HIGHLANDS Other ranges in Latin America include the Guiana Highlands in the northeast section of South America. Highlands are made up of the mountainous or hilly sections of a country. The highlands of Latin America include parts of Venezuela, Guyana, Suriname, French Guiana, and Brazil. The Brazilian Highlands (see the map on page 203) are located along the east coast of Brazil.

Plains for Grain and Livestock

South America has wide plains that offer rich soil for growing crops and grasses for grazing livestock.

LLANOS OF COLOMBIA AND VENEZUELA Colombia and Venezuela contain vast plains called **llanos** (LAH•nohs), which are grassy, treeless areas used for livestock grazing and farming. They are similar to the Great Plains in the United States and the pampas of Argentina.

PLAINS OF AMAZON RIVER BASIN Brazil also contains expansive plains in the interior of the country. These are the **cerrado** (seh•RAH•doh), savannas with flat terrain and moderate rainfall that make them suitable for farming. Much of this land is undeveloped.

However, the government of Brazil is encouraging settlers to move into the interior and develop the land.

PAMPAS OF ARGENTINA AND URUGUAY In parts of South America, the plains are known as **pampas** (PAHM•puhs), areas of grasslands and rich soil. Pampas are found in northern Argentina and Uruguay. The main products of the pampas are cattle and wheat grain. A culture of the gaucho has grown up in the region, centered on the horsemen of the pampas.

The Amazon and Other Rivers

The countries of Central America and the Caribbean do not have the extensive river systems that are found in South America. In North America, the Rio Grande, which forms part of the border between the United States and Mexico, is longer than any other river in Mexico, Central America, or the Caribbean. However, these areas are all bordered by water. As a result, they are less dependent on river systems for transportation than is South America.

South America has three major river systems. The Orinoco is the northernmost river system, with the Amazon also in the north, and the Paraná in the south of the continent.

ORINOCO RIVER The <u>**Orinoco River**</u> winds through the northern part of the continent, mainly in Venezuela. It flows more than 1,500 miles, partly along the Colombia-Venezuela border, to the Atlantic. The Orinoco River basin drains the interior lands of both Venezuela and Colombia. Some of the areas drained by the Orinoco are home to the few remaining Native American peoples, such as the Yanomamo.

Geographic Thinking

Seeing Patterns How are the llanos, cerrado, and pampas of South America similar to the Great Plains of the United States?

HUMAN-ENVIRONMENT

INTERACTION

The Gaucho

Gauchos, the cowboys of

Argentina and Uruguay, wear

ponchos to help protect them

from bad weather. They tuck the

tops of their baggy trousers into

riding boots. Like American cow-

boys and the vaqueros of Mexico,

they wear hats with wide brims

to help protect them from sun

Their tools include the knife

thongs. The thrower hurls the bola

at the legs of an animal, tripping it

and the bola, a special kind of

sling. It is made of stones fastened to the ends of cowhide

and throwing it to the ground.

and rain on the pampas.

BACKGROUND

The Amazon is the second longest river in the world after the Nile. **AMAZON RIVER** Farther south, the Amazon River flows about 4,000 miles from west to east, emptying into the Atlantic Ocean. Its branches start in the Andes Mountains of South America, close to the Pacific. Yet it flows eastward across the central lowlands toward the Atlantic. The Amazon River is fed by over 1,000 tributaries, some of which are large rivers in themselves. The Amazon carries more water to the ocean than any other river in the world. In fact, it carries more water to the ocean than the next seven largest rivers of the world combined.

PARANÁ RIVER The Paraná River

has its origins in the highlands of southern Brazil. It travels about 3,000 miles south and west through Paraguay and Argentina, where it is fed by several rivers, and then turns eastward. The last stretch of the river, where it turns into an estuary of the Paraná and Uruguay rivers between Argentina

Landforms and Rivers of Latin America



and Uruguay, is called the Río de la Plata. An estuary is the wide lower course of a river where its current is met by the tides.

Major Islands of the Caribbean

The Caribbean Islands consist of three major groups: the Bahamas, the Greater Antilles, and the Lesser Antilles. (See the map on page 191.) These islands together are sometimes called the West Indies and were the first land encountered by Christopher Columbus when he sailed to the Western Hemisphere in 1492. They served as a base of operations for the later conquest of the mainland by the Spanish.

The Bahamas are made up of hundreds of islands off the southern tip of Florida and north of Cuba. They extend southeast into the Atlantic Ocean. Nassau is the capital and largest city in the Bahamas.

THE GREATER ANTILLES The Greater Antilles are made up of the larger islands in the Caribbean. These include Cuba, Jamaica, Hispaniola, and Puerto Rico. The island of Hispaniola is divided between the countries of Haiti and the Dominican Republic.

THE LESSER ANTILLES The Lesser Antilles are the smaller islands in the region southeast of Puerto Rico. The Lesser Antilles are divided into the Windward Islands and Leeward Islands. The Windward Islands face winds that blow across them. The Leeward Islands enjoy a more sheltered position from the prevailing northeasterly winds.

LATIN AMERICA



Using the Atlas Use the map on page 191. Which of the Antilles are closer to the coast of South America?

Resources of Latin America

Latin America is a treasure house of natural resources. These include mineral resources, such as gold and silver, as well as energy resources, such as oil and natural gas. In addition, the region is rich in agricultural and forest resources, such as timber. These resources have drawn people to the region for centuries.

MINERAL RESOURCES Gold, silver, iron, copper, bauxite (aluminum ore), tin, lead, and nickel—all these minerals are abundant in Latin America. In addition, mines throughout the region produce precious gems, titanium, and tungsten. In fact, South America is among the world's leaders in the mining of raw materials.



Many of these minerals are mined and then exported to other parts of the world, where they are made into valuable goods. For example, Jamaica was originally a plantation economy that depended on the sale of bananas and sugar for its livelihood. Then it turned to the mining and processing of bauxite (aluminum ore) in an attempt to make the country less dependent on agriculture and tourism. Today, this resource is mainly an export that is shipped elsewhere for industrial use.

ENERGY RESOURCES Oil, coal, natural gas, uranium, and hydroelectric power are all plentiful in Latin America. Venezuela and Mexico have major oil reserves. Brazil is rich in hydroelectric power because of its many rivers (including the mighty Amazon) and waterfalls. It is also rich in oil and gas.

Trinidad has discovered vast reserves of natural gas. New factories have turned Trinidad into a major exporter of methanol and ammonia. Natural gas has also attracted developers to the island.

In Mexico and Venezuela, oil has been a very important resource. Venezuela sits on top of major oil deposits. This resource was developed into a significant oil industry. Mexico has huge oilfields centered along the Gulf coast. Because of its reserves, Mexico is able to export oil to other countries. However, changes in the global price of oil have had a great impact on the economies of these countries.

Latin America has great variety in its climate and vegetation. You will read about each in the next section.

Connect TO THE ISSUE

Rain Forest Medicines

Vegetation in the rain forests has yielded many products used to make modern drugs and medicines. These include quinine, which is used to treat malaria, and curare, which is used to relax muscles.

Scientists believe that many of the potential medicines and drugs of the rain forest remain undiscovered. Destroying the rain forests damages the habitats of plants or animals that might even provide a cure for cancer. In the picture below, a man is using a plant to soothe an earache.



CONNECT TO THE ISSUES RESOURCES How do the

countries of the region make use of their natural resources?

Assessment

Places & Terms

Identify and explain where in the region these would be found.

- Andes Mountains
- Ilanos
- cerrado
- pampas
- Orinoco River
- Amazon River
- Paraná River

3 Taking Notes

PLACE Review the notes you took for this section.

Landforms

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Resources
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- What types of landforms are found in Latin America?
- What is their relative location?

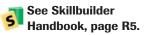
3 Main Ideas

- a. How did the Andes Mountains affect settlement along the western coast of South America?
- **b.** How are the landforms of the region both an advantage and disadvantage?
- **c.** What effect did natural resources have on the development of the region?

4 Geographic Thinking

Drawing Conclusions How might the Amazon River have affected movement into the interior of South America? **Think about:**

• the network of travel offered by a river system





SEEING PATTERNS Pair with a partner and draw a **sketch map** of Latin America's rivers and mountains. Use arrows to indicate the directions the rivers flow. Why does the Amazon flow all the way east across the continent even though its headwaters begin in the Andes Mountains along the west coast?

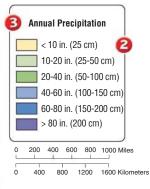
RAND MENALLY / Map and Graph Skills

Interpreting a Precipitation Map

This map shows differences in annual precipitation throughout South America. Suppose you have been given a chance to live in either Manaus, Brazil, or Buenos Aires, Argentina, for a year. You don't want to live in a city where it rains a lot. Which city would you choose? To help make your decision, find the two cities on the Unit Atlas map on page 193. Then find their locations on this precipitation map.

THE LANGUAGE OF MAPS A **precipitation map** is a type of thematic map. Many precipitation maps show differences in annual precipitation within a given region.

Precipitation in South America





በ The title gives you the subject matter of the map.

The amount of annual precipitation is shown both in inches and centimeters.

1 The key shows the colors used on the map and explains their meaning. Each color shows a different range of annual precipitation.

Copyright by Rand McNally & Co.

Map and Graph Skills Assessment

- **1. Making Comparisons** Where are you likely to experience more rain-in Peru or Brazil?
- 2. Drawing Conclusions Does Guyana have heavy or light annual precipitation?

3. Making Inferences

Is there heavier annual precipitation in the northern or southern parts of the continent?

Climate and Vegetation

A HUMAN PERSPECTIVE In the 17th century, missionaries and Indians in the area of present-day Paraguay were at times attacked by jaguars, the great cats of Latin America. In 1637, packs of jaguars roamed the countryside, attacking humans. The Indians built barricades for protection from the savage cats. But the jaguars remained a source of fear. The cats were a factor that had to be taken into account in settling and protecting towns and villages. There was no question about it—jaguars and other creatures thrived in the humid climate and thick vegetation of the tropical rain forests.

A Varied Climate and Vegetation

The climate of Latin America ranges from the hot and humid Amazon River basin to the dry and desert-like conditions of northern Mexico and southern Chile. Rain forest, desert, and savanna are all found in the region.

The vegetation varies from rain forests to grasslands and desert scrub. It ranges from the thick trees of the rain forests to mosses of the tundra.

This variety of climate and vegetation is due to several factors. First, Latin America spans a great distance on each side of the equator. Second, there are big changes in elevation because of the massive mountains in the region. Third, the warm currents of the Atlantic Ocean and the cold currents of the Pacific Ocean affect the climate.

Tropical Climate Zones

The tropical climate zones of the region produce both rain forests and the tree-dotted grasslands known as savannas. Rain forests are abundant in Central America, the Caribbean, and South America. Savannas are found in South America.

TROPICAL WET <u>**Rain forests</u>** are dense forests made up of different species of trees. They form a unique ecosystem—a community of plants and animals living in balance. The climate in these areas is hot and rainy year round. The largest forest is the</u>

Main Ideas

- Latin America has a variety of climates, from the cold peaks of the Andes to the Amazon rain forest.
- The vegetation of Latin America ranges from grasslands to the largest rain forest in the world.

Places & Terms

rain forest

CONNECT TO THE ISSUES RESOURCES Latin America's climate and vegetation make up a habitat that is threatened by economic development.



Vegetation of Latin America

Amazon rain forest, which covers more than two million square miles of South America. Much of this rain forest is located in Brazil.

Rain forests contain many exotic plants and creatures. Scientists have counted more than 2,500 varieties of trees in the Amazon rain forest. These include the Brazil nut tree, which grows 150 feet high. Animals include the anaconda, among the largest snakes in the world, the jaguar, and the piranha, a sharp-toothed, meat-eating fish.

The anaconda lives in and near the rivers of tropical South America. It may grow as long as 25 feet.

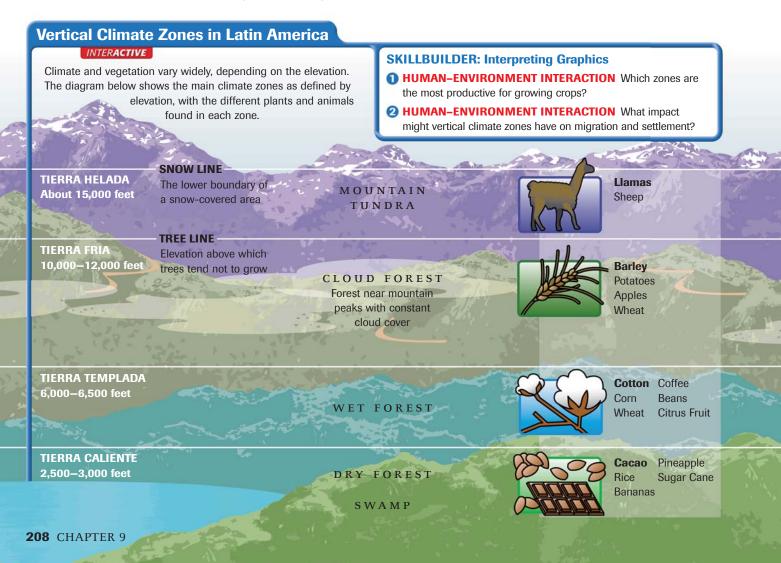
BACKGROUND

TROPICAL WET AND DRY Wet and dry climates, found primarily in South America, support savannas, which are grasslands dotted with trees common in tropical and subtropical regions. These areas have hot climates with seasonal rain. Savannas are found in Brazil, Colombia, and Argentina.

Dry Climate Zones

Dry climate zones are found in Mexico on the North American continent and in various countries of South America. Neither Central America nor the Caribbean, though, has dry climate zones.

SEMIARID A semiarid climate is generally dry, with some rain. Vast, semiarid, grass-covered plains are often found in such climates. Desert shrubs also grow in semiarid regions. Such regions are found in Mexico, Brazil, Uruguay, and Argentina.



DESERT Parts of northern Mexico are classified as desert, as is much of the coast of Peru. The Atacama Desert is in northern Chile. Likewise, Argentina's southern zone, Patagonia, contains a desert. The deserts of the region are made up of shrubs growing in gravel or sand.

Mid-Latitude Climate Zones

The mid-latitude, moderate climate zones in the region are located south of the equator, from approximately Rio de Janeiro in Brazil southward.

HUMID SUBTROPICAL Humid subtropical areas have rainy winters and hot, humid summers. Parts of Paraguay, Uruguay, southern Brazil, southern Bolivia, and northern Argentina (including Buenos Aires) are located in humid, subtropical climates. The vegetation is varied.

MEDITERRANEAN Mediterranean climate zones experience hot, dry summers and cool, moist winters. Part of Chile along the west coast is in this zone. You have experienced a similar climate if you have ever been to California. The vegetation in this climate is mainly chaparral.

MARINE WEST COAST Marine west coast climate zones are characterized by cool, rainy winters and mild, rainy summers. One such climate region runs along the coast of southwestern South America. Parts of southern Chile and Argentina have this climate. If you have spent time in Oregon or Washington, you have experienced this type of climate. Forests are the typical vegetation.

HIGHLANDS Highland climate zones vary from moderate to cold, depending on elevation. Other factors influence highland climates, such as wind, sunlight, and landscape. Highland climates are found in the mountains of Mexico and South America.

In the next section, you will read about how human-environment interaction affects the quality of life in Latin America.

Assessment

🚺 Places & Terms 🛛 2 🗎

Identify and explain where in the region this would be found.

rain forest

Geographic

Seeing Patterns

most of the high-

land climate zones

Where are

located?

rms **2** Taking Notes

PLACE Review the notes you took for this section.

Climate and

Vegetation

- What vegetation characterizes the Amazon River basin?
- What types of climate zones are found in Latin America?

3 Main Ideas

- a. What are two reasons for the variety of climate and vegetation found in Latin America?
- **b.** What effect might elevation have on growing crops and grazing livestock in the region?
- **c.** What are the three main types of moderate climate zones in the region?

4 Geographic Thinking

Making Inferences How might the climate and vegetation of Latin America have affected migration, settlement, and ways of life? Think about:

• the impact of deserts and rain forests on settlement



GeoActivity

ASKING GEOGRAPHIC QUESTIONS Research on the Internet the climate and vegetation in your state. Devise three geographic questions, such as "What is the dominant climate zone in my state?" Choose one of your questions and then write a **paragraph** explaining your findings. Be sure to list your sources.

Human–Environment Interaction

A HUMAN PERSPECTIVE High in the Andes Mountains, in what is present-day Peru, the ancient Inca needed fields in which to grow crops. By the 1200s, in the highlands around their capital of Cuzco and elsewhere, the Inca carved terraces out of the steep sides of the Andes Mountains. They built irrigation channels to bring water to the terraces. Because of their activity, they were able to grow crops for thousands of people on the slopes of previously barren hillsides. In this way, the Inca altered their environment to meet their needs.

Agriculture Reshapes the Environment

Native peoples were the first in the Western Hemisphere to change their environment to grow food. They burned the forest to clear land for planting and diverted streams to irrigate crops. They built raised fields in swampy areas and carved terraces out of hillsides.

SLASH–AND–BURN To clear fields, native peoples used the **slashand-burn** technique—they cut trees, brush, and grasses and burned the debris to clear the field. This method was particularly effective in humid and tropical areas.

Today, farmers practice the same method as they move into the Amazon River basin in Brazil and clear land for farming in the rain forest. But the non-landowning poor who are clearing and then settling the

Main Ideas

- The people of Latin America have altered the land through agriculture and urbanization.
- Tourism is having a growing impact on the environment of Latin America.

Places & Terms

slash-and-burn

terraced farming

push factors

infrastructure

CONNECT TO THE ISSUES INCOME GAP The income gap can be seen in the landless poor, the cities, and the tourist industry.

Slash-and-Burn Farming



Farmers cut trees, brush, and grasses to clear a field.



2 They then burn the debris and use the ashes to fertilize the soil.



Farmers plant crops for a year or two, which exhausts the soil. CONNECT TO THE ISSUES RESOURCES What is the impact of slashand-burn on the rain forest?

CONNECT TO THE ISSUES INCOME GAP How might push and pull

push and pull factors affect the gap between rich and poor?



Fields often remain barren or are reclaimed by brush, grass, trees, and scrub.

land sometimes use destructive farming practices. After a few years, they find that the soil is exhausted—all the nutrients have been drained from the land. Then they move on and clear a new patch to farm. This is one of the reasons for the steady shrinking of the rain forests. (For more about the rain forest, see Chapter 11, Section 1, page 245.)

TERRACED FARMING <u>Terraced farming</u> is an ancient technique for growing crops on hillsides or mountain slopes. It is an especially important technique in the mountainous areas of the region. Farmers and workers cut step-like horizontal fields into hillsides and slopes, which allow steep land to be cultivated for crops. The technique reduces soil erosion. As you read earlier, the Inca practiced terraced farming hundreds of years ago in Peru. The Aztecs of Mexico also used terraced farming.

Urbanization: The Move to the Cities

Throughout Latin America, people are moving from rural areas into the cities. They leave farms and villages in search of jobs and a better life. Cities have grown at such a rapid pace in Latin America that today the region is as urban as Europe or North America.

FROM COUNTRY TO CITY Argentina, Chile, and Uruguay are the most highly urbanized countries in South America. In these countries, more than 85 percent of the people live in cities. In Brazil, too, most people live in cities and towns.

People move to the cities in the hope of improving their lives. Many people in rural areas struggle to make a living and feed their families by subsistence farming. With a great deal of effort, they grow barely enough food to keep themselves and their families alive.

Both push and pull factors are at work in moving peasants and farmers off the land and drawing them to the cities. **Push factors** are factors that "push" people to leave rural areas. They include poor medical care, poor education, low-paying jobs, and ownership of the land by a few rich people. **Pull factors** are factors that "pull" people toward

cities. They include higher-paying jobs, better schools, and better medical care.

RAPIDLY GROWING CITIES Six cities in South America rank among the region's largest in population. These include São Paulo and Rio de Janeiro in Brazil, Buenos Aires in Argentina, Lima in Peru, Bogotá in Colombia, and Santiago in Chile. But the most populous city in all of Latin America is Mexico City. Estimates of its population vary from approximately 18 to 20 million people for the city alone to about 30 million for the entire greater metropolitan area.

Similar problems afflict cities throughout the region. Slums spread over larger and larger urban areas. Often unemployment and crime increase. In addition to social problems, there are many environmental problems. These include high levels of air

Growth of Cities, 1968–2000 20 15 People in Millions 10 Lima Rio de Janeiro São Paulo **Buenos Aires** Mexico City Santiago 2000 SOURCE: The Times Atlas of the World 1968 SKILLBUILDER: Interpreting Graphs MAKING COMPARISONS Which city had the largest population in 1968? In 2000? A MAKING COMPARISONS Which two cities showed the biggest increase in population between 1968 and 2000?

PLACE Pedestrians crowd a street during a festival in Buenos Aires, Argentina. pollution from cars and factories. Some cities have shortages of drinkable water as local supplies are used up and underwater supplies are drained.

To make matters worse, local governments cannot afford facilities to handle the population increase. This **infrastructure** includes such things as sewers, transportation, electricity, and housing.

Tourism: Positive and Negative Impacts

Tourism is a growth industry throughout Latin America. It is especially important in Mexico and the Caribbean. But despite the money it brings in to the economies of the region, tourism is a mixed blessing.

ADVANTAGES OF TOURISM Every year millions of tourists visit the resorts of Latin America, spending money and helping to create jobs. New hotels, restaurants, boutiques, and other businesses have sprung up on the islands of the Caribbean and in Mexico to serve the tourist trade. Luxurious cruise ships anchor in the ports of the region. They carry travelers who spend money on souvenirs and trips around the islands. Lavish restaurants serve expensive meals to these tourists. Staffing those ships, hotels, and restaurants are local people who profit from the visitors in their midst.

Resorts offer many activities that provide jobs for local residents. For example, local guides conduct tours of the natural wonders and beautiful scenery. Local companies may offer guided rafting trips down rivers. Sailing and snorkeling expeditions into the waters of the Caribbean and Pacific reveal exotic marine life. All of these activities bring money into the region and employ local people. In this way, tourism can play a part in reducing the income gap between rich and poor. Jobs in hotels, restaurants, and resorts raise incomes and give the local people a stake in their society.

DISADVANTAGES OF TOURISM

Despite the income and jobs that tourism brings to various places in Latin America, it causes problems as well. As resorts are built in previously unspoiled settings, congestion occurs and pollution increases.



The tourism industry often puts a great strain on the local communities where it builds its resorts. Further, there is an obvious gap between rich tourists and less well-off local residents. This has produced resentment and hostility in places such as Jamaica in the Caribbean and Rio de Janeiro in Brazil.

More important, local governments can run up large public debts by borrowing money to build tourist facilities. Airports and harbors must be constructed. Hotels and resorts must be built. Sewage systems and shopping areas must be expanded.

HUMAN– ENVIRONMENT

INTERACTION

A luxury cruise ship is docked in the beautiful harbor of Charlotte Amalie, St. Thomas in the Virgin Islands. What might be the impact of tourists on the local economy?

LATIN AMER

Often the owners of these hotels and airlines do not live in the tourist country. Typically, they send their profits back home. Further, these absentee owners often make decisions that are not in the tourist country's best interest. The owners may be able to influence local elections and business decisions.

In the next chapter, you will read about the human geography of Latin America, including its history, culture, economics, and daily life.

Assessment

🚺 Places & Terms

Identify and explain the significance of each in the region.

- slash-and-burn
- terraced farming
- push factors
- pull factors
- infrastructure

s 🙋 Taking Notes

HUMAN-ENVIRONMENT INTERACTION Review the notes you took for this section.

Human-Environment

Interaction

- What are the steps in slashand-burn farming?
- What are some of the problems of cities in the region?

3 Main Ideas

- a. How have humans changed the environment in Latin America to make it more suitable for agriculture?
- b. What factors have drawn people from the countryside into the cities of the region?
- **c.** What are some of the advantages of tourism to the Caribbean?

4 Geographic Thinking

Making Inferences How might the cities of Latin America deal with the increasing demands placed on them by their expanding populations? Think about:

- water, sewage, and electricity
- transportation and housing

See Skillbuilder Handbook, page R4.



SEEING PATTERNS Pair with a partner and create a **travel poster** about a place in the region that you would like to visit. Show various activities and sports available at the place you choose.

CONNECT TO THE ISSUES DEMOCRACY How might absentee ownership of tourist

facilities under-

mine democracy in a tourist country?

Human-Environment Interaction **213**

Assessment

VISUAL SUMMARY PHYSICAL GEOGRAPHY OF LATIN AMERICA

Landforms

Chapter

Major Mountain Ranges: Andes, Sierra Madres

Major Rivers: Orinoco, Amazon, Paraná

Major Plains: pampas of Argentina and Uruguay, Ilanos of Colombia and Venezuela, cerrado of Brazil

- Resources
- Latin America has important mineral and energy resources.
- Venezuela and Mexico have major oil reserves.

Climate and Vegetation

- The variety of climate and vegetation in Latin America is caused by the great distance from north to south, variations in elevation, and ocean currents.
- Latin America has many rain forests.

Human-Environment Interaction

- Two techniques that farmers have used in the region are slash-andburn and terraced farming.
- Cities in Latin America have grown at a rapid pace, and the region is now highly urbanized.
- Tourism has both advantages and disadvantages for the region.

Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- 1. Andes Mountains 5. Amazon River
- Ilanos
 pampas

4. Orinoco River

- 6. rain forest
 - 7. slash-and-burn
 - 8. terraced farming

9. push factors

10. infrastructure

B. Answer the questions about vocabulary in complete sentences.

- 11. What two countries does the Orinoco River drain?
- 12. Where are the Andes Mountains located?
- **13.** What agricultural technique involves using ashes to fertilize the soil?
- 14. What characteristics do the pampas and Ilanos have in common?
- **15.** What are some of the problems that afflict cities throughout the region?
- 16. Which river drains the largest rain forest in the region?
- **17.** What are some factors that are pushing farmers off the land and into the cities?
- 18. Which is the northernmost of the great rivers of South America?
- **19.** What farming technique is especially useful in mountainous regions?
- 20. What are the main products of the pampas?

Main Ideas

Landforms and Resources (pp. 201-206)

- 1. How have the Andes Mountains affected settlement in South America?
- **2.** What are the two main purposes for which the plains and grasslands of the region are used?
- 3. What are the three major island groups of the Caribbean?
- **4.** What Caribbean island is rich in natural gas, and what impact has this had on the economy?

Climate and Vegetation (pp. 207-209)

- 5. In what part of the region are savannas most common?
- **6.** How do the vertical climate zones of Latin America affect agriculture?
- 7. What is the dominant vegetation of the Amazon river basin?

Human-Environment Interaction (pp. 210-213)

- **8.** What is the main disadvantage of the slash-and-burn method of growing crops?
- 9. What factors tend to pull people into the cities from their farms?
- **10.** What are some of the disadvantages of tourism in the region?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.

Landforms	
Resources	
$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ $	\sim

- a. Where are most of the mountains of South America located?
- b. What are some examples of mineral and energy resources found in abundance in Latin America?

2. Geographic Themes

- a. LOCATION Where are some of the largest plains found in Latin America?
- b. **REGION** What are the settlement patterns of South America in terms of the interior and the coast?

Geographic Skills: Interpreting Maps

3. Identifying Themes

Based on landforms and climate, which areas of Latin America would be the least agriculturally productive? Which of the five themes are reflected in your answer?

4. Drawing Conclusions

What factors must people in the region consider when they are deciding whether to move from the country to the citv?

5. Making Comparisons

What are some of the advantages and disadvantages of tourism to a community?



SURINAME ATLANTIC GUYANA **OCEAN** FRENCH GUIANA (Fr.) Belém Manaus Tocantins R. BBA71

The Tributaries of the Amazon

Use the map to answer the following questions.

- 1. **MOVEMENT** In what general direction do the Amazon and its tributaries flow?
- 2. PLACE Into which ocean does the Amazon empty?
- 3. **REGION** What countries are drained by the Amazon and its tributaries?



Create your own sketch map of the physical geography of Latin America. Combine the information from this map with the information from the landforms map on page 203.



ERNET ACTIVITY

Use the links at classzone.com to do research on the most rapidly growing cities in Latin America. Focus on the impact that rapid growth has on the residents of a city.

Writing About Geography Write a report of your findings. Include a map that shows the fastest growing cities. Combine it with a chart that lists common problems of rapid growth.

Chapter



SECTION 1 Mexico

SECTION 2 Central America and the Caribbean

SECTION 3 Spanish-Speaking South America

section 4 Brazil

HUMAN GEOGRAPHY OF LATIN AMERICA A Blending of Cultures



GeoFocus

Which different cultures have blended in Latin America?

Taking Notes In your notebook, copy a cluster diagram like the one below. For each subregion of Latin America, take notes about its history, economics, culture, and modern life.





A HUMAN PERSPECTIVE Quetzalcoatl (keht•SAHL•koh•AHT•l) was a god worshiped by the Toltec and Aztec peoples of Mexico and Central America. According to Native American legend, Quetzalcoatl traveled east across the sea. It was said that he would return some day, bringing peace. One day, messengers brought Montezuma, the Aztec emperor, news that strangers had arrived from across the sea. Montezuma thought that these strangers might be Quetzalcoatl and his servants. Instead, it was Hernando Cortés and his soldiers, who would claim the land for Spain. When the Spanish landed, the cultures of two widely separated regions came into contact, which forever changed the Aztec and Spanish worlds—and made Mexico what it is today.

Colonialism and Independence

The history of Mexico is the story of the conflict between native peoples and settlers from Spain and the Spanish conquest of the region. The result was a blending of Indian and Spanish cultures that has greatly affected Mexico's development.

NATIVE AMERICANS AND THE SPANISH CONQUEST The territory of present-day Mexico was originally occupied by many different native peoples. These people included the residents of Teotihuacán, an early city-state, the Toltecs, the Maya (in the Yucatán Peninsula), and the Aztecs, as well as a number of other smaller groups or tribes.

The rich fabric of native life in Mexico was torn apart by the **Spanish conquest.** In 1519, Hernando Cortés landed on the coast of Mexico. Cortés and his men marched into the interior of the country until they reached the Aztec city of **Tenochtitlán** (teh•NOH•tee•TLAHN), the site today of Mexico City. By 1521, Cortés and his soldiers had conquered the Aztecs.

COLONY AND COUNTRY For centuries afterward, Mexico was a part of the Spanish empire. Mexico's abundant resources, such as gold and silver, made it a great prize. In 1821, Mexico achieved independence from Spain under Agustín de Iturbide, who proclaimed himself emperor in 1822. Then,

Main Ideas

- Native and Spanish influences
 have shaped Mexico.
- Mexico's economy may expand because of democracy and trade.

Places & Terms

Spanish conquest Tenochtitlán Institutional Revolutionary Party (PRI) mestizo maquiladoras NAFTA

CONNECT TO THE ISSUES DEMOCRACY Economic development is helping to shape the increasingly democratic culture of Mexico.

PLACE Independence Monument stands at a busy intersection of the Paseo de la Reforma in Mexico City.



Mexican History

1325 Aztecs found Tenochtitlán

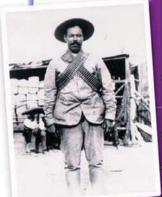
1502 Montezuma

(right) becomes Aztec emperor.

1521 Cortés conquers Aztec empire.

1624

Viceroy is recalled to Spain after rioting in Mexico City by Indians and others.



1910 Pancho Villa (*above*) helps lead the Mexican revolution.

2000

Vicente Fox (right) is elected president of Mexico.

1790

Two massive Aztec sculptures are dug up in Mexico City.

1821

Mexico declares independence from Spain.

1848 United States wins Mexican-American War. beginning in the mid-19th century, Benito Juárez led a reform movement and became president of Mexico. He worked for separation of church and state, better educational opportunities, and a more even distribution of the land.

Under Spanish rule, and even after independence, land had been unequally distributed. A few rich landowners owned haciendas (estates or ranches) that covered most of Mexico's farmland. Landless peasants worked on these haciendas. Juárez tried to remedy this problem by giving some land to the peasants.

Juárez was eventually succeeded by Porfirio Díaz, a dishonest politician who ruled Mexico for more than 30 years. His harsh and corrupt rule brought about a revolution and civil war, led by Francisco Madero, Pancho Villa, and Emiliano Zapata. A new constitution was adopted in 1917. It redistributed nearly half of Mexico's farmland to peasants.

ONE-PARTY RULE In 1929, a new political party arose in Mexico. This was the **Institutional Revolutionary Party (PRI)**. It helped to introduce democracy and maintain political stability for much of the 20th century. It continued the policy of redistributing land to the peasants. However, because it did not tolerate opposition, fraud and corruption undermined the democratic process. In 1997, two parties opposed to the PRI won a large number of seats in the congress.

In 2000, Vicente Fox, the National Action Party candidate, was elected president of Mexico. For the first time in 71 years, the PRI did not control Mexico's congress or presidency. This election showed that Mexico was gradually becoming more democratic.

A Meeting of Cultures

The culture of Mexico is a blend of Spanish influences with original native cultures. Mexico's native population has helped to shape the country's self-image.

THE AZTECS AND THE SPANISH Before the arrival of the Spanish, Mexico was a place of many advanced native cultures. For example, the Aztec empire arose in the Valley of Mexico, a mountain basin about 7,500 feet above sea level. According to legend, the Aztec people arrived there around A.D. 1200 from the deserts of northern Mexico. Then they built their capital of Tenochtitlán, a city of beautiful temples, palaces, gardens, and lakes. Canals linked parts of the city. People grew food on islands in Lake Texcoco surrounding the city. Tenochtitlán was where the Aztecs practiced human sacrifice in their temples.

CONNECT TO THE ISSUES DEMOCRACY A How did the PRI both help and hinder democracy? Geographic

Seeing Patterns What does Mexico City's site on top of the Aztec city suggest about the location? When Cortés and the Spanish conquered the Aztec empire, they destroyed most of the capital and built Mexico City on top of the ruins of Tenochtitlán. Today, though, ancient Aztec ruins and relics keep turning up as modern projects in Mexico City are built. Like the ruins, the past is still very much present in Mexico.

The Spanish brought their language and Catholic religion, both of which dominate modern Mexico. In spite of Spanish cultural diffusion, though, Mexico's Indian heritage remains very strong. In fact, the name of the country comes from *Mexica*, an older name for the Aztecs. Mexico has a large **mestizo** population people of mixed Spanish and Native American heritage.

MEXICAN PAINTERS Mexico has a long heritage of architecture and art. In the 20th century, Mexico's

tradition of painting took the form of public art. Many important painters portrayed the history of Mexico on the walls of its public buildings. Among the important Mexican mural painters of the 20th century were José Orozco, Diego Rivera, David Siqueiros, and Juan O'Gorman. (See the Diego Rivera mural showing the city of Tenochtitlán on page 186.) Frida Kahlo was an important Mexican painter known for her selfportraits. Most of the important Mexican painters blended European and Native American influences.

AN ARCHITECTURAL HERITAGE The Native Americans constructed beautiful temples and public buildings, often in the shape of pyramids. At Teotihuacán, for example, the people built a city of pyramids, many of which were topped with temples. The Aztec city of Tenochtitlán was filled with temples and palaces before it was demolished by the Spanish. The Spanish buildings included beautiful missions that were scattered throughout the territory they conquered. Later the Spanish built huge cathedrals, such as the Metropolitan Cathedral in Mexico City. This cathedral is located on the main square, or zocalo, of the city.

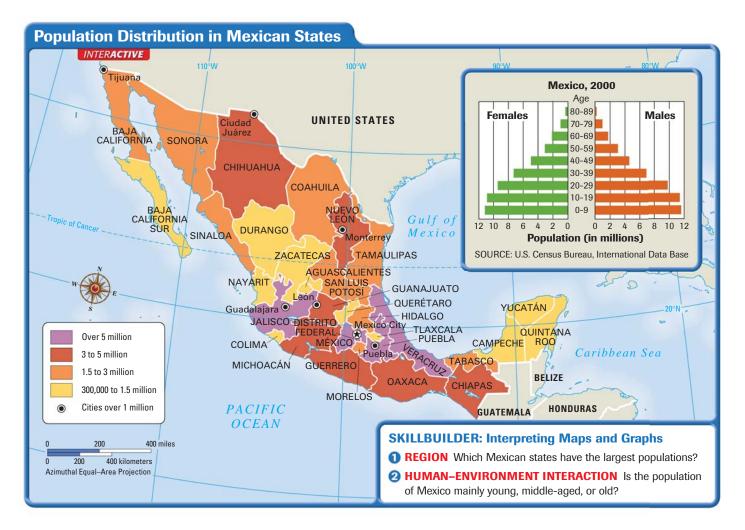
Economics: Cities and Factories

Mexico continues to struggle with two main economic challenges. First, it is attempting to close a long-standing gap between rich and poor people. Second, it is attempting to develop a modern industrial economy. Mexico had traditionally been an agricultural society, but it started to industrialize in the middle of the 20th century.



HUMAN-ENVIRONMENT INTERACTION

This painting by Juan O'Gorman (1905-1982) portrays Father Miguel Hidalgo, a Mexican priest and a leader of the revolt against Spanish rule in 1810. What does the painting suggest about Hidalgo's support among the people?



POPULATION AND THE CITIES Mexicans are moving to cities because they see economic opportunities there. Jobs in cities provide a way to narrow the gap between rich and poor because such jobs pay more than those in rural areas. Mexico's population of about 52 million in 1970 almost doubled by the year 2000. Its population is largely very young.

OIL AND MANUFACTURING Mexico's economy includes a large industry based on its oil reserves in and along the coast of the Gulf of Mexico. Mexico has emphasized its oil industry as an important part of developing an industrial economy. The profits from oil have helped to finance development, especially in manufacturing industries.

Manufacturing is the most important part of Mexico's recent economic development. Many of the new factories are located in the north of the country, along the border with the United States. **Maquiladoras** are factories in Mexico that assemble imported materials into finished products that are then exported, mostly to the United States. These products include electronic equipment, clothing, and furniture.

Mexico is a vital member, along with the United States and Canada, of **NAFTA** (North American Free Trade Agreement). This important trade agreement has created a huge zone of cooperation on trade and economic issues. Trade is expected to contribute to the economic prosperity of the member nations, creating jobs for millions of people. Under NAFTA, import tariffs on manufactured goods are being slowly reduced and eventually will disappear.

Mexican Life Today

The people of Mexico face big challenges in today's world. Jobs, emigration, and education are foremost among their concerns. Many of these issues relate to the income gap between rich and poor.

EMIGRATION Emigration has had an impact on family life in Mexico. Mexico shares a 2,000mile border with the United States. Many workers leave Mexico and travel to the United



States in search of work. This separates families. Nonetheless, most of these workers remain in touch with their families in Mexico. Many send money back to their native villages. Often, after a year or two working in the United States, they return to Mexico with savings to help improve living conditions for their extended families.

WORK AND SCHOOL The rapidly growing population and various government policies have contributed to a shortage of jobs. This has led many Mexicans to migrate to the United States in search of work.

Without education and training, young workers cannot find good jobs. In recent years, attendance of eligible students at school has improved. Today, about 85 percent of school-age children attend school. In the coming years, Mexico will have to invest large sums in education to provide a better life for its young citizens. Education will become even more important as Mexico becomes more industrialized.

In the next section, you will read about Central America and the Caribbean. This subregion links North America and South America.

Contraction of the second

MOVEMENT

Pedestrians use a walkway in crossing from Nuevo Laredo, Mexico, into Laredo, Texas. Shop signs are in English and Spanish.

CONNECT TO THE ISSUES INCOME GAP How might the income gap be narrowed in Mexico?

SCHON

Assessment

Places & Terms

Identify and explain the following terms.

- Spanish conquest
- Tenochtitlán
- Institutional Revolutionary Party (PRI)
- mestizo
- maquiladoras
- NAFTA

2 Taking Notes

REGION Review the notes you took for this section.

Mexico



- Which two main cultures blended to form modern Mexico?
- Where do most of Mexico's people live today?

3 Main Ideas

- a. How might democratic reforms and improved trade agreements contribute to a stronger economy in Mexico?
- b. What effect might Mexico's young population have on its development?
- c. In what ways have Native American and Spanish influences shaped Mexico?

Geographic Thinking

Making Generalizations How might a shortage of jobs in Mexico affect the movement of its people? Think about:

- why one might travel to the United States in search of work
- what factors in Mexico might lead people to move



MAKING COMPARISONS Pair with a partner and make a **chart** of the ten most heavily populated states of Mexico arranged in order from most to least heavily populated. Then compare your chart with a map, and mark those states that are closest to the U.S. border.

Central America and the Caribbean

A HUMAN PERSPECTIVE Central America forms an isthmus, a land bridge between North and South America. It also divides two oceans. This geographic fact has made the region attractive to the United States and other major world powers and has helped to keep the area fragmented and politically unstable. For example, in the early 20th century, the United States wanted to build a canal across Panama that would connect the Atlantic and Pacific oceans. In 1903, Panama was still a province of Colombia, which did not like the idea. The United States encouraged a revolution in Panama, and when it won its independence, Panama granted the United States a ten-mile-wide zone in which to build a canal. Central America had become a crossroads of world trade.

