renunciation, moral virtue, study, and meditation
11. Judaism
12. They believe he died for their sins.
13. the teachings of Confucius, grounded in ethical behavior and good government; it is closer to philosophy, there is no god or clergy
Political and Economic Systems

Governments and economies of countries around the world are becoming increasingly interconnected. Some countries or groups of countries, such as the European Union, have strong economies that allow them to help improve standards of living in other countries.

**Voices Around the World**

"I drove east on the highway that connects the capital of Tallinn with Narva, on the Russian border. Nearly everywhere I looked I saw the handiwork of the European Union, starting with the road itself. The EU has already invested millions of euros to improve the highway, which serves as the main link to St. Petersburg, Russia. This highway passes the town of Sillamäe, once a "closed" city run by the Soviet military, which enriched uranium for weapons programs in a huge factory overlooking the sea. The EU is here, too, kicking in more than a million dollars to help prevent the radioactive waste from leaching into the Baltic Sea."

— Don Belt, “Europe’s Big Gamble,” National Geographic, May 2004
Features of Government

MAIN Idea Territory, population, and sovereignty influence levels and types of governments in countries around the world.

GEOGRAPHY AND YOU What do you know about the powers of government in the U.S. federal system? Read to learn about the powers of government in other places.

Today the world includes nearly 200 independent countries that vary in size, military might, natural resources, and world influence. Each country is defined by characteristics such as territory, population, and sovereignty, or freedom from outside control. These elements are brought together under a government. A government must make and enforce policies and laws that are binding on all people living within its territory.

Levels of Government

The government of each country has unique characteristics that relate to that country’s historical development. To carry out their functions, governments are organized in a variety of ways. Most large countries have several different levels of government. These usually include a national or central government, as well as the governments of smaller internal divisions such as provinces, states, counties, cities, towns, and villages.

**Unitary System** A unitary system of government gives all key powers to the national or central government. This structure does not mean that only one level of government exists. Rather, it means that the central government creates state, provincial, or other local governments and gives them limited sovereignty. The United Kingdom and France both developed unitary governments as they emerged from smaller territories during the late Middle Ages and early modern times.

**Federal System** A federal system of government divides the powers of government between the national government and state or provincial governments. Each level of government has sovereignty in some areas. The United States developed a federal system after the thirteen colonies became independent from Great Britain.

Another similar type of government structure is a federation, a loose union of independent territories. The United States at first formed a confederation, but this type of political arrangement failed to provide an effective national government. As a result, the U.S. Constitution established a strong national government, while preserving some state government powers. Today, other countries with federal or confederal systems include Canada, Switzerland, Mexico, Brazil, Australia, and India.

Types of Governments

Governments can be classified by asking the question: Who governs the state? Under this classification system, all governments belong to one of the three major groups: (1) autocracy—rule by one person; (2) oligarchy—rule by a few people; or (3) democracy—rule by many people.

**Autocracy** Any system of government in which the power and authority to rule belong to a single individual is an autocracy (aw-TAH-kruh-see). Autocracies are the oldest and one of the most common forms of government. Most autocrats achieve and maintain their position of authority through inheritance or by the ruthless use of military or police power.

Creating an Almanac

**Step 3: Researching Government and Economic Systems** Pairs of students will research the economic and political system used by their city and create a chapter of their almanac presenting this information.

**Essential Question** What types of political and economic systems exist in cities?

Directions Have student pairs research the political and economic systems of the city they are writing about. Remind students that the national government and economic system will influence the local government and economy of the city. Have students research the history of the government and economic systems the city has used, and report on the impact of that history on the modern life of the city.

Hands-On Chapter Project

Students will write and illustrate a chapter of their almanac to share what they learn.

Putting It Together Allow students time to share what they learn with the class.

(Chapter Project continues on page 106.)
Reading Strategy

Taking Notes Have students write the three forms of government on a notebook page, leaving space for notes after each term. As they read, have students fill in the page.

Outlining As they read, have students write down the different bodies of government that can be described as an assembly.

Caption Answer: In a direct democracy, citizens vote on the issues directly. In a representative democracy, citizens vote for representatives to vote on the issues for them.

Reading Check Answer: In an autocracy, one person makes all the decisions. In an oligarchy, all decisions are made by a small group of people.

Differentiated Instruction

Leveled Activities
Economic Systems

**Main Idea** The three major economic systems are traditional economy, market economy, and command economy.

**Geography and You** Can you imagine not having a wide range of choices as you shop for clothes? Read to learn about economic systems in which choices are limited or do not exist at all.

All economic systems must make three basic economic decisions: (1) what and how many goods and services should be produced, (2) how they should be produced, (3) who gets the goods and services that are produced. These decisions are made differently in the three major economic systems—traditional, market, and command.

**Traditional Economy**

In a traditional economy, habit and custom determine the rules for all economic activity. Individuals are not free to make decisions based on what they would like to have. Instead, their behavior is defined by the customs of their elders and ancestors. For example, it was a tradition in the Inuit society of northern Canada that a hunter would share the food from the hunt with the other families in the village. Today, traditional economies exist in very limited parts of the world.

**Market Economy**

In a market economy, individuals and private groups make decisions about what to produce. People, as shoppers, choose what products they will or will not buy, and businesses make more of what they believe consumers want. A market economy is based on free enterprise, the idea that private individuals or groups have the right to own property or businesses and make a profit with only limited government interference. In a free enterprise system, people are free to choose what jobs they will do and for whom they will work. Another term for an economic system organized in this way is capitalism.

No country in the world, however, has a pure market economy system. Today the U.S. economy and others like it are described as mixed economies. A mixed economy is one in which the government supports and regulates free enterprise through decisions that affect the marketplace.

In this arrangement, the government's main economic task is to preserve the free market by keeping competition free and fair and by supporting public interests. Governments in modern mixed economies also influence their economies by spending tax revenues to support social services.

**Command Economy**

In a command economy, the government owns or directs the means of production—land, labor, capital (machinery, factories), and business managers—and controls the distribution of goods. Believing that such economic decision making benefits all of society and not just a few people, countries with command economies try to distribute goods and services equally among all citizens. Public taxes, for example, are used to support social services, such as housing and health care, for all citizens. However, citizens have no voice in how this tax money is spent.

**Communism** A command economy is called either socialism or communism, depending on how much the government is involved. In theory, communism requires strict government control of almost the entire society, including its economy. The government decides how much to produce, what to produce, and how to distribute the goods and services produced. One political party—the Communist Party—makes decisions and may even use various forms of coercion to ensure that the decisions are carried out at lower political and economic levels.

**Activity: Economics Connection**

**Cost and Worth** Ask: How does a market economy determine what something is worth? *(The price is set by what people will pay.)* Tell students that in the Netherlands in the seventeenth century, the price of tulip bulbs skyrocketed. Collectors and investors drove the price of tulips to astronomical heights. An investor once offered 3000 gilders—as much as a wealthy merchant would earn in a year—for one bulb of the tulip *Semper Augustus*. The owner refused to sell. Investors thought that the price of tulips would continue to rise and they could always sell the bulbs for more than they paid for them. Then, in the late 1630s, people simply stopped paying high prices for tulip bulbs. Auctions were held, and tulip bulbs that had commanded high prices in recent years sold for 50 gilders. Ask: How could something that was so expensive suddenly lose so much value? *(Tulip bulbs have very little intrinsic value. The extreme value they had was the product of speculators who thought others would always pay more. When people stopped believing the bulbs were valuable, the price of bulbs fell.)*

**Critical Thinking**

**Determining Cause and Effect** Ask: What causes a command economy to stagnate? *(Businesses have no incentive to be creative or efficient; consumers may not want the available products.)* What are the expected effects of changing to a market economy? *(Businesses grow because they make products people want.)*

**Caption Answer:**

1) what and how many goods and services should be produced; 2) how they should be produced; 3) who gets the goods and services produced.
Supporters of the market system claim, however, that without free decision making and incentives, businesses will not innovate or produce products that people want. Customers will be limited in their choices, and economies will stagnate. As a result of these problems, command economies often decline. The Soviet Union, as described below by a Russian observer, provided an example of this situation:

"In 1961 the [Communist] party predicted . . . that the Soviet Union would have the world’s highest living standard by 1980 . . . . But when that year came and went, the Soviet Union still limped along, burdened by . . . a stagnant economy."