Native and Colonial Central America

Central America is a cultural hearth as well as a crossroads. A **cultural hearth** is a place from which important ideas spread. Usually, it is the heartland or place of origin of a major culture. The Mayan people built a great civilization in the area that spread throughout the region. The homeland of the Maya stretched from southern Mexico into northern Central America. During the 800s, the Maya began to abandon many of their cities. Why they did so remains a mystery to be solved by archaeologists.

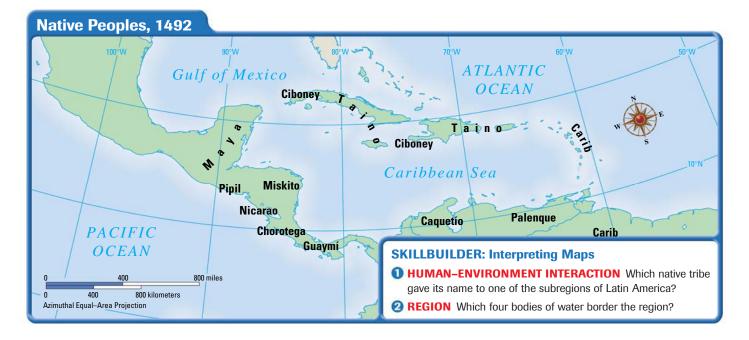
Main Ideas

- Native peoples, Europeans, and Africans have shaped the culture of this region.
- The economies of the region are based primarily on agriculture and tourism.

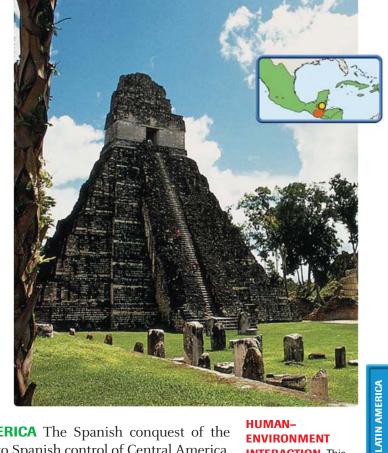
Places & Terms

cultural hearth United Provinces of Central America Panama Canal calypso reggae informal economy

CONNECT TO THE ISSUES INCOME GAP The people of Central America and the Caribbean face an uneven distribution of income as one of the effects of colonialism.



MAYAN INFLUENCE The Maya built many cities with temples and palaces in present-day Belize, Guatemala, El Salvador, and Honduras. Each city was an independent state ruled by a god-king and served as a center for religious ceremony and trade. One of their most spectacular cities was Tikal, located in the dense, steamy jungle of northern Guatemala, considered the center of Mayan civilization. The pyramids at Tikal were among the tallest structures in the Americas until the 20th century. The influence of the Maya spread over a region from Mexico to El Salvador. The Mayan culture was carried to other regions through military alliances and trade.



THE SPANISH IN CENTRAL AMERICA The Spanish conquest of the Aztecs in Mexico opened the door to Spanish control of Central America. Spain ruled Central America until the 19th century. Mexico declared its independence from Spain in 1821. Up to that point, Central America had been governed from Mexico. In 1823, however, the whole region declared its independence from Mexico and took the name of the **United Provinces**

of Central America.

By the late 1830s, the United Provinces had split into separate nations. These became El Salvador, Nicaragua, Costa Rica, Guatemala, and Honduras. Later, Panama broke off from Colombia and became an independent country in Central America. Belize, a former British colony, broke away from British Honduras.

Native and Colonial Caribbean

Although Central America was ruled by Spain, the Caribbean was settled and claimed by many European powers. In addition, Africans who were brought to the Caribbean as slaves played an important role in the settling of the Caribbean. 🐗

CARIBBEAN INFLUENCES When Christopher Columbus reached the Caribbean islands in 1492, he thought he had reached the East Indies in Asia. Therefore, he called the natives "Indians." The inhabitants of these islands called themselves the Taino (TY•noh). The Spanish settled some of the islands and established sugar plantations, which were well suited to the climate and soil of the islands. They attempted to use the Taino as forced labor, but many of the natives died from disease and mistreatment.

To replace the Taino, European slave traders brought Africans to the Caribbean by force and put them to work on plantations. As a result, Africans have had a lasting influence on Caribbean life and culture.



HUMAN-**ENVIRONMENT INTERACTION** This

pyramid at Tikal towers over the great plaza of the ancient city. A temple sits on top of the pyramid.

What might this and similar buildings at Tikal suggest about Mayan civilization?



Caribbean Colonies

Country	Colony	Major Cultural Influences	
Spain	Cuba, Dominican Republic, Puerto Rico	Spanish language Catholic religion	
France	Haiti, Guadeloupe, Martinique	French language Catholic religion	
Great Britain	Jamaica, Barbados, St. Lucia, St. Vincent, Grenada, Trinidad and Tobago, British Virgin Islands	English language Protestant and Catholic religions	
Netherlands	Netherlands Antilles	Dutch language Protestant religion	
Denmark	Danish West Indies ¹	Danish language ² Protestant religion	
¹ Became U.S. Virgin Islands in 1917. ² English is now the official language.			
SKILL PUIL DEPL Interpreting Charts			

SKILLBUILDER: Interpreting Charts

REGION Which European country had the most colonies in the Caribbean?

PLACE In the colonies of which European countries was the Catholic religion dominant? **A COLONIAL MOSAIC** By the 19th century, the Spanish, French, British, Dutch, and Danish all claimed islands in the Caribbean. Most of the European powers were there to profit from the sugar trade. This trade depended on the forced labor of workers brought in chains from Africa.

CARIBBEAN INDEPENDENCE The first independence movement in Latin America began as a slave revolt in the Caribbean on the island of Haiti. In the 18th century, Haiti was a French colony with an important sugar industry. Africans brought to the island by force worked on the sugar plantations and other plantations. In the 1790s, Toussaint L'Ouverture (too•SAN•loo•vehr•TOOR) led a slave rebellion in Haiti and took over the government of the island. By 1804, Haiti had achieved independ-

ence from France. Cuba achieved independence from Spain in 1898 as a result of the Spanish-American War. After an occupation by United States forces, the island became self-governing in 1902. Jamaica and Trinidad and Tobago did not achieve full independence from Great Britain until 1962.

Cultural Blends

Central America and the Caribbean are close to each other geographically, and their cultures show a blending of influences. This mixture affects everything from religion to language.

CULTURE OF CENTRAL AMERICA As you've read, the culture of Central America blends two major elements: Native American influences with those of Spanish settlers. The Spanish were the dominant group of European settlers in Central America—their language remains dominant in the area today. Catholicism is the major religion, although Protestant missionaries are active in the region.

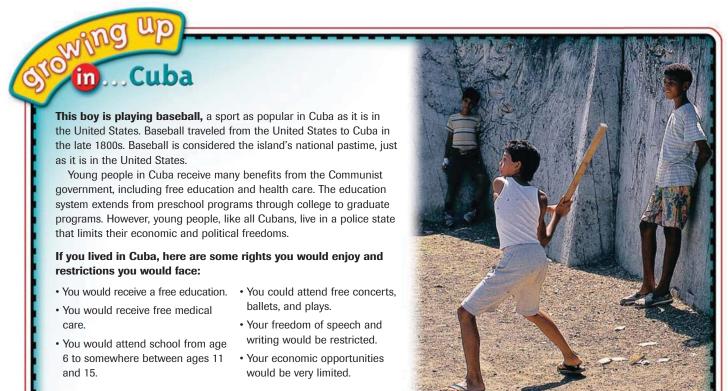
The Spanish took land away from the natives of the region. The conquerors cut down forests, opened up land for grazing livestock, and introduced new crops, such as wheat. They created large farms and ranches, built towns, and moved the native peoples off the land and into the towns. All this altered the way of life in the region.

CULTURE OF THE CARIBBEAN A greater variety of influences was at work in the Caribbean. The Spanish, French, British, Danish, and Dutch existed side by side with the African and Native American. Residents of the islands are of European, African, or mixed ancestry.

African influences were especially important. Most of the people are descendants of the African slaves brought to the islands to work on the



Making Comparisons I How does the culture of the Caribbean differ from the culture of Central America?



LATIN AMERICA

sugar plantations. They left a lasting mark on all aspects of culture in the islands, including village life, markets, and choice of crops.

The religions of the Caribbean include Catholic and Protestant, as well as Santeria, which combines certain African practices and rituals with Catholic elements. Voodoo is practiced on the island of Haiti. Rastafarianism is a religious and political movement based in Jamaica.

Spanish is spoken on the most populous islands in the Caribbean: Cuba, with a population of about 11 million, and the Dominican Republic, with a population of about 8.5 million. There are also many French speakers (Haiti alone has a population of more than 6 million). English dominates in Jamaica, with a population of almost 3 million. There is a smattering of Dutch and Danish also spoken in the region.

Economics: Jobs and People

In general, most of the people in the countries of the region are poor. This is, in part, a legacy of colonialism. The early success of the sugar crop benefited colonial planters, not the native or African laborers. Also, the region faced competition in the sugar market, and eventually the sugar trade declined. Further, the fact that natural resources were exported and not used locally left the region economically weakened.

FARMING AND TRADE Sugar cane plantations in the Caribbean provide the region's largest export crop. Other important export crops are bananas, citrus fruits, coffee, and spices. All these crops are well adapted to the climate and soil of the region. Many people work on the plantations that grow crops for export. But the pay is poor, and as a result, average per-capita income in the Caribbean is very low.

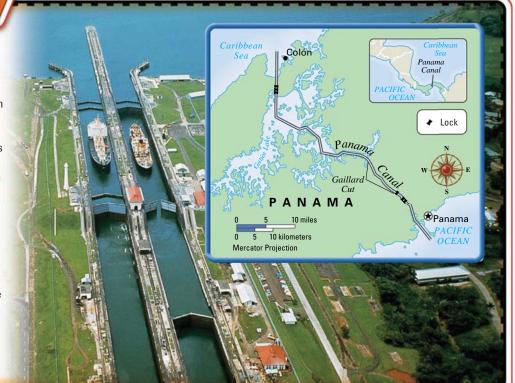
MOVEMENT

The Panama Canal

Panama is a unique crossroads, linking North America and South America and the Caribbean Sea and the Pacific Ocean.

Before the Panama Canal was built, sea travel from the east coast to the west coast of North America meant a journey of about 15,000 miles. The canal cut the coast-to-coast journey more than in half. Now, ships move through a series of locks shown on the map at right.

Sailing through the Panama Canal from the Caribbean to the Pacific Ocean, you actually sail from northwest to southeast, not from east to west.



In Central America, too, the main source of income is the commercial farming practiced on large plantations. These farms produce 10 percent of the world's coffee and 10 percent of the world's bananas. Central America's mines and forests also provide resources for export.

Trade is important because of the **Panama Canal**, which cuts through the land bridge and connects the Atlantic and Pacific oceans. Ships from both hemispheres use the canal, making Panama a crossroads of world trade. The canal made possible the exchange of both goods and ideas.

WHERE PEOPLE LIVE AND WHY Population patterns in Central America and the Caribbean are directly related to their economies. Both Central America and the Caribbean have populations of between 30 and 40 million people. But in Central America, most of the people make their living on farms and, as a result, live in rural areas.

Many of the islands in the Caribbean are densely populated. More than 11 million people live on Cuba, the largest of the islands. Most people live in urban areas, where they hope to find jobs in tourism. The cities attract people who are seeking a better way of life. Unfortunately, many end up living in slums. The region is working to find a way to channel more of the profits from tourism and farming to benefit local communities.

Popular Culture, Tourism, and Jobs

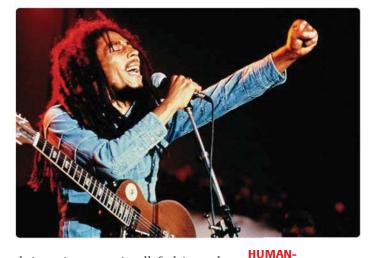
Education and jobs are a major concern to the people of Central America and the Caribbean. Music, heavily influenced and shaped by the African heritage in the region, is an important part of the popular culture of Central America and the Caribbean.

CONNECT TO THE ISSUES RESOURCES What resources are exported from Central America and the Caribbean?

MUSIC OF THE CARIBBEAN Both

reggae and calypso music started in the Caribbean. **Calypso** music began in Trinidad. Calypso combines musical elements from Africa, Spain, and the Caribbean. Calypso songs are accompanied by steel drums and guitars, and they have improvised lyrics.

<u>Reggae</u> developed in Jamaica in the 1960s. Many reggae songs deal with social problems and religion.



African music, Caribbean music, and American music all fed into the roots of reggae. Bob Marley of Jamaica was a pioneer of reggae. The music of the Caribbean is one of the elements that lures tourists to the region, creating jobs for local residents.

BACKGROUND

Bob Marley's son, David "Ziggy" Marley, is carrying on his father's musical legacy.

TOURISM AND THE INFORMAL ECONOMY Rapid population growth in the Caribbean is contributing to high unemployment, especially among the young. Many people flee rural areas and move to the cities in search of jobs. Too often, however, they lack job skills. There are schools to help prepare students for jobs in agriculture and tourism.

Tourism is, in fact, an increasingly important industry. Local residents of the islands are able to find jobs working in the hotels, resorts, and restaurants there. In addition, people can make a living working as guides and assistants on fishing excursions, sailing trips, snorkeling adventures, hiking expeditions, and other activities for tourists.

People also find jobs in the **informal economy**, which takes place outside official channels, without benefits or protection for workers. These include jobs such as street vending, shining shoes, and a variety of other activities and services that provide people with a small income.

In Section 3, you will read about Spanish-speaking South America.

Assessment

🚺 Places & Terms 🛛 🙆 Taking Notes

Identify and explain the following places and terms.

- · cultural hearth
- United Provinces of Central America
- Panama Canal
- calypso
- reggae
- · informal economy

REGION Review the notes you took for this section.

Central America and the Caribbean

Latin America

- What European countries had colonies in the Caribbean?
- Which European country settled most of Central America?

3 Main Ideas

- a. What are the major groups that blended to form the culture of this region?
- b. What are some major sources of income in the economies of Central America and the Caribbean?
- **c.** What forms of music have evolved in the region?

Geographic Thinking

Drawing Conclusions How did the establishment of sugar plantations by Europeans affect the settlement of the Caribbean? **Think about:**

• the people brought in to work on the plantations



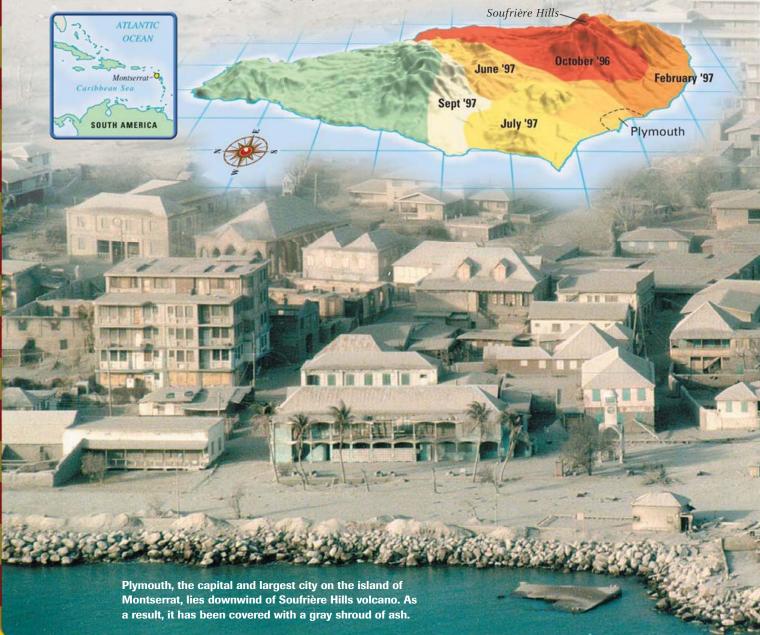


MAKING COMPARISONS Pair with a partner and make a **poster** about the Panama Canal. Do research on the Internet and illustrate your poster with maps and diagrams of the locks in the canal. Provide statistical data about the canal that compares it with other canals, such as the Suez Canal.

Volcano on Montserrat

Montserrat is an island in the Caribbean. One of the outstanding features of the island is its large volcano located in the Soufrière Hills. The volcano had been dormant for approximately five centuries when it began to erupt in 1995. The eruptions continued through 1996 and became particularly severe in 1997. The large map of the island (below) shows the area affected by the eruptions. The dates on the map show the expanding "zones of exclusion." A zone of exclusion is an area too dangerous for people to enter. Two-thirds of the island is now uninhabitable.

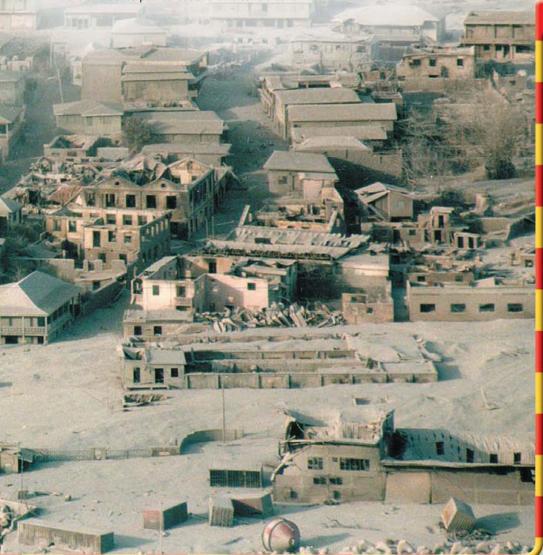
50sters



228 CHAPTER 10



Fiery eruptions illuminated the nighttime sky as lava and ashes poured out of the volcano's cone.



GeoActivity

MAKING A PRESENTATION

Working with a partner, use the Internet to research a volcanic eruption on the chart below. Then create a presentation about the eruption.

- · Create a diagram showing the extent of the eruption, the damage caused by it, and the number of lives lost.
- Add a map of the region affected by the eruption.
- Write a report explaining how the eruption affected people.



GeoData

OTHER FAMOUS VOLCANOES



Mount Vesuvius erupted, and thousands of people died when they were buried under ash and mud or breathed the poisonous fumes.



Mount Fuji erupted. It is the highest and most sacred mountain in Japan.



Paricutin was a volcano that

formed in the middle of a cornfield in Mexico. It last erupted in 1943.



Mt. St. Helens in Washington State erupted with tremendous force. The eruption lasted nine hours and killed 60 people.



2000

Popocatépetl in Mexico erupted in its biggest explosion in a thousand years.

Spanish-Speaking South America

A HUMAN PERSPECTIVE In the early 1500s, the Inca empire was at the height of its glory. Then Spanish soldiers under the command of Francisco Pizarro invaded the South American empire. The Spanish attacked the Inca army, killed many of its warriors, and took the emperor prisoner. The Spaniards held him for ransom. Although the Inca filled a room with silver and gold to win his release, the Spanish executed the emperor. This broke the spirit of the Inca nation, already weakened by civil war, and the Spanish conquered the rest of the empire. As in Mexico, Central America, and the Caribbean, the Spanish conquest would have a deep effect on the history and culture of South America.

Conquest and the End of Spanish Rule

South America is divided into two main regions, based in part on whether the people speak Spanish or Portuguese. In this section, you will learn about Spanish-speaking South America. This region is composed of Argentina, Bolivia, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Uruguay, and Venezuela. Suriname is a Dutch-speaking country. French Guiana is a part of France.

THE INCA One of the great civilizations of the Americas arose in the rugged Andes Mountains of Peru. This civilization was created by the **Inca**—descendants of people who came across a land bridge from Siberia to Alaska and eventually crossed the Isthmus of Panama into South America. When they reached the west coast of South America,

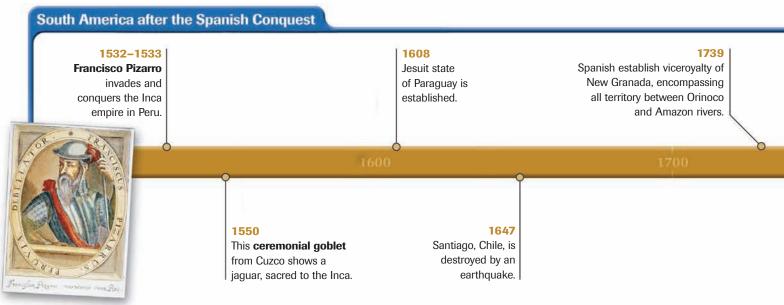
Main Ideas

- Native peoples and settlers from Spain have shaped the culture of South America.
- Regional economic cooperation will help raise people's standards of living.

Places & Terms

Inca	Mercosur
Quechua	

CONNECT TO THE ISSUES INCOME GAP The countries of South America are trying to find ways to narrow the gap between rich and poor.



they found the Andes Mountains, which rise to heights of more than 20,000 feet in some places. In spite of the harsh terrain, the Inca were able to build an advanced civilization.

They built their empire on the foundation of earlier cultures. From their capital at Cuzco in Peru, the Inca extended their power. They brought other tribes under their control and built a great empire.

By 1500, the Inca empire extended 2,500 miles along the west coast of South America. It ran from present-day Ecuador in the north to Argentina in the south. A road system that was about 20,000 miles long crossed mountains and deserts to link the empire.

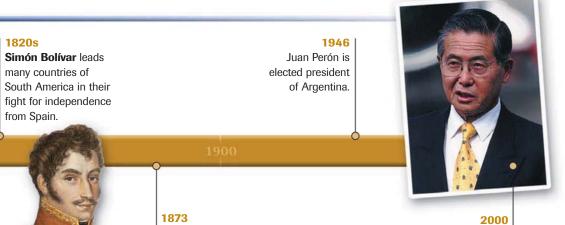
THE SPANISH CONQUEST As you read earlier, Pizarro and his soldiers invaded and conquered the Inca empire. The Spanish were primarily interested in claiming the gold and silver of the Inca.

The Spanish settlers forced the natives to work in mines and on farms and ranches. The Spanish landlords received the rights to the labor of the natives from officials in Spain, who passed laws to protect the Indians. But in spite of the laws, many of the settlers abused the natives or worked them to death.

The presence of the Spanish had an important geographic effect on the Inca, who were forced to move from their villages to large plantations. This disrupted and destroyed Inca families and communities, and made the region difficult to govern even into the 20th century.

The Spanish forced their own language and religion on the conquered peoples. The **Quechua** (KEHCH•wuh) language of the Inca was overshadowed by Spanish as the settlers became the dominant culture. Likewise, the Inca religion of the native peoples was replaced by the Catholic religion of the conquerors as the official religion. Spanish rule in the region continued for almost 300 years. But one lasting legacy of the Inca is that millions of native peoples still speak Quechua.

INDEPENDENCE MOVEMENTS Inspired by the American Revolution (1776) and the French Revolution (1789), the countries of South America sought their independence from Spain in the first half of the 19th century. Two great leaders of independence movements in the region in the first half of the 19th century were Simón Bolívar and José



Alberto Fujimori resigns as president of Peru.

Geographic Thinking 4

Seeing Patterns How might a road system have helped to hold the Inca empire together?

CONNECT TO THE ISSUES DEMOCRACY What effect

might the disruption of Inca life have had on the development of democracy in the region?

1777

Spain and Portugal resolve disputes about colonies in South America.

1780

Peruvian Indians rebel against Spain.

Peace treaty fixes frontier between Argentina and Chile along the ridge of the Andes.

DEMOCRACY

Coup in Chile

The socialist Salvador Allende became president of Chile in 1970 in a democratic election. However, his victory displeased the wealthy and powerful in Chile.

In 1973, a group of military officers overthrew Allende's democratically elected government. The coup was led by General Augusto Pinochet, who succeeded Allende in 1973. Under Pinochet's 17-year rule, thousands of people are believed to have been killed by the military government. A democratically elected government succeeded Pinochet in 1990. de San Martín. Bolívar helped to liberate the countries of Colombia, Venezuela, Ecuador, and Bolivia. José de San Martín helped to free the countries of Argentina, Chile, and Peru from Spanish rule.

Argentina and Chile were the first to achieve independence because they were the farthest from Lima, the center of Spanish control. However, once independence was achieved, geography contributed to the failure of various countries to unify or work together for common goals. The continent has tended to be populated around its edges, with mountains and rain forests limiting interaction. This has contributed to underdevelopment and political instability.

GOVERNMENT BY THE FEW Oligarchy (government by the few) and military rule have characterized the governments of many of the countries of South America since they won their independence from Spain. In fact, before his death in 1830, Simón Bolívar had become discouraged about the future of democracy in Latin America.

Throughout South America, authoritarian rule—which stresses obedience to authority over individual freedom delayed the development of democracy. Although many South American nations gained freedom in the 1800s, hundreds of years of colonialism had their effects. Strong militaries, underdeveloped economies, and social class divisions still exist in the region today.

A Cultural Mosaic

South America is one of the most culturally complex regions in the world, due in part to the region's isolation after independence. These countries form a cultural mosaic—a number of societies with different cultures living near each other but not mixing.

LITERATURE Spanish-speaking South America has a strong literary heritage. Particularly in the last quarter of the 20th century, South American writers claimed the world's attention with their extraordinary novels. Perhaps the most famous of these writers is Gabriel García Márquez of Colombia, who won the Nobel Prize for literature in 1982. Among his best-known novels are *One Hundred Years of Solitude* (1967) and *The General in His Labyrinth* (1989), a novel about Simón Bolívar.

MUSIC Popular music and folk music are important artistic traditions in South America. You can hear street music everywhere throughout the region. Musicians play drums, guitars, marimbas, maracas, and flutes, among other instruments. This music combines Indian, African, and European elements to make a thick cultural brew, as can be heard in the tango of Argentina. Classical music is also important in the region. Many cities in South America have symphony orchestras and opera companies.

ARTS AND CRAFTS Beautiful craftwork and handmade items can be found throughout Latin America. Pottery, textiles, glasswork, and metal-work all manage to combine beauty and usefulness. Many handmade

DEMOCRACY How might better interaction and communication affect the development of

democracy?

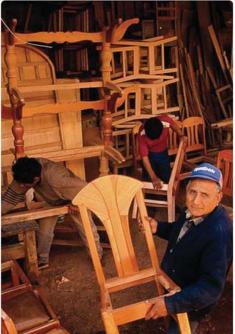
CONNECT TO

THE ISSUES

Arts and Crafts in South America



A native woman displays a variety of goods for sale at a crafts market in Chinchero, Peru. Her wares include blankets, pottery, and items of clothing.



Handmade furniture is still found throughout the region. This carpenter shows a chair that he has made in his workshop in Sicuani, Peru.



A Cotopaxi native woman weaves a basket at an open market in Alameda Park in Quito, Ecuador.

items are decorated with folk art or Indian religious symbols. Beautiful examples of handmade items can be found in tools and other household items throughout the region. Indian weavers, for example, make ponchos from the wool of the animals of the region, such as llamas and alpacas.

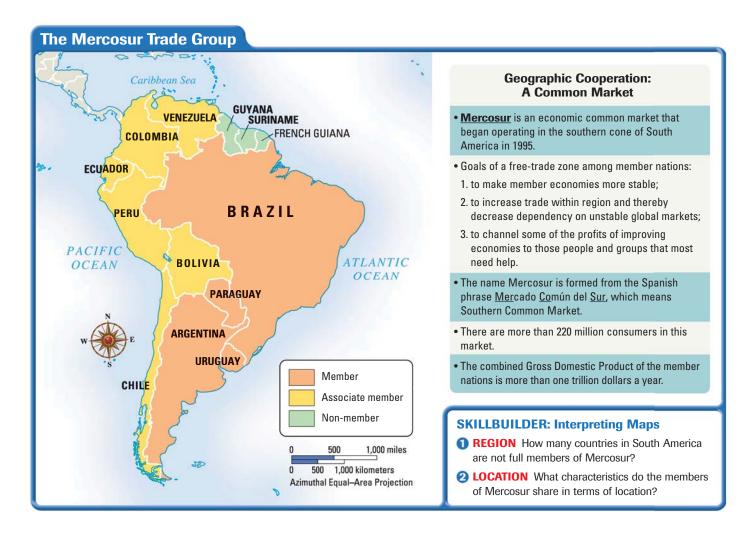
Economics: Resources and Trade

Most economies in South American countries are based upon agriculture and the mining and extraction of resources such as oil and minerals. However, the income gap between rich and poor reflects the region's poverty and failure to develop economically after independence. Economic development of the entire region holds out the hope of improving the lives of millions of people.

ECONOMIES OF THE REGION One of the advantages in the region is that it produces a wide variety of products. This is because of its unique combination of resources, landforms, climate, and vegetation. In the north, Guyana, Suriname, and French Guiana grow crops for export on large farms. Colombia and Venezuela both have huge oil reserves that are probably their greatest economic asset.

In the west, Peru has an important fishing industry. Ecuador exports huge quantities of shrimp. Bolivia has deposits of tin, zinc, and copper.

In the south, Argentina produces great quantities of grain and livestock on its vast pampas. Uruguay is a prosperous agricultural country that has major farming and grazing areas in its portion of the pampas. Paraguay exports products such as soybeans, cotton, and animal hides.



CHILE'S SUCCESS STORY Chile is South America's greatest economic success story. It has been able to participate in the global economy by trading the products of its mines and fields with nations as far away as Japan. The export of fruit and vegetables to North American markets is an important part of Chile's economy because its harvest comes during the Northern Hemisphere's winter. Chile also has huge deposits of copper, which remains its largest export. However, Chile has recently begun to focus on its own hemisphere. It has been a leader in working for economic cooperation in the region, where it is an associate member of Mercosur. (See the chart and map above.) Associate members (Chile and Bolivia) are countries with free-trade agreements with Mercosur.

Education and the Future

The people of Spanish-speaking South America face a number of challenges. Education is a critical issue as young people move to the cities in search of jobs.

LITERACY IN SOUTH AMERICA The countries of Spanish-speaking South America have higher literacy rates than do the countries of Central America and the Caribbean, or Mexico and Brazil. In Argentina, Chile, and Uruguay, for example, literacy rates are higher than 90 percent. Moreover, the literacy rates for women are about the same as for men in those three countries; in fact, in Uruguay, the rate is slightly higher for women. Most of the countries of South America support colleges, universities, and technical schools that train students for careers. As measured by the number of students in school and copies of daily newspapers and books published per capita, most of the countries of the region show high rates of education and literacy.

THE CASE OF CHILE Chile's literacy rate for the total adult population is around 95 percent. For young people between the ages of 15 and 19, it is even higher—close to 98 percent. The number of books and daily newspapers sold and read is very high—approximately 46 copies of daily newspapers are sold for every 100 people.

Education is very important in Chile. When they are between the ages of 6 and 13, all children must attend school, and public education is free. Higher education has suffered because of political unrest. The universities had been independent and of high



REGION The writer Isabel Allende, niece of Salvador Allende, is an important novelist in Latin America. Her most famous book may be *The House of the Spirits* (1982).

quality. Then a military coup led by General Augusto Pinochet overthrew Salvador Allende's government in 1973. Afterwards, the military introduced reforms that undermined higher education. Nonetheless, since Pinochet's departure from power in 1990, universities have regained some of their independence and standards. Today, there are many business schools in Chile that have contributed to the country's economic success.

In the next section you will read about Brazil. This Portuguese-speaking country is the giant of South America, both in terms of population and land area.

Assessment

Places & Terms

Identify and explain the importance of each of the following.

Inca

- Quechua
- Mercosur

2 Taking Notes

PLACE Review the notes you took for this section.

Latin America Spanish-Speaking South America

- Which countries besides Spain sent settlers to South America?
- Which countries in South America have the highest literacy rates?

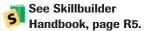
3 Main Ideas

- What have been some obstacles to democratic government in South America?
- b. What was the extent of the Inca empire in South America?
- **c.** What are some of the arts and crafts of the region?

4 Geographic Thinking

Drawing Conclusions Why might the southern cone of South America have decided to form a trade group? **Think about:**

- the geography of the region
- the region's economies





SEEING PATTERNS Pair with a partner and draw a **sketch map** of South America. Fill in the map with the names of the various countries and the dominant language spoken in each.



A HUMAN PERSPECTIVE In 1807, Napoleon's armies invaded Portugal. As the French army approached the capital of Lisbon, the Portuguese royal family boarded ships to escape capture. They sailed to Brazil, Portugal's largest colony, taking their court and royal treasury with them. For the next 14 years, Brazil was the heart of the Portuguese empire. During that time Brazilians developed a sense of their own independence. As you will read, a member of the Portuguese royal family was to play a decisive role in gaining Brazil's freedom from Portugal.

History: A Divided Continent

Geography played an important role in the colonization of South America by Spain and Portugal. The two European powers reached an agreement to divide South America. In the resulting **<u>Treaty of Tordesillas</u>** (1494), Portugal gained control over the land that became present-day Brazil. In this section, you will look at Portuguese-speaking Brazil, the largest country in South America.

NATIVE PEOPLES AND PORTUGUESE CONQUEST

The territory of Brazil was originally home to native peoples divided into hundreds of tribes and language groups. Various estimates place the number of native peoples between one million and five million when the first colonists arrived in the early 1500s.

The first Portuguese colonists hoped to find gold or silver but were disappointed when they could find neither. Then they cleared out huge areas of forest where they created sugar plantations. Brazil soon became a source of wealth for Portugal because the demand for sugar was so great.

The patterns of settlement were along the coast, where cities such as Rio de Janeiro were established, rather than in the interior where rain forests made farming difficult. Eventually, the colonists cleared more land in the west for sugar plantations. In the process, the Portuguese conquered the native tribes and put them to work on the plantations. When natives died from diseases brought by the colonists, the Portuguese brought African slaves to Brazil by force to replace them. Today millions of Brazilians are of mixed European, African, and native ancestry.

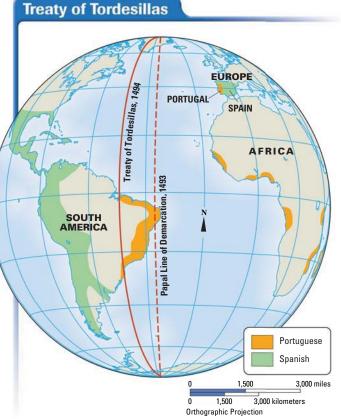
Main Ideas

- Native peoples, Portuguese, and Africans have shaped Brazil.
- Brazil has the largest territory and the largest population of any country in Latin America.

Places & Terms

Treaty of Tordesillas Carnival samba capoeira

CONNECT TO THE ISSUES RESOURCES Brazil is a giant country rich in natural resources that must be developed and used wisely.



INDEPENDENCE FOR BRAZIL Brazil remained a Portuguese colony from 1500 to 1822. After Napoleon's defeat in 1815, many people in Brazil demanded independence from Portugal. However, the Portuguese government wanted Brazil to remain a colony. But the Brazilians kept pushing for independence. Finally, thousands of them signed petitions asking Dom Pedro, the son of Portugal's king, to rule Brazil as an independent country. He agreed, and in September of 1822, he declared Brazil's independence from Portugal.

A National Culture

Geographic

Thinking 4

Comparisons

> How does the population of Brazil

resemble that of

the United States?

Making

The culture of Brazil includes Portuguese influences, Native American elements, and African influences. But unlike other South American countries, Brazil has had more success in blending its ethnic groups.

THE PEOPLE OF BRAZIL When the first Europeans arrived in 1500, millions of native people lived in what is now Brazil. But today, only about 200,000 live in the depths of the Amazon rain forest. Thousands of the native peoples died from diseases brought by the European colonists.

Brazil has become home to many immigrants from other nations. Large numbers of people from Portugal, Germany, Italy, and Spain have settled there, as have immigrants from Lebanon and Syria. Brazil also has the largest Japanese population outside Japan.

LANGUAGE AND RELIGION The Portuguese brought their language and their Catholic religion with them to Brazil. Today, Brazil has the largest Catholic population in the world. In addition, Protestants make up almost 20 percent of the population. Many other Brazilians, mainly those of African or mixed ancestry, practice religions that combine African beliefs with Catholicism.

ARCHITECTURE OF BRASÍLIA The architect Oscar Niemeyer designed the buildings for the new capital of Brasília, which was built in the interior of Brazil beginning in 1957. Part of the reason for locating the capital 600 miles inland was to draw people into the inte-

rior. The move of the government to the new capital city in 1960 signaled the opening of the country's west.

HUMAN-ENVIRONMENT INTERACTION Oscar

Niemeyer designed these government offices for Brasília. The Senate meets in the domed building, and the Chamber of Deputies meets in the bowl-like building.



An Economic Giant Awakens

Brazil is a growing economic power. Much of this power is based on its vast area, its abundance of natural resources, and its people. Its economy is the tenth largest in the world. Its diverse population of about 170 million people contributes to its economic strength.

AN INDUSTRIAL POWER Natural resources have helped make Brazil an industrial power. It has deposits of iron and bauxite, as well as other minerals used in manufacturing. In addition, tin and manganese reserves are abundant. It also has supplies of gold, silver, titanium, chromite, tungsten, and quartz.

More than a thousand rivers, including the Amazon, flow through Brazil. Power plants located along these rivers produce electricity. In addition, Brazil's large reserves of oil and natural gas contribute to its industrial might.

Brazil is one of the most industrialized of South American countries, with one of the largest steel plants in the region. It is a leading maker of automobiles. Over half of its cars use ethanol, a fuel that comes from sugar cane and is less expensive than imported oil.

CONNECT TO THE ISSUES RESOURCES How do Brazil's natural resources contribute to its industrial success?

MIGRATION TO THE CITIES Despite its economic successes, Brazil remains a country with a vast gap between the rich and the poor.



LOCATION In what part of Brazil are most of its timber resources located?

2 LOCATION Is most of Brazil's tin located along the coasts or in the interior of the country? Increasing urbanization is one result of attempts by many Brazilians to improve their lives by seeking jobs in the cities.

The movement of people in Brazil from country to city reflects changes in agriculture that pushed people off the land. It also reflects the growth in manufacturing that pulled people to the cities. In 1960, about 22 percent of the population lived in the cities. By 1995, more than 75 percent of the people lived in cities.

MIGRATION TO THE INTERIOR

There has also been a move into the interior. About 80 percent of the people live within 200 miles of the sea. But the government is encouraging settlement of the interior to develop its many resources. Commercial agriculture is an important part of the economy in the western interior. That is because of the *cerrado*—the fertile grasslands, similar to the Great Plains in the United States, that provide rich farmland. Many Brazilians are willing to move to the interior to improve their economic situation.

Brazilian Life Today

Brazil is a country of great variety in its city life, music, and holidays.

FROM CARNIVAL TO MARTIAL

ARTS The most colorful feast day in Brazil is <u>Carnival</u>. In Rio de Janeiro, people in costumes ride on floats through the streets. Carnival takes place to the music of the <u>samba</u>, a Brazilian dance with African influences.

<u>Capoeira</u> is a martial art and dance that developed in Brazil



from African origins. Angolans who were taken to Brazil by the Portuguese brought this martial art and dance with them.

PLACE Young men demonstrate the martial art of *capoeira*.

CITY LIFE IN RIO DE JANEIRO Brasília is the political capital of Brazil, and São Paulo is its economic heart and largest city, but Rio de Janeiro is the cultural center. The residents of Rio are among the country's leaders in important cultural activities and institutions.

Rio has one of the most spectacular natural settings in the world. Sugarloaf Mountain, Guanabara Bay, and Copacabana Beach are just a few of the breathtaking sights.

There is a darker side to life in Rio, and that is caused by the widening gap between rich and poor. Desperately poor slums, called *favelas*, dot the hillsides. Crime waves and drug abuse are two results of the poverty. Recently, however, government officials have launched programs to bring in electrical power, paved streets, and sewers.

In the next chapter, you will read about three important issues that affect Latin America—resources, democracy, and the income gap.

THE ISSUES INCOME GAP What might be the impact of poverty and the income gap on democratic government?

CONNECT TO

Assessment

Places & Terms

Identify and explain the importance of each of the following.

- Treaty of Tordesillas
- Carnival
- samba
- capoeira

2 Taking Notes

PLACE Review the notes you took for this section.





- Which European country sent the most settlers to Brazil?
- Who lived in Brazil before the European settlers arrived?

3 Main Ideas

- a. What crop did settlers first grow in Brazil and what effect did it have on the makeup of the population?
- b. How do Brazil's rivers contribute to its wealth?
- **c.** What are some aspects of Brazilian culture that show an African influence?

4 Geographic Thinking

Drawing Conclusions What is the relationship between coast and interior in the settling of Brazil? Think about:

- the patterns of settlement along the coast
- the resources of the interior



EXPLORING LOCAL GEOGRAPHY Rio de Janeiro is almost two different cities—one rich and one poor. Pair with a partner and draw a **map** that divides your city, town, or neighborhood in two. Decide which parts are better off than others. What resources and features distinguish one part from another?