By 2000, Russia and the other countries that were once part of the Soviet Union were developing market economies. China and Vietnam have allowed some free enterprise to promote economic growth, although their governments tightly control political affairs.

### Vocabulary

1. Explain the significance of: unitary system, federal system, autocracy, monarchy, oligarchy, democracy, traditional economy, market economy, mixed economy, command economy.

### Main Ideas

2. Define the three major economic systems. What are the three basic economic decisions that all economic systems must make?

3. Use a table like the one below to summarize the features of government—levels of government and types of government—that exist around the world.

<table>
<thead>
<tr>
<th>Level of government</th>
<th>Example</th>
<th>Type of government</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>United States</td>
<td>Autocracy</td>
<td>Nazi Germany</td>
</tr>
<tr>
<td>Unitary</td>
<td>France</td>
<td>Monarchy</td>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>Confederation</td>
<td>early U.S.</td>
<td>Oligarchy</td>
<td>China</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Democracy</td>
<td>U.S.</td>
</tr>
</tbody>
</table>

### Critical Thinking

4. **Answering the Essential Question** Explain the different ways in which an autocracy, an oligarchy, and a democracy exercise authority.

5. **Comparing and Contrasting** What different roles might local citizens have in government decision making under a unitary system, a federal system, and a confederation?

6. **Analyzing Information** How does a market economy affect other economies in a region?

### Writing About Geography

7. **Expository Writing** Write a one-page essay explaining the human and physical geographic characteristics that can influence a country’s foreign policy. Use Iran, Israel, Japan, and the United Kingdom as examples.
Resources, Trade, and the Environment

The growth of the global economy continues to make the world’s peoples increasingly interdependent, or reliant on each other. Natural resources are extracted and traded around the world. And although important to modern life, they are misused and often cause pollution and damage to the environment.

Voices Around the World

“Below more than a mile of ocean and three more of mud and rock, the prize is waiting. At the surface a massive drilling vessel . . . shudders every few minutes as its thrusters put out a burst of power to fight the strong current. The PA system crackles, warning of small amounts of gas bubbling from the deep Earth. And in the shadow of the 23-story-tall derrick, engineers and managers gather in worried knots. ‘We’ve got an unstable hole,’ laments Bill Kirton, who’s overseeing the project. . . . [I]f the wells live up to expectations, each will eventually gush tens of thousands of barrels a day. ‘That’s like a well in Saudi Arabia,’ says [a drilling supervisor]. ‘We hardly get those in the U.S. anymore.’”

—Tim Appenzeller, “The End of Cheap Oil,” National Geographic, June 2004
Resource Management

MAIN Idea Natural resources must be managed to ensure that they meet future needs.

GEOGRAPHY AND YOU Have you heard news accounts about the U.S. dependence on foreign oil? Read to learn about the importance of conserving nonrenewable resources.

Earth provides all the elements necessary to sustain life. Elements from the Earth that are not made by people but can be used by them for food, fuel, or other necessities are called natural resources. Some are renewable resources, and cannot be used up or can be replaced naturally or grown again in a relatively short amount of time. Wind, sun, water, forests, and animal life are renewable resources. The Earth’s crust, however, contains many nonrenewable resources that cannot be replaced, such as minerals and fossil fuels.

Because fossil fuels, such as coal and oil, and other nonrenewable resources cannot be replaced, they must be conserved. The immediate goal of conservation is to manage vital resources carefully so that people’s present needs are met. An equally important long-term goal is to ensure that the needs of future generations are met.