INTER**ACTIVE**

Comparing Cultures

Festivals and Holidays

Different cultures around the world have their own festivals and holidays– occasions for celebration. Often these special days have a religious significance. Carnival, for example, is a period of merrymaking that is celebrated in many Christian countries just before Lent, a season of fasting and penitence. On these two pages, you will learn about this and other festivals around the world. Three of the festivals–those in Brazil, Venice, and India–have their roots in religion. One of the holidays–that in Hong Kong–celebrates the beginning of a new year.





In Venice, Italy, masks are used to celebrate Carnival, a revel that features elaborate costumes.

Samba dancers in Rio de Janeiro, Brazil, celebrate Carnival by dancing in the streets. Carnival is the period of merrymaking just before Lent.

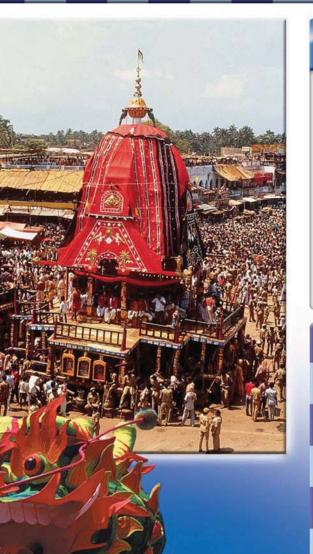


The Juggernaut in Puri,

India, is a wooden image of the Hindu god Krishna mounted on a cart. The term comes from a Sanskrit word that means "lord of the world." The cart moves on 16 wheels through crowds of Hindu pilgrims on various festival days.

In Hong Kong, a

dragon is paraded by a boy to celebrate the New Year. In Chinese culture, the New Year is an important holiday.



GeoActivity

CREATING A POSTER

Working with a partner, use the Internet to research one of the festivals or holidays listed below. Then create a **poster** about the holiday.

- Use visuals and captions to describe the festival or holiday you have chosen.
- Research a different festival and make a second poster to compare festivals from different countries.



GeoData

FESTIVALS AND HOLIDAYS AROUND THE WORLD

RELIGIOUS

Christianity Christmas Easter

Judaism Rosh Hashanah Passover

Islam

Feast of Sacrifice Festival of Breaking Fast Ashura

Hinduism

Holi Diwali

OTHER

Independence Day New Year's Day Cinco de Mayo Bastille Day May Day Kwanzaa Thanksgiving

Chapter (10) Assessment

VISUAL SUMMARY HUMAN GEOGRAPHY OF LATIN AMERICA

Subregions of Latin America

🔵 Mexico

- Native peoples and Spanish settlers have shaped the history and culture of Mexico.
- Economic expansion and an increasingly democratic government have developed together.

Central America and the Caribbean

- Native peoples, settlers from many European countries, and Africans have shaped Central America and the Caribbean.
- The economies of the region rely primarily on agriculture and tourism.

O Spanish-Speaking South America

- The countries of South America are developing strategies to improve their economies.
- Among these strategies are wideranging trade agreements, including Mercosur.

🔵 Brazil

- Brazil is the giant of Latin America.
- Settled originally by the Portuguese, Brazil has welcomed immigrants from all over the world.
- Its economy is among the ten largest in the world.



Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- 1. Tenochtitlán
- 2. Institutional Revolutionary Party (PRI)
- 3. NAFTA
- 4. cultural hearth

- 6. Panama Canal
- ary **7.** Inca
 - 8. Mercosur

10. Carnival

- 9. Treaty of Tordesillas
- 5. United Provinces of Central America
- B. Answer the questions about vocabulary in complete sentences.
 - 11. What body of water surrounded Tenochtitlán?
 - 12. Whose election signaled the end of one-party rule in Mexico?
 - 13. Why is the Panama Canal important to world trade?
 - 14. Which two European powers signed the Treaty of Tordesillas?
 - 15. Which countries are associate members of Mercosur?
 - **16.** In what city of Brazil is Carnival celebrated in a particularly colorful way?
 - 17. Which countries besides Mexico are members of NAFTA?
 - **18.** Why are Central America and the Andes Mountains around Cuzco cultural hearths?
 - 19. Which countries made up the United Provinces of Central America?
 - 20. What language did the Inca speak?

Main Ideas

Mexico (pp. 217-221)

- 1. What was the Spanish attitude toward Aztec culture?
- 2. What are the maquiladoras?

Central America and the Caribbean (pp. 222-229)

- **3.** In terms of who settled there, how is the Caribbean different from Mexico and Central America?
- **4.** Which two parts of the economy provide most of the income in Central America and the Caribbean?
- 5. What are some of the most important export crops in the region?

Spanish-Speaking South America (pp. 230–235)

- 6. Which countries are full members of Mercosur?
- 7. Which countries have literacy rates higher than 90 percent?
- 8. What happened to the Inca language after the Spanish conquest?

Brazil (pp. 236-241)

- 9. What is the ethnic makeup of Brazil?
- 10. What are some of the darker aspects of life in Brazil today?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.



- a. Which two European countries colonized the most territory in Latin America?
- b. What are some of the ways in which Latin America is developing economically in recent years?

2. Geographic Themes

- a. **HUMAN-ENVIRONMENT INTERACTION** How has the Amazon River been used and developed?
- b. **MOVEMENT** What has restricted the movement of people from the coast of South America into the interior?

Geographic Skills: Interpreting Maps

City of Tenochtitlán

Use the map to answer the questions.

- 1. **PLACE** This is a Spanish map of the Aztec city of Tenochtitlán. Why did the city require roadway connections to the mainland?
- 2. **MOVEMENT** Why might this site have been a good location for a city?
- 3. **HUMAN-ENVIRONMENT INTERACTION** What purpose might the canals within the city have served?



Create a map of a fortress city of your design. Your map should make use of the natural advantages afforded by the site you have chosen.

INTERNET ACTIVITY

Use the links at **classzone.com** to do research on economic growth in Latin America. Focus on the impact of free-market reforms on the income gap.

themes are reflected in your answer?4. Identifying and Solving Problems

What are some of the ways that individual citizens of Latin America are working to improve their economic situation?

Interaction between European powers and native peoples occurred throughout the region. What are some of the

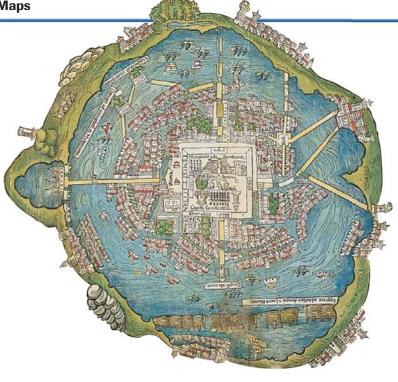
consequences of this interaction? Which of the five

5. Making Comparisons

3. Identifying Themes

How are Spanish-speaking and Portuguese-speaking South America alike and different?





Creating Graphs and Charts Present a report of your findings. Include a chart that shows which countries have introduced free-market reforms and what impact these reforms have had on closing the income gap.

Chapter

SECTION 1 Rain Forest Resources

SECTION 2 Giving Citizens a Voice

CaseStudy The Income Gap

For more on these issues in Latin America . . . CURRENT EVENTS CLASSZONE.COM

Timber harvesting (as shown here in Bahia, Brazil) and agriculture have had a devastating effect on the Latin American rain forest.

GeoFocus

How can citizen participation help solve problems?

Taking Notes In your notebook, copy a cause-and-effect chart like the one below. Then take notes on causes and effects of some aspect of each issue.

	Causes	Effects
lssue I: Resources		
lssue 2: Democracy		
Case Study: Income Gap		

TODAY'S ISSUES Latin America

Rain Forest Resources

How can we preserve and develop the rain forest?

A HUMAN PERSPECTIVE In 1997, biologist Marc van Roosmalen made an incredible discovery. An Amazonian Indian had brought the biologist a tiny monkey huddled inside a tin can. Van Roosmalen realized that the monkey was a kind of pygmy marmoset never before seen by scientists. Over the next three years, Van Roosmalen and his colleagues located the native region of this creature and along the way observed plants and animals unknown to science. These scientists had confirmed the richness of plant and animal life in the Amazon rain forest of Brazil. But for other people, the forest (once cleared) holds the promise of something more—land for farming and timber for sale.

Main Ideas

- Special-interest groups make competing demands on the resources of the rain forest.
- As the rain forests are destroyed, the quality of life on Earth is threatened.

Places & Terms

biodiversity

deforestation global warming

debt-for-nature swap

The Voyageur Experience in World Geography Costa Rica: Ecotourism and Economic Development

Rain Forest Land Uses

The rain forest is an important global resource. Its vegetation helps to clean the earth's atmosphere, regulate the climate, and shelter several million species of plants, insects, and other wildlife. Scientists have just begun to investigate and understand the rain forest's **biodiversity**—its wide range of plant and animal species. And yet, this variety of life is being destroyed at a rapid rate. At the end of the 20th century, nearly 50 million acres of rain forest worldwide were being destroyed every year.

CLEARING THE RAIN FORESTS

The world's demand for timber is great. The Amazon rain forest contains tropical hardwoods, such as mahogany and cedar, that are harvested for export by the timber industry.

Native peoples, living in poverty, travel into the rain forest in search of land on which they can grow crops. They clear the forest,



not realizing that the soil is not very fertile. Also, cutting down the trees exposes the land to erosion. After a few years, this new farmland becomes less productive, resulting in the need for more timber clearing.

Livestock, too, have been introduced into the rain forest. Ranchers need land on which to graze their cattle, and by clearing the forests for pasture, they can produce a steady supply of beef for the export market.

POPULATION PRESSURES More than half of the Amazon rain forest is located in Brazil. That country's growing population is contributing to the rain forest's decline. The estimated population of Brazil in 2000 was about 173 million people. With an annual growth rate between half a percent and 1 percent, Brazil's population is expected to reach 200 million by 2020. With that many people to shelter, some developers want to build homes on land now covered by the rain forest.

The Price of Destruction

There is a cost to pay for **<u>deforestation</u>**—cutting down and clearing away of trees—in the rain forest. The short-term benefits are offset by

the high price Latin America and the world are paying in damage to the environment.

ENVIRONMENTAL CONCERNS Rain forests help to regulate the earth's climate. They do this by absorbing carbon dioxide and producing oxygen. As the forests disappear, however, much less carbon dioxide is absorbed. The carbon dioxide that is not absorbed builds up in the atmosphere. This buildup prevents heat from escaping into space. The temperature of the atmosphere begins to rise, and weather patterns start to change. By the beginning of the 21st century, evidence of this global warming appeared around the world, causing scientific concern. A common method for clearing the rain forest, known as slash-and-burn (see pages 210–211), produces carbon dioxide and other harmful gases.

PLANTS AND ANIMALS IN DANGER Although the world's rain forests cover about 6 percent of the earth's surface, they are home to an estimated 50 percent of the world's plant and animal species. Medical researchers are developing the processes needed to make use of the many plants that rain-forest dwellers have harvested for thousands of years. The forest dwellers have used these plants to make medicines that heal wounds and cure disease. What is lost as the rain forests disappear is more than biodiver-

sity and a stable environment. The rain forests also hold secrets of nature that might improve and extend the quality of people's lives.

HUMAN-ENVIRONMENT INTERACTION A

naturalist and a biologist attach a radio transmitter to a bird to track its movements in the rain forest. Why might scientists wish to track birds?



Geographic Thinking Using the Atlas

Use the map on page 191. In what other countries besides Brazil is the Amazon rain forest located?

BACKGROUND

These gases are referred to as greenhouse gases because they help keep heat in the atmosphere.

Moving Toward Solutions

Saving the rain forests of Latin America is an issue that affects people around the world. Creative solutions will be required to make sure that the forests are not sacrificed to economic development.

A JUGGLING ACT A central problem facing many Latin American countries is how to balance competing interests. Some countries in the region are attempting to restrict economic development until they can find the right balance between economic growth and the preservation of the rain forests.

For example, grassroots organizations are closely observing development projects in the rain forests. Their mission is to educate people about the value of the rain forests and, when necessary, to organize protests against plans that would damage the environment.

FIGHTING ECONOMICS WITH ECONOMICS Some people think that since economic gain is at the heart of rain forest destruction, the affected governments should be paid to preserve the forests. One such plan is known as a **debt-for-nature swap**.

Many Latin American nations are burdened by tremendous debt. They've borrowed money to improve living conditions, and now they are struggling to pay it back. In a debt–for–nature swap, an environmental organization agrees to pay off a certain amount of government debt. In return, the government agrees to protect a certain portion of the rain forest. Governments get debt relief; environmentalists get rain forest preservation. This approach was successful in Bolivia. There, an international environmental group paid off some government debt in exchange for the protection of an area of forest and grassland.

The movement to preserve the rain forests has many supporters in the region, as well as around the world. The battle to preserve the rain forests may be one in which everybody wins.

Assessment

Places & Terms

Identify and explain the following places and terms.

- biodiversity
- deforestation
- global warming
- debt-for-nature swap

2 Taking Notes

HUMAN-ENVIRONMENT

INTERACTION Review the notes you took for this section.

	Causes	Effects
lssue I: Resources		
\sim		

- Why are the rain forests being destroyed?
- What effect might the destruction of the rain forest have on climate?

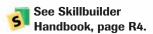
3 Main Ideas

- **a.** What are some of the important resources of the rain forest?
- **b.** What are some of the costs of the destruction of the rain forest?
- **c.** What are some factors that might slow destruction of the rain forest?

4 Geographic Thinking

Making Inferences What might happen to the rain forest in the future? Think about:

- economic pressures to destroy the rain forest
- reasons to preserve the rain forest





MAKING COMPARISONS Pair with a partner and make a **chart** of the largest rain forests in the world. Then make a copy of a map of the world and color in on the map the rain forests on your chart.



B How might the

income gap affect

the use of the

rain forest?

STION

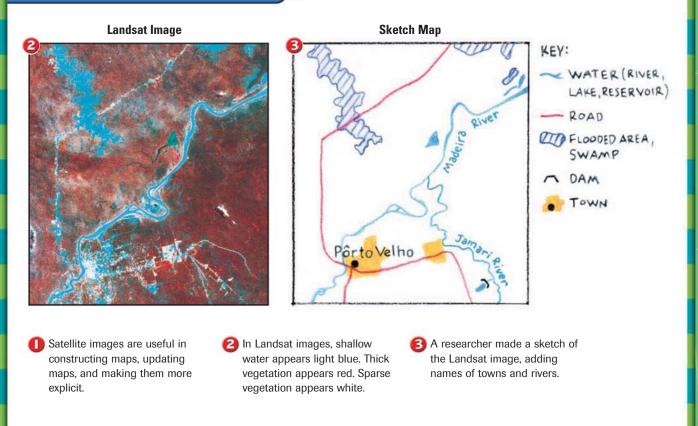
RAND MENALLY Map and Graph Skills

Interpreting Satellite Images

Satellites are orbiting "eyes in the skies." They can give us detailed views of landforms, vegetation, and bodies of water. The satellite image below shows part of the rain forest in the state of Rondônia in Brazil.

THE LANGUAGE OF MAPS A satellite image is a visible-light, radar, or infrared picture of land or water taken from space. Depending on the equipment used, satellite images can show land features such as those shown below-ground vegetation and a lake as well as a river that shows some flooding (in the loop below the center of the image). Landsat satellites are orbiting satellites that measure reflected light to show features on the earth's surface, including vegetation. A landsat satellite image shows changes in vegetation over time by using a series of images.

A Satellite View of the Rain Forest



Map and Graph Skills Assessment

1. Making Inferences The town of Pôrto Velho is near the intersection of what two means of transportation?

2. Making Decisions

In what direction would you travel in going from Pôrto Velho to the Jamari River?

3. Drawing Conclusions

What sort of vegetation predominates in the Landsat image? How can you tell?

Giving Citizens a Voice

How can Latin Americans gain a voice in government?

A HUMAN PERSPECTIVE From the late 1970s through the early 1980s, the Argentine military waged a campaign of terror against those who supported political reform. As many as 30,000 people mysteriously disappeared. People accused of being terrorists and revolutionaries were kidnapped and questioned. Some were tortured, and then killed or "disappeared"-their bodies were never found. In an effort to learn the truth about their loved ones, a group of women, calling themselves the Mothers of Plaza de Mayo, staged weekly protests in the plaza in Buenos Aires. Their protests were part of the larger attempt by citizens of the region to gain a voice in how their governments were being run.

A Struggle to Be Heard

Latin Americans today seek more democratic governments. Democracy depends on free and fair elections, citizen participation, majority rule with minority rights, and guaranteed freedoms. However, Latin America has shown little support for democratic rule until recently.

THE LEGACY OF COLONIALISM After the Spanish conquest of the region in the 16th century, Native Americans in Central and South America were ruled by governors who took their orders from the king and queen of Spain. Even when Latin American countries won their independence during the 1800s, they continued to be governed mainly by small groups of Spanish colonists.

This government by the few, known as oligarchy (AHL•ih•GAHR•kee), was not democratic. The government censored the press, limited free speech, and punished dissent. It also discriminated against all who were not part of the Spanish ruling class. Elections were held, but there was never any doubt who was in charge. If the government was unable to control the people, the military would step in, seize power, and form a new, harsher government known as a junta (HOON•tah), which was run by the generals.

THE RULE OF THE CAUDILLO Throughout the 20th century, many Latin American countries were ruled by a caudillo (kow•DEE•yoh), a military dictator or political boss, such as Juan Perón in Argentina. The caudillo's

Main Ideas

- Despite obstacles, democracy is beginning to succeed in Latin America.
- The success of Latin American democracies depends on political, economic, and social reforms.

Places & Terms

oligarchy junta

caudillo land reform



"My goodness, if I'd known how badly you wanted democracy I'd have given it to you ages ago."

support came from the military and the wealthy. Surprisingly, the caudillo was sometimes elected directly by the people.

For example, from the 1920s until the end of the 20th century, Mexico was governed by caudillos who were members of the *Partido Revolucionario Institucional* (PRI), or the Institutional Revolutionary Party. For 71 years the PRI dominated Mexican politics.

Opposition parties were legal, but the PRI used fraud and corruption to win elections. Opposition parties made big gains in the 1997 congressional elections. In 2000, Vicente Fox became the first non-PRI president since the adoption of Mexico's constitution in 1917. Finally, it seemed Mexico was ready to fully accept democracy.

Establishing Stable Democracies

Creating democracies in Latin America requires political, economic, and land reforms.

THE GOALS OF REFORM One goal of political reform is to establish constitutional government. A freely elected government that respects the law is the basis of democracy. Participation of citizens in political affairs is also critical. This requires that people be well educated and provided

with economic security. Political and economic stability are two sides of the same coin. A lack of prosperity is usually accompanied by social and political unrest.

Argentina in the 1980s was one example of how economic problems damaged a developing democracy. In 1983, Raúl Alfonsín was elected president of Argentina in that nation's first free election in many years. He was faced with a ruined economy after years of military rule.

Argentina suffered from inflation—a rise in the prices of goods and services. To fight inflation, the newly-elected president froze all wages and prices. He issued a new currency to replace the peso. (Later, the peso was brought back.) At first these measures seemed successful, but by 1989, inflation was severe again. In 1989, Argentina elected a new president, Carlos Menem. He introduced a number of capitalist reforms. These included reducing government spending and selling off state-controlled industries and utilities.

Another goal of reform is to recognize and increase the role of women in politics. Throughout the region, women are running for office and taking an active role in government. For example, Marta Suplicy was elected mayor of São Paulo, Brazil, in 2000.

LAND REFORM Latin American countries had been ruled by a wealthy elite. Economic power, as well as land, was in the hands of the few. To spread the wealth more fairly, some governments set up a program of **land reform**, the process of breaking up large landholdings and giving portions of the land to land-poor peasant farmers.

BACKGROUND Caudillo is a Spanish word that means "leader" or "chief."



Attitudes on Democracy

Latinobarometro, a Chilean organization, conducts polls asking Latin Americans from a number of countries what they think about different political issues. Recently, the organization asked residents of various countries the following question:

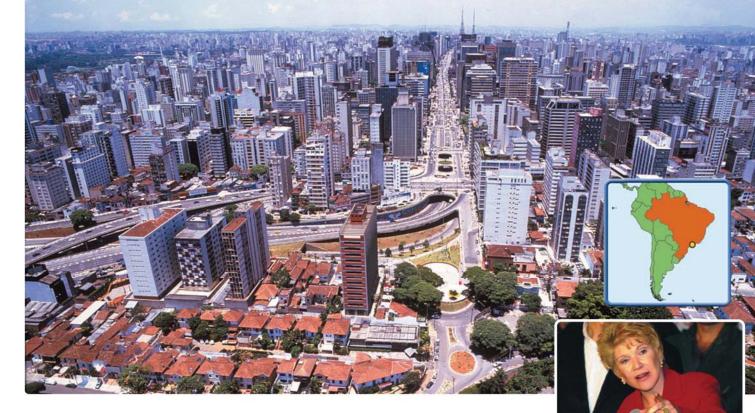
Is democracy the best system of government?

Brazil	50% agree	
Central America	49%	
Ecuador	41%	
Mexico	45%	
Paraguay	44%	
Peru	21%	
Uruguay	86%	
SOURCE: Latinobarometro, 1998		

Seeing Patterns What effect might the income gap have on political stability in

a democracy?

Geographic Thinking Seeing Patterns



In Mexico, for example, the process of land reform began with Benito Juarez. He was a Zapotec Indian from a small farm who was elected Mexico's president in 1858. One of his

main reform goals was to redistribute the land so that rich landowners could not keep other Mexicans in a cycle of poverty. After the Mexican Revolution in the early part of the 20th century, there was another attempt at land reform. This gave people a better chance at economic equality.

All of these reforms have been aimed at creating stability. With a sound foundation, democracy has a better chance of taking root.

REGION Marta

Suplicy holds a press conference after being elected mayor of São Paulo, Brazil, in 2000. What does her election suggest about the role of women in politics in Brazil?

Assessment

1 Places & Terms

Identify and explain the following places and terms.

- oligarchy
- junta
- caudillo
- land reform

s **2 Taking Notes** e HUMAN-ENVIRONMENT

INTERACTION Review your notes.

	Causes	Effects
lssue 2:		
Democracy		

- What problems has democracy faced in Latin America?
- What are some of the effects of political reform in the region?

3 Main Ideas

- How did colonialism affect the development of democracy?
- **b.** What are some of the goals of political reform in the region?
- **c.** Why was land reform necessary, and what was its purpose?

Geographic Thinking

Drawing Conclusions What are the prospects of democracy in the region? Think about:

- political reforms
- economic reforms



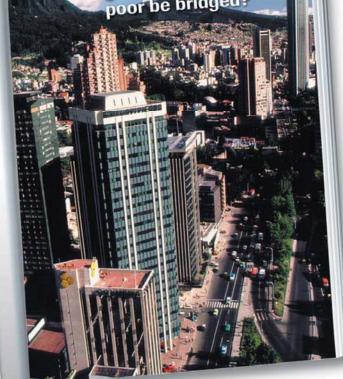


SEEING PATTERNS Pair with a partner and choose a country in Latin America to research on the Internet. Then prepare a **report** on the condition of democracy in that country and present your report to the class. Discuss what kind of government the country has, the number and names of political parties, and the nature of its legislative and executive functions.

CASESTUDY

The Income Gap

How can the economic gulf between rich and poor be bridged?



Bogotá, Colombia's glittering financial district

A long the oceanfront in Rio de Janeiro, Brazil, gleaming office buildings and hotels share the boulevards with trendy restaurants and exclusive shops.

Behind all this glitter and glamour, however, is another world, hidden from sight—the *favelas*, or slums, of Rio. Here, the poor live among swamps and garbage dumps, and on barren hillsides.

These contrasting conditions are evidence of what economists call an income gap. This is the difference between the quality of life enjoyed by the rich and the poor. In many Latin American countries, the gap is widening. Some solutions have been proposed for this problem.

The Nature of the Problem

As you've learned in this unit, the income gap in Latin America has many causes, some of which reflect the impact of colonialism in the region. There are three angles to exploring the income gap: it is a moral issue, an economic dilemma, and a political problem.

A MORAL ISSUE Some people argue that Latin America's income gap raises important ethical questions. How can any caring society, they ask, justify vast wealth in the hands of a few while most people live in poverty from which they will likely never escape? The Catholic Church and other religious faiths in Latin America have argued that narrowing the gap between rich and poor is more than just an economic necessity; it is a matter of social justice.

AN ECONOMIC DILEMMA Most Latin American countries now have free-market economies with a minimum of government rules. A free-market economy offers many people the freedom and rewards they need to create wealth. However, in Latin America the poor often lack the basic skills that would make taking part in the economy possible.

Often, the poor have little education. Many cannot read. Most cannot find jobs. Those who find work may end up sweeping streets or shining shoes. Conditions in the slums breed disease and encourage crime. In fact, the life spans of slum dwellers are shorter than those of the middle and upper classes. To the poor of Latin America, the doors to economic equality appear shut.

A POLITICAL PROBLEM Poverty can make people desperate. Those who think they have nothing to lose are sometimes willing to take great risks.

SEE PRIMARY SOURCE

SEE

PRIMARY SOURCE

Throughout history, battles have been waged and governments have been overthrown by citizens protesting what they regard as an unjust society in which a few have too much while the many have too little.

Argentina, Bolivia, Brazil, Colombia, El Salvador, and Guatemala have all seen bloody rebellions put down by harsh military measures. In the process, human rights and human dignity have been violated. The story is usually the same. The rebels seek economic justice, and the military protects the wealthy. Clearly, attitudes will have to change before the poor in Latin America will be able to participate fully in their nations' economies. Some attitudes are already changing as, for example, more money is going to education.

Possible Solutions

The income gap in Latin America varies from one country to another. For example, according to a recent report issued by the United Nations' Development Program, nearly 45 percent of all Brazilians live in pover-

ty, existing on less than two dollars a day. In Ecuador, Paraguay, and Uruguay, on the other hand, the income gap is much narrower than it is in Brazil.

EDUCATION, POLITICS, AND ECONOMICS Many of the countries of the region have put in place free-market economies that they hope will eventually help to narrow the gap by providing economic opportunity and stability for all citizens.

Along with market economies, democracy is now seen by many countries as an essential part of the equation needed to achieve widespread prosperity. Democracy provides an outlet for protest and opposition so that policies can be adjusted to reflect the will of the majority of the people.

Finally, education is an important part of the mix. A literate, well-educated population will be needed to fill the jobs that will become available in an increasingly complex economy. A case study project on the income gap follows on the next two pages.

REGION A girl

plays amid garbage and polluted water in Belém, Brazil. What do the photographs on these pages suggest about the distribution of money in the region?



CASESTUDY

PROJECT

Primary sources A, B, C, and D offer information about the income gap in Latin America. Use these resources along with your own research to prepare a multimedia report. The report should define the income gap, personalize it with accounts from the very poor, and identify possible solutions.

RESEARCH LINKS

Multimedia Report

Suggested Steps

- Research possible solutions or initiatives to deal with the income gap in Latin America.
- **2.** Use video, audio, online, and print resources to research your topic.
- **3.** Think about the following questions during your research:
 - What are the roots of the income gap?
 - How does the income gap hinder the participation of the poor in national economies?
 - What are some possible solutions to the problem?

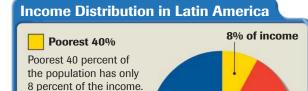
- **4.** Create charts and graphs and use videotapes, audio CDs, and other electronic media to make your report clear and convincing.
- **5.** Prepare a brief talk to introduce and explain your topic.

Materials and Supplies

- Reference books, newspapers, and magazines
- · Computer with Internet access
- Printer
- VCR and television
- CD player

PRIMARY SOURCE (A)

Graph This pie graph shows income distribution in Latin America. The gap was wider at the end of the 1990s than at the end of the 1970s.



62%

of income

30%

of income

SOURCE: UNICEE State of

the World's Children, 1999

Wealthiest 20%

The wealthiest 20 percent controls 62 percent of the income.

Middle 40%

The middle 40 percent of the population has 30 percent of the income. PRIMARY SOURCE

Cable News Story For the homeless children of Rio de Janeiro, the income gap is more than just an economic hardship. It is a matter of life and death, as detailed in this report filed by CNN correspondent Marina Marabella.

April 29, 1996—Four men, including three police officers, went on trial in Rio Monday for the 1993 slaying of eight street children. The murder, the worst massacre of children on record in Brazil, took place outside Candelaria Cathedral in the city center. . . .

Of all the dangers faced by Rio's homeless children, the one they fear the most is being murdered by death squads while they sleep. "When we can, we sleep during the day," said Ricardo, 13. "It's too risky at night."...

Yvonne Bezerra de Mello has spent years helping Brazil's estimated 2,000 to 3,000 street children. "Until now, no policemen were ever convicted for killing street kids. This is a very good step for Brazilian justice," she said.

She and other human rights activists say the death squads that murder Brazil's homeless children are hired by shopkeepers and others to get rid of those suspected of stealing....

[O]fficial police estimates say about 500 of Rio's homeless children are murdered each year.

PRIMARY SOURCE 🜔

Newspaper Report On September 5, 2000, Steven Gutkin filed this story from Caracas, Venezuela, to The Times of India Online. It shows clearly that the consequences of the income gap can be found throughout Latin America.

Caracas—The Sambil shopping mall in eastern Caracas is Latin America's largest. It boasts 450 stores, two movie theatres, an amusement park, a 30,000-gallon aquarium—and a McDonald's where Big Macs cost a half day's pay for the average Venezuelan worker.

A slum just a few miles to the west has open sewers running alongside tin shacks perched on unstable hillsides, flies buzzing in uncollected garbage and idle young men nursing bullet wounds. Blanca Vera, 65, lifts her baby granddaughter's blouse to reveal blotches on her tiny stomach. "This is from the pollution," she says.

[I]nequality of wealth and opportunity is a huge obstacle to development in Latin America. The existence of so many have-nots threatens to undermine the success of the region's two great experiments of recent years: democracy and free markets.

In Chile, the highest-paid 6 percent of workers get 30 percent of salaries, while 75 percent of workers get just 4 percent, according to the United Nations' Economic Commission for Latin America and the Caribbean.

Some blame the growing inequality on globalization... Yet most economists say the real culprit is not globalization but misguided state policies that deprive the poor of a decent education, fail to collect taxes, and encourage corruption.

There's another factor that's harder to define but likely is just as real: a culture of elitism that regards poor people as unworthy. "You can't operate in a globalized economy with a narrow, tiny elite sector that has absolutely no connection or appreciation of the vast majority of people in society," says Michael Shifter, a Latin America specialist at the Washingtonbased Inter-American Dialogue.

PRIMARY SOURCE D

Magazine Article There are some initiatives to deal with the consequences of poverty. A reporter for the British magazine, The Economist, wrote about a program in Pôrto Alegre, Brazil, to help street children.

"Is it true that in your country parents can be jailed for beating their children?" 16-year-old Jose asks your correspondent. Clearly there is no need to ask what made him run away from home, to become, briefly, one of Brazil's "street children." Luckily for him, the city on whose streets he ended up sleeping is Pôrto Alegre. Its municipal council this year, for the second year running, won an award given by the Abring Foundation, a Brazilian children's rights charity, to the local authority with the best social services for children. After only a short while on the streets, Jose now sleeps in a council-run dormitory and spends most of his days in the city's "Open School," which allows current and former street children to come and go as they please, aiming gradually to draw them back to something like a normal life and perhaps to an education. . . .

Pôrto Alegre is one of a handful of cities . . . that are trying. The services they offer are modest: a shelter where the children can sleep, eat, and wash; a day center staffed with a few teachers, drug counsellors, and so on; and some staff to patrol the streets at night looking for children in need.

PROJECT CheckList

Have I . . .

fully researched my topic?

- searched for a mix of media sources from which to build my report?
- created informative visuals that make my report clear and convincing?
- practiced the delivery of my presentation?
- made sure that I am familiar with the video and audio equipment I plan to use?

Chapter 🕘 🔭 Assessment

VISUAL SUMMARY TODAY'S ISSUES IN LATIN AMERICA

Environment

Rain Forest Resources

- There are a number of competing demands on the resources of the rain forest
- · Farmers, ranchers, environmentalists, the timber industry, and pharmaceutical companies all have their own interests in the rain forests of the region.
- · Intelligent management and development of the rain forests depend on careful balancing of these competing interests.

Government

Giving Citizens a Voice

- After a long struggle to overcome the legacy of colonialism, most countries in Latin America are struggling toward more democratic forms of government.
- Political stability and economic progress often go hand in hand.



Economics

Case Study: The Income Gap

- The gap between rich and poor in Latin America presents a challenging problem.
- It is likely that a widening income gap will undermine political stability in the region.
- For this reason, government, businesses, and education must all work together to try to narrow the gap.

Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- **1.** biodiversity
- 2. deforestation
- 6. junta 7. caudillo
- 3. global warming **4.** debt-for-nature swap
- 8. land reform

5. oligarchy

B. Answer the questions about vocabulary in complete sentences.

- 9. Why is the biodiversity of the rain forest important?
- **10.** What are some examples of the kinds of trees being harvested in the rain forest?
- **11.** What is one byproduct of slash-and-burn clearing of the rain forest that is harming the atmosphere?
- 12. Why is it in the interest of governments to participate in debt-fornature swaps?
- 13. Why is an oligarchy undemocratic?
- 14. Why is a junta undemocratic?
- 15. From where does the caudillo gain support?
- 16. Who benefits from land reform?
- **17.** Is the biodiversity of the region increasing or decreasing?
- **18.** In a debt-for-nature swap, what does the government agree to do?
- 19. Who loses in a program of land reform?
- **20.** Which of the eight terms listed above represent the negative impact of colonialism on the politics of the region?

Main Ideas

Rain Forest Resources (pp. 245–248)

- 1. Why is the rain forest an important global resource?
- 2. What are some of the reasons the rain forest is being cleared?
- 3. What is one mission of the grassroots organizations in the rain forest?

Giving Citizens a Voice (pp. 249–251)

- 4. Who are some democratically elected leaders in the region?
- 5. What are some of the elements upon which democracy depends?
- 6. What sorts of reforms are essential to stable democracy in the region?

Case Study: The Income Gap (pp. 252–255)

- 7. Which groups have argued that the income gap presents a moral issue?
- 8. What is the basic economic dilemma confronted by poor people in Latin America?
- 9. Why is the income gap a political issue?
- **10.** Do all countries of Latin America have a similar income gap? Explain.

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.

	Causes	Effects
lssue I: Resources		
lssue 2: Democracy		
	\sim	

- a. How might the income gap undermine democracy?
- b. What effect might the exploitation of rain forest resources have upon the income gap in the region?

2. Geographic Themes

- a. **MOVEMENT** What effect has the movement of people had on the rain forest?
- b. **REGION** What are some of the major historical facts that have hindered the development of democracy in Latin America?

Geographic Skills: Interpreting Graphs

3. Identifying Themes

How might the use and development of the region's resources be connected to the gap between rich and poor? Which of the five themes apply to this situation?

4. Making Decisions

If you were a government official in the region, how might you try to balance competing demands on rain forest resources?

5. Drawing Conclusions

How might democratic government in the region promote economic prosperity?



Poverty in Latin America

Use the graph to answer the following questions.

- 1. **REGION** In which three countries of Latin America is the percentage of people living in poverty the lowest?
- 2. **REGION** In which three countries is the poverty rate highest?
- 3. **PLACE** Brazil is the largest country in the region, in terms of both area and population. What is its poverty rate?

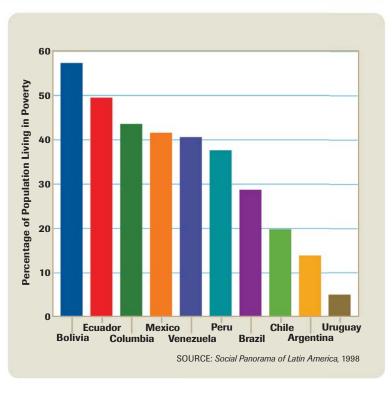


Create a poster showing the effects of poverty and the income gap in one or more countries in the region. Include a map, as well as photographs and diagrams.

INTERNET ACTIVITY

Use the links at **classzone.com** to do research about the Amazon rain forest. Focus on solutions and strategies to slow the dwindling of the rain forest.

Creating Multimedia Presentations Combine charts, maps, or other visual images in an electronic presentation showing strategies for preserving the rain forest.



Unit

Europe

PREVIEW: TODAY'S ISSUES IN EUROPE

UNIT ATLAS

Chapter 12 PHYSICAL GEOGRAPHY The Peninsula of Peninsulas

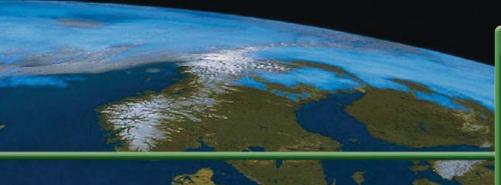
Chapter 13 HUMAN GEOGRAPHY Diversity, Conflict, Union

Chapter 14 TODAY'S ISSUES Europe

<mark>CaseStudy</mark> The European Union Europe is the world's second smallest continent. Located in the Northern Hemisphere, Europe has great diversity of landforms and cultures.



LOCATION The dazzling White Cliffs of Dover in England face the English Channel. The cliffs are made of soft chalk and are slowly eroding.



GeoData

REGION Many people view the Ural Mountains as the eastern border of Europe, but for historic and cultural reasons, Russia and other former republics of the Soviet Union are in Unit 5.

PLACE Europe's coastline is longer than that of Africa, the world's second largest continent.

HUMAN-ENVIRONMENT INTERACTION

Historically, Europeans used the oceans and seas to make voyages for exploration and trade. Their culture spread around the world.

For more information on Europe ...





PLACE The Eiffel Tower stands 984 feet above the Paris skyline. It was completed in 1889 for an International Exposition celebrating the French Revolution.



MOVEMENT Europeans are wildly enthusiastic about soccer. Teams and fans travel to matches held all over the world. In this game, held during the 1998 World Cup matches, Germany played Italy.

Unit PREVIEW

Today's Issues in Europe

Today, Europe faces the issues previewed here. As you read Chapters 12 and 13, you will learn helpful background information. You will study the issues themselves in Chapter 14.

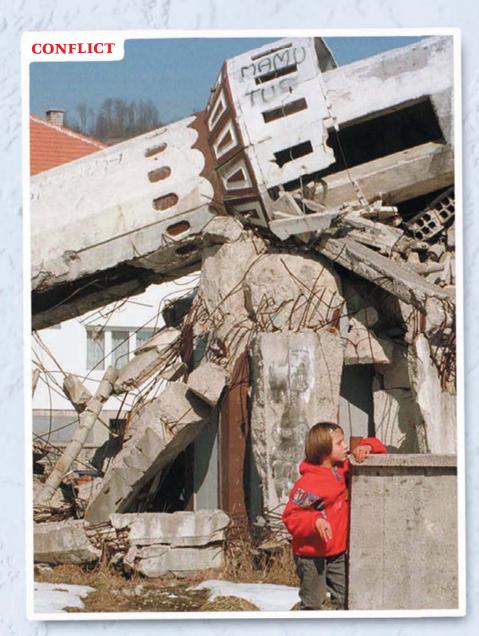
In a small group, answer the questions below. Then participate in a class discussion of your answers.

Exploring the Issues

- **1. CONFLICT** Search a print or online newspaper for articles about ethnic or religious conflicts in Europe today. What do these conflicts have in common? How are they different?
- **2. POLLUTION** Make a list of possible pollution problems faced by Europe and those faced by the United States. How are these problems similar? Different?
- **3. UNIFICATION** To help you understand the issues involved in unifying Europe, compare Europe to the United States. Imagine what might occur if each U.S. state were its own country. List five problems that might result.

For more on these issues in Europe . . .





How can people resolve their differences?

In central Bosnia, a child stands near the ruins of a Muslim mosque. Bosnian Croats destroyed the mosque during an "ethnic cleansing" campaign to drive out Muslims during the 1992-1995 Bosnian war.



How can Europeans clean up their environment?

On February 13, 2000, cyanide-polluted water from a Romanian mine reached Hungary. The cyanide killed thousands of fish, some of which are shown here washed up on the banks of the Tisza River.

CASESTUDY

Will there be a United States of Europe?

Over the centuries, wars and conflicts have ravaged Europe, but since 1950, Europe's nations have begun working together. As the new century begins, economics may be the key to uniting Europe. UNIFICATION

20



Patterns of Physical Geography

Use the Unit Atlas to add to your knowledge of Europe. As you look at the maps and charts, notice geographic patterns and specific details about the region. For example, the chart gives details about the rivers and mountains of Europe. **Comparing Data**

Unit

After studying the graphs and physical map on these two pages, jot down answers to the questions below in your notebook.

Making Comparisons

- 1. Compare Europe's size and population to that of the United States. Based on that data, how might the population densities of the two compare?
- **2.** Compare Europe's longest river, the Danube, to the Mississippi. How much difference is there in the lengths?
- **3.** Which countries have many mountains? How might those mountains affect human life there?

For updated statistics on Europe ...

CLASSZONE.COM







Patterns of Human Geography

Europe, 1914

After World War I (1914–1918), the political map of Europe changed radically. Empires disappeared, and new countries were born. Study the political maps of Europe in 1914 and Europe today to see what changes took place in the 20th century. Then answer these questions in your notebook.

Making Comparisons

- 1. Which nations appear on the map of Europe today but don't appear on the 1914 map?
- **2.** Which nations existed in 1914 but no longer exist today?
- **3.** Which nations are larger now than they were in 1914?
- **4.** Which nations are smaller than they were in 1914?







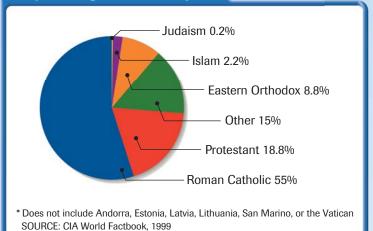
Regional Patterns

Major Religions of Europe*

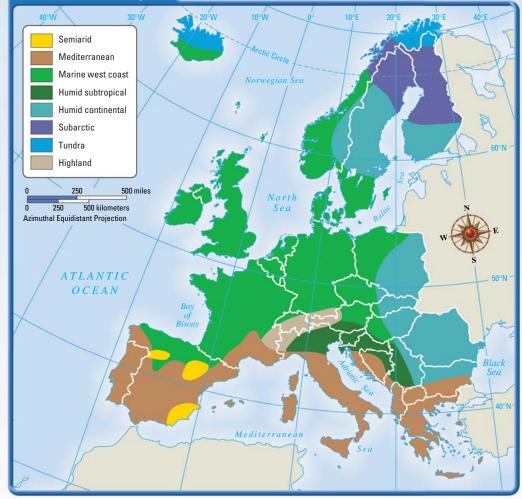
These two pages contain a pie graph and three thematic maps. The pie graph shows the religions of Europe. The maps show other important features of Europe: its generally mild climate, its diversity of languages, and its high population density. After studying these two pages, answer the questions below in your notebook.

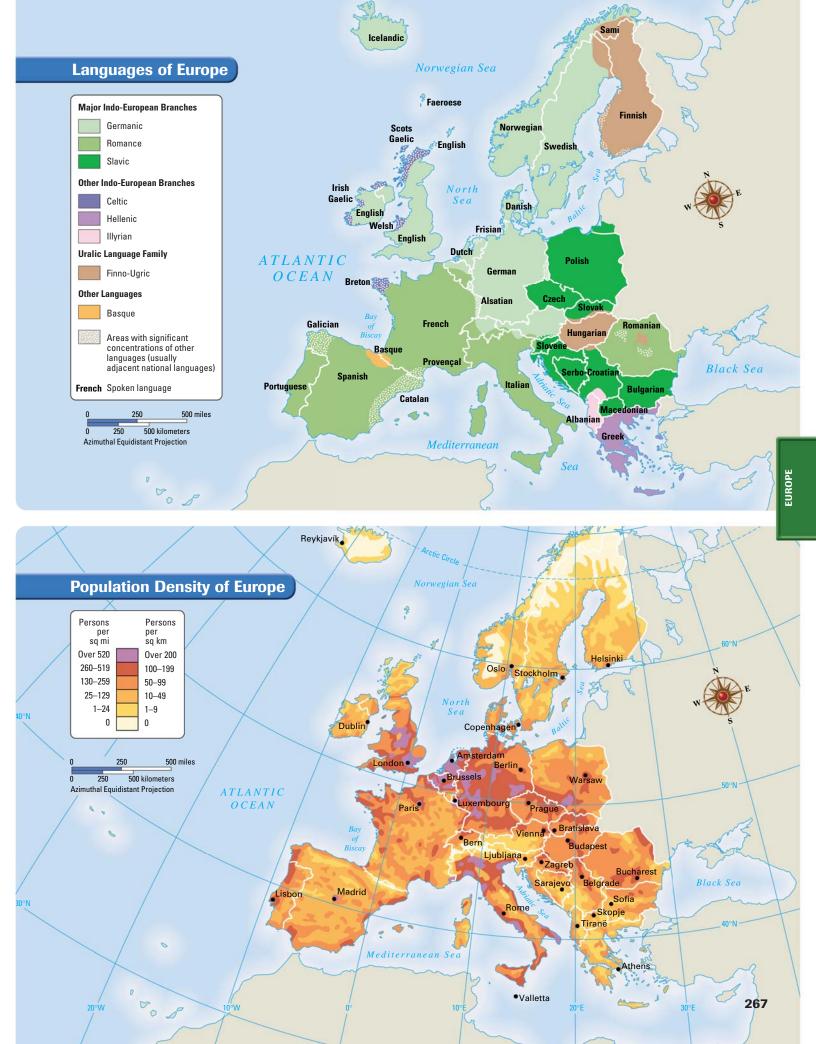
Making Comparisons

- 1. Where are the coldest climates to be found in Europe? Is the population density high or low in those areas? Give possible reasons for that pattern.
- 2. What do you notice about the number of languages in Europe? Do they belong to one language group or several? Explain whether the pattern of languages would be more likely to increase or decrease conflict in the region.



Climates of Europe





Regional Data File

Study the charts on the countries of Europe. In your notebook, answer these questions.

Unit

Making Comparisons

- 1. Make a list of the top five European countries in GDP. Where are each of these countries located, relative to the rest of Europe? What pattern do you notice?
- 2. Look at Albania's life expectancy, infant mortality, and number of doctors. Judging from these statistics, does Albania have good health care?
- **3.** Use the map on page 265 to choose a country in Eastern Europe. How many televisions and cars does it have per 1,000 people? How does that compare to the United States?

(continued on page 270)

Notes:

- ^a A comparison of the prices of the same items in different countries is used to figure these data.
- ^b Includes water, when figures are available.

For updated statistics on Europe



Country Flag	Country/ Capital	Population (2000)	Life Expectancy (years) (2000)	Birthrate (per 1,000 pop.) (2000)	Infant Mortality (per 1,000 live births) (2000)	
1	Albania Tiranë	3,431,000	71	19	41.3	
Ö	Andorra Andorra la Vella	67,000	83	11	6.4	
	Austria Vienna	8,094,000	78	10	4.9	
	Belgium Brussels	10,246,000	78	11	5.6	
***	Bosnia & Herzegovin Sarajevo	a 3,809,000	73	13	25.2	
	Bulgaria Sofia	8,152,000	71	8	14.9	
	Croatia Zagreb	4,600,000	73	11	8.2	
	Czech Republic Prague	10,275,000	75	9	4.6	
	Denmark Copenhagen	5,330,000	77	12	4.7	
	Finland Helsinki	5,177,000	78	11	4.2	
	France Paris	59,353,000	79	13	4.8	
	Germany Berlin	82,141,000	77	9	4.7	
	Greece Athens	10,596,000	78	10	6.7	
	Hungary Budapest	10,020,000	71	9	8.9	
+	lceland Reykjavík	281,000	80	15	4.0	
	Ireland Dublin	3,795,000	76	15	6.2	
	Italy Rome	57,820,000	78	9	5.5	
	Liechtenstein Vaduz	33,000	73	14	5.1	
	Luxembourg Luxembourg	438,000	77	13	5.0	

Doctors (per 100,000 pop.) (1990–1998)	GDPª (billions \$US) (1999)	Import/Export ^a (billions \$US) (1996–1999)	Literacy Rate (percentage) (1991-1998)	Televisions (per 1,000 pop.) (1996–1998)	Passenger Cars (per 1,000 pop.) (1996–1997)	Total Area^b (square miles)	
129	5.6	0.9 / 0.2	83	161	10 (1990)	11,100	1
253	1.2 (1996)	1.0 / 0.6	100	315	552	174	*
302	190.6	69.9 / 62.9	100	516	468	32,378	
395	243.4	172.8 / 187.3	99	510	434	11,787	*
143	6.2	3.0 / 0.5	86	94	23	19,741	*
345	34.9	5.3 / 3.8	98	366	202	42,822	
229	23.9	7.6 / 4.5	98	267	160	21,830	T
303	120.8	29.0 / 26.9	99	447	428	30,448	-
290	127.7	43.9 / 49.5	100	585	339	16,637	te .
299	108.6	30.7 / 43.0	100	640	378	130,560	>
303	1,373.0	280.8 / 304.7	99	601	437	212,934	*
350	1,864.0	587.0 / 610.0	100	580	504	137,830	,
392	149.2	24.9 / 12.4	97	466	223	50,950	5
357	79.4	25.1 / 22.6	99	437	222	35,919	
326	6.4	2.4 / 1.9	100	356	489	39,768	
219	73.7	39.6 / 66.0	100	456	292	27,135	ź
554	1,212.0	206.9 / 242.6	98	486	540	116,320	5
100	0.730	0.9 / 2.5	100	371	592 (1993)	62	\$
272	14.7	8.6 / 7.5	100	619	515	999	\$

Regional Data File

Making Comparisons (continued)

Unit

- **4.** Europe has several countries with populations under 100,000 people. Which of these has the smallest total area?
- 5. Use the map on page 265 to identify the two countries on the Scandinavian Peninsula. For each of those countries, calculate per capita GDP by dividing total GDP by population. Which country has the higher per capita GDP?

Sources:

- Europa World Year Book 2000 Human Development Report 2000,
- United Nations International Data Base, 2000, U.S.
- Census Bureau online Merriam-Webster's Geographical Dictionary, 1997
- Stateman's Yearbook 2001
- 2000 World Population Data Sheet, Population Reference Bureau online
- WHO Estimates of Health Personnel, World Health Organization online World Almanac and Book of Facts
- 2000 World Factbook 2000, CIA online
- N/A = not available

Notes:

- ^a A comparison of the prices of the same items in different countries is used to figure these data.
- ^b Includes land and water, when figures are available.

Country Flag	Country/ Capital	Population (2000)	Life Expectancy (years) (2000)		Infant Mortality (per 1,000 live births) (2000)
Ж	Macedonia Skopje	2,033,000	73	15	16.3
<i>ер</i> -	Malta Valletta	390,000	77	12	5.3
	Monaco Monaco	34,000	79	20	5.9
	Netherlands Amsterdam	15,921,000	78	13	5.0
╉	Norway Oslo	4,487,000	79	13	4.0
	Poland Warsaw	38,648,000	74	10	8.9
۲	Portugal Lisbon	10,013,000	76	11	6.0
	Romania Bucharest	22,432,000	70	11	20.5
\$	San Marino San Marino	27,000	80	11	8.8
*	Slovakia Bratislava	5,401,000	73	11	8.8
-	Slovenia Ljubljana	1,968,000	75	9	5.2
灎	Spain Madrid	39,466,000	78	9	5.7
	Sweden Stockholm	8,866,000	80	10	3.5
+	Switzerland Bern	7,142,000	80	11	4.8
	United Kingdom London	59,750,000	77	12	5.7
\$	Vatican City Vatican City	860 (1999)	N/A	N/A	N/A
	Yugoslavia Belgrade	10,662,000	73	11	10.4

United States	281,422,000	77	15	7.0	
 Washington, D.C.					

Doctors (per 100,000 pop.) (1990-1998)	GDPª (billions \$US) (1999)	Import/Export ^a (billions \$US) (1999)	Literacy Rate (percentage) (1991–1998)	Televisions (per 1,000 pop.) (1996–1998)	Passenger Cars (per 1,000 pop.) (1996-1997)	Total Area^b (square miles)	
204	7.6	1.6 / 1.2	89	250	132	9,927	
261	5.3	2.7 / 1.8	91	518	321	124	-
664	0.9	Included in figures for France	100	690	548	0.6	٤
251	365.1	152.0 / 169.0	100	543	372	16,033	R
413	111.3	38.6 / 47.3	100	579	399	125,050	6
236	276.5	40.8 / 27.8	99	413	195	124,807	
312	151.4	34.9 / 25.0	91	542	295	35,514	¥
184	87.4	9.6 / 8.4	98	226	106	92,042	4
252	0.5 (1997)	Included in figures for Italy	99	346	955	23	
353	45.9	11.2 / 10.1	100	402	185	18,923	elle
228	21.4	9.7 / 8.4	99	356	343	7,819	W
424	677.5	137.5 / 112.3	97	506	384	195,363	T
311	184.0	67.9 / 85.7	100	531	417	173,730	1
323	197.0	99.0 / 98.5	100	535	460	15,942	
164	1,290.0	305.9 / 271.0	100	645	434	94,548	4
N/A	N/A	N/A	100	N/A	N/A	0.17	
203	20.6	3.3 / 1.5	98	27	173	39,448	
251	9,255.0	820.8 / 663.0	97	847	489	3,787,319	



SECTION 1 Landforms and **Resources**

SECTION 2 Climate and Vegetation

SECTION 3 Human–Environment Interaction

Sognafjord, north of the city of Bergen, Norway, has only about five and a half hours of light per day in mid-December.

GeoFocus

What effect does physical geography have on the lives of Europeans?

Taking Notes Copy the graphic organizer below into your notebook. Use it to record information from the chapter about the physical geography of Europe.

Landforms	
Resources	
Climate and Vegetation	
Human-Environment Interaction	

PHYSICAL GEOGRAPHY OF EUROPE The Peninsula of Peninsulas

Landforms and Resources

A HUMAN PERSPECTIVE Elephants in Europe? In 218 B.C., Hannibal, a general from Carthage in North Africa, attacked the Roman Empire, which was at war with Carthage. He moved 38 war elephants and an estimated 60,000 troops across the Mediterranean Sea to Spain. To reach Italy, his armies had to cross the Pyrenees Mountains, the Rhone River, and the Alps. Hannibal used rafts to float the elephants across the Rhone. In the Alps, steep paths and slick ice caused men and animals to fall to their deaths. Despite this, Hannibal arrived in Italy with 26,000 men and a few elephants, and he defeated Rome in many battles. His crossing of the Alps was a triumph over geographic barriers.

Peninsulas and Islands

On a map you will see that Europe is a large peninsula stretching to the west of Asia. Europe itself has many smaller peninsulas, so it is sometimes called a "peninsula of peninsulas." Because of these peninsulas, most locations in Europe are no more than 300 miles from an ocean or sea. As you can imagine, the European way of life involves using these bodies of water for both business and pleasure.

NORTHERN PENINSULAS In northern Europe is the Scandinavian Peninsula. Occupied by the nations of Norway and Sweden, it is bounded by the Norwegian Sea, the North Sea, and the Baltic Sea. More than almost any other place in Europe, this peninsula shows the results of the movement of glaciers during the Ice Age. The glaciers scoured away the rich topsoil and left only thin, rocky soil that is hard to farm.

In Norway, glaciers also carved out **fjords** (fyawrdz), which are steep U-shaped valleys that connect to the sea and that filled with seawater after the glaciers melted. Fjords provide excellent harbors for fishing boats. The fjords are often separated by narrow peninsulas.

The Jutland Peninsula is directly across the North Sea from Scandinavia. Jutland forms the largest part of Denmark and a small part of Germany. This peninsula is an extension of a broad

Main Ideas

- Europe is composed of many peninsulas and islands.
- Europe's landforms also include large plains and mountain ranges.

Places & Terms

fjord	Massif Central
uplands	peat
Meseta	

CONNECT TO THE ISSUES UNIFICATION Resources helped Western Europe develop industry before other regions. The European Union began in Western Europe.



plain that reaches across northern Europe. Its gently rolling hills and swampy low-lying areas are very different from the rocky land of the Scandinavian Peninsula.

SOUTHERN PENINSULAS The southern part of Europe contains three major peninsulas:

- The Iberian Peninsula is home to Spain and Portugal. The Pyrenees Mountains block off this peninsula from the rest of Europe.
- The Italian Peninsula is home to Italy. It is shaped like a boot, extends into the Mediterranean Sea, and has 4,700 miles of coastline.
- The Balkan Peninsula is bordered by the Adriatic, Mediterranean, and Aegean Seas. It is mountainous, so transportation is difficult.

ISLANDS Another striking feature of Europe is its islands. The larger islands are Great Britain, Ireland, Iceland, and Greenland, all located in the North Atlantic. Although far from mainland Europe, Iceland and Greenland were settled by Scandinavians and have maintained cultural ties with the mainland. Over the centuries, many different groups have occupied the smaller Mediterranean Sea islands of Corsica, Sardinia, Sicily, and Crete. All of Europe's islands have depended upon trade.

Geographic

Seeing Patterns

have that help to promote trade?

Thinking

What geographic advantages do islands

Mountains and Uplands

The mountains and uplands of Europe may be viewed as walls because they separate groups of people. They make it difficult for people, goods, and ideas to move easily from one place to another. These landforms also affect climate. For example, the chilly north winds rarely blow over the Alps into Italy, which has a mild climate as a result.

MOUNTAIN CHAINS The most famous mountain chain in Europe is the Alps. On a map you can see that the Alps arc across France, Italy, Germany, Switzerland, Austria, and the northern Balkan Peninsula. They cut Italy off from the rest of Europe. Similarly, the Pyrenees restrict movement from France to Spain and Portugal. Both ranges provide opportunities for skiing, hiking, and other outdoor activities.

Running like a spine down Italy, the Apennine Mountains divide the Italian Peninsula between east and west. The Balkan Mountains block

HUMAN-ENVIRONMENT INTERACTION

The Wetterhorn in the Swiss Alps stands 12,142 feet above the city in the valley below. How do the mountains affect the lives of the people in the valley? off the Balkan Peninsula from the rest of Europe. Historically, they also have isolated the peninsula's various ethnic groups from each other.

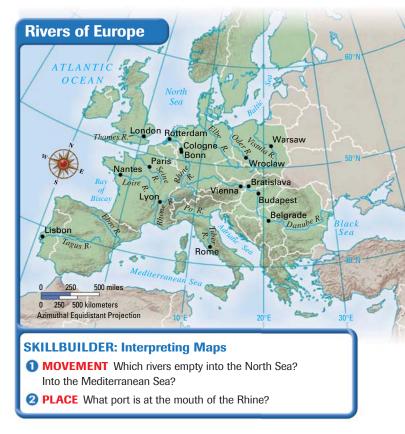
UPLANDS Mountains and uplands differ from each other in their elevation. **Uplands** are hills or very low mountains that may also contain mesas and high plateaus. Some uplands of Europe are eroded remains of ancient mountain ranges. Examples of uplands include the Kjølen (CHUR•luhn) Mountains of Scandinavia, the Scottish highlands, the low mountain areas of Brittany in France, and the central plateau of Spain called the **Meseta** (meh•SEH•tah). Other uplands border mountainous areas, such as the Central Uplands of Germany, which are at the base of the Alps. About one-sixth of French lands are located in the uplands called the **Massif Central** (ma•SEEF sahn•TRAHL).

Rivers: Europe's Links

Traversing Europe is a network of rivers that bring people and goods together. These rivers are used to transport goods between coastal harbors and the inland region, aiding economic growth. Historically, the rivers also have aided the movement of ideas.

Two major castle-lined rivers the Danube and the Rhine—have served as watery highways for centuries. The Rhine flows 820 miles from the interior of Europe north to the North Sea. The Danube cuts through the heart of Europe from west to east. Touching 9 countries over its 1,771-mile length, the Danube River links Europeans to the Black Sea.

Many other European rivers flow from the interior to the sea and are large enough for ships to



traverse. Through history, these rivers helped connect Europeans to the rest of the world, encouraging both trade and travel. Europeans have explored and migrated to many other world regions.

Fertile Plains: Europe's Bounty

One of the most fertile agricultural regions of the world is the Northern European Plain (see the map on page 263), stretching in a huge curve across parts of France, Belgium, the Netherlands, Denmark, Germany, and Poland. Relatively flat, this plain is very desirable agricultural land that has produced vast quantities of food over the centuries. However, the plain's flatness has also allowed armies and groups of invaders to use it as an open route into Europe. Smaller fertile plains used for farming also exist in Sweden, Hungary, and Lombardy in northern Italy.

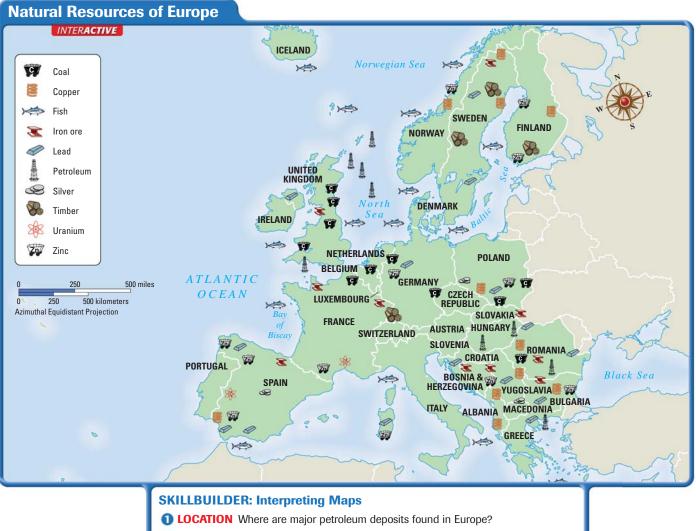
BACKGROUND

Brittany is a region located on a peninsula in northwest France.



Seeing Patterns How does the direction in which European rivers flow aid in linking Europeans to the world?

B. Answer Because they flow toward seas, the rivers help Europeans to travel to other regions.



REGION Which countries in Europe have relatively few natural resources?

Resources Shape Europe's Economy

Europe has abundant supplies of two natural resources—coal and iron ore—needed for an industrialized economy. The map above shows a band of coal deposits stretching from the United Kingdom across to Belgium and the Netherlands and from there to France, Germany, and Poland. Near many of these coal deposits are iron ore deposits. Having both of these resources makes it possible to produce steel. The Ruhr (roor) Valley in Germany, the Alsace-Lorraine region of France, and parts of the United Kingdom are heavily industrialized because these minerals are found there and good transportation exists. But as a result, these regions have suffered from industrial pollution. (See Chapter 14 for more on pollution.)

ENERGY Oil and natural gas were found beneath the North Sea floor in 1959. Energy companies began to tap gas fields between the United Kingdom and the Netherlands. In 1971, new technologies made it possible to construct offshore oil rigs in the North Sea despite its deep, stormy waters. Norway, the Netherlands, the United Kingdom, and Denmark now pump oil from rigs as far as 400 miles out in the ocean. The North Sea oil fields are major sources of petroleum for the world.

CONNECT TO THE ISSUES POLLUTION What types of pollution might industry create? **AGRICULTURAL LAND** About 33 percent of Europe's land is suitable for agriculture. The world average is 11 percent, so Europe is especially well off. The land produces a variety of crops: grains, grapes, olives, and even cork. Timber is cut from vast forests on the Scandinavian Peninsula and in the Alps.

Resources Shape Life

As is true of every region, the resources available in Europe help shape the lives of its people. Resources directly affect the foods people eat, the jobs they hold, the houses in which they live, and even their culture. For example, traditional European folk tales often take place in deep, dark forests that were a major part of the European landscape centuries ago.

The distribution of resources also creates regional differences within Europe. For instance, because Ireland lacks energy sources, the Irish cut peat from large beds and burn it as fuel. **Peat** is partially decayed plant matter found in bogs. In

contrast, coal is plentiful in other parts of Europe and has been mined for centuries. For example, generations of Polish miners have worked the mines that modern-day Poles work.

Just as landforms and resources influence the lives of people, so does climate. In Section 2, you will learn that the climates of Europe are mild near the Atlantic Ocean and grow harsher inland. You will also learn about the climates of the Mediterranean and the Arctic regions.



PLACE Harvesting peat is common in Ireland because other fuel sources are scarce. Why is it cut in blocks?

Assessment

Places & Terms

Identify and explain where in the region these would be found.

• fjord

BACKGROUND Cork is the outer

bark of the cork

oak tree.

- uplands
- Meseta
- Massif Central
- peat

2 Taking Notes

PLACE Review the notes you took for this section.

	Landforms	
	Resources	
3	\frown	

- What types of landforms are found in Europe?
- What resources help with farming?

3 Main Ideas

- a. Why is Europe called a "peninsula of peninsulas"?
- b. How are the landforms of Europe both an advantage and a disadvantage to life in Europe?
- **c.** How did natural resources help Europe to become industrialized?

4 Geographic Thinking

Drawing Conclusions What role did the waterways of Europe play in the development of its economy? **Think about:**

- the nearness to seas and oceans
- · the network of rivers





EXPLORING LOCAL GEOGRAPHY Do research to learn the top three natural resources in your state. Then study the map on page 276 to determine which European country has the most resources in common with your state. Create a **Venn Diagram** showing the resources your state has in common with that country and the resources that are different.

Climate and Vegetation

A HUMAN PERSPECTIVE Because of Greece's mild climate, the ancient Greeks spent much time outdoors. Greek men liked to talk with their friends in the marketplace. They also enjoyed sports. Large crowds gathered for athletic contests that were held during religious festivals. The most important of these was a footrace held every four years in the town of Olympia, a contest called the Olympic Games. In time, these games came to include other sports such as wrestling. In this form, they were the model for our modern Olympics. If ancient Greece had had a cold climate, we might not have Olympic Games today.

Westerly Winds Warm Europe

A marine west coast climate exists in much of Europe—from northern Spain across most of France and Germany to western Poland. It also exists in the British Isles and some coastal areas of Scandinavia. With warm summers and cool winters, the region enjoys a milder climate than do most regions at such a northern latitude.

The nearby ocean and the dominant winds create this mild climate. The **North Atlantic Drift**, a current of warm water from the tropics, flows near Europe's west coast. The prevailing westerlies, which blow west to east, pick up warmth from this current and carry it over Europe. No large mountain ranges block the winds, so they are felt far inland. They also carry moisture, giving the region adequate rainfall.

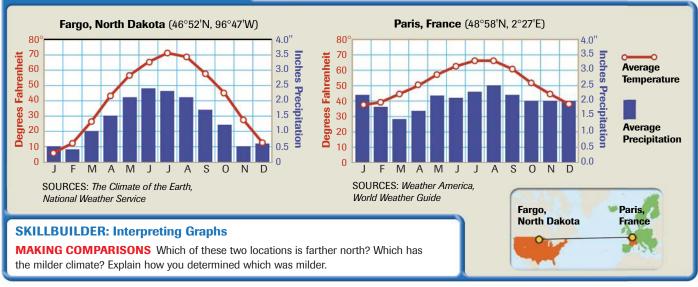
Main Ideas

- Much of Europe has a relatively mild climate because of ocean currents and warm winds.
- Eastern Europe has a harsher climate because it is farther from the Atlantic Ocean.

Places & Terms

North Atlantic Drift sirocco mistral

CONNECT TO THE ISSUES POLLUTION Industrial air pollution leads to acid rain, which kills trees and other vegetation.



Climographs: Fargo and Paris



Making Comparisons Would you expect the high Alps to be more or less densely populated than the surrounding region? Why? The Alps create a band of harsher conditions next to this climate zone. Because of their high elevation, the Alps have a much colder climate. Above 5,000 feet, snow can reach a depth of 33 feet in winter.

FORESTS TO FARMS Originally, mixed forests covered much of the marine west coast climate region. Over the centuries, people cleared away most of the forest so they could settle and farm the land. Today, farmers in the region grow grains, sugar beets, livestock feed, and root crops such as potatoes.

Harsher Conditions Inland

People who live far from the Atlantic Ocean do not benefit from the moderating influence of the westerlies. As a result, much of Sweden and Finland and the eastern parts of Poland, Slovakia, and Hungary have a humid continental climate, as does all of Romania. These places have cold, snowy winters and either warm or hot summers (depending upon their latitude). In general, the region receives adequate rainfall, which helps agriculture.

Like most of Europe, the region has suffered much deforestation, but the forests that do survive tend to be coniferous. The region also has broad fertile plains that were originally covered with grasses. Today, farmers grow grains such as wheat, rye, and barley on these plains. Other major crops include potatoes and sugar beets.

The Sunny Mediterranean

A mild climate lures people to live and vacation in the region bordering the Mediterranean Sea. This Mediterranean climate extends from southern Spain and France through Italy to Greece and other parts of the Balkan Peninsula. Summers are hot and dry with clear, sunny skies, while winters are moderate and wet. One reason for the climate is that mountain ranges block cold north winds from reaching the Iberian, Italian, and Balkan peninsulas.

SPECIAL WINDS An exception to this pattern is the Mediterranean coast of France, which is not protected by high mountains. In winter, this coast receives the **mistral** (MIHS•truhl), a cold, dry wind from the north.

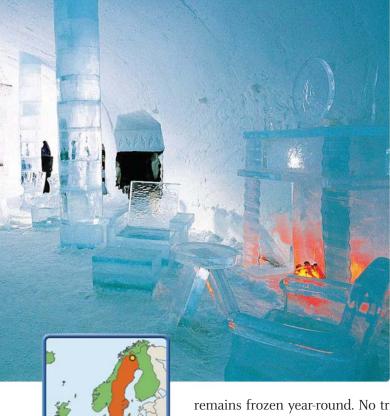
Most Mediterranean countries experience a wind called the sirocco. The **sirocco** (suh•RAHK•oh) is a hot, steady south wind that blows from North Africa across the Mediterranean Sea into southern Europe. Some siroccos pick up moisture from the sea and produce rain; others carry dust from the desert.



REGION In some Mediterranean fields, such as this one in southern France, olive trees and grape vines are grown side by side. Why might farmers choose to plant a field with two crops instead of one?



Using the Atlas Locate southern France on the map on page 263. What type of landform borders the Mediterranean Sea there?



THE CLIMATE ATTRACTS TOURISTS The Mediterranean region has primarily evergreen shrubs and short trees that grow in climates with hot, dry summers. The region's major crops are citrus fruits, olives, grapes, and wheat. The sunny Mediterranean beaches also attract thousands of people, making tourism a major industry in the region.

Land of the Midnight Sun

In far northern Scandinavia, along the Arctic Circle, lies a band of tundra climate. As explained in Chapter 3, the land in such a climate is often in a state of permafrost, in which the subsoil

remains frozen year-round. No trees grow there—only mosses and lichens. To the south of this lies the subarctic climate, which is cool most of the time with very cold, harsh winters. Little grows there but stunted trees. Because of the climate, agriculture is limited to southern Scandinavia.

This far northern region witnesses sharp variations in the amount of sunlight received throughout the year. Winter nights are extremely long, as are summer days. North of the Arctic Circle, there are winter days when the sun never rises and summer days when the sun never sets. The region is often called the Land of the Midnight Sun.

In the next section, you will read about ways in which Europeans have altered their environment—both positively and negatively.

BACKGROUND

A lichen is an organism made of a fungus and an alga growing together.

Assessment

Places & Terms

Identify these terms and explain how they affect climate.

- North Atlantic Drift
- mistral

PLACE In the village

the Ice Hotel is built

every winter out of

of Jukkasjärvi, Sweden,

10,000 tons of ice and

30,000 tons of snow. **How does climate**

make this possible?

sirocco

🛛 🙆 Taking Notes

REGION Review the notes you took for this section.

Climate and	
Vegetation	

- Which regions of Europe have the harshest, coldest climates?
- Which climate zones produce the richest variety of vegetation?

3 Main Ideas

- How do the North Atlantic Drift and the prevailing westerlies affect Europe's climate?
- **b.** How are a mistral and a sirocco different?
- c. Why is northern Scandinavia sometimes called the Land of the Midnight Sun?

4 Geographic Thinking

Making Decisions If you wanted to attract tourists to far northern Scandinavia, how would you advertise the region? Think about:

• recreational activities suitable for such a climate





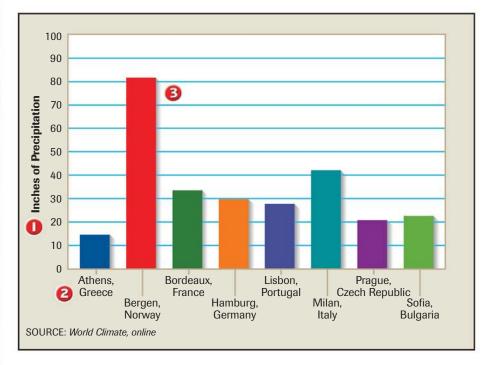
MAKING COMPARISONS Choose a place in Europe, and then find a place in North America at about the same latitude. Do Internet research to learn about the climate and vegetation of the two places. Create a **chart** comparing the two.

RAND Menally Map and Graph Skills

Interpreting a Bar Graph

How much rain and snow does your area receive in a year? Average yearly precipitation varies widely throughout the United States, with extremes ranging from a low of less than 2 inches a year in Death Valley, California, to as much as 151.25 inches a year in Yakutat, Alaska. The figures for average yearly precipitation don't reveal how much rain or snow falls in a given month, but they can provide a general indication of a place's suitability for agriculture or other activities.

THE LANGUAGE OF GRAPHS A **bar graph** is a visual way of showing quantities. On a bar graph, it is easy to see how different examples in a category compare; the longer the bar, the greater the quantity. Depending on the subject, the quantities are expressed using measurements such as inches, dollars, or tons. The categories vary from graph to graph. Time periods and places are common categories. Below, a bar graph shows annual precipitation for several European cities.



Average Annual Precipitation in Europe

The vertical axis tells you that on this graph, the precipitation is expressed in inches.

2 The horizontal axis tells you that the category is selected cities of Europe.

A quick glance at this bar graph tells you which cities have high and low amounts of precipitation. By examining the bars more carefully and measuring their heights against the horizontal lines, you can estimate actual amounts of precipitation.

Map and Graph Skills Assessment

1. Analyzing Data

Which cities on this graph have the lowest and highest amounts of annual precipitation?

2. Drawing Conclusions

To which city would you move if your doctor advised you to live in a drv climate?

3. Analyzing Data

What is the average annual precipitation for these eight cities?

Human–Environment Interaction

A HUMAN PERSPECTIVE "1800 DIE IN WIND-WHIPPED FLOOD WATERS!" February 1, 1953, witnessed a disaster in the Netherlands. Winds estimated at 110 to 115 miles per hour piled up gigantic waves that ripped through **dikes**—earthen banks—holding back the North Sea. When the storm was over, 4.5 percent of the Netherlands was flooded, and thousands of buildings were destroyed. The Netherlands is prone to floods because much of its land is below sea level.

Polders: Land from the Sea

An old saying declares, "God created the world, but the Dutch created Holland." (Holland is another name for the Netherlands.) Because the Dutch needed more land for their growing population, they reclaimed land from the sea. At least 40 percent of the Netherlands was once under the sea. Land that is reclaimed by diking and draining is called a **polder**.

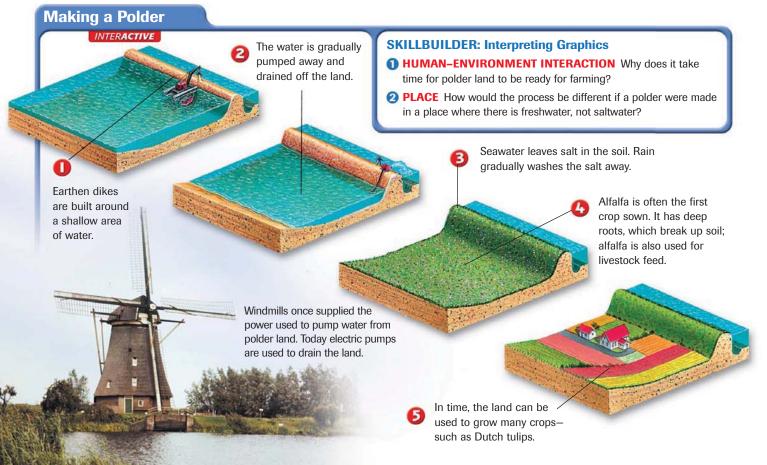
Main Ideas

- The Dutch and the Venetians altered lands to fit their needs by constructing polders and canals.
- Uncontrolled logging and acid rain destroy forests.

Places & Terms

dike	terpen
polder	Zuider Zee
seaworks	ljsselmeer

CONNECT TO THE ISSUES POLLUTION Water pollution is creating conditions that kill the fish in Venice's lagoon.





Making Comparisons What are possible disadvantages of windmills and of electric pumps?

BACKGROUND

A land link to Venice was built in 1846. A railway bridge connected Venice to the mainland. **SEAWORKS** The Dutch erected **seaworks**, structures that are used to control the sea's destructive impact on human life. Those seaworks include dikes and high earthen platforms called **terpen**. The dikes hold back the sea, while the terpen provide places to go for safety during floods and high tides.

Over the centuries, the Dutch found ways to reinforce the dikes and to control water in the low-lying areas the dikes protected. In the 1400s, the Dutch began using their windmills to power pumps that drained the land. When the French conqueror Napoleon viewed a site with 860 windmills pumping an area dry, he reportedly said, "Without equal." Today the pumps use electric motors instead of windmills.

TRANSFORMING THE SEA Another remarkable Dutch alteration of their environment was the transformation of the **Zuider Zee** (ZEYE•duhr ZAY). It was an arm of the North Sea and is now a freshwater lake. The idea was originally proposed in 1667. But it was not until the late 1800s and early 1900s that the Dutch perfected a plan to build dikes all the way across the entrance to the Zuider Zee. Since no saltwater flowed into that body of water, it eventually became a freshwater lake. It is now called **Jisselmeer** (EYE•suhl•MAIR). The land around the lake was drained, creating several polders that added hundreds of square miles of land to the Netherlands.

Waterways for Commerce: Venice's Canals

Like the Netherlands, Venice, Italy, is a place where humans created a unique environment. About 120 islands and part of the mainland make up the city of Venice. Two of the largest islands are San Marco and Rialto. A broad waterway called the Grand Canal flows between them.

Moving people or goods in Venice depends upon using the more than 150 canals that snake around and through the islands. Consequently, to get from one place to another in Venice, you generally have two choices: take a boat or walk. Almost anything that is moved on wheels elsewhere is moved by water in Venice.

AN ISLAND CITY GROWS Venice began when people escaping invaders took shelter on inhospitable islands in a lagoon. They remained there and established a settlement that eventually became Venice. The city is located at the north end of the Adriatic Sea, a good site for a port. As a result, trade helped Venice grow.

BUILDING ON THE ISLANDS Building Venice required construction techniques that took into account the swampy land on the islands. Builders sunk wooden pilings into the ground to help support the structures above. So many pilings were required that oak forests in the northern Italian countryside and in Slovenia were leveled to supply the wood. The weight of the buildings is so great that it has compressed the underlying ground. This is one of the reasons that Venice is gradually sinking. Other reasons include rising sea levels and the removal of too much groundwater by pumping.

PROBLEMS TODAY Severe water pollution threatens historic Venice. Industrial waste, sewage, and saltwater are combining to eat away the



foundations of buildings and damage the buildings themselves. Erosion has allowed increased amounts of seawater into the lagoon. Because of this, floods also endanger the city. In November 1966, six feet of floodwater engulfed the city and ruined many of its buildings and the artwork that they housed. Agricultural runoff flowing into Venice's harbor creates conditions that promote algae growth, sometimes called "killer algae." These algae grow rapidly and, after they die, decay. The decaying process uses up oxygen in the water, so that fish also die. Dead fish attract insects and create a stench, especially in warm weather.

A Centuries-Old Problem: Deforestation

Throughout history, humans have damaged and destroyed Europe's forests. The term deforestation means the clearing of forests from an area. Often when we think of deforestation, we think of losing the great rain forests of the world, such as those in South America, which you learned about in Unit 3. But people have also been clearing the forests of Europe since ancient times. Forests provided wood to burn for fuel and to use as building material for ships and houses. When Europeans began to develop industry in the 1700s and 1800s, they needed even





HUMAN-ENVIRONMENT INTERACTION A

forest in Bohemia in the Czech Republic is dying from the effects of acid rain. Why would restoring the forest be a slow process?

more wood to make charcoal for blast furnaces. Eventually, they used coal as a fuel in place of wood, but not before huge areas of Europe had lost their native forests.

ACID RAIN STRIPS FORESTS In the 1960s, people noticed that many trees of the Black Forest in Germany were discolored, losing needles and leaves, and dying. In time, scientists identified one cause of the tree deaths as acid rain. Europe's factories produce high amounts of sulfur dioxide and nitrogen oxide emissions. These combine with water vapor and oxygen to form acid rain or snow. Winds carry the emissions to other parts of Europe, affecting an estimated one-fourth of all European forests. This problem has hit Scandinavia particularly hard, since the prevailing winds blow in that direction. As mentioned earlier, the Black Forest in Germany also has suffered extreme damage. To save the remaining forests, nations must work together to reduce air pollution. You can read more about this in Chapter 14.

As you will read in Chapter 13, the ways people live upon the land and interact with each other make up the human geography of Europe.

CONNECT TO THE ISSUES UNIFICATION

How might a union of nations affect the clean-up effort?

Assessment

🚺 Places & Terms 🛛 🙋

Identify and explain where in the region these would be found.

- dike
- polder
- seaworks
- terpen
- Zuider Zee Ijsselmeer

s **2 Taking Notes** HUMAN-ENVIRONMENT

INTERACTION Review your notes for this section.