With these future needs in mind, environmental experts have encouraged people to replace their dependence on fossil fuels with the use of renewable energy sources. Many countries, for example, already produce hydroelectric power—energy generated from falling water. Another renewable energy source is solar energy, power produced by the sun’s energy. Electricity derived from nuclear energy, the power created by a controlled atomic reaction, is another renewable source. Concerns, however, surround the use of nuclear power because, like fossil fuels, it produces dangerous waste.

Human-Environment Interaction

What are some types of renewable energy sources?

Answers
1. eastern China, north central Russia, central Europe, Saudi Arabia, Indonesia, Australia, southern United States, southern Mexico, northern South America, western Brazil, southern Brazil
2. central Africa

Hands-On Chapter Project

Step 4 Creating an Almanac

Step 4: Researching Pollution Student pairs will use Internet and library resources to explore the air quality, water quality, and solid waste management of their chosen city. Have students explore such questions as: “What are the most pressing pollution issues the city faces?” “What agency is responsible for monitoring pollution?” “Does the city recycle?” “Has progress been made in reducing pollution in the city?” Have students write and illustrate another chapter of their almanac with their findings.

Putting It Together Allow students time to share their findings with the class, and have the class look for trends and patterns in students’ research.

(Chapter Project continues on Visual Summary page.)
Economies and World Trade

**MAIN Idea** | Countries with varying levels of economic development have become increasingly interdependent through world trade.

**GEOGRAPHY AND YOU** | What types of economic activities take place in your community? Read to learn how countries involved in different economic activities contribute to the global economy.

Most natural resources are not evenly distributed throughout the Earth. This uneven distribution affects the global economy, as you see from the economic activity map below. As a result, countries specialize in the economic activities best suited to their resources.

**Economic Development**
Geographers and economists classify all of the world's economic activities into four types:

- **Primary economic activities** involve taking or using natural resources directly from the Earth. They include farming, grazing, fishing, forestry, and mining. Primary economic activities take place near the natural resources that are being gathered or used. For example, coal mining occurs at the site of a coal deposit.
- **Secondary economic activities** use raw materials to produce something new and more valuable. Such activities include manufacturing automobiles, assembling electronic goods, producing electric power, or making pottery. These activities occur close to the resource or to the market for the finished good.
- **Tertiary economic activities** do not involve directly acquiring and remaking natural resources. Instead, they are activities that provide services to people and businesses. Doctors, teachers, lawyers, bankers, truck drivers, and store clerks all provide professional, wholesale, or retail services.
- **Quaternary economic activities** are professional, wholesale, or retail services.

**Visualizing** | Invite students to use a visual strategy to organize the information in the bullet points explaining the types of economic activities (Note that the bullet points continue on p. 108). For example, transferring the information to a web-diagram or flow chart may help students who learn best when information is presented visually.

**Skill Practice**
Remind students that the numbers around the shoe on the facing page correlate to the numbers on this map. For example, the numeral 1 indicates where the cotton for the laces was harvested. On the map, the numeral 1 shows that the cotton may have come from the United States or from East Asia.

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**Practicing Sewer Science**

**Objective**: Discover properties of pollutants to understand how sediment forms and can be separated from wastewater.

**Focus**: Students perform an experiment to see how pollutants are removed from water.

**Teach**: Form student teams and provide materials for teams to perform the experiment.

**Assess**: Evaluate reports and conclusions.

**Close**: Discuss results with the class.

**Differentiated Instruction Strategies**

- **BL** | Perform the experiment for the class. Write the Lab Activity Report questions and table on the board. Fill in the table as a group.
- **AL** | After completing the experiment, students should research the methods used to treat wastewater in their municipality, and then write a report.
- **ELL** | Assign English Language Learners to groups with English-proficient students.
Differentiated Instruction

Below Grade Level  Have students form groups of three. Then ask each student in the group to read one paragraph out loud. Between readings, have students pause to ask the group questions about the passage.  