Human-Environment

Interaction

- What are examples of human adaptation to the environment?
- What are examples of an environment changed by humans?

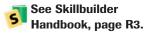
3 Main Ideas

- a. How have the people of the Netherlands been able to create more land for their country?
- b. How has pollution affected the city of Venice?
- c. How has industrialization hurt the forests of Europe?

4 Geographic Thinking

Making Comparisons What is similar about the ways that the people of the Netherlands and the people of Venice interact with their environments? **Think about:**

- seaworks in the Netherlands
- canals in Venice





SEEING PATTERNS Pollution has affected both Venice and the forests of Scandinavia. Create two **cause-and-effect charts** outlining the causes and effects of pollution in each place. Then write a sentence or two summarizing the similarities.

Chapter (2) Assessment

VISUAL SUMMARY **PHYSICAL GEOGRAPHY OF EUROPE**

Landforms

Major Peninsulas: Scandinavian, Jutland, Iberian, Italian. Balkan

Major Mountain Ranges: Alps, Pyrenees, Carpathians, Apennines, Balkans

Major Rivers: Danube, Rhine, Seine, Loire. Elbe. Oder

Resources

- Oil from North Sea oil rigs is an important energy source for Europe.
- · Coal and iron ore are found in abundance, making heavy industry possible.

Climate and Vegetation

- The North Atlantic Drift and the prevailing westerlies moderate much of Europe's climate.
- Lands bordering the Mediterranean Sea have a climate that encourages large-scale commercial agriculture.

Human-Environment Interaction

- Polders are an example of how Europeans have altered their environment.
- The canals of Venice demonstrate how Europeans have adapted to their environment.
- · Deforestation of the land is a longstanding environmental problem in Europe.

Reviewing Places & Terms

A. Briefly explain the importance of each of the following. 6. mistral

- 1. fjord
- 2. uplands
 - 7. polder
- 3. Meseta 8. seaworks 9. terpen
- 4. Massif Central
- 5. peat 10. Zuider Zee

B. Answer the questions about vocabulary in complete sentences.

- 11. What are fjords and where are they found?
- 12. Which of the above terms are examples of uplands?
- 13. What is France's highland area called?
- 14. How does the North Atlantic Drift influence climate?
- 15. In what part of Europe would you find the mistral?
- 16. How is peat used?
- **17.** Which of the above terms is a type of seaworks?
- 18. How did the Zuider Zee become ljsselmeer?
- 19. What are polders and where are they found?
- 20. Which of the above terms are associated with humanenvironment interaction?

Main Ideas

Landforms and Resources (pp. 273-277)

- **1.** How do the mountain ranges of Europe impact the lives of the people who live near them?
- 2. Why are the rivers of Europe an important aspect of its geography?
- **3.** Where are the most important oil fields of Europe located, and which countries pump oil from them?

Climate and Vegetation (pp. 278-281)

- 4. How do the prevailing westerlies affect the climate of Europe? Explain which part of Europe is most affected.
- 5. In which climate area of Europe would you find citrus fruits growing? Explain why.
- 6. What types of vegetation are found on the Scandinavian Peninsula?

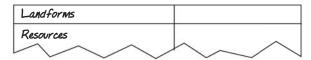
Human-Environment Interaction (pp. 282-285)

- 7. Why did the Dutch build seaworks?
- **8.** In what ways have the people of the Netherlands changed the physical geography of their land?
- 9. What kinds of pollutants are found in the Venice canals?
- 10. Why were forests chopped down in Europe?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.



- a. Which of the human-environment interactions try to make the best use of landforms?
- b. Which interactions focus on problems with resources?

2. Geographic Themes

- a. **PLACE** In what ways has the physical geography of the Balkan Peninsula affected the people who live there?
- b. LOCATION How would you describe Europe's location relative to bodies of water and to other regions?

3. Identifying Themes

Considering the climate and landforms, evaluate which areas of Europe would be the most agriculturally productive. Which of the five themes apply to this situation?

4. Identifying and Solving Problems

What factors must the people of Venice consider when dealing with the water pollution in their city?

5. Making Comparisons

How are the Scandinavian Peninsula and the Italian Peninsula alike and how are they different? Discuss landforms, resources, and climates.



Geographic Skills: Interpreting Maps

Mountain Ranges of Europe

Use the map to answer the following questions.

- 1. **MOVEMENT** Which mountains hinder travel between Spain and France?
- 2. **REGION** Which mountain ranges are in Eastern Europe?
- 3. **LOCATION** What is the relative location of the Alps?



Create your own sketch map of the physical geography of Europe. Combine the information from this map with the information from the rivers map on page 275 and the peninsulas map on page 273.



INTERNET ACTIVITY

Use the links at **classzone.com** to do research about acid rain in Europe. Focus on one aspect of acid rain, such as how the European Union is fighting acid rain or how European students learn about acid rain. **Writing About Geography** Write a report of your findings. Include a map or a chart that visually presents information on acid rain. List the Web sites that you used in preparing your report.

Chapter

13

SECTION 1 Mediterranean Europe

SECTION 2 Western Europe

SECTION 3 Northern Europe

SECTION 4 Eastern Europe

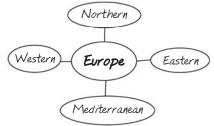
HUMAN GEOGRAPHY OF EUROPE Diversity, Conflict, Union



Geo**Focus**

How have cultural differences in Europe caused conflict?

Taking Notes In your notebook, copy a cluster diagram like the one shown below. As you read, take notes about the history, economics, culture, and modern life of each subregion of Europe.



Mediterranean Europe

A HUMAN PERSPECTIVE Have you ever heard the saying, "All roads lead to Rome"? The Mediterranean region was home to the two great civilizations of ancient Europe-ancient Greece and ancient Rome. The city of Rome was founded in about 753 B.C., and Rome conquered a huge empire by about A.D. 100. To aid communication and make it possible for the army to march quickly to distant locations, Rome built a large network of well-paved roads. In ancient Europe, most roads did indeed lead to Rome, enabling that city to control a vast region.

A History of Ancient Glory

Two geographic advantages helped the Mediterranean to become the region where European civilization was born. First, the mild climate made survival there easier than in other areas. So societies had time to develop complex institutions such as government. Second, the nearby Mediterranean Sea encouraged overseas trade. When different societies trade with each other, they also exchange ideas. The spread of ideas often leads to advances in knowledge.

GREECE: BIRTHPLACE OF DEMOCRACY Beginning about 2000 B.C., people from the north moved onto the Balkan Peninsula. They built villages there. The region is mountainous, so those villages were isolated from each other and developed into separate city-states. A city-state is a political unit made up of a city and its surrounding lands.

Ancient Greece left a lasting legacy to modern civilization. The city-state of Athens developed the first democracy, a government in which the people rule. In Athens, all free adult males were citizens who had the right to serve in the law-making assembly. Athenian democracy helped inspire the U.S. system of government. And Greek science, philosophy, drama, and art helped shape modern culture.

In the 400s B.C., conflict weakened Greece. Several city-states fought a costly series of wars with Persia, an empire in southwest Asia. Then Athens fought a ruinous

Main Ideas

- The ancient Greek and Roman civilizations and the Renaissance all began in Mediterranean Europe.
- In the 20th century, the region has seen economic growth and political turmoil.

Places & Terms

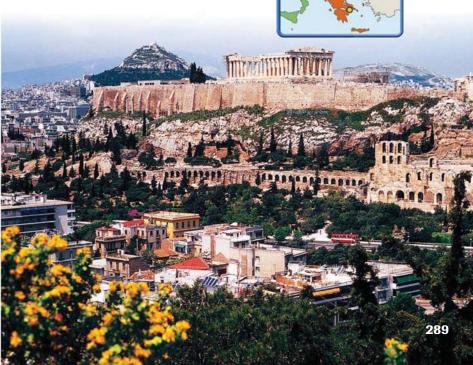
city-state	Renaissance	
republic	aqueduct	
Crusades		

CONNECT TO THE ISSUES UNIFICATION Membership in the European Union has helped the economies of the Mediterranean nations.

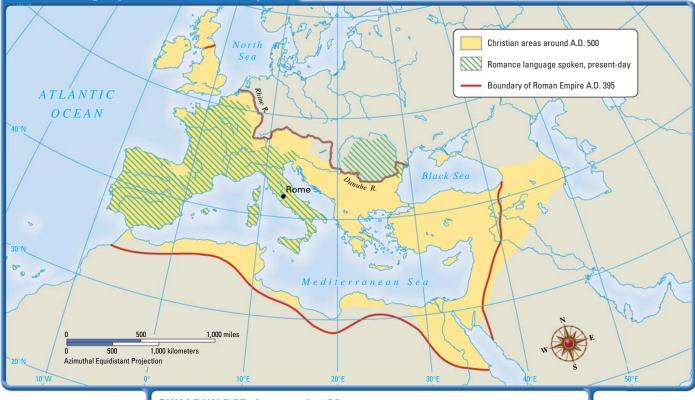
The Voyageur Experience in World Geography Italy: Natural Hazards and Disasters

PLACE In Athens, ancient ruins such as the Parthenon, shown here, stand near modern buildings.





Cultural Legacy of the Roman Empire



SKILLBUILDER: Interpreting Maps
 REGION Which waterways formed part of the northern boundary of the Roman Empire?
 MOVEMENT Which Roman cultural influence was more widespread, Christianity or Romance languages?

war with Sparta, a rival Greek city-state. Finally, in 338 B.C., Macedonia (a kingdom to the north) conquered Greece. Beginning in 336 B.C., the Macedonian general Alexander the Great conquered Persia and part of India. His empire spread Greek culture but broke apart after his death.

THE ROMAN EMPIRE As Greece lost power, a state to the west was rising. That state, Rome, ruled most of the Italian Peninsula by 275 B.C. At the time, Rome was a **republic**, a government in which citizens elect representatives to rule in their name.

The Roman Empire grew by conquering territory overseas, including the Iberian and Balkan peninsulas. At home in Italy, unrest over inequalities led to decades of turmoil that caused Romans to seek strong leaders. Rome began to be ruled by an emperor, ending the republic.

One of Rome's overseas territories was Palestine, the place where Jesus was born. Christianity spread from there across the empire, and by the late 300s, Christianity was Rome's official religion.

By A.D. 395, the empire was too big for a single government, so it split into a western and an eastern half. The Western Roman Empire grew weak, in part because of German invaders from the north, and fell in A.D. 476. The Eastern Roman Empire lasted nearly 1,000 years longer.

Moving Toward Modern Times

After 476, the three Mediterranean peninsulas had very different histories. The Balkan Peninsula stayed part of the Eastern Roman Empire

BACKGROUND

The Roman republic was a model for modern governments such as those of France and the United States. (also called the Byzantine Empire) for nearly 1,000 years. Beginning in the 1300s, Italy saw the birth of the Renaissance, and in the 1400s, Portugal and Spain launched the Age of Exploration.

ITALIAN CITY-STATES The invaders who overran the Italian Peninsula had no tradition of strong central government. Italy eventually became divided into many small states and remained so for centuries.

In 1096, European Christians launched the **Crusades**, a series of wars to take Palestine from the Muslims. Italians earned large profits by supplying the ships that carried Crusaders to the Middle East. Italian cities such as Florence and Venice became rich from banking and foreign trade. This wealth helped them grow into powerful city-states.

The **Renaissance**, which began in the Italian city-states, was a time of renewed interest in learning and the arts that lasted from the 14th through 16th centuries. It was inspired by classical art and writings. Renaissance ideas spread north to the rest of Europe.

But the wealth of Italy did not protect it from disease. In 1347, the bubonic plague reached Italy from Asia and in time killed millions of Europeans. (See pages 294–295.)

SPAIN'S EMPIRE In the 700s, Muslims from North Africa conquered the Iberian Peninsula. Muslims controlled parts of the Iberian Peninsula for more than 700 years. Spain's Catholic rulers, Ferdinand and Isabella, retook Spain from the Muslims in 1492.

Also in 1492, Queen Isabella paid for Christopher Columbus's first voyage. Portugal had already sent out many voyages of exploration. Both Spain and Portugal established colonies in the Americas and elsewhere. Their empires spread Catholicism and the Spanish and Portuguese languages throughout the world.

A Rich Cultural Legacy

Mediterranean Europe's history shaped its culture by determining where languages are spoken and where religions are practiced today. And the people of the region take pride in the artistic legacy of the past.

ROME'S CULTURAL LEGACY Unlike many areas of Europe that Rome conquered, Greece retained its own language. Greek was, in fact, the official language of the Byzantine Empire. In contrast, Portuguese, Spanish, and Italian are Romance languages that evolved from Latin, the language of Rome.

The two halves of the Roman Empire also developed different forms of Christianity. The majority religion in Greece today is Eastern Orthodox Christianity. Roman Catholicism is strong in Italy, Spain, and Portugal.

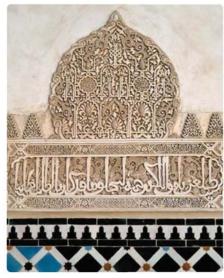
CENTURIES OF ART This region shows many signs of its past civilizations. Greece and Italy have ancient ruins, such as the Parthenon, that reveal what classical

REGION Italian Renaissance paint-

ings often show the Virgin Mary and baby Jesus. Muslim art, like the Spanish wall design below (*bottom*), often uses calligraphy to praise God.



The Virgin and Child Surrounded by Five Angels, Sandro Botticelli



Alhambra Palace, Granada, Spain



shaped modern life by stressing classical culture, material comfort, and the value of individuals.

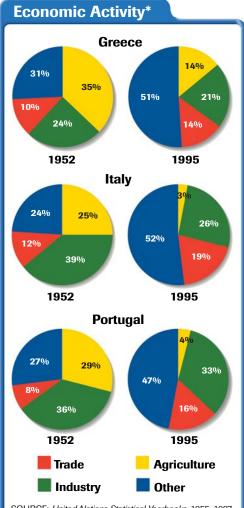


Making Comparisons What is similar about the cultural legacies left by the Roman and Spanish empires? architecture was like. Spain has Roman **<u>aqueducts</u>**, structures that carried water for long distances, and Muslim mosques, places of worship.

The region also has a long artistic legacy, which includes classical statues, Renaissance painting and sculpture, and modern art produced by such artists as Pablo Picasso of Spain. The pictures on page 291 contrast Renaissance Italian art with Muslim Spanish art.

Economic Change

Because of the Mediterranean region's sunny climate and historic sites, tourism has long been a large part of its economy. In other ways, the econ-



SOURCE: United Nations Statistical Yearbooks, 1955, 1997 NOTES: Industry includes mining and construction; other includes government, utilities, transportation, and service industries.

* as percentage of GDP

SKILLBUILDER: Interpreting Graphs

SEEING PATTERNS From 1952 to 1995, which economic activities increased and which decreased?

MAKING INFERENCES Why do you think the category "other" changed so significantly? Give possible reasons.

omy has been changing rapidly since World War II.

AGRICULTURE TO INDUSTRY In general, the Mediterranean nations are less industrial than those of Northern and Western Europe. For centuries, the region's economy was based on fishing and agriculture. Fishing remains important, and olives, grapes, citrus, and wheat are still major agricultural crops.

But in the late 20th century, the region's economy grew and changed. Today, manufacturing is increasing. The making of textiles is Portugal's biggest industry. Spain is a leading maker of automobiles, and Italy is a major producer of clothing and shoes. Service industries, such as banking, also make up a much larger part of the economy than before.

In the 1980s, Greece, Portugal, and Spain joined the European Union (EU). This aided growth by promoting trade with other EU nations and by making financial aid from the EU available.

ECONOMIC PROBLEMS The region still faces economic challenges. For example, Italy's northern region is much more developed than its southern half. The reasons for this include the following:

- The north is closer to other industrial countries of Europe, such as Germany and France.
- The south has poorer transportation systems.
- The government tried to promote growth in the south but made bad choices. It started industries that did not benefit the local people.

Another problem is that the entire Mediterranean region is poor in energy resources and relies heavily on imported petroleum. This makes the region vulnerable because trade problems or wars could halt oil supplies and prevent industries from functioning.

Modern Mediterranean Life

Mediterranean Europe saw political turmoil in the 20th century. Two dictators, Benito Mussolini in Italy

BACKGROUND

The EU is an economic and political alliance of 15 nations. Italy was one of the founding members. and Francisco Franco in Spain, ruled for long periods. After Franco died in 1975, Spain set up a constitutional government. After World War II, Italy became a republic but has had dozens of governments since then. Greece has also experienced political instability.

THE BASQUES Spain has had an ongoing conflict with a minority group. The Basque people live in the western foothills of the Pyrenees. Their language is the only pre-Roman language still spo-



ken in southwestern Europe. In the late 1970s, Spain granted the Basque region self-rule. But some Basques want complete independence and have used violence to fight for it. The conflict remains unresolved.

CITY GROWTH The transition from agriculture to manufacturing and service industries has encouraged people to move from the country to the city. Urban growth has created housing shortages, pollution, and traffic jams. The people of Mediterranean Europe want to preserve their historic cities, so they are trying to solve these problems. For example, Athens is expanding its subway system to reduce traffic and pollution.

Despite their problems, Mediterranean cities give intriguing insight into the past. In Rome and Athens, classical ruins stand near modern buildings. Florence has glorious works of Renaissance art. Granada, Spain, has Catholic cathedrals and a Muslim palace. In Section 2, you will read about Western Europe, a region that also has a rich history.



PLACE Pamplona, Spain, holds a festival in which young men run through the streets before a herd of stampeding bulls. What might this activity show about Spanish culture?

Assessment

Places & Terms

Identify these terms and explain their importance in the region's history or culture.

- city-state
- republic

Geographic

Using the Atlas Locate the

Basque language

on the map on

page 267. What

besides Spain has

Basque speakers?

other country

Thinking

- Crusades
- Renaissance
- aqueduct

2 Taking Notes

REGION Review the notes you took for this section.



- What are the two ancient civilizations of this region?
- What type of movement is the result of recent economic change?

3 Main Ideas

- **a.** How was the Renaissance an example of the movement of ideas?
- b. What is Rome's cultural legacy in Mediterranean Europe today?
- c. How has Mediterranean Europe's economy changed since World War II?

4 Geographic Thinking

Identifying and Solving Problems What might help preserve the historic cities of Mediterranean Europe? Think about:

 how to provide housing and reduce both pollution and traffic





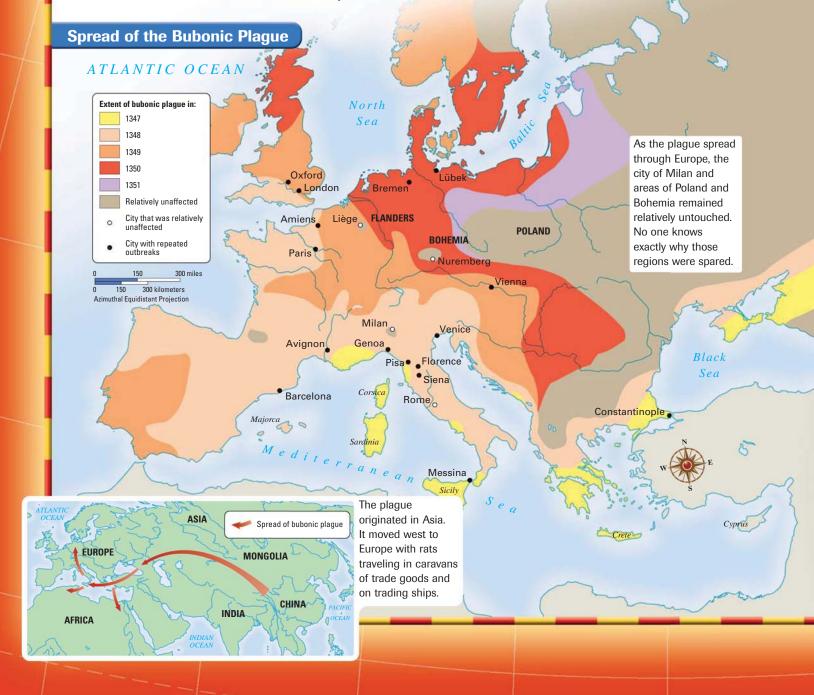
ASKING GEOGRAPHIC QUESTIONS Review the paragraph about the Crusades on page 291. Write three to five geographic questions about the Crusades, such as "Why did many Crusaders purchase supplies for their ships in Italy?" Do research to answer as many of your questions as possible. Then create a set of **quiz show questions and answers.**

INTERACTIVE

Bubonic Plague

By the 1300s, Italian merchants were growing rich from the trade in luxury goods from Asia. Then in October 1347, trading ships sailed into the port of Messina, Sicily, carrying a terrifying cargo—the disease we now call bubonic plague. Over the next four years, the plague spread along trade routes throughout Europe. An estimated 25 million Europeans died, about one-fourth to one-third of the population. In terms of its death toll, the plague (also called the Black Death) was the worst disaster Europe ever suffered.

50Sters



Transmission of the Plague



The bacterium that causes bubonic plague, *Yersinia pestis,* lives in the guts of fleas. The fleas bite rats and feed on their blood, infecting them with the disease.

> Sometimes, an infected rat comes into contact with humans. Because the rat is dying, the fleas jump onto the humans to feed off them.

GeoActivity

UNDERSTANDING EPIDEMICS

Working with a partner, use the Internet to research an epidemic on the time line below and create a **presentation** about it.

- Create a diagram showing the symptoms of the disease and the methods of treating it.
- Add a map of the region affected by this epidemic.
- Last, write a report explaining how the epidemic affected society.



GeoData

PREVENTIVE MEASURES

In the 1300s, most doctors recommended these methods of purifying the air to prevent plague:

- Burn richly scented incense.
- Fill the house with flowers.
- Sprinkle the floors with vinegar.
- Have doctors wear a bird mask with perfume in the beak.

OTHER DISASTROUS EPIDEMICS

1507-1518

Smallpox killed one-third to one-half of the people of Cuba, Haiti, and Puerto Rico.

1918-1919

About 30 million people died from an influenza outbreak that spread around the world.

2000

A UN report said that AIDS had killed 19 million people worldwide. Seven African countries had 20 percent of their population infected.

People catch bubonic plague from flea bites. In some, the plague enters their lungs, becoming pneumonic plague. These victims cough, sneeze, and spit up infected blood and saliva-spreading the disease more quickly.



A HUMAN PERSPECTIVE Today, the French call Émile Durkheim the father of French sociology (the study of society). But he wasn't always honored. During World War I, some French patriots considered him a disloyal foreigner. Why? Perhaps it was because he had a German last name and came from Lorraine, a region that had switched between French and German rule many times. France and Germany have long had a deep rivalry, based in part on cultural differences.

A History of Cultural Divisions

France and Germany are the dominant countries in Western Europe. They are the two largest countries, and their access to resources, ports, and trade routes helped them to build productive economies.

French culture is strong in France and Monaco; German culture is strong in Germany, Austria, and Liechtenstein. Switzerland and the **Benelux** countries of Belgium, the Netherlands, and Luxembourg have their own cultures—but also have been influenced by Germany and France. Western Europe's cultural divisions have historic roots.

ROME TO CHARLEMAGNE One cultural division, language, dates from ancient times. By 50 B.C., the Roman Empire had conquered the Celtic tribes in what is now France. French is one of the Romance languages that evolved from Latin (Rome's language). But Rome never fully conquered the Germanic tribes that migrated into the lands east of France. Germanic languages are still spoken there. (See the chart on page 297.)

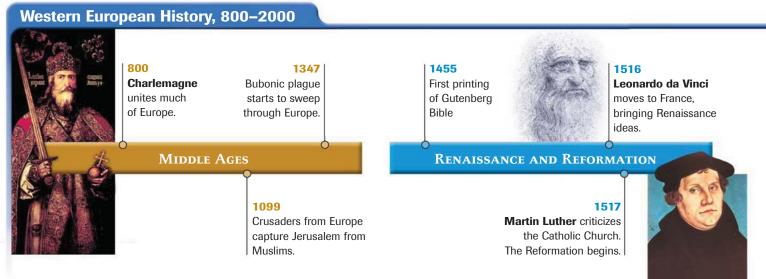
Main Ideas

- France and the Germanic countries developed very different cultures.
- These cultural differences led to conflicts that shaped the history of Western Europe.

Places & Terms

Benelux	nationalism	
Reformation	Holocaust	
feudalism	Berlin Wall	

CONNECT TO THE ISSUES UNIFICATION France and Germany have resolved their past conflicts and now cooperate in the European Union.



In the late 700s, a Germanic king, Charlemagne, conquered most of the region. However, his empire began to fall apart soon after his death. Western Europe remained a region of small, competing kingdoms.

THE REFORMATION A religious movement created new differences. During the Renaissance (see Section 1), scholars questioned authority. Some people even began to question the Catholic Church. In 1517, Martin Luther published 95 statements that criticized church practices that he believed were wrong. That began the **Reformation**, a period when many Christians broke away from the Catholic Church and started Protestant churches. Mutual hostility led Catholics and Protestants to fight religious wars that tore Europe apart.

Today, France is mostly Catholic. The Netherlands, Switzerland, and Germany contain both Protestants and Catholics. In Germany, Protestants live mainly in the north and Catholics in the south of the country.

The Rise of Nation-States

The period between the fall of Rome and the Renaissance is called the Middle Ages. During this time, Europeans gradually developed the nation-state, an independent nation of people with a common culture.

NATIONALISM During the centuries after Rome fell, <u>feudalism</u> gradually developed in Europe. This was a political system in which powerful lords owned most of the land. They gave some land to nobles in exchange for military service by those nobles. Over time, strong kings gained power over feudal lords, and nationalism evolved. <u>Nationalism</u> is the belief that people should be loyal to their nation, the people with whom they share land, culture, and history.

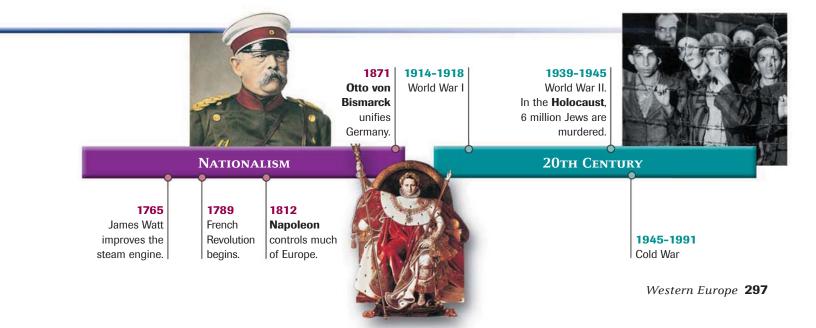
Nationalism often causes groups to want their own countries, so it contributed to the rise of modern nation-states. France was one of the

1	(5)	HEMES	
(REGION		
F	Diversity of Languages		
	Nation Austria	Languages Spoken German	
	Belgium	Flemish, French, German	
	Germany	German	
	France	French	
	Liechtenstein	German, Alemannic dialect	
	Luxembourg	Luxembourgian, German, French	
	Monaco	French, English, Italian, Monegasque dialect	
	Netherlands	Dutch	
	Switzerland	German, French, Italian, Romansch	
	SOURCE: The N Desk Reference	lational Geographic , World Book	

NUT IN THE

THE ISSUES CONFLICT Why might conflict result if neighboring countries adopt different religions?

CONNECT TO



first nation-states. By the late 1600s, French kings held absolute power, which they often used to benefit themselves, not their people. In 1789, the people began a rebellion—the French Revolution. They deposed the king and formed a republic. But in a few years, an army officer named Napoleon Bonaparte seized power. In 1804, he made himself emperor. Napoleon tried to conquer all of Europe but was defeated.

The nation-states of Europe became strong rivals. From the 1600s to 1945, wars repeatedly broke out between France and Austria or between France and the German states (later Germany). Germany did not unify as a nation until 1871. It was one of many European countries affected by a new wave of nationalism in the 1800s.

Western Europe also experienced industrial growth in the 1800s. Industrialism caused European nations to set up colonies in other lands in order to gain raw materials and markets. Many European nations saw each other as rivals in the race to gain colonies. You will learn more about the effects of colonialism as you read this book.

MODERN CONFLICTS The nationalistic rivalry and competition for colonies among European nations helped cause World War I. The Allied Powers (including France) fought the Central Powers (Germany, Austria-Hungary, and their allies). The Allied Powers won and imposed harsh terms on Germany. German resentment over those terms helped cause World War II, in which Germany, led by Adolf Hitler and the Nazis, tried to conquer Europe. The Nazis also carried out the <u>Holocaust</u>, a program of mass murder of European Jews and other minorities. In 1945, the Allies defeated Germany.

After the war, Germany was split into two nations. West Germany was allied with non-Communist Europe and the United States. East Germany was allied with the Communist Soviet Union. The capital city of Berlin, located in East Germany, was also divided, cut in two by the **Berlin Wall**. In 1989, anti-Communist reforms swept Europe, and in response to protests, East Germany opened the Berlin Wall.

In 1990, the two Germanys reunited under a democratic government. In recent years, France and Germany have tried to end the rivalry that so often led to war. These two nations were leaders in the movement

> toward establishing the European Union. (See the Case Study on pages 326–329.)

Economics: Diversity and Luxury

Since the Middle Ages, Western Europe has been rich in agriculture, and in the 1800s, it was one of the first regions to industrialize. The region's economy remains strong because it includes agriculture and manufacturing, plus high-tech and service industries.



Seeing Patterns Why might industrialism cause a country to want colonies?

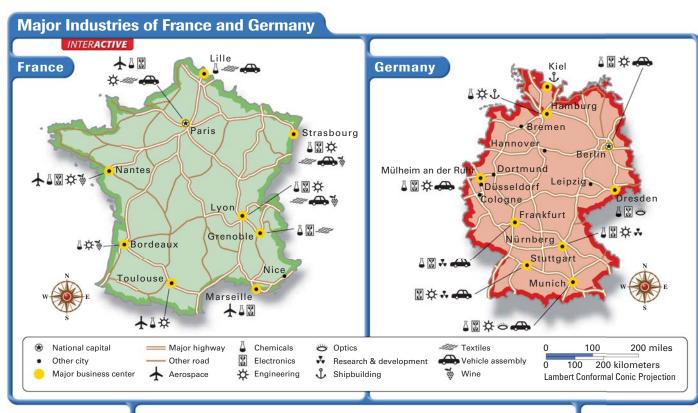
BACKGROUND

The Nazis were a political party that created a government that controlled all aspects of German life. They held many racist beliefs.

REGION Picturesque old castles, such as the Castle Reichenstein in Germany, were built for defense purposes. Now they are tourist attractions.

Why do you think this castle was built on a hillside?





SKILLBUILDER: Interpreting Maps

LOCATION What is the relative location of business centers? Give possible reasons.
 MOVEMENT Use the Unit Atlas to find the border between France and Germany.

Which French and German cities might make good international trading partners?

AGRICULTURE TO HIGH-TECH Dairy farming and livestock provide most of the agricultural income in Belgium, France, the Netherlands, and Switzerland. These countries produce and export dairy products. In addition, France is the largest producer of agricultural products in Western Europe. Its major crops include wheat, grapes, and vegetables.

Western Europe was a leader in developing industry because it was rich in coal and iron ore. Today, the region has three of Europe's top manufacturing nations: France, Germany, and the Netherlands. The maps above show the major industries of France and Germany.

High-tech and service industries are also very important. Electronics is a major product of the Netherlands. Germany also produces electronics, as well as scientific instruments. France has one of the world's fastest passenger trains, the TGV (*train à grande vitesse*, or high-speed train), and a space program. France also relies heavily on nuclear energy. Nuclear plants produce nearly 75 percent of its electricity.

Switzerland specializes in the service industry of banking. One reason for this is that Switzerland refuses to fight in wars, so people believe that money is safer there.

TOURISM AND LUXURY Because of its varied scenery, mild climate, and historic sites, Western Europe is popular with tourists. Tourism is a major part of the French, Swiss, and Austrian economies.

Western Europe exports luxury goods to the world. For example, some German cars and Swiss watches are considered status symbols.

EUROPE



Making Comparisons Which hightech industry do Germany and the Netherlands have in common?



France is famous for its high-fashion clothing and gourmet foods. The Netherlands exports high-quality flower bulbs, such as colorful tulips.

ECONOMIC PROBLEMS One nation in the region, Germany, has had economic problems recently. When Germany reunified, the new nation faced difficulties because the West had a much higher standard of living. East Germany's factories were outdated compared with those in the West, and many shut down. Germany has been working steadily to foster growth in the former East Germany, but progress will take time. By 1998, the East produced only six percent of the nation's exports.

Great Music and Art

Each Western European country has a distinct identity, shaped in part by language and religion. Even with these differences, one thing is true of the region as a whole—it has a strong artistic legacy.

MUSIC Germany and Austria are famous for music. Johann Sebastian Bach, who wrote music for church services, was German. So was Ludwig van Beethoven, who composed symphonies and other works. He wrote music even after going deaf. Austrian composers include Wolfgang Amadeus Mozart, who was a child genius.

PAINTING France and the Netherlands have had many important painters. Jan Van Eyck was a painter from Flanders (a region now divided among France, the Netherlands, and Belgium) who perfected techniques for using oil paints. Jan Vermeer and Rembrandt were Dutch artists who painted with great realism. Major French painters include the impressionist Claude Monet and postimpressionists Paul Cézanne and Paul Gauguin, who paved the way for modern art.

BACKGROUND

Many landscape paintings of the Netherlands show its flat, low terrain. The sea is also a frequent subject.

EUROPE

Modern Life

Because of their strong economies, Western Europeans enjoy a high standard of living and generally can afford to buy material goods such as cars and computers. Most Western Europeans live in cities.

CITY LIFE In general, Western European cities are interesting and pleasant places to live. Most have good public transportation systems. They offer many cultural attractions: movies, concerts, art galleries, and museums. Crime rates are lower than in the United States.

As a rule, Europeans live in smaller homes than Americans do. Because of this, they often socialize in public places. Friends might meet in cafes, sitting at outdoor tables if the weather is nice. Also, most cities have many lovely parks that their citizens regularly enjoy. 🐗

One difference between Western Europe and the United States is that Europeans receive more paid vacation time. For example, Germans have about 30 vacation days a year. Vacationing Europeans often leave the city to engage in outdoor activities like biking, hiking, or skiing.

RECENT CONFLICTS In recent decades, immigration has been a source of conflict here. In the 1980s, increasing numbers of "guest workers" from Yugoslavia and Turkey came to West Germany for jobs. When the German economy declined, some angry Germans committed discrimination and even violence against immigrants. In response, millions of other Germans protested racism.

Austria has also faced tensions. Political leader Joerg Haider made controversial remarks that defended former Nazis and that immigrants found insulting. Many feared a rebirth of racist politics, so in 2000 Haider had to resign as party head-yet he remained a force in Austrian public life.

In Section 3, you will read about Northern Europe, a region that includes the Nordic countries, the United Kingdom, and Ireland.

Assessment

Places & Terms

Identify these terms and explain their importance in the region's history or culture.

Benelux

Geographic

Using the Atlas

Refer to the climate map on

page 266. What

play in Western

Europeans' enjoyment of the

outdoors?

role does climate

Thinking

- Reformation
- feudalism
- nationalism
- Holocaust
- Berlin Wall

2 Taking Notes

REGION Review the notes you took for this section.



- · What are major aspects of Western Europe's artistic legacy?
- What are some characteristics of modern life in Western Europe?

3 Main Ideas

- a. How do language and religion reflect the cultural division in Western Europe?
- b. Which Western European leaders tried to unify Europe through conquest?
- c. In what way does Western Europe have a diverse economy?

4 Geographic Thinking

How does the economic strength of a nation affect its willingness to welcome immigrants? Think about:

- · whether immigrants are more welcome when jobs are scarce or plentiful
- the experience of Germany since the 1980s



MAKING COMPARISONS Study the two maps on page 299. Create a Venn Diagram showing the businesses that France and Germany have in common and those that each have separately.

Making Generalizations

Northern Europe

A HUMAN PERSPECTIVE In World War II, Germany perfected a new military tactic, the blitzkrieg. Using a massive force of dive-bombers, tanks, and artillery, the German army rapidly surprised, attacked, and defeated a foe before it could mount a defense. Germany used blitzkriegs to invade Poland, Belgium, the Netherlands, and France. But Germany couldn't launch a swift land attack against the United Kingdom on the island of Great Britain. Germany tried to destroy Britain by first bombing it from the air, but such a campaign took time, so Britain was able to fight back. In time, Britain and its allies won the war. Throughout its history, Britain's status as an island has been a geographic advantage.

A History of Seafaring Conquerors

Today, Northern Europe consists of the United Kingdom, Ireland, and the Nordic countries. The **Nordic countries** are Denmark, Finland, Iceland, Norway, and Sweden. The history of this region has been a history of using the sea and of conquest.

EARLY CONQUERORS In ancient times, waves of migrating people settled Northern Europe. Each new group tended to push the previous residents out of its way. As a result, the earlier groups ended up living at the tips or along the coasts of Northern Europe's peninsulas and islands. For example, the Sami, descendants of one of the earliest migrating groups, now live in far northern Scandinavia and Finland.

The ancient inhabitants of Great Britain were Celtic. Roman armies conquered southern Britain by about A.D. 80. In the 400s, Germanic tribes invaded, driving out the Romans and gradually pushing the Celts north and west.

Beginning about 795, a group of seafaring warriors from Denmark, Norway, and Sweden terrorized Europe. These Norsemen, or Vikings, sailed in long ships to coastal towns and conducted hit-and-run raids. They conquered parts of Britain and sailed to Iceland, Greenland, and even North America. They also had a settlement in Normandy (a part of France named for the Norsemen) and moved into Russia.

In 1066, William the Conqueror of Normandy conquered England (the largest kingdom in Britain) and began to rule it. The Normans spoke French, and over time the English language acquired many words of French origin.

Main Ideas

- The United Kingdom and the Nordic countries have seafaring histories that often led to conquest.
- The region played a role in developing representative government and industry.

Places & Terms

Nordic countries Silicon Glen parliament euro

CONNECT TO THE ISSUES UNIFICATION Some nations in Northern Europe have held back from full participation in the European Union.

MOVEMENT This helmet is from Sutton Hoo, a burial site in England that included a ship. Some scholars think that site shows Viking influence. **DREAMS OF EMPIRE** Denmark, Sweden, and Norway each became a kingdom during the 900s. Sweden was a strong power in the 1600s, but no Nordic country ever became a major empire.

In contrast, Great Britain built an empire that strongly affected the rest of the world. First, the English set out to control the British Isles. Over time, England won control of its neighbors, Wales, Ireland, and Scotland. In 1801, the nation became known as the United Kingdom of Great Britain and Ireland.

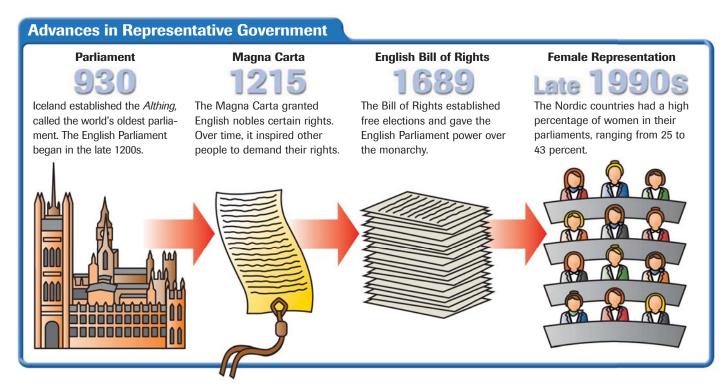
Britain drew on its geographic advantages to grow in strength. As you read earlier, Britain's status as an island helped protect it. After 1066, no outside power ever successfully invaded Britain. In addition, the British people had much experience as sailors. This helped them to build a strong navy and to develop overseas trade.

Drawing on its economic and naval strength, Great Britain built a global empire. By the 1800s, it had colonies in the Americas, Asia, Africa, and Oceania. A popular saying declared, "The sun never sets on the British Empire." One consequence of the empire is that the English language and British culture spread worldwide.

Moving into the Modern Age

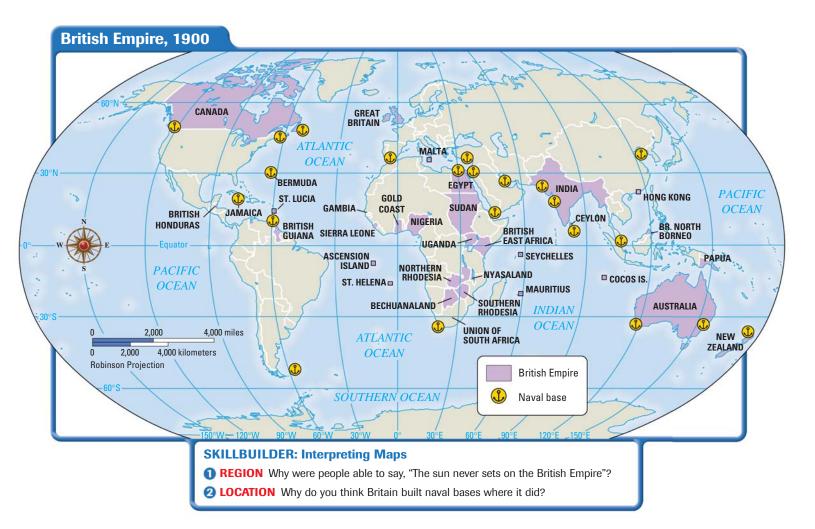
Great Britain played a role in shaping our modern world in two ways. It helped to develop representative government. Also, the industrial revolution started in Britain and spread to other countries.