Critical Thinking

Analyzing Information
Tell students that steel imported from Japan is used to make cars in Mexico, which are then exported to the United States and Canada. Ask: Which of the countries are trading partners? (Japan and Mexico are trading partners; Mexico and the United States are trading partners; Mexico and Canada are trading partners.)

Answers
1. more than $20 billion; answers will vary but should refer to an increasing global economy.
2. world GDP; It has increased by more than 15 billion.

Economic activities, including industrialization, or the spread of industry, help influence a country’s level of development. Those countries having much technology and manufacturing, such as the United States, are called developed countries. Most people who work in manufacturing, service, or information industries and enjoy a high standard of living. Farmers in developed countries engage in commercial farming, rising crops and livestock to sell in the market. Because of modern techniques, only a small percentage of workers in developing countries is needed to grow the food to feed entire populations.

Newly industrialized countries have moved from primarily agricultural to primarily manufacturing and industrial activities. Such countries include Mexico and Malaysia. Those countries working toward greater manufacturing and technology use are called developing countries. In many developing countries, which are mainly in Africa, Asia, and Latin America, agriculture remains dominant. Despite much commercial farming, most farmers in these countries engage in subsistence farming, growing only enough food for family needs. As a result, most people in developing countries remain poor.

The global influence of developed countries has sparked resentment in some developing countries. Feeding on this discontent, militant groups have tried to strike back by engaging in terrorism, the use of violence to create fear in a population or region. Small in size and often limited in resources, these groups use the fear unleashed by violence to heighten their influence, hoping to promote and control changes in society.

World Trade
The unequal distribution of natural resources is one factor that promotes a complex network of trade among countries. Countries export their specialized products, trading them to other countries that cannot produce those goods. When countries cannot produce as much as they need of a certain good, they import it, or buy it from another country. That country, in turn, may buy the first country’s products, making the two countries trading partners. Other factors affecting world trade are differences in labor costs and education levels. Multinationals, firms that do business in many

Graph Study
1. Movement By how much has world trade increased since 1985? Develop a hypothesis to explain this increase. Write a brief paragraph summarizing your hypothesis.

2. Movement Compare the world trade and world GDP graphs. Which measure of economic activity has experienced the most dramatic change since 1995? Why do you think this is so?

Graph Study

Activity: Collaborative Learning
Making Economic Activity Maps Ask: What natural resources and economic activities are important to your state? Have students work together to make maps that show the key natural resources and economic activities of your local community and your state. You may divide the tasks—research economic activities, preparation of the map, display (based on the data)—among three groups. Then have students use their community and state activity maps, and the map on page 107, to compare and contrast the ways humans depend on each other and adapt to, or modify, their physical environment.
People and the Environment

**MAIN Idea**
Economic activities have led to environmental pollution.

**GOEEDY AND YOU** Is your community facing the challenges of water pollution or air pollution? Read to learn how economic activities may be responsible for such pollution.

In recent decades, economic activities have drastically affected the environment. A major environmental challenge today is pollution—the release of unclean or toxic elements into the air, water, and land.

**Water and Land Pollution**

Earth's bodies of water are normally renewable, purifying themselves over time, but this natural cycle can be interrupted by human activity. Oil tankers and offshore drilling rigs can cause oil spills. Industries may dump chemical waste that enters and pollutes the water supply. Fertilizers and pesticides from farms can seep into groundwater and cause harm, as can animal waste and untreated sewage.

Land pollution occurs where chemical waste poisons fertile topsoil or solid waste is dumped in landfills. Radioactive waste from nuclear power plants and toxic runoff from chemical processing plants can also leak into the soil.

**Air Pollution**

The main source of air pollution is the burning of fossil fuels by industries and vehicles. Burning fuel gives off poisonous gases that can damage people's health. Acidic chemicals in air pollution also combine with precipitation to form acid rain. Acid rain eats away at the surfaces of buildings, kills fish, and can destroy entire forests.

Forests provide animal habitats, prevent soil erosion, and carry on photosynthesis (the process by which plants take in carbon dioxide and, in the presence of sunlight, produce carbohydrates. The oxygen released during photosynthesis is vital for human and animal survival. Decreasing acid rain will help preserve a region's environmental balance.