REPRESENTATIVE GOVERNMENT Britain's government is a monarchy that also has a parliament. A **parliament** is a representative lawmaking body whose members are elected or appointed. (In some cases, they inherit the position.) Over the centuries, English rulers lost power to the English Parliament, so a more representative government evolved. For example, in 1215 nobles forced the king to sign the Magna Carta. That





Seeing Patterns Why would a strong navy be helpful in building an empire?



document inspired such political ideas as trial by jury and no taxation without representation. Those ideas later spread to the United States, Canada, and various British colonies.

The Nordic countries also developed representative government. Iceland's parliament, which has been meeting since 930, is the oldest parliament in the world.

INDUSTRIAL REVOLUTION As you read in Chapter 12, deposits of iron ore and coal helped Britain to be the first nation to industrialize. Industry used coal as fuel and iron to make machinery. The growth of industry motivated Britain's empire building. Britain imported raw materials from its colonies and sold finished goods to those colonies.

In the 1800s, the industrial revolution spread from Britain to other countries, especially Belgium, France, Germany, and the United States. Of the Nordic countries, Sweden developed the most industry.

SINCE 1900 In the 20th century, the Nordic countries did not heavily involve themselves in other nations' affairs. But Great Britain played a major role in both world wars, fighting as one of the victorious Allies.

After World War II, the British Empire underwent major change as nearly all of its colonies gained independence. Since then, some former colonies, such as Nigeria, have had ethnic conflicts. Many of the conflicts arose because the British had set the boundaries of their colonies without regard to where rival ethnic groups lived. (See the Case Study in Unit 6, on pages 468–471.)

BACKGROUND

As you learned in Chapter 12, France, Belgium, and Germany also had coal deposits. That promoted industrial growth. **THE IRISH QUESTION** The British still face a problem that has roots in the past. Protestant English rulers strengthened their hold on Catholic Ireland by seizing Irish land and giving it to Scottish and English Protestants. That left many Irish in poverty. In the 1840s, potato crops failed and caused famine. Over a million Irish fled to other lands.

Many Irish called for independence, and in 1921, Britain divided Ireland into two states. The Republic of Ireland gained independence in 1921. Northern Ireland, which had a Protestant majority, remained part of the United Kingdom. Since then, religious conflict and anti-British violence have plagued Northern Ireland.

Economics: Diversity and Change

Today, Northern Europe has a highly developed and varied economy. Manufacturing and traditional economic activities such as fishing and forestry remain important. As is true in all developed countries, the service and information economies are growing.

INDUSTRY AND RESOURCES Sweden and the United Kingdom have many types of manufacturing in common. For example, both nations have strong motor vehicle and aerospace industries. Both also produce paper products, food products, and pharmaceuticals.

Northern Europe's economy benefits from its many natural resources. Sweden exports timber. Iceland relies heavily on its fishing industry and the production of fish products. Norway earns a large portion of its income from North Sea oil.

HIGH-TECH Technology is swiftly changing the economy of Northern Europe. For example, the production of computer software and hardware has been a major part of Ireland's economy since the 1970s. The section of Scotland between Glasgow and Edinburgh is called **Silicon Glen** because it has so many high-tech companies (which use silicon computer chips). Silicon Glen produces 32 percent of Europe's personal computers and 51 percent of Europe's notebook computers.

UNION OR INDEPENDENCE? Most nations of this region joined the European Union (EU), but Norway has chosen not to do so. Even in nations belonging to the European Union, people have mixed feelings about the EU policy that they should adopt a common currency called the **euro**. In September 2000, Denmark voted against adopting the euro. Economics professor Jesper Jespersen agreed with that decision. He said, "I believe Denmark should retain its own currency . . . [because] our economy is in many ways independent of the eurozone [the region using the euro]." (See the Case Study on pages 326–329 for more about the EU.)

Connect TO THE ISSUES

Norway Rejects the EU

In 1994, Norwegians voted 52 percent to 48 percent against joining the European Union. Norway did not become a separate nation until 1905, so many Norwegians feared losing their independence and national identity.

Another reason for the vote against joining is that the economy was booming. This prosperity was due to Norway's status as the world's second-largest exporter of crude oil. Some Norwegians feared that Norway would lose control over its valuable oil resources if it joined the EU.





Seeing Patterns How have politics, economics, and religion all contributed to the conflict in Northern Ireland?

BACKGROUND

The word *glen* is from the Scottish term for valley.

Cultural Similarities and Modern Art

Throughout most of history, Northern Europe has not been culturally diverse. Even today, the Nordic nations have populations that consist mostly of one ethnic group. In recent years, however, the United Kingdom, particularly its capital London, has grown more diverse. That is partially due to immigration from former colonies, such as India. By the year 2005, more than 1.8 million of London's 7.2 million residents belonged to an ethnic minority.



MOVEMENT

Portobello Road in London has antique shops and stalls. As shown here, immigration has given London a diverse population. What might draw people to a city like London? **SIMILAR LANGUAGES AND RELIGIONS** The language map on page 267 shows the effect of historic migrations into this region. Most people of Northern Europe speak a Germanic language. When Germanic tribes migrated to the Scandinavian Peninsula and the British Isles, they pushed the previous inhabitants north and west. Today, the Sami language is spoken in the far north. Celtic languages such as Welsh, Irish Gaelic, and Scottish Gaelic survive on the northern and western edges of the British Isles.

The Reformation, which began in nearby Germany in the 1500s, swept through Northern Europe. Several different Protestant churches took root there. Most of the region is still Protestant. Only Ireland kept Catholicism as its main faith.

MODERN CULTURE AND LITERATURE The Nordic countries have influenced many modern cultures. The Norwegian playwright Henrik Ibsen is sometimes called the father of modern drama. Ingmar Bergman, a

Swedish director, influenced movies with his intensely personal films. Both men raised psychological issues in their work that remain important in modern life.

Great Britain and Ireland have had their strongest artistic influence on world literature. Many people consider William Shakespeare the greatest playwright of all time. Nearly 400 years after his death, his works are still performed on stage and also adapted for movies. The English poet William Wordsworth popularized the use of everyday speech in poetry. English novelists of the 1800s, such as Charlotte Brontë, influenced later novels. The Irish novelist James Joyce shaped modern fiction by exploring techniques to portray human thought.

Life in Northern Europe

In Northern Europe, most people live in cities and have a high standard of living. One aspect that distinguishes Northern Europe from most other regions is that its women have made great strides toward political equality. In the late 1990s, women made up 25 percent of the parliament in Iceland, 36 percent in Norway, 37 percent in Finland and Denmark, and 43 percent in Sweden.

SOCIAL WELFARE Overall, the governments of Northern Europe take great responsibility for the welfare of their people. This is especially true



Using the Atlas Refer to the language map on page 267. Which Germanic languages are spoken in Northern Europe? of the Nordic countries, which provide many welfare services for their citizens. For example, Finland, Norway, and Sweden give families a yearly allowance to help raise their children. The Nordic governments help fund national health insurance programs. Britain also has a national health insurance program. To pay for the programs, the people in those countries have very high taxes.

DISTINCTIVE CUSTOMS Some social customs of Northern Europe have gained worldwide fame. For example, the British are known for afternoon tea, a small meal of sandwiches, breads, cakes, and tea. Swedes developed the smorgasbord. It is a large assortment of hot and cold dishes served buffet style. Finns are famous for their sauna, in which people sit in a hot room to work up a sweat that cleans the skin's pores. Afterward, they plunge into a cold bath or icy lake.

LEISURE Even though the Nordic countries have some of the coldest climates in Europe, outdoor sports remain popular there. Some of the sports in the winter Olympics developed in Norway and the other Nordic countries. They include cross-country skiing and ski jumping.

Many British enjoy horseback riding, horse jumping, and fox hunting. These traditionally were pastimes for the wealthy upper classes on their large country estates. In addition, the British developed two sports that are unique. Rugby is a form of football, and cricket is played with a ball, a bat, and wickets. Spread by British colonialism, cricket is played around the world.

In Section 4, you will read about Eastern Europe, a region that continues to be torn apart by ethnic conflicts.

MOVEMENT

Tea Time

Nothing seems more English than tea, but it is really an import from Asia. Dutch traders introduced tea to Europe, and it was sold for the first time in England in 1657. Tea soon became Britain's national beverage.

Perhaps one reason for its popularity is that clean water was scarce; boiling water for tea purified it. Tea also had caffeine, giving tea drinkers energy during the long stretch between the midday meal and supper. The custom of taking food with afternoon tea began in the 1800s.



Assessment

Places & Terms

Identify these terms and explain their importance in the region's history, culture, or economy.

- Nordic countries
- parliament
- Silicon Glen
- euro

BACKGROUND

Sweden's close-

ness to the sea,

feature a variety

of seafood such

as salmon and

herring.

smorgasbords

Because of

2 Taking Notes

REGION Review the notes you took for this section.



- Where did the Industrial Revolution begin and to where did it spread?
- What are some characteristics of governments in Northern Europe?

3 Main Ideas

- **a.** How did conquest influence the languages spoken in Northern Europe?
- **b.** How did the Industrial Revolution spur the growth of Britain's empire?
- **c.** How did the Reformation affect Northern Europe?

Geographic Thinking

Determining Cause and Effect Why is there conflict in Northern Ireland? **Think about:**

- the history of Britain's relationship with Ireland
- religious differences
- arguments for and against a union of the Republic of Ireland and Northern Ireland



SEEING PATTERNS Compare the map on page 304 with the world map on pages A4 and A5 to learn the present names of former British colonies. Then do research to learn which former colonies still use English as an official language. Present this information on a **chart.**

INTER**ACTIVE**

Comparing Cultures

Geographic Sports Challenges

Over time, humans have found ways to enjoy even the most forbidding climates and terrains. Some popular sports evolved from activities that people used to overcome geographic challenges, such as mountains or snowy climates. Other sports were created to take advantage of special geographic features, such as recurring winds or waves. On these two pages, you will learn about geographically inspired sports from around the world.



Surfing, shown here off the coast of Australia, dates back to prehistoric times. It may have originated when Polynesian sailors of the Pacific Islands needed to reach land from large canoes floating offshore.

Skiing originated as a means of travel in northern Europe, and ski jumping probably evolved in hilly Norway. In 1924, ski jumping became an Olympic sport. Competitors are judged not only on how far they jump but also on the technique they use.

Norway

United States

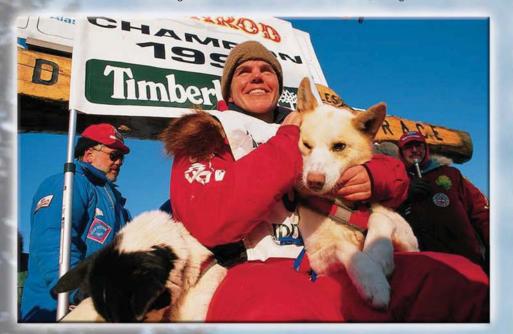
Mexico

Australia



Acapulco, Mexico, is famous for its cliff diving. This dangerous sport often involves diving from heights nearly three times higher than those used in Olympic platform diving. Cliff divers have been killed by hitting their heads on rocks.

The Iditarod Sled Dog Race is held in Alaska. Susan Butcher, shown here, was the first person to have won it three years in a row. The Inuit people first used sled dogs to travel across snow-covered terrain; racing evolved later.



GeoActivity

EXPLORING MOUNTAIN CLIMBING

Working with a small group, use the Internet to research mountain climbing, another geographic sports challenge. Then create a **presentation** about the sport.

- Draw a world map, label popular mountains to climb, and give their altitudes.
- Make a chart listing the dangers of mountain climbing.



GeoData

Skiing

- Skis that are more than 4,000 years old have been found in Scandinavian bogs.
- Skiing was once a military skill. Norwegian troops skied in the Battle of Oslo in 1200.

Surfing

- The explorer James Cook first reported seeing surfing in 1778.
- European missionaries banned surfing in 1821. It was revived in 1920 by a Hawaiian, Duke Kahanamoku.

Cliff Diving

- Women did not compete at Acapulco until 1996.
- Divers enter the water at speeds of up to 65 mph.

Sled Dog Racing

- The Iditarod honors a 1925 emergency mission to deliver medicine to Nome, Alaska.
- During the 1985 race, a moose charged across Susan Butcher's path. The collision that resulted killed 2 dogs and wounded 13 other dogs.



A HUMAN PERSPECTIVE Eastern Europe has many plains that allow invaders to move from east to west and vice versa. In World War II, Germany invaded the Communist Soviet Union, killing millions. After the war, the Soviet Union decided to protect itself from invasion by setting up a political barrier. So it established Communist governments in the nations of Eastern Europe, which lay between the Soviet Union and its enemies to the west. Soviet dictator Joseph Stalin wanted Eastern Europe to "have governments whose relations to the Soviet Union are loyal." For decades, the Soviet Union crushed political reform and free trade in Eastern Europe. The region is still recovering.

History of a Cultural Crossroads

Eastern Europe's location between Asia and the rest of Europe shaped its history. Many groups migrated into the region, creating great diversity. Strong empires ruled parts of Eastern Europe, delaying the rise of independent nation-states there. Today the region includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Hungary, Macedonia, Poland, Romania, Slovakia, Slovenia, and Serbia and Montenegro.

CULTURES MEET Eastern Europe is a **<u>cultural crossroads</u>**, or a place where various cultures cross paths. Since ancient times, people moving between Europe and Asia-traders, nomads, migrants, and armieshave passed through this region. Because the region is an important crossroads, many world powers have tried to control it.

Main Ideas

- Eastern Europe has great cultural diversity because many ethnic groups have settled there.
- Many empires have controlled parts of the region, leaving it with little experience of self-rule.

Places & Terms

cultural crossroads balkanization satellite nation market economy folk art anti-Semitism

CONNECT TO THE ISSUES CONFLICT Nationalism and ethnic differences have fueled conflicts that have torn apart the Balkans in recent times.

Eastern European History, 1389–2000

1389 The Ottoman Empire defeats the Serbs at the Battle of Kosovo. 1566

Suleiman I, the Ottoman ruler, dies during a siege in Hungary.



1686 The Austrians drive the Ottomans out of Hungary.

1867

Hungary demands equal status with Austria. The empire becomes Austria-Hungary.

CONFLICT AMONG EMPIRES

1618

Bohemia (now the Czech Republic) revolts against its Austrian ruler, starting the Thirty Years' War.

1795 The Russian ruler Catherine the Great divides Poland among Russia, Prussia, and Austria.



BACKGROUND

Romania means "land of the Romans."

CONNECT TO THE ISSUES CONFLICT What might

happen if two different ethnic groups wanted to establish a nation on the same land? **EMPIRES AND KINGDOMS** By about A.D. 100, ancient Rome held the Balkan Peninsula, Bulgaria, Romania, and parts of Hungary. After the Roman Empire was split, the Byzantine Empire held onto those lands for centuries. In the 1300s and 1400s, the Ottoman Empire of Turkey (see Unit 7) gradually took over the southern part of Eastern Europe.

Various Slavic groups moved into Eastern Europe from the 400s through the 600s. Several kingdoms, such as Poland in the north and Serbia on the Balkan Peninsula, formed. In the late 800s, a non-Slavic group called the Magyars swept into what is now Hungary and in time established a kingdom. The Ottomans later conquered it.

Beginning in the 1400s, the nation of Austria became a great power. Austria drove the Ottomans out of Hungary and took control of that state. In the late 1700s, Austria, Prussia (a German state), and Russia divided up Poland among themselves. Poland ceased to exist.

Turmoil in the 20th Century

Responding to centuries of foreign rule, most ethnic groups in Eastern Europe fiercely guarded their identities. Many wanted their own nationstates, even though few had a history of self-rule. These characteristics sparked many conflicts in Eastern Europe during the 20th century.

WAR AFTER WAR By 1908, the Balkan nations of Bulgaria, Greece, Montenegro, Romania, and Serbia had broken free from the Ottoman Empire. In 1912, Greece, Bulgaria, and Serbia went to war against the Ottomans, who lost most of their remaining European territory. In 1913, the Balkan countries fought over who should own that territory. Their actions led to a new word, **balkanization**. The term refers to the process of a region breaking up into small, mutually hostile units.

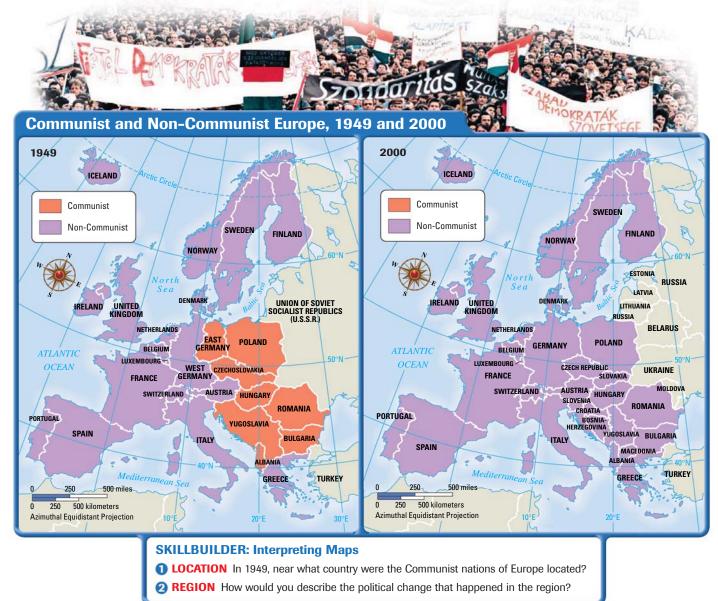
The Slavic nation of Serbia also wanted to free the Slavs in Austria-Hungary. In 1914, a Serb assassinated an Austrian noble, sparking World War I. Austria-Hungary and Serbia each pulled their allies into the conflict until most of Europe was involved. After the war, Austria and Hungary split apart. Albania, Bulgaria, Czechoslovakia, Poland, and Yugoslavia gained independence. The Ottoman Empire ended and was replaced by the nation of Turkey.

1946-1948 1989 1914 1939 Czechoslovakia, A Serb kills Germany overruns Communist governments are Hungary, Romania, Austrian Archduke Poland. World War II starts. set up in Eastern and Poland end Francis Ferdinand. Europe. Communist rule. World War I erupts. **COMMUNISM AND DEMOCRACY Two World Wars** 1945 2000 1918 Josip Broz Yugoslavia elects a The Kingdom of Serbs, Tito becomes reform leader. Croats, and Slovenes (now Vojislav Kostunica, dictator of Yugoslavia) is created. Yugoslavia as president. In 1939, Germany seized Poland, starting World War II. Near the end of that war, the Soviet Union advanced through Eastern Europe as part of an Allied strategy to crush Germany from two sides. The Soviet Union later refused to withdraw from Eastern Europe until it had set up Communist governments there. Eastern Europe became a region of <u>satellite nations</u>—nations dominated by another country.

RECENT CHANGES The Soviet Union controlled Eastern Europe for four decades. But by the late 1980s, the Soviet Union had severe economic problems, and a new leader, Mikhail Gorbachev, was making reforms. As one reform, he gave Eastern Europe more freedom.

The impact was dramatic. Eastern Europeans demanded political and economic reforms. In 1989, Czechoslovakia, Hungary, Poland, and Romania ended Communist control of their governments and held free elections. In 1990, Bulgaria and Yugoslavia followed suit.

Instability followed. The old governments had taught people to be loyal only to the Communist Party. After those governments fell, people



MOVEMENT In 1989, the desire for democracy swept Eastern Europe. Country after country saw demonstrations like this one in Budapest, Hungary. returned to ethnic loyalties. That was especially true in Yugoslavia, a nation consisting of six republics. In the early 1990s, four of the six Yugoslav republics voted to become separate states. Serbia objected, leading to civil war. (See Chapter 14 for details.) In contrast, Czechoslovakia peacefully split into the Czech Republic and Slovakia.

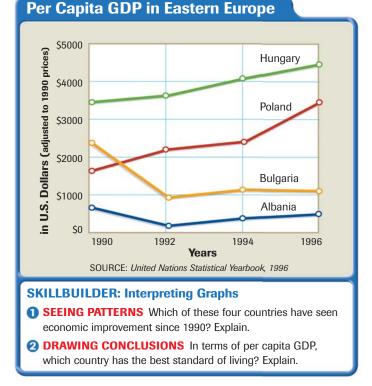
Developing the Economy

Because of its fertile plains, Eastern Europe has traditionally been a farming region. After 1948, the Soviet Union promoted industry there.

INDUSTRY Under communism, the government owned all factories and told them what to produce. This system was inefficient because industries had little motive to please customers or to cut costs. Often, there were shortages of goods. Eastern European nations traded with the

Soviet Union and each other, so they didn't keep up with the technology of other nations. As a result, they had difficulty selling goods to nations outside Eastern Europe. And their outdated factories created heavy pollution.

After 1989, most of Eastern Europe began to move toward a **market economy**, in which industries make the goods consumers want to buy. Many factories in Eastern Europe became privately owned instead of state owned. The changes caused problems, such as inflation, the closing of factories, and unemployment. Since then, however, many factories have cut their costs and improved production. As a result, the Czech Republic, Hungary, and Poland have all grown economically.



LINGERING PROBLEMS Some

Eastern European nations have had trouble making economic progress—for many different reasons.

- Albania's economic growth is slowed by old equipment, a lack of raw materials, and a shortage of educated workers.
- Few of Romania's citizens have money to invest in business. In addition, the Romanian government still owns some industries. Foreigners don't want to invest their money in those industries.
- The civil wars of the 1990s damaged Yugoslavia and its former republics of Bosnia and Herzegovina and Croatia. Equipment and buildings were destroyed; workers were killed or left the country.

In general, it will take years for Eastern Europe to overcome the damage caused, in part, by decades of Communist control.

CONNECT TO THE ISSUES UNIFICATION Do you think the nations of

the nations of Eastern Europe wanted to join the European Union? Why or why not?

A Patchwork Culture

Because Eastern Europe contains a variety of ethnic groups, the region as a whole is a patchwork of different languages and religions.

CULTURAL DIVERSITY The map on page 267 shows the languages of Eastern Europe. The number of languages makes it difficult to unify the region. In some places, the national language is most closely related to a language spoken in a different region. For example, Hungarian is related to Finnish, and Romanian is related to Italian, French, and Spanish. Neither are related to the Slavic languages of the countries around them. This pattern was created by long-ago migrations.

Similarly, many different religions can be found in Eastern Europe. The Roman Empire introduced Catholicism, and after Rome fell, the Byzantine Empire spread Eastern Orthodox Christianity. Some countries also have a Protestant minority. And under the Ottoman Empire, some Eastern Europeans converted to Islam.

The region also has a small Jewish minority. Jews once made up a much higher percentage of Eastern Europeans, but in the Holocaust, Nazi Germany killed 6 million Jews. About half of them were from Poland. After World War II, many surviving Jews migrated to Israel.

FOLK ART Religious belief, rural customs, and Byzantine art have all influenced Eastern European folk art. In general, **folk art** is produced by rural people with traditional lifestyles instead of by professional artists. Eastern European folk artists create items such as pottery, woodcarving, and embroidered traditional costumes.

Many Eastern European ethnic groups also have their own folk music. This music influenced the region's classical musicians. Frédéric Chopin based some of his piano music on Polish dances. Anton Dvořák wove Czech folk music into his compositions.

Moving Toward Modern Life

Since their Communist governments fell, many Eastern Europeans have expressed a longing for more economic growth and political freedom. These goals provide the region with some major challenges.

LESS URBAN DEVELOPMENT Eastern Europe has several large cities, such as Prague in the Czech Republic. More than 1,000 years old, Prague is one of Europe's most interesting cities, with quaint buildings, a rich history of music and culture, and thriving industries.

In general, though, Eastern Europe is much less urban than the rest of Europe. For example, the percentage of city dwellers is only 40 percent in Bosnia and Herzegovina and only 37 percent in Albania.

As Eastern Europe develops more industry, its cities will grow. That will have both positive and negative effects. Cities are often places of culture, learning, and modern technology. But urban growth creates problems such as pollution, traffic jams, and housing shortages.

CONFLICT As you read earlier, many Eastern Europeans have fierce loyalties to their own ethnic groups. One result of that has been conflict. For example, many Serbs hate Croats (KROH•ATS) because they believe the Croats betrayed them in World War II by working with the Nazis.



Seeing Patterns Why do you think folk art has remained important in Eastern Europe?

These figures are folk art depictions of

traditional costumes from the mountains of southern Poland.





PLACE Crossing the Vltava River in Prague is the famous 650-yearold Charles Bridge. The bridge is now reserved for pedestrians. Why do you think cars are banned from this bridge?

Eastern European minority groups have often faced discrimination. Throughout history, Jews have suffered from **anti-Semitism**, which is discrimination against Jewish people. Another minority that experiences prejudice is the Romany, or Gypsy, people who are scattered across Eastern Europe. Traditionally, the Romany have moved from place to place. Because of this, other groups often look down on them.

DEMOCRACY To obtain true democracy, Eastern Europeans need to overcome old hatreds and work together. They also need to accept democratic ideals such as the rule of law—which means that government officials must obey the law. The dictators that ruled Eastern Europe in the past did not do so. But in recent years, Eastern Europeans have often held their leaders accountable. For example, in 2000, the Yugoslav people forced a dictator to accept election results that turned him out of office. You will read about this event in Chapter 14, along with other major issues of European life today.

Assessment

1) Places & Terms

Identify these terms and explain their importance in the region.

- cultural crossroads
- balkanization
- satellite nation
- market economy
- folk art
- anti-Semitism

2 Taking Notes

REGION Review the notes you took for this section.



- What country dominated Eastern Europe after World War II?
- What problems did the move toward a market economy cause?

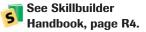
3 Main Ideas

- a. Why is Eastern Europe considered a cultural crossroads?
- b. What role did the Soviet Union play in the rise and fall of communism in Eastern Europe?
- c. What are some important ways that Eastern Europe is different from Western Europe?

4 Geographic Thinking

Making Inferences The Balkan region has been called the "powder keg of Europe." Why do you think it earned that name? **Think** about:

- the wars in 1912 and 1913
- World War I





EXPLORING LOCAL GEOGRAPHY Like Eastern Europe, most places in the United States have been controlled by various cultural groups or nations over time. Research the history of your area and create a **time line**, like the one on pages 310-311, listing changes in control.

Chapter (E) Assessment

VISUAL SUMMARY HUMAN GEOGRAPHY OF EUROPE

Subregions of Europe

Mediterranean Europe

- The influence of ancient Greece, ancient Rome, and Renaissance Italy on art, philosophy, religion, and language shaped modern life.
- In the late 1900s, Mediterranean Europe began to have more manufacturing and service industries.

O Western Europe

- Germany and France developed very different cultures, and throughout history, conflicts between them involved much of Europe.
- Western Europe has a highly developed economy. It is a leader in the economic and political alliance known as the European Union.

Northern Europe

- This region was a leader in the Industrial Revolution and the rise of representative government.
- The region has a history of seafaring conquerors. Great Britain established an empire that spread British culture and the English language worldwide.

🔴 Eastern Europe

- Because it is a cultural crossroads, Eastern Europe has a diverse culture with many ethnic groups.
- Domination by outside powers, most recently the Soviet Union, has characterized the region's history.



Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

city-state
 republic

3. Benelux

- **7.** euro
 - 8. cultural crossroads
- 4. nationalism
 5. Berlin Wall
- 9. balkanization

6. Nordic countries

satellite nation

B. Answer the questions about vocabulary in complete sentences.

- 11. Which of the terms above are the names of regions?
- **12.** Would a supporter of nationalism want to adopt the euro? Explain.
- 13. Which of the terms above have to do with conflict?
- **14.** In which part of Europe did the countries become satellite nations of the Soviet Union?
- **15.** How does the geographic theme of movement relate to a cultural crossroads?
- **16.** Which ancient civilization was organized into city-states and which was a republic?
- 17. In what part of Europe is Benelux found?
- 18. What is the origin of the term balkanization?
- **19.** Which of the terms above can also be applied to the United States? Explain.
- 20. Which two major peninsulas are found in the Nordic countries?

Main Ideas

Mediterranean Europe (pp. 289–295)

- 1. What legacy did ancient Athens leave for modern governments?
- **2.** What effect did the empires of Spain and Portugal have on the rest of the world?
- 3. Why does Spain have a conflict with the Basque people?

Western Europe (pp. 296-301)

- 4. How did the Reformation create new cultural divisions?
- 5. How did nationalism lead to conflicts?
- 6. For what artistic legacy are Germany and Austria famous?

Northern Europe (pp. 302–309)

- 7. Who were the Vikings, and what did they do?
- 8. What geographic advantages helped Great Britain build its empire?

Eastern Europe (pp. 310-315)

- **9.** Why did independent nation-states develop later in Eastern Europe than in Western Europe?
- **10.** What problems existed in the Eastern European economy under Communist rule?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.



- a. What similarities exist between the ways the Roman Empire and the British Empire influenced other regions of the world?
- b. In what ways are Eastern Europe and Northern Europe different?

2. Geographic Themes

A Divided Germany

questions.

- a. LOCATION Do you think the location of France and Germany relative to the rest of Europe is a geographic advantage or disadvantage? Explain.
- b. **MOVEMENT** What geographic reason might account for the fact that Spain and Great Britain colonized much of the Americas?

Geographic Skills: Interpreting Maps

Use the map to answer the following

was the city of Berlin located?

was closer to the Soviet Union?

West Germany was divided into

showing the zones.

compare with that of East Germany?

3. LOCATION Which of the two Germanys

GeoActivity

several zones after World War II. Use

learn which three countries controlled

INTERNET ACTIVITY

those zones. Create a historical map

a history book or historical atlas to

3. Identifying Themes

Explain which countries were the first to develop industry and which developed industry later. If you identify those countries on a map, what spatial patterns do you see? Which geographic themes relate to your answer?

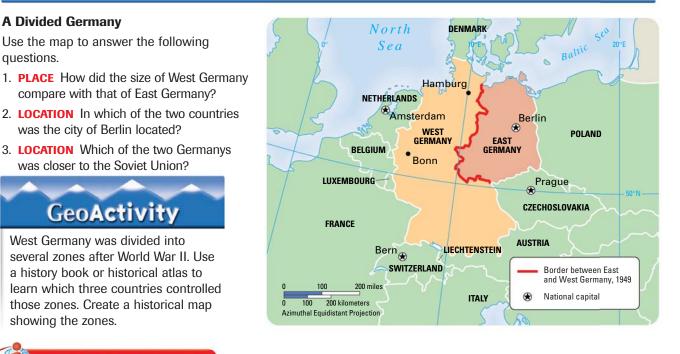
4. Seeing Patterns

How did ancient migrations affect the pattern of where certain languages are spoken in Europe today? Give examples.

5. Making Inferences

Millions of Europeans have migrated to other parts of the world. What are some geographic factors that you think might have encouraged this?





Use the links at classzone.com to do research about the population of a single society in Europe. Look for such information as age distribution, religions, ethnic or minority groups, and literacy rates.

Constructing a Population Pyramid Use the information you have gathered to construct a population pyramid describing the population characteristics of the European society you have chosen.

Chapter

1 **SECTION 1** Turmoil in the Balkans

SECTION 2 Cleaning Up Europe

CASESTUDY THE EUROPEAN UNION

For more on these issues in Europe . . . CURRENT EVENTS CLASSZONE.COM

Throughout the 1990s, ethnic conflict tore apart the Balkan region.

Geo**Focus**

How can international cooperation resolve issues?

Taking Notes In your notebook, copy a cause-and-effect chart like the one shown below. Then take notes on the causes and effects of the issues.

	Causes	Effects
lssue I: Conflict		
lssue 2: Pollution		
Case Study: Unification		

TODAY'S ISSUES Europe

Turmoil in the Balkans

How can people resolve their differences?

A HUMAN PERSPECTIVE The Serbian leader <u>Slobodan Milošević</u> (SLOH•buh•DAHN muh•LOH•suh•VIHCH) tried to increase Serbia's power over the rest of Yugoslavia. As a result, in 1991 and 1992, four republics left Yugoslavia. Serbia went to war against them but lost. In 1999, an international court accused Milošević (who was the Yugoslav president by then) and Serbian troops of war crimes in those conflicts. Many nations ended trade with Yugoslavia in protest, and the country grew poorer.

In 2000, Yugoslavia voted Milošević out of office. When he refused to accept the election results, thousands of people protested until he admitted defeat. In doing so, the Yugoslav people showed that they wanted peace and a normal relationship with the world. This may have been a turning point in the long history of conflict in the Balkans.

Roots of the Balkan Conflict

One conflict in the Balkans is that different groups want control of the same land. The causes of this conflict go back centuries. In the 500s, Slavic people migrated from Poland and Russia and settled in the Balkan Peninsula. They were called the **South Slavs**. Each group of South Slavs (the Croats, the Slovenes, and the Serbs) formed its own kingdom.

FOREIGN RULERS In the 1300s, the Muslim Ottoman Empire tried to conquer the Balkan Peninsula. In 1389, the Ottomans defeated the Serbian Empire at the Battle of Kosovo Polje. The Ottomans also ruled Bosnia and Herzegovina. Elsewhere in the Balkans, Austria ruled Slovenia, and Hungary ruled Croatia. Over time, foreign rule created differences among the South Slavs. For instance, under Muslim rule, the Serbs clung to Christianity, while many Bosnians converted to Islam.

Both Serbs and Albanians had lived in Kosovo, a part of the Serbian Empire. When the Muslims seized power, many Serbs fled Kosovo, so the region became more Albanian in culture.

YUGOSLAVIA IS FORMED In 1878, Serbia broke free of the Ottoman Empire. Many Serbs wanted all the South Slavs to be free of foreign rule and to unite in one nation. That desire helped to spark World War I.

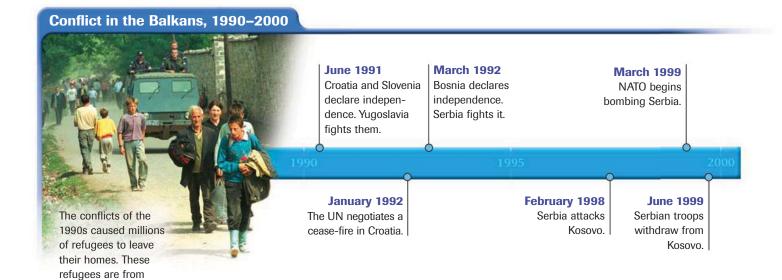
In 1918, the Kingdom of the Serbs, Croats, and Slovenes was formed. In 1929, the king renamed it Yugoslavia (which means "Land of the South Slavs") to help end ethnic divisions.

Main Ideas

- Yugoslavia was a nation of many ethnic groups distributed among six republics.
- When Serbia tried to dominate Yugoslavia, other republics broke away. This sparked conflict.

Places & Terms

Slobodan Milošević South Slavs ethnic cleansing KLA Vojislav Kostunica



COMMUNIST RULE During World War II, Germany and Italy invaded Yugoslavia. The Croats cooperated with the Nazis, and the Croat leader ordered the massacre of Jews and Serbs. Many other Yugoslavs joined the Chetniks or the Partisans, two rival groups fighting the Nazis.

One Partisan leader was Josip Broz Tito, head of the Communist Party. After the war, Tito became the dictator of Yugoslavia. He encouraged the Serbs, Croats, and other groups to think of themselves as Yugoslavs.

In 1946, a new constitution organized Yugoslavia into a nation of six republics: Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia, and Slovenia. Serbia had two self-governing provinces, Kosovo and Vojvodina. The map on page 322 shows that Croatia and Bosnia were ethnically mixed and contained many Serbs.

Ethnic Tension Boils Over

In 1980, Tito died, and the presidency began to rotate among leaders from the many republics and provinces. No single person ran the country.

FEAR OF SERBIA Slobodan Milošević began to propose the creation of a Greater Serbia. Serbia would expand its borders to include other territories with Serbian populations. This plan alarmed Croats and Bosnians. Then in 1991, Serbia blocked a Croat from becoming president.

In response, Slovenia and Croatia declared their independence. In June 1991, the Serbian-led Yugoslav army invaded both republics. The Slovenes quickly achieved freedom. But Croatia had a large Serbian minority, and past Serb-Croat hatreds exploded in all-out war. The fighting claimed thousands of lives before the United Nations arranged a cease-fire in January 1992. Slovenia and Croatia remained free.

WAR IN BOSNIA In March 1992, Bosnia and Herzegovina declared independence. Bosnia's Muslims and Croats backed the move, but its Serbs (and Serbia) launched a war to stop it. The Serbs used murder and violence to get rid of Bosnia's Muslims and Croats. The policy of trying to eliminate an ethnic group through violence is called <u>ethnic cleansing</u>. More than 200,000 people died, while over 2 million people fled their homes.

In 1995, the United States sponsored peace negotiations, and in December, a peace treaty was signed. Bosnia remained independent.

Geographic

Seeing Patterns How might having a mixed population affect the stability of Croatia and Bosnia?

BACKGROUND

By 1992, only Serbia and Montenegro remained part of Yugoslavia.

Kosovo.

WAR IN KOSOVO The Serbs had never forgotten their long-ago defeat at Kosovo Polje. They saw the province as a sacred part of Serbia's heritage. But in the 1990s, Kosovo was inhabited mostly by Albanians, who spoke a non-Slavic language and whose religion was Islam.

Serbia, led by Milošević, tried to assert control over Kosovo and to wipe out its Albanian culture. In response, Kosovo demanded independence. In the 1990s, a group called the Kosovo Liberation Army (**KLA**) began to carry out attacks against Serbian officials. The Serbian government responded by bombing villages and began a campaign of ethnic cleansing against Albanians.

In March 1999, NATO started bombing Serbia to force it to stop the violence. In June, Milošević withdrew his troops from Kosovo. After they pulled out, international officials found horrifying evidence that the Serbs had carried out tortures and massacres.

AN UNCERTAIN FUTURE In 2000, the Yugoslav people elected a reform leader named <u>Vojislav Kostunica</u> (VAW•yee•sLAHV kahsh•TOO•neet•sah) as president.

Even as Kostunica took office, the outlook for peace was unclear. Ethnic loyalties still created tension. The decade of wars had created millions of refugees. And the wars' destruction had created widespread poverty.

Another cause of tension was that many people in Kosovo and the republic of Montenegro wanted independence. In 2003, Serbia and Mongengro officially replaced what remained of the former Yugoslavia by becoming a new country called Serbia and Montenegro. Section 2 discusses an issue that affects not only the Balkans but all of Europe—pollution.

Land Mines

All over the world, land mines remain after war and cause countless injuries and deaths. Bosnia alone has an estimated 750,000 active mines.

Geograp

Scientists are trying to find ways to detect buried mines, so they can be removed. Some are using bees. Bees gathering pollen sometimes carry chemical traces from land mines to their hives. Sensors can be put in the hives to detect those chemicals. But scientists have to find a way to track the bees back to the mine fields.

Other scientists, such as the one below, are working to develop machines to detect buried mines.



EUROPE

Assessment

Places & Terms

Identify these terms and explain their relationship to the issue.

- Slobodan Milošević
- South Slavs

Geographic

Thinking

Comparisons

B How were

to its actions

in Bosnia and

Herzegovina?

Serbia's actions

in Kosovo similar

Making

- ethnic cleansing
- KLA

STION

Vojislav Kostunica

2 Taking Notes

PLACE Review the notes you took for this section.

	Causes	Effects
Issue I:		
Conflict		
\sim	\sim	\sim

- Where was the historic battle in which the Ottomans defeated the Serbs?
- Which two republics suffered brutal wars after independence?

3 Main Ideas

- a. How did Tito try to overcome the differences among ethnic groups in Yugoslavia?
- **b.** What was the plan to create Greater Serbia?
- c. How did the rest of the world get involved in the Balkan conflicts?

4 Geographic Thinking

Drawing Conclusions Was Milošević's effort to make Serbia stronger successful? Give examples. Think about:

- the reaction of other Yugoslav republics to Serbia's actions
- the reaction of the international community



MAKING COMPARISONS Working from a history book, historical atlas, or other resource, make a sequence of **maps** showing changes in the political boundaries of the Balkans over the last 100 years. Possible dates for maps include 1912, 1919, 1946, 1995, and 2003.

RAND MENALLY Map and Graph Skills

Interpreting a Thematic Map

This map shows the republics and provinces that made up the former country of Yugoslavia. It also shows the major ethnic and religious groups throughout the region. In the 1990s, civil wars raged throughout this part of Europe. These wars were rooted in centuries-old ethnic and religious conflicts. This map shows the ethnic distribution that contributed to those conflicts.

THE LANGUAGE OF MAPS A **thematic map** illustrates a specific feature, or features, of a region. As this map shows, thematic maps may use color to convey information.



Ethnic Groups in the Former Yugoslavia

The kev illustrates the colors used and what they represent. It also shows symbols for boundaries.

Pa The different colored areas on the map indicate the majority ethnic group in each area. The colors do not imply that no one from a different group lives in the area.

This map shows three types of political boundaries: the boundary of the former Yugoslavia, boundaries of the republics that were part of it, and boundaries of provinces that belonged to the republic of Serbia.

Map and Graph Skills Assessment

1. Analyzing Data

Which republics had Serbs as part of their populations?

2. Drawing Conclusions

What republic had the most diverse population?

3. Making Inferences

How did the ethnic composition of the most diverse republic relate to its relative location?

Cleaning Up Europe

How can Europeans clean up their environment?

A HUMAN PERSPECTIVE In January 2000, a gold mine in Romania released cyanide into local streams. The **cyanide**, a deadly poison, flowed into the Tisza River in Hungary. Before the accident, the river held some of Europe's rarest fish. The poison killed an estimated 80 percent of the fish in the Tisza. Balazs Meszaros, whose family has commercially fished the Tisza for generations, said, "Now I don't know how I am going to live." Even worse than the loss of jobs was the threat to health. Experts feared that the poison would seep into wells and contaminate crops and livestock. The damage will take years to undo.

Pollution is a complex example of human-environment interaction. People damage the environment, which in turn affects human lives. For instance, pollution is thought to cause 1 out of every 17 deaths in Hungary. Because cleaning up pollution is time-consuming, difficult, and costly, it remains a serious issue in Europe—and around the world.

Saving Europe's Water

As the story of the Tisza demonstrates, pollution rarely remains at its point of origin but often spreads to neighboring regions. As a result, water pollution is a problem that concerns almost all of Europe.

CAUSES OF WATER POLLUTION Mines and factories create much of Europe's water pollution. Industries often discharge chemicals into streams and rivers. Factories sometimes bury solid waste. Poisons from this waste seep into ground water and contaminate wells and rivers.

And, as you read in Chapter 12, the burning of coal and other fuels causes acid rain. Acid rain changes the chemistry of lakes and rivers, often killing fish.

The link between industry and pollution creates a dilemma. Most countries want to develop industry, and some accept environmental damage as the price they must pay for progress. Other nations force industry to use pollution controls, but these are usually expensive.

Main Ideas

- Pollution has many complex causes and results. It often spreads across borders, contaminating a region.
- The nations of Europe are cooperating to try to clean up their environment.

Places & Terms

cvanide **European Environmental** Agency particulates smog

ozone

The Voyageur Experience in World Geography Greece: Urbanization and the Environment

HUMAN-ENVIRONMENT INTERACTION A cyanide

spill poisoned Eastern Europe's streams and rivers. These dead fish are from the Tisza River in Hungary.

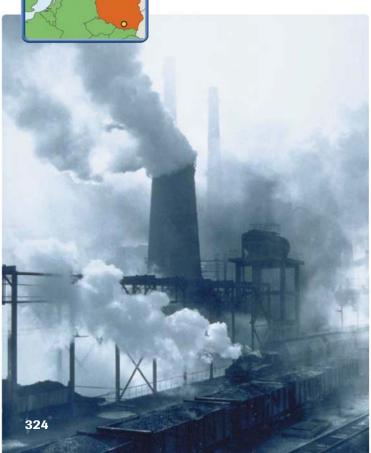


Industry is not the only source of water pollution. Other sources include the following:

- · Sewage Ideally, cities should have treatment plants that remove harmful substances from sewage before it is released into bodies of water. But in Poland, for example, from 1988 to 1990, 44 percent of the cities had no sewage treatment plants. The water in most of Poland's rivers is unsafe to drink. It has also contaminated the soil so that some crops are toxic.
- · Chemical fertilizers Rain washes fertilizers from fields into bodies of water, where they cause algae and plants to grow faster than fish can eat them. The plants and algae die and decay, a process that uses up oxygen. The lack of oxygen kills fish—which then decay, using more oxygen. In time, these bodies of water can no longer support life.
- Oil spills For example, in December 1999, a tanker sank off the west coast of France and spilled 10,000 tons of oil that spread along 250 miles of coastline. The oil killed tens of thousands of shorebirds.

CLEANING UP THE WATER Because water pollution spreads so easily, nations must cooperate to solve the problem. For example, pollution levels in the Rhine River rose sharply in the mid-1900s. To correct this, representatives from France, Germany, Luxembourg, the Netherlands, and Switzerland formed the International Commission for the Protection of the Rhine. Since it began meeting in 1950, the commission has recommended programs such as the treatment of sewage before it enters the Rhine. As a result, pollution of the Rhine has decreased.

In addition, the European Union has passed environmental laws that its member nations must obey. The EU also set up the European Environmental Agency, which provides the EU with reliable information about the environment.



Improving Europe's Air Quality

Although they are often considered separately, the different types of pollution are connected. For example, water pollution can be caused by air pollution-because rain washes chemicals out of dirty air and into bodies of water.

CAUSES OF AIR POLLUTION Air pollution is made up of harmful gases and **particulates**, very small particles of liquid or solid matter. Many human activities create air pollution by expelling these gases and particulates into the atmosphere.

• Using fossil fuels The burning of petroleum, gas, and coal causes much air pollution. It contributes

HUMAN-**ENVIRONMENT INTERACTION** This

mill in Nowa Huta, Poland, is making coke-a byproduct of coal. The smokestacks cause heavy air pollution.

What else besides the smokestacks might be causing air pollution?



BACKGROUND

The word *smog* was formed by combining the words *smoke* and *fog*.



Seeing Patterns Vou learned in Chapter 13 that Eastern Europe used old technology. How might this relate to pollution? to the formation of **smog**—a brown haze that occurs when the gases released by burning fossil fuels react with sunlight to create hundreds of harmful chemicals. One such chemical is **ozone**, a form of oxygen that causes health problems.

- Fires Forest fires caused by careless human behavior and the burning of garbage release smoke and particulates into the atmosphere.
- Chemical use Dry cleaning, refrigeration, air conditioning, and the spraying of pesticides are among the human activities that release harmful chemicals into the air.
- Industry Factories discharge chemicals such as sulfur into the air. The factories of former Communist countries have been especially heavy polluters. Because of this, air pollution levels are much higher in the former East Germany than in the United States.

RESULTING PROBLEMS Breathing polluted air can contribute to respiratory diseases such as asthma, bronchitis, and emphysema. Air pollution is also suspected to be one of the causes of lung cancer. In addition, air pollution harms livestock and stunts plant growth. It also causes acid rain, which kills forests and damages buildings, such as the famous Parthenon in Athens, Greece.

CLEANING UP THE AIR Individual European countries are passing laws to make their air safer to breathe. France, for example, now requires improved thermal insulation of new buildings. This reduces the need to burn fossil fuels for heat. Other European governments are also passing laws to protect the air.

Nations are also cooperating to clean the air. For example, in 1998, the members of the European Union agreed that, starting in 2000, they would require reduced emissions from cars and vans. As that example indicates, a leader in the effort to restore Europe's environment will be the European Union—which is discussed in the following Case Study.

Assessment

Places & Terms

Identify these terms and explain their relationship to the issue.

- cyanide
- European Environmental Agency
- particulates
- smog
- ozone

is 🛛 🕘 Taking Notes

HUMAN-ENVIRONMENT

INTERACTION Review the notes you took for this section.

	Causes	Effects
Issue Z:		
Pollution		
\sim	\sim	\sim

- What river has an international group been trying to save?
- What diseases are linked to air pollution?

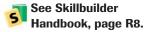
3 Main Ideas

- a. What dilemma is faced by countries that are developing industry?
- b. What is a harmful result of burning fossil fuels?
- **c.** Why is the European Union a leader in the fight against pollution?

4 Geographic Thinking

Seeing Patterns How are the different types of pollution interrelated? Think about:

 how air pollution, water pollution, and buried waste cause other types of pollution





EXPLORING LOCAL GEOGRAPHY Find out how your community deals with pollution. Learn about laws passed by your local government, environmental safeguards used by industry, or water treatment facilities. Then write a **news article** on the subject.

CASESTUDY

UNIFICATION: The European Union

Will there be a United States of EUROPE?

EU headquarters in Brussels, Belgium

Level 2 Consider the pros and cons of that idea.

Steps Toward Unity

In 1951, France and West Germany began the process of unification by signing a treaty that gave control of their coal and steel resources to a multinational group, the European Coal and Steel Community (ECSC). Italy and the Benelux countries also joined the ECSC. The six countries' leaders thought this alliance would have many positive results. Because the nations would depend on each other for industrial resources, their economies would suffer if they fought again. No country could prepare for war secretly because each knew what the others were manufacturing. In addition, the ECSC would set

a tone of cooperation that would help Europe rebuild its economy.

The next step toward unity came in 1957 with the formation of the European Economic Community (EEC), also called the Common Market. This alliance removed trade barriers, set common economic goals, and allowed people to live and work in any member country. Between 1958 and 1968, trade among the EEC nations quadrupled.

In 1967, the EEC merged with the ECSC and another European alliance to become the European Community (EC). In 1973, the EC began to admit other European nations. (See the map on page 327.)



The European Union Today

In 1993, the Maastricht Treaty took effect, and the European Union (EU) replaced the EC. With 25 member nations, the EU faces many issues. They include settling political and economic differences, replacing national currencies with the euro, and expanding EU membership.

ECONOMICS AND POLITICS EU members wonder how the union will affect their national economies. For example, workers may move to areas with higher wages, creating shifts in national populations.

Further, some countries believe that switching to the euro will mean losing control of economic factors such as interest rates. Others don't want to give up the national identities associated with having their own currencies. But many people believe the euro has benefits. These include greater business efficiency and increased international trade. In 1999, financial institutions began to calculate transactions in euros. Euros began to be used in everyday life in 2002.

The EU also affects politics. For example, on February 4, 2000, Joerg Haider and his Freedom Party became part of a coalition government in Austria. (In a coalition government, several parties share power.) In the

past, Haider had made statements that were sympathetic to Nazi Germany, so EU nations criticized Austria for its support of Haider. Haider did step down, but some observers fear that a controversial leader like Haider could some day tear the EU apart.

EXPANDING THE EU One of the complex issues facing the EU is growth. In time, it might expand to 28 countries that presently have about 475 million people. Running such a huge alliance could be difficult. Many of the more recent members were once Communist nations. In general, they are less prosperous and have little experience of democracy. Such differences may create tensions that the EU will have to resolve.

On the following pages, you will find primary sources about the EU. Use them to form your own opinion.



MOVEMENT In what year did the largest expansion of the European alliance occur? What countries joined?

2 REGION Which region of Europe has the most non-member countries? Why?



PRIMARY SOURCE 🖪

SEE

SFF

PRIMARY SOURCE 💽

CASESTUDY

Primary sources A to E on these two pages present differing opinions on expansion of the EU. Use these sources and your own research to prepare for a panel discussion on EU expansion. You might use the Internet and the library for research.

P R O J E C T Panel Discussion

Suggested Steps

- 1. Choose a European (EU or non-EU) country to represent.
- 2. Research your country's position on EU expansion. Use encyclopedias, books, or the Internet to help you find the right information.
- **3.** Consider the following questions during your research.
 - · Why do certain countries want to ioin the EU?
 - · What do current EU members have to gain and lose in expansion?
 - · Why do certain countries want to remain independent?

- 4. Create a visual to be shown during the panel discussion.
- **5.** Give a 2–3 minute speech that introduces your country's position.

Materials and Supplies

- Writing paper
- · Posterboard
- · Felt-tip markers
- Encyclopedias and reference books
- Computer
- Internet access

PRIMARY SOURCE 🖪

Political Commentary Global Britain, a conservative group in the United Kingdom, gave this view of the euro on January 25, 1999. Although the United Kingdom belongs to the EU, it has been reluctant to adopt the euro, a central issue for EU expansion.

RESEARCH LINKS CLASSZONE.COM

The Single Currency is a political project designed to hasten the creation of a Single European State in which nation-states like Britain would be provinces. . . . In joining the Single Currency, a nation hands over control of its interest rate, exchange rate and gold and currency reserves, as well as control over tax and spending, to [the EU]. All of this is set out in the Maastricht Treaty which Britain signed in 1992. . . . There are 43 nationstates in Europe, of which only 11 have joined the "single" European currency. Those 11 countries, unlike Britain, are in varying degrees economic satellites of Germany and France. . . . A single currency eliminates the interest rate and exchange rate safety valves, which allow changing national economies to adjust to each other. . . . Preparations for the "single" currency have already

helped to cause mass unemployment in Germany, France, and Italy, where real jobless rates are at least three times as high as in Britain.

PRIMARY SOURCE

Speech Günter Verheugen of Germany, the European Commissioner for Enlargement, expressed his views on EU expansion in speeches in the United States on April 4–6, 2000. Germany is an original member of the EU and its predecessors.

Enlargement is the biggest challenge the Union is facing at the dawn of the new millennium.... We are committed to this historical mission: to integrate the Central and East European countries which can and want to participate in our common achievements. . . . Our objective is to promote political and economic stability-and make this process irreversible. ... What are the political benefits? First and foremost, the enlargement process is vital for securing political stability, democracy and respect of human rights on the European continent as a whole. . . . Political stability and freedom will be increased throughout Europe. Against the background of many years of crisis . . . the only way to achieve lasting stability in Europe is further integration.

PRIMARY SOURCE 🖸

Data Eurobarometer is a company that surveys public opinion. In 1999, it asked people in the 15 EU countries how they felt about various countries joining the EU. This chart lists the various countries and the support for them.

GeoNet

k Forward Reload Home Images

Location

Level of EU Member Support for Possible Members, 1999

NON-EU Country	FOR (%)	AGAINST (%)	NO OPINION (%)
Norway	70	12	18
Switzerland	70	13	17
Malta	50	26	24
Hungary	46	31	23
Poland	43	35	22
Cyprus	42	33	25
Czech Republic	40	35	25
Estonia	36	38	26
Latvia	35	38	27
Slovakia	35	39	26
Lithuania	35	39	26
Bulgaria	35	40	25
Romania	33	43	24
Slovenia	32	42	26
Turkey	29	47	24

PRIMARY SOURCE

Political Cartoon Pat Oliphant, a political cartoonist, shows the leaders of the EU trying to navigate stormy seas on a euro.



PRIMARY SOURCE D

Political Analysis Edmund L. Andrews published this article in the New York Times on June 21, 1999. He examined some of the problems and issues of EU expansion into Central Europe.

By becoming [EU] members, the Central European nations would eventually gain full access to European markets. Their citizens would be free to live and work throughout Western Europe....

As more detailed negotiations loom . . . between the European Union and the Poles, Czechs, and Hungarians . . . both sides face the need for painful change. . . .

Central Europeans have the added burden of history. Many of them remain suspicious of Germany, the European Union's largest power and Central Europe's neighbor. And most adults, reared under Communism, are still adjusting to ... the Western way of doing things.

As for the European Union, the prospect of a flood of labor from the East raises irrational fears among Westerners already grumbling about too many immigrants.... Another big fear [in Central Europe] is that foreigners—by which most people mean Germans—will buy up their land, which is another basic right accorded to anybody living within the European Union.



Chapter (12) Assessment

VISUAL SUMMARY

Conflict

Turmoil in the Balkans

- Yugoslavia was a nation of many ethnic groups distributed among six republics.
- Serbia tried to dominate Yugoslavia, causing several republics to declare independence. Brutal wars followed. The UN and the United States negotiated peace.
- Seeking to re-establish control over Kosovo, Serbia tried to drive Albanians from Kosovo. NATO intervened to stop the violence.

Environment

Cleaning Up Europe

- Industry, sewage, agriculture, and other activities have caused water and air pollution in Europe.
- Pollution has caused disease, damaged buildings, and harmed livestock.
- Both national and international efforts are being made to clean up Europe.

Economics

The European Union

- After the destruction of World War II, France, Germany, Italy, and the Benelux countries joined in an economic alliance to foster cooperation.
- In time, this alliance began to admit other nations and to pursue more general goals.
- The alliance became the European Union (EU) in 1993. The EU faced the issues of adopting a common currency, settling political and economic differences, and expanding EU membership.

Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- Slobodan Milošević
 South Slavs
- cyanide
 European Environmental Agency
- **3.** ethnic cleansing
- 4. KLA

9. smog **10.** ozone

8. particulates

- 5. Vojislav Kostunica
- B. Answer the questions about vocabulary in complete sentences.
 - 11. What is the relationship between ozone and smog?
 - 12. What effect did cyanide have on the rivers of Europe?
 - 13. How are Slobodan Milošević and Vojislav Kostunica different?
 - 14. What do Milošević and Kostunica have in common?
 - **15.** Which of the terms listed above might appear in a report by the European Environmental Agency?
 - 16. Who were the South Slavs?
 - 17. Who was the leader associated with the policy of ethnic cleansing?
 - 18. Which groups were targets of ethnic cleansing?
 - **19.** Can Slobodan Milošević and the KLA best be described as allies or enemies? Explain.
 - **20.** Which type of pollution is associated with particulates? Explain.

Main Ideas

Turmoil in the Balkans (pp. 319-322)

- 1. How did historic events contribute to the conflict over Kosovo?
- **2.** How did the diversity of Bosnia and Herzegovina's population contribute to the conflict there?
- **3.** What did international officials discover after Serbian forces withdrew from Kosovo?
- 4. What are possible sources of future conflict in the Balkans?

Cleaning Up Europe (pp. 323–325)

- 5. What are the effects of acid rain?
- 6. Which region became heavily polluted under Communist rule?
- 7. Why is pollution such a difficult issue to resolve?

The European Union (pp. 326-329)

- 8. What organizations were forerunners of the European Union?
- **9.** Why did European leaders believe that an economic alliance would help prevent war?
- **10.** What are some possible problems associated with admitting formerly Communist countries to the EU?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.

	Causes	Effects
Issue I: Conflict		
Issue 2: Pollution		

- a. Which of these issues has caused physical damage to Europe? Explain.
- b. Do you think the issues are linked? Explain.

2. Geographic Themes

- a. **REGION** In what way is the European Union creating a new region?
- b. **MOVEMENT** What natural processes spread pollution from its point of origin?

Geographic Skills: Interpreting Graphs

EU Trade, 2003

(as percentage of total trade) Use the graph to answer the following

questions.

- 1. **PLACE** Which country does the highest percentage of its trade within the EU?
- 2. **PLACE** Which two countries do the lowest percentage of trade within the EU?
- 3. **MOVEMENT** Judging by the countries shown here, is there more trade within the EU or between the EU and non-member countries? Explain.

GeoActivity

Research trade statistics for Austria, Denmark, Finland, Ireland, Luxembourg, Netherlands, Portugal, and Spain. Create an expanded graph by adding data for these EU countries to those already shown.

INTERNET ACTIVITY

3. Identifying Themes

Reread the story about the Tisza River on page 323. How do the five themes of geography relate to that story?

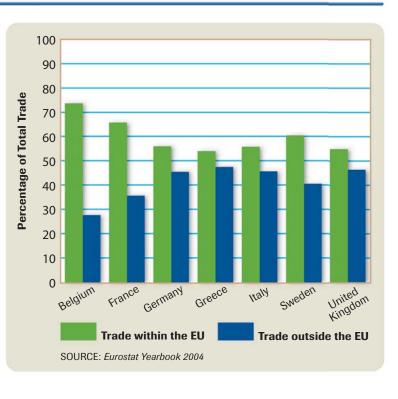
4. Making Inferences

What factors do you think led the Yugoslav people to vote Slobodan Milošević out of office?

5. Drawing Conclusions

How important is international cooperation in solving Europe's problems? Explain using specific examples.





Use the links at **classzone.com** to do research about pollution in Europe. Learn about the "Green" political parties and their views on what should be done.

Writing About Geography Write a summary of your findings. Include a chart listing the programs proposed by the "Green" political parties. List the Web sites that were your sources.

Russia and the Republics

PREVIEW: TODAY'S ISSUES IN RUSSIA AND THE REPUBLICS

UNIT ATLAS

Unit

Chapter 15 PHYSICAL GEOGRAPHY A Land of Extremes

Chapter 16 HUMAN GEOGRAPHY A Diverse Heritage

Chapter 17 TODAY'S ISSUES Russia and the Republics

CASESTUDY THE SOVIET UNION'S NUCLEAR LEGACY Between 1922 and 1991, Russia and most of the Republics were part of the Union of Soviet Socialist Republics (USSR), also known as the Soviet Union.



LOCATION Shoppers stroll around Russia's famous State Department Store. The mall, which opened in 1893, is located in Moscow, the capital of Russia.



GeoData

REGION Russia and the Republics cross over 11 time zones and cover nearly one-sixth of the earth's land surface.

LOCATION Most of the region is hundreds of miles from the open sea.

HUMAN-ENVIRONMENT INTERACTION

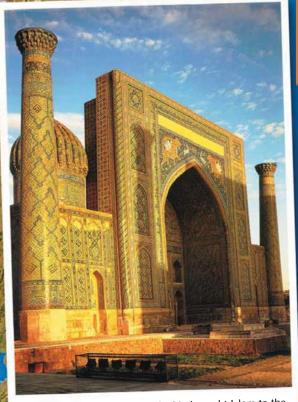
Freezing temperatures can continue so long that people use frozen rivers as roadways.

For more information on Russia and the Republics . . .





PLACE The Caucasus Mountains stretch between the Black and Caspian seas. A great variety of peoples have settled in the region surrounding the mountains.



MOVEMENT Invaders from Arabia brought Islam to the southern areas of the region by the 8th century. Beautiful mosques adorn many of the region's cities.

Unit PREVIEW

Today's Issues in Russia and the Republics

Today, Russia and the Republics face the issues previewed here. As you read Chapters 15 and 16, you will learn helpful background information. You will study the issues themselves in Chapter 17.

In a small group, answer the questions below. Then participate in a class discussion of your answers.

Exploring the Issues

1. CONFLICT Search a newspaper for articles about conflicts in Russia and the Republics today. What do these conflicts have in common? How are they different?

2. ECONOMIC CHANGE

Think about the different economic systems you learned about in Chapter 4. How might changing from a command economy to a market economy be difficult?

3. NUCLEAR LEGACY

What impact could Soviet nuclear programs have on the region's economy?

For more on these issues in Russia and the Republics . .

CURRENT EVENTS CLASSZONE.COM



How do new nations establish law and order?

After the collapse of the Soviet Union in 1991, groups in different parts of the region took up arms to fight for independence. This photo shows a woman and child from a region of Russia called Chechnya. Russia invaded Chechnya twice in the 1990s to end an independence movement in the region.



How does a nation change its economic system?

For more than 70 years, the Soviet government made all the important economic decisions in the region. This cartoon illustrates a major economic challenge faced by the region's new leaders, as demonstrated here by former Russian president Boris Yeltsin. The leaders are trying to move their nations from a command economy to a market economy.

CASESTUDY

How have Soviet decisions affected new leaders?

In 1965, Soviet officials exploded a nuclear bomb to create this lake in Kazakhstan. The blast exposed nearby residents to harmful radiation. The region's new leaders inherited many problems caused by Soviet nuclear programs.



Unit ATLAS

Patterns of ARCTIC BO Physical Geograp

NORWAY

Josef Land

Russia and the Republics span two continents. The part of the region that lies to the west of the Ural Mountains is part of Europe. The part of the region that lies to the east of the Urals is part of Asia.

Use the Unit Atlas to add to your knowledge of Russia and the Republics. As you study the maps and charts, notice geographic patterns and specific details about the region.

Jot down answers to the following questions in your notebook.

Making Comparisons

- 1. What ocean lies to the north of Russia and the Republics? How might this ocean affect the region's climate?
- 2. How much deeper is Lake Baikal than the deepest lake in the United States?
- **3.** Based on these maps and charts, which region do you think has the higher population density: Russia and the Republics or the United States? Why?

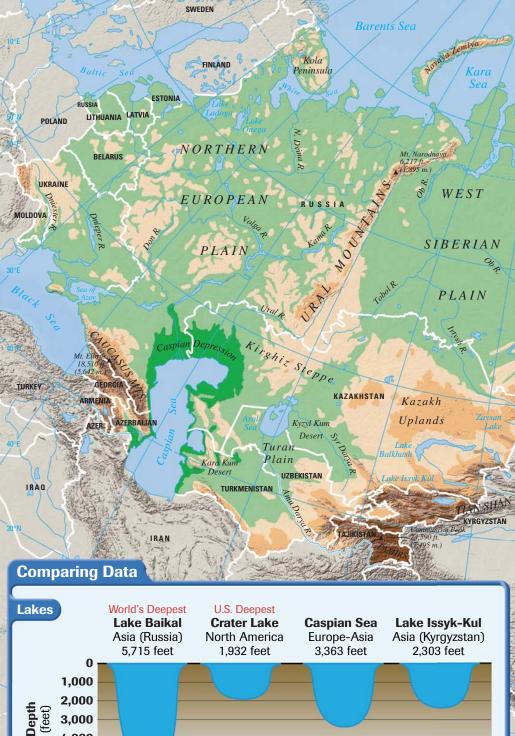
4,000

5,000

6,000

For updated statistics on Russia and the Republics . . .

DATA UPDATE CLASSZONE.COM





Unit

In 1991, the political geography of Russia and the Republics changed dramatically. For decades, the region's 15 republics had been part of the Soviet Union. Each of the republics became independent after 1991, when the Soviet Union collapsed.

Study the map of the former Soviet Union and the map of Russia and the Republics today. Then answer these questions in your notebook.

Making Comparisons

- **1.** Where are most of the region's smaller republics located?
- 2. What was the largest republic in the Soviet Union? What is the largest republic in the region today?
- **3.** To which of the Soviet Socialist Republics did Kaliningrad belong?



Patterns of CEAN Svalb Human Geograph

80°N

Franz Josef Land

Svalbard (Nor.)





These two pages contain a pie graph and three thematic maps. The pie graph shows the religions of Russia and the Republics. The maps show other important features of the region: its different climates, numerous ethnic groups, and population density. After studying these two pages, answer the questions below in your notebook.

Unit

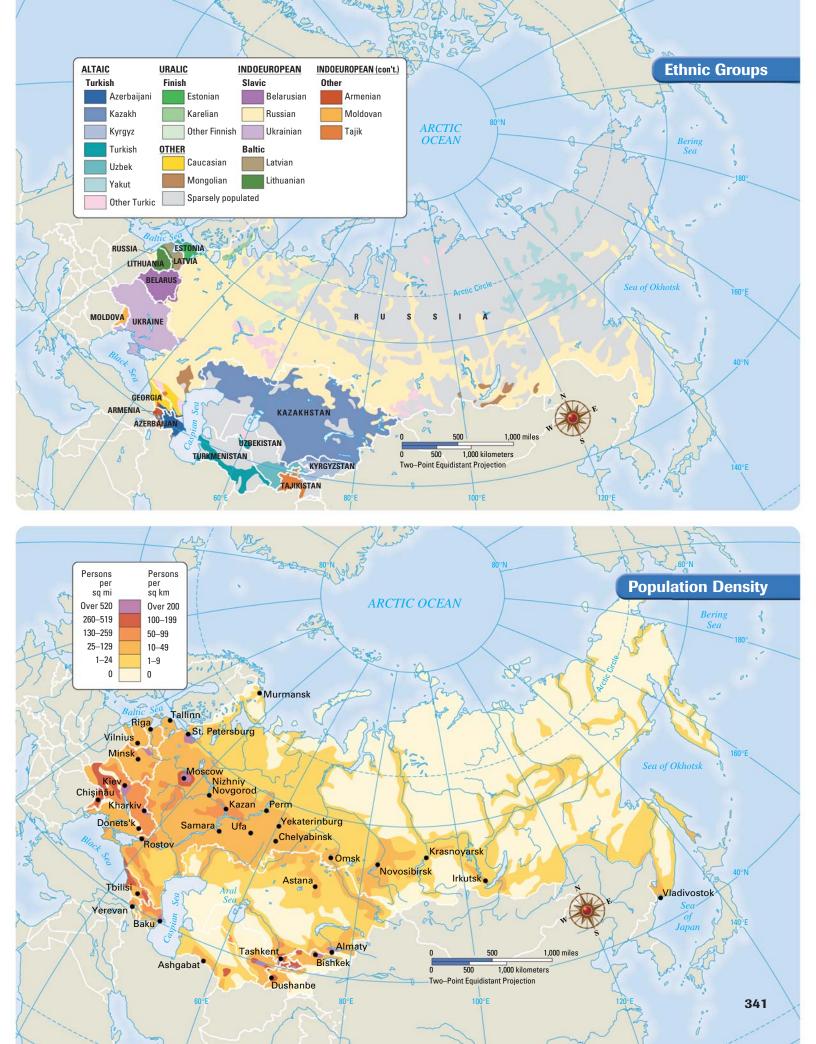
Making Comparisons

- Where is the population of Russia and the Republics most dense? Which climate do those areas have? How might climate affect population density?
- 2. How would you describe the ethnic and religious populations of Russia and the Republics? Which is the most widespread ethnic group in the region?

Religions of Russia and the Republics

Climates of Russia and the Republics





Regional Data File

Life Expectancy^a

Infant Mortality

Birthrate

Population

Study the charts on the countries of Russia and the Republics. In your notebook, answer these questions. Country

Country/

Unit

Making Comparisons

- 1. Which five republics have the highest infant mortality rates? Do you notice any pattern?
- **2.** Examine the literacy rates for the region. What do the figures tell you about the value placed on education in the region?

Sources:

- CIA World Factbook 2000 online Europa World Year Book 2000 Human Development Report 2000,
- United Nations International Data Base (IDB), 2000 updates, U.S. Census Bureau online
- Merriam-Webster's Geographical Dictionary, 3d ed., 1998
- Statesman's Yearbook 2001
- WHO Estimates of Health Personnel, 1998, World Health Organization online
- World Almanac and Book of Facts 2001 World Education Report 2000,
- UNESCO online 2000 World Population Data Sheet, Population Reference Bureau online

Notes:

- ^a Life expectancy figures for Russia and several other republics in the former USSR declined significantly in the 1990s.
- ^b A comparison of the prices of the same items in different countries is used to figure these data.
- ^c Includes land and water, when figures are available.

For updated statistics on Russia and the Republics . . .



Flag	Capital	(2000 estimate)	(years) (2000)	(per 1,000 pop.) (2000)	(per 1,000 live births) (2000)	
	Armenia Yerevan	3,809,000	75	11	41	
C •	Azerbaijan Baku	7,734,000	72	18	83	
	Belarus Minsk	10,004,000	68	9	15	
	Estonia Tallinn	1,433,000	70	8	13	
	Georgia Tbilisi	5,454,000	73	11	53	
	Kazakhstan Astana	14,865,000	65	17	59	
Ø	Kyrgyzstan Bishkek	4,929,000	67	26	77	
	Latvia Riga	2,416,000	70	8	16	
	Lithuania Vilnius	3,697,000	72	10	15	
1	Moldova ChişinBu	4,276,000	67	13	43	
	Russia Moscow	145,231,000	67	9	20	
a)	Tajikistan Dushanbe	6,374,000	68	34	117	
Ċ	Turkmenistan Ashgabat	5,239,000	66	29	73	
	Ukraine Kiev	49,509,000	68	9	22	
C.:::	Uzbekistan Tashkent	24,760,000	69	26	72	

United States	281,422,000	77	15	7	
 Washington, D.C.					

Doctors	GDP⁵	Import (Export)	Litoroov Doto	Televisions	Descenter Core	Total Area ^c	
(per 100,000 pop.) (1998)	(billions \$US) (1999 est.)	Import/Export ^b (billions \$US) (1999)	Literacy Rate (percentage) (1998)	(per 1,000 pop.) (1996–1998)	Passenger Cars (per 1,000 pop.) (1996-1997)	(square miles)	
316	9.9	0.782 / 0.24	98	217	2	11,506	*
360	14.0	1.46 / .885	99	254	36	33,436	3
443	55.2	5.76 / 6.0	99	314	111	80,154	
297	7.9	3.4 / 2.5	99	480	294	17,413	:4
436	11.7	0.84 / 0.33	99	472	80	26,911	10.
353	54.5	4.8 / 5.2	99	234	61	1,048,300	-
301	10.3	0.59 / 0.515	97	44	32	76,641	
282	9.8	2.8 / 1.9	99	593	174	24,595	A 16
395	17.3	4.5 / 3.3	99	376	242	25,174	
400 (1995)	9.7	0.56 / 0.47	98	297	46	13,012	7
421	620.3	48.2 / 75.4	99	420	120	6,592,812	
201	6.2	0.77 / 0.634	99	285	31	55,251	1 m
300 (1997)	7.7	1.25 / 1.1	98	201	N/A	188,455	4
299	109.5	11.8 / 11.6	99	490	97	233,089	*
309	59.3	3.1 / 2.9	88	273	37	173,591	Pre-
251	9,255.0	820.8 / 663.0	97	847	489	3,787,319	

~



5

SECTION 1 Landforms and Resources

SECTION 2 Climate and Vegetation

SECTION 3 Human–Environment Interaction

Russia's Lake Baikal is the world's deepest lake and holds over 20 percent of the earth's fresh water. Russians treasure Lake Baikal as much as Americans treasure the Grand Canyon.

PHYSICAL GEOGRAPHY OF RUSSIA AND THE REPUBLICS A Land of Extremes



GeoFocus

How do the extremes of physical geography in Russia and the Republics affect the lives of the region's people?

Taking Notes Copy the graphic organizer below into your notebook. Use it to record information from the chapter about the physical geography of Russia and the Republics.

Landforms	
Resources	
Climate and Vegetation	
Human-Environment Interaction	

Landforms and Resources

A HUMAN PERSPECTIVE Russia and the Republics occupy a tremendous expanse of territory—approximately three times the land area of the United States. The region sprawls across the continents of both Europe and Asia and crosses 11 time zones. When laborers in the western city of Kaliningrad are leaving their jobs after a day's work, herders on the region's Pacific coast are just beginning to awaken their animals for the next day's grazing.

Northern Landforms

The geography of Russia and the Republics is the geography of nearly one-sixth of the earth's land surface—over eight and a half million square miles. In spite of this huge size, the region's landforms follow a simple overall pattern. You can divide the northern two-thirds of the region into four different areas. Moving from west to east, they are the Northern European Plain, the West Siberian Plain, the Central Siberian Plateau, and the Russian Far East. (See the physical map on pages 336–337 of the Unit Atlas.)

THE NORTHERN EUROPEAN PLAIN The Northern European Plain is an extensive lowland area. It stretches for over 1,000 miles from the western border of Russia and the Republics to the Ural Mountains.

One of the world's most fertile soils—<u>chernozem</u>, or black earth—is abundant on this plain. It sometimes occurs in layers three feet deep or more. Because of the high quality of its soil, many of the region's agricultural areas are located on this plain.

Nearly 75 percent of the region's 290 million people live on this plain. Three of the region's largest cities are located there: Moscow, Russia's capital; St. Petersburg; and Kiev, the capital of Ukraine.

Main Ideas

- Flat plains stretch across the western and central areas of the region. In the south and east, the terrain is more mountainous.
- Many resources in Russia and the Republics are in hard-to-reach regions with brutal climates.

Places & Terms

chernozem	Transcaucasia
Ural	Central Asia
Mountains	Siberia
Eurasia	

CONNECT TO THE ISSUES ECONOMIC CHANGE

Leaders must strike a balance between environmental protection and economic growth.

PLACE Ukraine, which lies on the Northern European Plain, has been called the region's breadbasket because of the enormous grain crops produced on its farms.



WEST SIBERIAN PLAIN The **<u>Ural</u> Mountains** separate the Northern European and West Siberian plains. Some geographers recognize the Urals as a dividing line between Europe and Asia. Others consider Europe and Asia to be a single continent, which they call **<u>Eurasia</u>**.

The West Siberian Plain lies between the Urals and the Yenisey River and between the shores of the Arctic Ocean and the foothills of the Altay Mountains. Because the plain tilts northward, its rivers flow toward the Arctic Ocean.

CENTRAL SIBERIAN PLATEAU AND RUSSIAN FAR EAST Although extensive plains lie east of the Yenisey River, uplands and mountains are the dominant landforms. High plateaus—with average heights of 1,000 to 2,000 feet—make up the Central Siberian Plateau, which lies between the Yenisey and Lena rivers.

East of the Lena River lies the Russian Far East and its complex system of volcanic ranges. The Kamchatka Peninsula alone contains 120 volcanoes, 20 of which are still active. The Sakhalin and Kuril islands lie south of the peninsula. Russia seized the islands from Japan after World War II. Japan still claims ownership of the Kuril Islands.

Southern Landforms

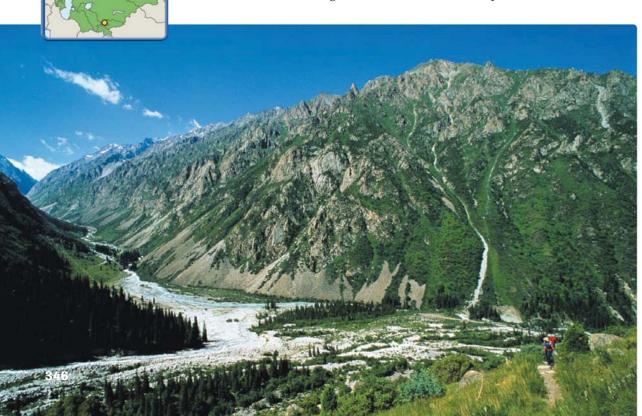
The southern areas of Russia and the Republics feature towering mountains, barren uplands, and semiarid grasslands.

THE CAUCASUS AND OTHER MOUNTAINS The Caucasus Mountains stretch across the land that separates the Black and Caspian seas. The mountains form the border between Russia and **Transcaucasia**—a region that consists of the republics of Armenia, Azerbaijan, and Georgia. Farther east, along the southern border of Russia and the Republics, rises a colossal wall of mountains, including the Tian Shan, shown below.

Some of these mountains are located along the southeastern border of **Central Asia**—a region that includes the republics of Kazakhstan,



BACKGROUND



LOCATION The

Tian Shan, which is Chinese for "Heavenly Mountains," stretch for nearly 1,500 miles, mainly between China and Kyrgyzstan. Why might a river be flowing at the base of these mountains?



Using the Atlas Examine the climate map on page 340. What is the relationship between landforms and climate zones in Central Asia?

Thinking

that they prevent moist air from entering the region from the south, contributing to the arid climate of Central Asia. 🐗

Kara Kum Desert

THE TURAN PLAIN An extensive lowland called the Turan Plain lies between the Caspian Sea and the mountains and uplands of Central Asia. Although two major rivers, the Syr Darya and Amu Darya, cross the plain, much of the lowland is very dry. Two large deserts stretch across the plain—the Kara Kum and the Kyzyl Kum.

Rivers and Lakes

Some of the world's longest rivers flow through the vast plains of Russia and the Republics. The region also boasts some of the largest and deepest lakes in the world.

DRAINAGE BASINS AND RIVERS The region's rivers flow through a number of large drainage basins. You may recall from Chapter 2 that a drainage basin is an area drained by a major river and its tributaries. The main drainage basins in Russia and the Republics are the Arctic Ocean, Caspian Sea, Pacific Ocean, Baltic Sea, Black Sea, and Aral Sea basins.

The Arctic basin is the region's largest. The basin's three powerful rivers-the Ob, the Yenisey, and the Lena-drain an area of more than

three million square miles. These rivers deliver water to the Arctic Ocean at a combined rate of nearly 1,750,000 cubic feet per second.

The Volga River, the longest river on the European continent, drains the Caspian Sea basin. The Volga begins near Moscow and flows southward for about 2,300 miles until it arrives at the Caspian. This important waterway carries about 60 percent of Russia's river traffic.

Geographic Thinking ■ Seeing Patterns Examine the map on pages 336–337. Why might many of the region's rivers flow toward the north?

LAKES In addition to some of the world's longest rivers, Russia and the Republics also boast some of the largest lakes on our planet. Two of them, the Caspian and Aral seas, are located in Central Asia.

The Caspian Sea, which is actually a saltwater lake, stretches for nearly 750 miles from north to south, making it the largest inland sea in the world. The Aral Sea, which lies east of the Caspian, is also a saltwater lake. Since the 1960s, the Aral has lost about 80 percent of its water vol-

ume. This enormous loss is the result of extensive irrigation projects that have diverted water away from the rivers that feed the lake. Unless drastic action is taken, the Aral Sea could vanish within 20 to 30 years.

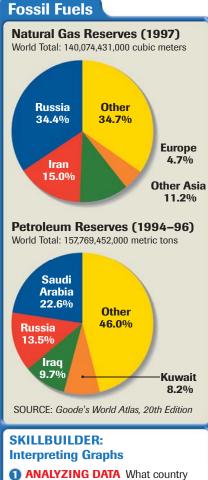
LAKE BAIKAL The crown jewel among the region's lakes is Lake Baikal—the deepest lake in the world. At its deepest point, Baikal is more than a mile from the surface to the bottom. From north to south, the lake stretches for nearly 400 miles. It holds 20 percent of the world's fresh water.