**Activity: Science**

**Expressing Environmental Views** Ask:

What do you think about pollution? Have students research, identify, and give examples of different points of view on an environmental issue, such as pollution, global warming, or fuel consumption. The issue may be important on a local, state, national, or international level. Write the point of view statements related to the issue on the board. Have students choose the statement that best expresses their point of view, and use it as the topic sentence for a paragraph defending that position. Remind students to reread this section and include supporting details based on information in the text.
Section 4 Review

**Vocabulary**
1. Explain the significance of: natural resource, industrialization, developed country, newly industrialized country, developing country, free trade, pollution.

**Main Ideas**
2. Why must natural resources be managed wisely?
3. Explain how economic activities have led to air, water, and land pollution.
4. Use a table like the one below to list and describe the four types of economic activities. Then list an example of each. How have countries with varying levels of economic development become interdependent through world trade? Write a paragraph explaining your answer.

<table>
<thead>
<tr>
<th>Economic activity</th>
<th>Example</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tbody>
</table>

**Critical Thinking**
5. Answering the Essential Question Research and compare two countries in the ways they depend on the environment for their products they export.
6. Evaluating Information Evaluate the impact of innovations, such as fire, steam power, diesel machinery, and electricity, on the environment.
7. Making Inferences What advantages and disadvantages might a developing country experience by joining a free trade agreement?
8. Analyzing Visuals Study the world economic activity map on page 107. What regions have the most oil? The most coal? What patterns do you see? How does this influence world trade?

**Writing About Geography**
9. Expository Writing Write an essay explaining how quotas, embargoes, and tariffs differ, and describe the unintended consequences they might have on a country's economy.

**Answers**
1. Definitions for the vocabulary terms are found in the section and the Glossary.
2. Some of them are nonrenewable.
3. Industrialization requires the burning of fossil fuels, which releases harmful gases into the atmosphere. Industries can release toxic wastes into the water and soil.
4. Primary: farming, mining; Secondary: manufacturing; Tertiary: teacher, lawyer, banker; Quaternary: accountant, statistician
5. Answers should reflect an understanding of human-environment interaction.
6. Fire, steam power, and diesel all require the burning of fuels that release carbon dioxide. Electricity may release carbon dioxide if generated by burning fossil fuels, but may be generated more cleanly by wind or solar power. Electricity generated by dams disrupts the local environment when the dam is built. Electricity through nuclear power requires safe disposal of nuclear waste.
7. Developing countries can make goods cheaper than a developed country, and with a free trade agreement can sell their goods at a competitive price. Countries will lose their ability to protect local businesses unable to compete with large multinationals.
8. Southwest Asia; Russia; Coal tends to be around mountains. Oil is mostly found in Southwest Asia. Countries with lots of oil or coal have power in trade, since fossil fuels are important to developed countries' economic well being.
9. Answers will vary, but should include an understanding of the significance of these economic terms.
World Population
- Population growth increased rapidly but unevenly throughout the twentieth century and into the twenty-first century.
- The world’s population is unevenly distributed. Large numbers of people are migrating from rural areas to cities for jobs or to escape famine and war.
- As people become more mobile, so do goods. Countries trade to gain access to resources they lack.

World Culture
- Language, religion, social groups, government, and economic activities define cultures.
- Geographers divide the Earth into specific culture regions.
- Trade, migration, war, and technology can change cultures.
- The world’s first civilizations arose in culture hearths in Central America, Africa, and Asia.

Government and Economic Systems
- Governments may be organized as a unitary system, a federal system, or a confederation.
- An autocracy, an oligarchy, and a democracy differ in the way they exercise authority.
- The three major economic systems are traditional economy, market economy, and command economy.
- The type of economic system helps determine how a country will view international trade. Market economies are more open to free trade, while command economies are likely to put up trade barriers.

Creating an Almanac

Step 5: Compiling the Almanac Students will synthesize what they have learned in Steps 1, 2, 3, and 4.

Directions Have students assemble the chapters of their almanac into a book. Students should include a title page and a table of contents. Allow students to improve their work with additional information, graphs, charts, or illustrations. Ask: What have you learned that most surprised you about the city? Allow class time for students to share surprising facts, as well as the important information they have learned about the cities they studied. Encourage students to identify patterns in the challenges and solutions that each of the cities may share.

Did You Know?
Populous Nations China and India are the only countries in the world with populations of over 1 billion people each.
Answers, Analyses, and Tips

Reviewing Vocabulary

1. D Answer B is a distractor because the term was not used in the chapter. The question asks about birthrates and death rates, so answer C can be eliminated. Answers A and D are very close. Students should remember that the demographic transition model was defined in the chapter, and that a graph illustrating the model appears with the text.

2. C The key word here is process. Culture is a way of life, not a process. Global warming is a distracter, since the concept is not covered in this chapter. A culture hearth is a place, while cultural diffusion is a process.

3. D Answer C describes how a government is structured and can be eliminated. Answers A, B, and D describe systems of government. In a democracy, leaders rule with the consent of the citizens. This eliminates answer A. Students who do not remember the difference between an oligarchy and an autocracy may recognize the root word auto-, which also appears in the familiar word automatic, meaning able to move independently, and automobile, a self-propelled vehicle.

Reviewing Main Ideas

5. B Answers A and C can be eliminated because both assume that there will be more children in a society with negative population growth. Answer D is vague and could be true under any population growth conditions.

6. C Answer C represents a key idea in the section. Remind students that questions will often be asked about the most important ideas.

7. C Answer C represents a key idea in the section. Some democracies have a monarch as head of state. Since answers A and D both describe ideas of monarchy and both answers cannot be true, both answers can be eliminated. Some dictators have been democratically elected, but dictatorships do not represent the idea of democracy, so answer B should be eliminated.

8. B Students should recognize that answer C is the main idea of the section.
Critical Thinking

9. Which of the following is an example of how culture affects the daily lives of people?
   A. Language is the means by which people communicate ideas.
   B. Religion helps keep peace around the world.
   C. Government is not usually affected by cultural influences.
   D. Cultural influences are the same throughout a country.

10. What do the Nile Valley and Mesopotamian civilizations have in common?
   A. Both are located along the Red Sea.
   B. Both are located alongside major rivers.
   C. The waterways running through the civilizations empty into the Mediterranean Sea.
   D. Both were established by Greek invaders.

Document-Based Questions

9. Which of the following is an example of how culture affects the daily lives of people?
   A. Language is the means by which people communicate ideas.
   B. Religion helps keep peace around the world.
   C. Government is not usually affected by cultural influences.
   D. Cultural influences are the same throughout a country.

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   C. The waterways running through the civilizations empty into the Mediterranean Sea.
   D. Both were established by Greek invaders.

By 2050, according to the projections of the United Nations Population Division, more people in the developing world will live in urban than rural areas; by 2030, two-thirds of its population is likely to be urban. The world’s population as a whole is expected to grow by 2.5 billion from 2007 to 2050, with the cities and towns of developing countries absorbing almost all of these additional people.

This demographic transformation will have profound implications for health. To understand these consequences, it is important to set aside the misconceptions that have prevented the health needs of urban populations from being fully appreciated. The most urgent need is to acknowledge the social and economic diversity of urban populations, which include large groups of the poor whose health environments differ little from those of rural villagers. On average, urbanites enjoy an advantage in health relative to rural villagers, but health policies for an urbanizing world cannot be based on averages alone. Disaggregation [the separation into parts] is essential if policies are to be properly formed and health programs targeted to those most in need.


11. In the future, what will have the most profound impact for health in the developing world?

12. A country experiencing Stage 2 of the demographic transition model would most likely be engaged in agriculture, and possibly moving toward more manufacturing. Some agricultural activities in a Stage 2 country might be large-scale commercial farming of cash crops.