Though it has some pollution, most of Lake Baikal is remarkably clean. Thousands of species of plants and animals live in the lake. Twelve hundred species, including the world's only freshwater seal, are unique to Lake Baikal.

Regional Resources

Russia and the Republics have a great wealth of natural resources. Regional leaders have found it difficult to properly manage these resources. One challenge has been how to transport resources from harsh and distant regions. Another has been how to use the resources without damaging the environment in the process.





- ANALYZING DATA What country had the largest reserves of natural gas in 1997?
- 2 ANALYZING DATA About how many cubic meters of natural gas did Russia have in 1997?

LOCATION Workers adjust machinery at the Samotlor oil field in Russia.

ABUNDANT RESOURCES Russia and the Republics boast huge reserves of coal, deposits of iron ore, and other metals. The region is also a leading producer of oil and natural gas. Petroleum deposits around the Caspian Sea are among the world's largest.

Russia's vast forests hold one-fifth of the world's timber resources. And the region's powerful rivers make it one of the world's largest producers of hydroelectric power.

RESOURCE MANAGEMENT Harsh climates, rugged terrain, and vast distances make it difficult for Russia and the Republics to remove resources from the ground and transport them to markets. Many of these resources are located in the frigid arctic and subarctic region of **Siberia**—the part of Russia that lies on the continent of Asia. Businesses find it difficult to attract workers to this severe region.

When businesses have been able to exploit regional resources successfully, they have often done so at great cost to the environment. Mining operations have caused significant damage, as has the production of oil and gas. Russia's hydroelectric plants have also caused substantial damage. Dams and the plants' discharge of unusually hot water—known as thermal pollution—have caused significant damage to surrounding plant and animal habitats.

Dramatic political and economic change in recent years will continue to make resource management difficult. Leaders will have to balance the need for economic growth with their responsibility to protect the environment.

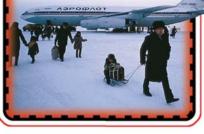
ECONOMIC CHANGE

connec

Change in Norilsk

In the photo below, a plane arrives in the remote nickelmining town of Norilsk, which is not accessible by road. Until the 1990s, the government provided money for people willing to work in this remote region.

But the demand for Norilsk's nickel has faded, and unemployment and poverty there have increased. Now the Russian government is paying to move people out of the area. Leaders must act quickly, though. In the brutal Siberian winter, poverty is deadly.



Assessment

1) Places & Terms

Explain the importance of each of the following terms and places.

- chernozem
- Ural Mountains
- Eurasia
- Transcaucasia
- Central Asia
- Siberia

2 Taking Notes

REGION Review the notes you took for this section.

Landforms



- What is the name of the region's westernmost lowland?
- What mountain range separates Russia from Transcaucasia?

3 Main Ideas

- Why might a large part of the region's population live on the Northern European Plain?
- b. What factor contributes to the dry conditions on the Turan Plain?
- c. Why is the Volga one of the region's most important rivers?

Geographic Thinking

Making Generalizations Why has resource management been a problem for leaders in Russia and the Republics? Think about:

- where resources are located
- how resources are extracted or used



EXPLORING LOCAL GEOGRAPHY Do more research on Lake Baikal and on the deepest lake in the state in which you live. Make a **poster** that visually compares the size and depth of the two lakes. Provide other information on your poster, including the volume of water in each of the lakes.



Seeing Patterns Why might workers be unwilling to take jobs in Siberia?

Climate and Vegetation

A HUMAN PERSPECTIVE Large areas of Russia and the Republics are extremely cold during much of the year. For example, the Siberian town of Oymyakon has reportedly had temperatures as low as –95°F. At such temperatures, the cold can crack steel and cause tires to explode. When you exhale, your breath freezes into crystals that fall to the ground and make a noise that Siberians call "the whispering of the stars." Some of the region's native peoples believe that, in the coldest weather, words themselves freeze, and that, when warmer weather arrives and thaws the crystals, the words come to life and begin to speak. "Suddenly the air fills with out-of-date gossip, unheard jokes, and cries of forgotten pain."

A Climate of Extremes

As you can see on the climate map on page 340, Russia and the Republics have some very cold climates. But the region also features warmer climates, such as the subtropical areas of Transcaucasia, and the semiarid and desert zones of Central Asia.

MAJOR CLIMATE REGIONS Humid continental and subarctic climates dominate much of Russia and the Republics. These climates reflect the influence of the region's high latitude and the impact of the wall of mountains in the southeast. The region's enormous size also has a major effect on its climates. Much of the region is hundreds of miles from the moderating influence of the sea. The effect of this distance on climate is called <u>continentality.</u>

Distance from the sea affects the amount of precipitation the region gets, as well as its temperatures. Most of the region's moisture comes from the Atlantic Ocean. But the air coming from the ocean loses its moisture as it travels farther and farther inland. Distance from the seas also results in extreme temperatures. In Siberia, average monthly temperatures rarely exceed 50°F and sometimes drop below -90°F.

The long stretches of cold weather in the region have a unique impact on daily life. Siberians, for example, use frozen rivers and lakes as roads for part of the year. Temperatures are so consistently low that the region is covered by a layer of permanently frozen subsoil called permafrost. This layer can reach depths of 1,500 feet.

- Much of Russia and the Republics lies in subarctic and tundra climate zones.
- In the region's southern areas, semiarid and desert climates feature warmer winters and hot summers.

Places & Terms

continentality taiga

CONNECT TO THE ISSUES CONFLICT Ethnic conflict has disrupted the flow of tourist dollars into some areas of the region.

MOVEMENT The crew driving this truck is using the frozen surface of Lake Baikal to transport cargo.



While humid continental and subarctic climates dominate the northern and eastern areas of the region, Russia and the Republics also have warmer climates. A wall of mountains in the southeastern areas of the region blocks moist air traveling northward from the Indian and Pacific oceans. The mountains contribute to the semiarid and desert climates of Central Asia.

In Transcaucasia, moist air from the Mediterranean Sea contributes to a subtropical climate zone. The region's health resorts were a favorite destination of tourists until ethnic conflict made traveling there dangerous.

Vegetation Regions

Russia and the Republics have four major vegetation regions. These regions run east to west in wide strips. Moving from north to south, they are the tundra, forest, temperate grassland, and desert.

TUNDRA The tundra region of Russia and the Republics falls mostly in the Arctic climate zone. Only specific types of vegetation—such as mosses, lichens, small herbs, and low shrubs—are able to survive in the tundra's polar conditions.

FOREST South of the tundra lies the largest forest on earth—the **taiga**. The taiga contains primarily coniferous trees. Many fur-bearing animals,





Using the Atlas Examine the map on page 340. In which climate region do you think the layer of permafrost will be deepest?



REGION Siberian

herders lead reindeer through the taiga. The breathing of the reindeer is the cause of much of the fog floating above the herd. What does this image suggest about the region's climate? such as sable, fox, and ermine, live in the taiga. Elk, bear, and wolves also make their homes in the forest.

South of the taiga, deciduous trees begin to mix with coniferous species. In lower latitudes, the deciduous trees become dominant.

STEPPE The steppe is the name of the temperate grassland that extends from southern Ukraine through northern Kazakhstan to the Altay Mountains. The highly fertile chernozem soil is found in the steppe and helps to make the grassland a major source of grain for Russia and the Republics.

DESERT Deserts and semiarid lands occupy the wide plains in the west and central areas of Central Asia. The two main deserts are the Kara Kum, which covers most of the republic of Turkmenistan, and the Kyzyl Kum, which is located in western Uzbekistan. Together, the two deserts occupy an area of about 230,000 square miles. In the following section, you will learn how efforts to irrigate these regions resulted in one of the world's greatest environmental catastrophes.

Assessment

Places & Terms

Explain the importance of each of the following terms and places.

continentality

• taiga

2 Taking Notes

REGION Review the notes you took for this section.

Climate and	
Vegetation	
100	~/

How can climate affect transportation?

 To what depths can permafrost extend in Russia and the Republics?

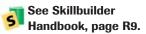
3 Main Ideas

- a. How does distance from the sea affect the region's climate?
- b. In what way is the climate of Transcaucasia unique?
- What are the major vegetation regions in Russia and the Republics?

4 Geographic Thinking

Determining Cause and Effect How are climate and vegetation related? **Think about:**

- average temperatures
- precipitation





SEEING PATTERNS Choose a city in Russia and the Republics. Collect data on the average monthly temperatures and precipitation in the city. Then create a **climograph** that illustrates the tient of your research.

Human-Environment Interaction

A HUMAN PERSPECTIVE Since the 1960s, irrigation policies in Central Asia have had a dramatic impact on the Aral Sea. A recent visitor to an old Aral fishing village described the change: "I stood on what had once been a seaside bluff . . . but I could see no water. The sea was twenty-five miles away." The dried-up seabed had become a graveyard for abandoned ships. The powerful winds were covering local populations with polluted dust picked up from the seabed. Thousands of people have left the region, and those who remain risk illness, or even death. In this section, you will read more about the complex relationship between the environment and the people of Russia and the Republics.

The Shrinking Aral Sea

Between 1960 and the present, the Aral Sea lost about 80 percent of its water. Central Asian leaders now face one of the earth's greatest environmental tragedies.

A DISAPPEARING LAKE The Aral Sea receives most of its water from two rivers, the Amu Darya and the Syr Darya. Before the 1960s, these rivers delivered nearly 13 cubic miles of water to the Aral Sea every

year. But in the 1950s, officials began to take large amounts of water from the rivers to irrigate Central Asia's cotton fields. Largescale irrigation projects, such as the 850-mile-long Kara Kum canal, took so much water from the rivers that the flow of water into the Aral slowed to a trickle. The sea began to evaporate.

EFFECTS OF AGRICULTURE Agricultural practices in Central Asia caused other problems for the Aral Sea. Cotton growers used pesticides and fertilizers. These chemicals were being picked up by **runoff**—rainfall not absorbed

by the soil that runs into streams and rivers. The runoff carried the chemicals into the rivers that feed the Aral, with devastating effects. Of the 24 native species of fish once found in the sea, none are left today.

Main Ideas

- The region's harsh climate has been both an obstacle and an advantage to its inhabitants.
- Attempts to overcome the region's geographic limits have sometimes had negative consequences.

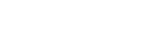
Places & Terms

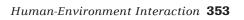
runoff Trans-Siberian Railroad

CONNECT TO THE ISSUES ECONOMIC CHANGE New regional leaders must solve economic problems caused by the former Soviet Union.

HUMAN-ENVIRONMENT

INTERACTION These two images, taken in 1976 and 1997, show what happened after agricultural officials began diverting water from the rivers that feed the Aral Sea.







PLACE Camels walk by the rusting hulks of abandoned ships on what was once the floor of the Aral Sea. Why might the ships have been abandoned? Soon the damage spread beyond the lake. The retreating waters of the Aral exposed fertilizers and pesticides, as well as salt. Windstorms began to pick up these substances and dump them on nearby populations.

This pollution has caused a sharp increase in diseases. The incidence of throat cancer and respiratory diseases has risen dramatically. Dysentery, typhoid, and hepatitis have also become more common. Child mortality rates in Central Asia are among the highest in the world.

SAVING THE ARAL Scientists estimate that even to keep the lake at its present levels, you would have to remove 9 of the 18 million acres that are now used for farming. This would create terrible hardship for the farmers who depend on those fields for their livelihood. But many argue that only such drastic measures can save the Aral.

The Russian Winter

The frigid landscapes of Siberia lie far from Central Asia. But the rugged inhabitants of Siberia are also familiar with hardship.

COPING IN SIBERIA More than 32 million people make their homes in Siberia. The climate presents unique challenges to its inhabitants, especially during winter.

Scientists have recorded the most variable temperatures on earth in Siberia. In the city of Verkhoyansk, temperatures have ranged from –90°F in the winter to 94°F in the summer—a span of 184 degrees. But most of the time it is cold. Temperatures drop so low that basic human activities become painful. A worker in the Siberian mining center at Norilsk explained how he and fellow workers turned up their collars and turned down the ear flaps of their fur caps so that only their eyes were visible. "Even then," he reported, "your eyes would be so cold that you'd close one until the one you were looking with froze, and then swap over."

The change of seasons brings little relief. Warmer weather melts ice and snow and leaves pools of water that become breeding grounds for mosquitoes and black flies. The problem becomes severe in the spring.

BACKGROUND

Scientists have reportedly found salt from the Aral Sea as far away as the coast of the Arctic Ocean.



Using the Atlas Examine the maps on pages 340–341. What relationship do you see between population density and climate? Swamps form when northward flowing rivers, swollen by spring rains, run into still-frozen water further north. Soon, enormous black clouds of insects are attacking Siberia's residents.

The climate also affects construction in Siberia. Permafrost makes the ground in Siberia iron-hard. However, a heated building will thaw the permafrost. As the ground thaws, buildings sink, tilt, and eventually topple over. To prevent such problems, builders raise their structures a few feet off the ground on concrete pillars.

WAR AND "GENERAL WINTER" Russia's harsh climate has caused difficulties for its inhabitants, but it has also, at times, come to their aid.

In the early 1800s, the armies of the French leader Napoleon Bonaparte were taking control of Europe. In the spring of 1812, Napoleon decided to extend his control over Russia. He gathered his army together in Poland and from there began the march on Moscow.

But as his troops advanced, so did the seasons. When Napoleon arrived in Moscow in September, the Russian winter was not far behind. Moreover, the citizens of Moscow had set fire to their city before fleeing, so there was no shelter for Napoleon's troops.

Napoleon had no choice but to retreat during the bitter Russian winter. He left Moscow with 100,000 troops. But by the time his army arrived back in Poland, the cruel Russian winter had helped to kill more than 90,000 of his soldiers. Some historians believe that Russia's "General Winter" succeeded in defeating Napoleon where the armies of Europe had failed.

Crossing the "Wild East"

At the end of the 19th century, Siberia was similar to the "Wild West" of the United States. Travel through the region was dangerous and slow. For these reasons, Russia's emperor ordered work to start on a **Trans-Siberian Railroad** that would eventually link Moscow to the Pacific port of Vladivostok.





Seeing Patterns Besides climate, what other geographic factors might an army invading Russia have to consider?



MOVEMENT A train from Ukraine travels on Trans-Siberian tracks on its journey toward Vladivostok. What impact do railroads have on

commerce?

AN ENORMOUS PROJECT The project was a massive undertaking. The distance to be covered was more than 5,700 miles, and the tracks had to cross seven time zones. Between 1891 and 1903, approximately 70,000 workers moved 77 million cubic feet of earth, cleared more than 100,000 acres of forest, and built bridges over several major rivers.

RESOURCE WEALTH IN SIBERIA Russian officials did not undertake this massive project simply to speed up travel. They also wanted to populate Siberia in order to profit from its many resources.

Ten years after the completion of the line in 1904, nearly five million settlers, mainly peasant farmers, had taken the railway from European Russia to settle in Siberia.

As migrants streamed into Siberia, resources, such as coal and iron ore, poured out. Siberia, one author wrote, began to yield riches that "she has under guard of eternal snow and ice, so long held in trust for future centuries." In the years that followed, the railroad would aid the political and economic development of Russia and the Republics, which you will read about in the next chapter.

Assessment

Places & Terms

Explain the importance of the following terms.

• runoff

 Trans-Siberian Railroad

2 Taking Notes

REGION Review the notes you took for this section.

Human-Environment Interaction

- What precautions must builders take in Siberia? Why?
- How did the construction of the Trans-Siberian Railroad affect the region's landscape?

3 Main Ideas

- a. Why is the Aral Sea shrinking?
- **b.** How has the region's harsh climate helped its inhabitants?
- **c.** What were the main reasons for the construction of the Trans-Siberian Railroad?

Geographic Thinking

Making Decisions If you were a regional leader, what steps would you take to end the Aral Sea disaster? Think about:

• how your solutions will affect people in the region





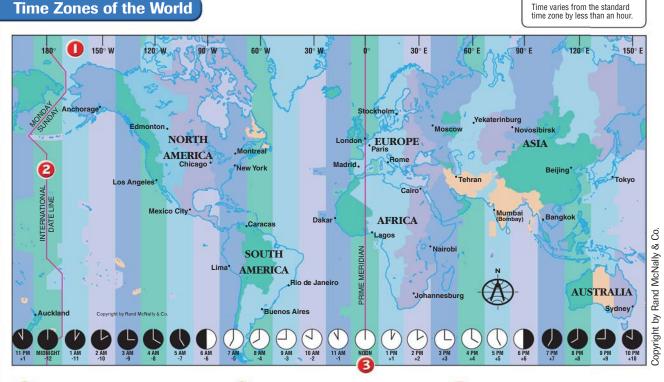
MAKING COMPARISONS Do more research on the Trans-Siberian Railroad. Then do research on the construction of the transcontinental railroad in the United States. Use a **Venn diagram** to compare and contrast the two projects.

RAND MENALLY Map and Graph Skills

Understanding Time Zones

In 1884, international officials agreed to divide the map of the earth's surface into 24 time zones, one for each hour of the day. Because the earth rotates 360° each day, each zone was to represent 15° longitude ($360^{\circ} \div 24$ hours = 15°). Officials used the prime meridian (0°) as the starting point for the time zones. They named this base time Greenwich Mean Time (GMT). The International Date Line was set at 180° longitude. To the east of this line, the calendar date is one day earlier than to the west.

THE LANGUAGE OF MAPS A **time zone map** shows the time zones that are in use around the world today. Officials have adjusted the boundaries of many time zones to keep political units, such as countries, within a single time zone.



Each band of color represents one time zone.

Officials set the International Date Line at 180°, but the line moves east or west of it in places to avoid dividing countries.

Positive and negative numbers show the difference between local time and Greenwich Mean Time.

Non-standard time zones

Time varies from the standard

Map and Graph Skills Assessment

1. Drawing Conclusions How many time zones are there in the continental United States?

2. Making Comparisons

What is the current time in the time zone in which you live? What is the current time in Greenwich, England?

3. Drawing Conclusions

If it is 6:00 Sunday morning in New York, what are the day and time in Auckland, New Zealand?

Assessment Chapter 🗸 📑

VISUAL SUMMARY **PHYSICAL GEOGRAPHY OF RUSSIA** AND THE REPUBLICS

Landforms

Major Geographical Areas: Northern European Plain, West Siberian Plain, Central Siberian Plateau. Russian Far East, Turan Plain

Important Mountain Ranges: Urals, Caucasus. Tian Shan

Important Rivers and Lakes: Caspian and Aral seas, Lake Baikal, Volga, Ob, Yenisey, and Lena rivers

Resources

- Regional resources include huge coal reserves and deposits of iron ore and other metals.
- The Caspian Sea region has enormous reserves of oil and gas.

Climate and Vegetation

• Continentality and a wall of high southeastern mountains have a major impact on the climate of Russia and the Republics.

Human-Environment Interaction

- The shrinking of the Aral Sea is an example of the dramatic impact that agricultural policies can have on the environment.
- The hardships faced by Napoleon's army show how Russia's environment influenced human events.
- The construction of the Trans-Siberian Railway changed the population distribution and economic geography of the region.

Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- 1. chernozem
 - 2. Ural Mountains
 - 3. Furasia
 - 5. Central Asia
- 6. Siberia 7. continentality
- 8. taiga
- 4. Transcaucasia
- 9. runoff
- 10. Trans-Siberian Railroad

B. Answer the questions about vocabulary in complete sentences.

- **11.** What is the name of the region crossed by the Trans-Siberian Railroad?
- **12.** Which region is located south of the Caucasus Mountains?
- **13.** What is chernozem and where is it found?
- **14.** How can runoff affect the environment?
- 15. What are the five republics located in Central Asia?
- **16.** Why are the Ural Mountains important for geographers?
- **17.** What is the name of the non-European part of Russia?
- **18.** Which vegetation region allows Russia to boast one-fifth of the world's timber resources?
- **19.** Why do Russia and the Republics receive limited precipitation?
- 20. Which landmass is named after the continents of Asia and Europe?

Main Ideas

Landforms and Resources (pp. 345–349)

- **1.** What facts could you provide to give an idea of the enormous size of Russia and the Republics?
- 2. How does the tilt of the West Siberian Plain affect the region's physical geography?
- **3.** How is the region's use of its resources affected by climate?

Climate and Vegetation (pp. 350–352)

- 4. What are major influences on the region's climate?
- **5.** How does latitude affect the type of vegetation found in Russia's forests?
- 6. Where is the steppe located in Russia and the Republics?

Human-Environment Interaction (pp. 353–357)

- 7. What effect have irrigation projects had on the Aral Sea?
- **8.** How has the shrinking of the Aral Sea affected public health in the surrounding region?
- 9. What factors contribute to the formation of swamps in Siberia, and how do the swamps affect people living in the region?
- **10.** How long did it take to complete the main line of the Trans-Siberian Railwav?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.

Landforms	
Resources	
$\langle \land \land \land \rangle$	\sim

- a. Which region contains a large number of volcanoes?
- b. Who was "General Winter"?

Mineral Resources and Pollution Use the map to answer the following

 REGION This map shows how close mining sites are to polluted areas. Why might the two be related?

2. **MOVEMENT** How might locating a

spread of pollution?

mining site near a river affect the

3. PLACE Why might the areas around

polluted even though there seem to

Moscow and St. Petersburg be

be few mining sites nearby?

questions.

2. Geographic Themes

- a. HUMAN-ENVIRONMENT INTERACTION How has Siberia's climate affected transportation in the region?
- b. **MOVEMENT** What impact did the Trans-Siberian Railway have on Russia's population?

Geographic Skills: Interpreting Maps

3. Identifying Themes

What factor might explain why Russia and the Republics receive relatively little precipitation and frequently experience extreme temperatures? Which of the five themes applies to this situation?

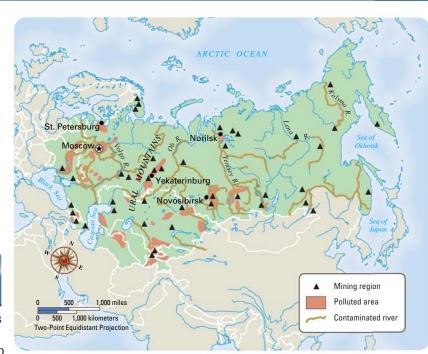
4. Determining Cause and Effect

What is a major factor contributing to the large subtropical climate zone in Transcaucasia?

5. Drawing Conclusions

Given what you have read about the dependency of Central Asian farmers on the water from the Amu Darya and Syr Darya rivers, how likely do you think it is that the Aral Sea will eventually recover?

Additional Test Practice, pp. S1–S37



Do more research on mining pollution's impact on public health in one area of the region. Use presentation software to share your results.

GeoActivity

INTERNET ACTIVITY

Use the links at **classzone.com** to do research on Siberia. Focus on how people cope with the region's low temperatures. For example, investigate the kinds of clothing people wear or how they move about in the winter. **Writing About Geography** Write a report of your findings. Include photos or illustrations that visually present information about life in the region. List the Web sites that you used in preparing your report.

Chapter

SECTION 1 Russia and the Western Republics

SECTION 2 Transcaucasia

SECTION 3 Central Asia

HUMAN GEOGRAPHY OF RUSSIA AND THE REPUBLICS A Diverse Heritage



360 CHAPTER 16

Russia

Republics

Transcaucasia

GeoFocus

Russia and the Western Republics

A HUMAN PERSPECTIVE Early in the 1500s, the Russian leader Ivan the Great put an end to two centuries of foreign rule in his homeland. Russia then entered a period of explosive growth. From its center in Moscow, Russia expanded at a rate of about 55 square miles a day for the next four centuries. During the expansion, Russians made so much progress toward the east that they swallowed up a future U.S. state, Alaska. Russia had taken control of the territory by the late 18th century but did not sell it to the United States until 1867.

A History of Expansion

Russia's growth had lasting effects on nearby lands and peoples. You can see these effects even today in the republics to its west: Belarus, Moldova, Ukraine and the **Baltic Republics** of Estonia, Latvia and Lithuania. But Russian expansion not only affected its neighbors. It also had an impact on the entire world's political geography.

BIRTH OF AN EMPIRE The Russian state began in the region between the Baltic and Black seas. In the ninth century, Vikings from Scandinavia came to the region to take advantage of the river trade between the two seas. They established a settlement near what is now Kiev, a city near the Dnieper River. In time, the Vikings adopted the customs of the local Slavic population. Soon the settlement began to expand.

Expansion was halted in the 13th century with the arrival of invaders from Mongolia, called Tatars. The ferocity of those Mongol warriors is legendary. It is said that "like molten lava, they destroyed everything in their path." The Tatars sacked Kiev between 1237 and 1240.

The Mongols controlled the region until the 1500s, when Ivan the Great, the powerful prince of Moscow, put an end to their rule. Russia continued once again to expand to the east. By the end of the 17th century, it had built an empire that extended to the Pacific Ocean. As the leaders of Russia added more territory to their empire, they also added more people. Many of these people belonged to different ethnic groups, spoke different languages, and practiced different religions.

Main Ideas

- From modest beginnings, Russia expanded to become the largest country in the world.
- The rise and fall of the Soviet Union affected the world's political geography.

Places & Terms

Baltic Republics czar Russian Revolution USSR Cold War command economy collective farm

CONNECT TO THE ISSUES ECONOMIC CHANGE The region is struggling to move from a command economy to a market economy.

MOVEMENT This Mongol armor from the 14th or 15th century includes a case for bow and arrows. Mongol warriors were skilled archers, even on horseback.



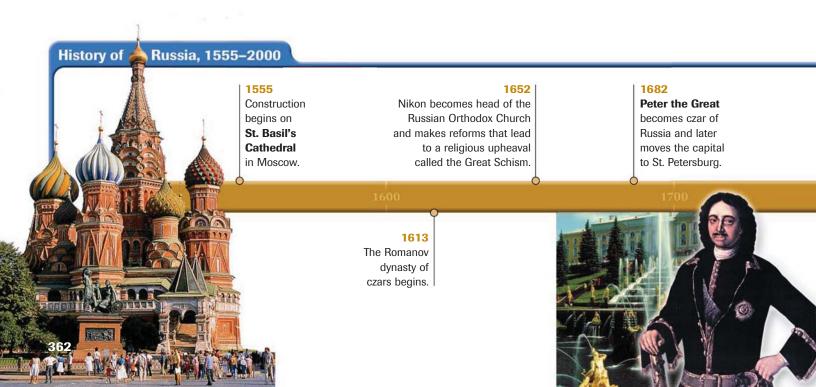


RUSSIA LAGS BEHIND WESTERN EUROPE Russia's territorial growth was rapid, but its progress in other ways was less impressive. Russian science and technology lagged behind that of its European rivals. Peter the Great, who was **czar**—or emperor—of Russia from 1682 to 1725, tried to change this. For example, he moved Russia's capital from Moscow to a city on the Baltic Sea. The new capital, named St. Petersburg, provided direct access by sea to Western Europe. Russians called St. Petersburg their "window to the West."

Peter the Great made impressive strides toward modernizing Russia, but the empire continued to trail behind the West. While the Industrial Revolution swept over many Western European countries in the first half of the 1800s, Russia did not even begin to industrialize until the end of the century. When industry did come to Russia, it resulted in harsh working conditions, low wages, and other hardships. These problems contributed to the people's anger at the czars who ruled Russia.

BACKGROUND

The word *czar* comes from the Latin for *Caesar,* the title of address for Roman emperors.



THE RISE AND FALL OF THE SOVIET UNION During World War I (1914–1918), the Russian people's anger exploded into revolt. In 1917, the **Russian Revolution** occurred, ending the rule of the czars. The Russian Communist Party, led by V. I. Lenin, took control of the government. The Party also took charge of the region's economy and gave Communist leaders control over all important economic decisions.

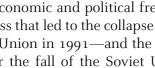
By 1922, the Communist Party had organized the different peoples absorbed during the centuries of Russia's imperial expansion. This new nation was called the Union of Soviet Socialist Republics (USSR), or the Soviet Union for short. The leaders of the Soviet Union ruled the nation from its new capital in Moscow.

By the time World War II broke out in 1939, Joseph Stalin had taken over the leadership of the USSR. In 1941, he led the Soviet Union in the fight against Nazi Germany. However, as the war dragged on, relations between the Soviet Union and its allies-including the United Statesbegan to worsen.

After the war, Stalin installed pro-Soviet governments in the Eastern European countries that his armies had liberated from Germany. U.S. leaders feared that a new stage of Russian expansion was beginning and that Stalin would spread communism all over the globe. By the late 1940s, tensions between the United States and the Soviet Union led to conflict. Diplomats called this conflict the **Cold War** because it never grew into open warfare between the two nations.

The rivalry between the two superpowers continued into the mid-1980s. At that time, Soviet leader Mikhail Gorbachev started to give more economic and political freedom to the Soviet people. This began a process that led to the collapse of the Communist government and the Soviet Union in 1991—and the end of the Cold War.

After the fall of the Soviet Union, the region was divided into 15 independent republics. Of these, Russia, formally known as the Russian Federation, is the largest and most powerful. Today, Russia has a popularly elected president. Its legislature, the Federal Assembly, is divided into two chambers-the Federation Council and the State Duma.



Soviet comes from the Russian word for a governmental council, or assembly.



Using the Atlas Examine the map on page 339. Why do you think the Soviet Union had so much power over Eastern Europe?





REGION The Soviet government's control over the economy was often inefficient. Citizens had to wait in line for hours, even to buy basic consumer goods, such as a handbag.



Building a Command Economy

The communists who overthrew czarist Russia in 1917 had strong ideas about the future. When they put their ideas into practice, they drastically transformed the economic geography of the region.

AN ECONOMIC DREAM The communists had been inspired by the work of Karl Marx, a German philosopher who had examined the history of economic systems. Marx believed that the capitalist system was doomed because it concentrated wealth in the hands of a few and left everyone else in poverty. He predicted that a communist system would replace capitalism. In a communist society, he argued, citizens would own property together, and everyone would share the wealth.

A HARSH REALITY To move their society toward communism, Soviet leaders adopted a **<u>command economy</u>**—one in which the central government makes all important economic decisions. The government took control of the major sources of the state's wealth, including land, mines, factories, banks, and transportation systems. Government planners decided what products factories would manufacture, what crops farms would grow, and even what prices merchants would charge for their goods.

Rapid industrialization became a major goal of Soviet planning. Even farming became an industry under Stalin. The Soviet government created enormous **collective farms** on which large teams of laborers were gathered to work together. People were moved to the farms by the thousands. By 1939, nearly nine out of ten farms were collectives. The Soviets had firmly established their power over the countryside.

Although industrial and agricultural production increased, the region's people had to make great sacrifices for this rapid transformation. Millions of citizens starved to death in famines caused, in part, by the creation of collective farms. Those who survived soon realized that only a small number of individuals had benefited from the economic changes.

Many people tried to do something about this betrayal, but at great risk. Under Stalin's rule, the police swiftly punished any form of protest. Some historians estimate that Stalin was responsible for the deaths of more than 14 million people.

Since the fall of the Soviet Union in 1991, leaders in Russia and the Republics have tried to reduce the state's monopoly on economic power and return some control to private individuals and businesses. You will learn more about these changes in Chapter 17.

CONNECT TO THE ISSUES ECONOMIC CHANGE

Considering how long the Soviet command economy lasted, why might the change to a market economy be hard for the region's citizens?

A Rich Culture

Russia and the Western Republics faced hard times under the czars and the communists. But these leaders could not destroy the cultural and spiritual traditions of the region's people.

ETHNICITY AND RELIGION The region has a rich variety of ethnic groups because of the many peoples absorbed during the centuries of Russian expansion. Russia has the greatest ethnic diversity of the region's republics. Russians make up the largest ethnic group there, with about 80 percent of the total. But nearly 70 other peoples live in Russia, including Finnish, Turkic, and Mongolian peoples. (See the map on page 341 of the Unit Atlas.)

Russia and the Western Republics are home to a great number of religions. Most Russians follow Orthodox Christianity, a religion Russia adopted in the 10th century. But the region is home to many other religions, including Buddhism and Islam. Judaism is also an important religion in the region. However, persecution has led large numbers of Jews to emigrate, especially to Israel and the United States.

Western Republics. The art and architecture of Orthodox Christian

churches, for example, are among the region's earliest artistic achieve-

ments. Even today, citizens adore the beautiful onion-shaped domes and

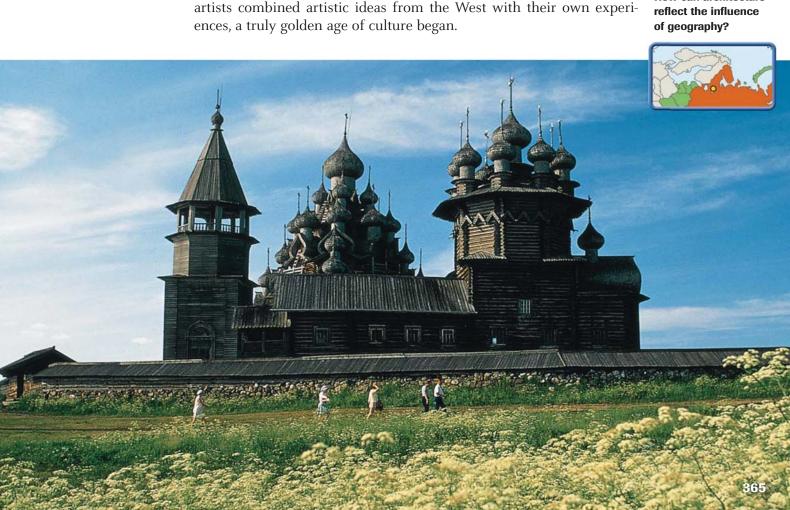
Regional culture went through great change after Peter the Great

began to promote communication with Western Europe. As Russian

the icons-images of sacred Christians-that ornament the churches.

gion in the region. However, persecution has led large numbers of Jews to emigrate, especially to Israel and the United States. **ARTISTIC GENIUS** Religion and art are closely related in Russia and the two churches in this

photo are on Kizhi Island, in Karelia, Russia. The churches' onion domes help to prevent the accumulation of snow during the winter. How can architecture reflect the influence of geography?



Seeing Patterns How did the expansion of the Russian Empire affect the ethnic and religious makeup of the region?

Geographic

Thinking

Soviet Poster Art



REGION The Communist Party recruited artists to help promote Soviet industry. The poster above, from 1947, and the one below, from 1931, promise punishment for laziness and rewards for hard work.



In the 18th and 19th centuries, audiences around the world marveled at the work of writers such as Aleksandr Pushkin and Feodor Dostoyevsky. Their dramatic scenes and colorful psychological studies give an important portrait of Czarist Russia.

Great composers such as Peter Tchaikovsky and Igor Stravinsky also earned worldwide attention, as did the Russian ballet. Russian ballet companies, such as the Kirov and Bolshoi, are famous for producing magnificent dancers and creative choreographers, such as Mikhail Baryshnikov.

Art underwent another major change after the Communist Party began to outlaw artists who did not work in the official style. This style, called socialist realism, promoted Soviet ideals by optimistically showing citizens working to create a socialist society. In spite of the censorship, many artists took great risks to continue producing original work. Since the collapse of the Soviet Union, artistic expression has begun to gain strength.

Tradition and Change in Russian Life

Since the collapse of the Soviet Union, the region is more open to the influence of other countries—especially those in the West. At the same time, the region's people continue to honor their traditions and work hard to preserve them.

A MORE OPEN SOCIETY The region's people—especially in larger cities—have begun to enjoy more social and cultural opportunities. Large cities, such as Moscow and St. Petersburg, now resemble

major cities in the West. City dwellers can read books, magazines, and newspapers from all over the world. They are able to keep up with new movies, music, and clothing trends. They can also experience a wide variety of foods and cuisines.

Although the variety of social and cultural opportunities has increased, native traditions have survived. For example, in spite of the many cuisines now available in Russian cities, many Russians still favor their traditional foods. Many of the foods, such as rye bread,

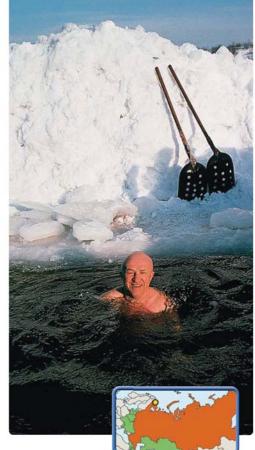


Seeing Patterns How do Russian foods reflect regional geography? reflect the large crops of grain produced on the region's steppes. Kasha is another popular food made from grain. It is cooked and eaten with butter. Even Russia's national drink, vodka, is made from rye or wheat grains.

DACHAS AND BANYAS Only a quarter of Russia's population lives in rural areas. Even so, many Russians cherish the nation's countryside. Nearly 30 percent of the population own homes in the country, where they spend weekends and vacations. These homes, called *dachas*, are usually small, plain houses and often have gardens in which to grow vegetables.

One of the customs that Russians enjoy both in the countryside and the cities is visiting a *banya*. A *banya* is a bathhouse in which Russians perform a cleaning ritual that combines a dry sauna, steam bath, and often a plunge into ice-cold water.

Russians begin the ritual by warming up in a sauna heated to around 200°F. They then move into a steam room, where they use birch twigs to ease the muscles and perfume the body. After spending time in the steam room, many bathers plunge into an icy-



cold pool—which might be a hole cut in the ice of a river or a lake. The ice bath is followed by hot tea, and the process is repeated. A visit to the *banya* can sometimes last for two to three hours.

The preservation of such customs and traditions by the Russian people has played an important role since the fall of the Soviet Union. It has helped to make the change from the isolated Soviet past to the more open society of the present less difficult. **PLACE** A man enjoys an ice-cold dip during his trip to the *banya*.

-Assessment

Places & Terms

Explain the importance of each of the following terms and places.

- Baltic Republics
- czar
- Russian Revolution
- USSR
- Cold War
- command economy
- collective farm

2 Taking Notes

REGION Review the notes you took for this section.

Russia and the

- Western Republics Russia and the Republics
- How did the Russian Empire lag behind its European rivals?
- How did the Communist Party control artistic expression?

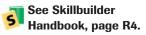
3 Main Ideas

- a. What was the extent of the Russian Empire's expansion between the 9th century and the end of the 17th century?
- **b.** What were the origins of the Soviet Union?
- **c.** How did the Soviet Union come to an end?

4 Geographic Thinking

Making Inferences How did the economic policies of the Soviet Union affect its human geography? **Think about:**

- industrialization
- collective farms





EXPLORING LOCAL GEOGRAPHY You read in this section how Russia's traditional food is related to its geography. Do research on the traditional foods where you live, and try to determine how they might be related to the physical or human geography of your region. Explain the connections that you find in an **oral report.**

INTERACTIVE

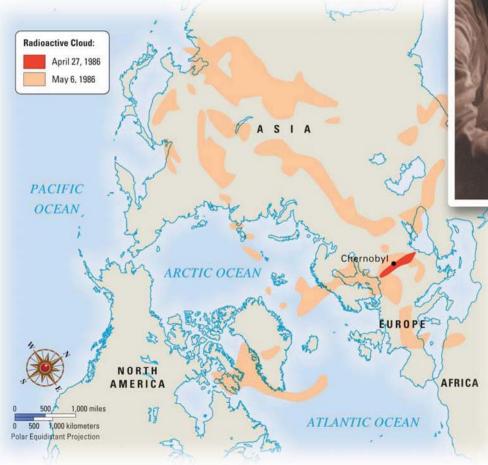
Nuclear Explosion at Chernobyl

oster

On April 28, 1986, engineer Cliff Robinson arrived at Sweden's Forsmark nuclear power plant. He was startled when a radiation detector went off as he entered his office. When he checked the radiation levels on his clothing, he could not believe his eyes. "My first thought," said Robinson, "was that a war had broken out and that somebody had blown up a nuclear bomb." What Forsmark had detected was a radioactive cloud from the city of Chernobyl—site of a Soviet nuclear power plant nearly 800 miles away.

One of Chernobyl's nuclear reactors had exploded, spewing radioactive dust across the region. It took two days for Soviet officials to admit that the explosion had occurred. The blast killed 31 people. No one is certain what toll accident-related diseases will take on the region's population in the future.

The Spread of Radiation from Chernobyl





Workers test radiation levels from a helicopter. After the explosion, hundreds of thousands of workers helped in cleanup operations. Many were exposed to radiation and required emergency medical treatment.

The radioactive cloud from Chernobyl eventually spread over the entire Northern Hemisphere.



Serious health problems, such as thyroid cancer, have increased dramatically among children since the accident at Chernobyl.

A close-up of the damage at Chernobyl's Unit 4 reactor (left). The color image below shows the concrete and steel "sarcophagus," or enclosure, later built around the contaminated reactor.

GeoActivity

PLANNING A PRESENTATION With a partner, use the Internet to research Chernobyl today. Plan a **multimedia presentation** about the disaster's legacy.

- Design charts, graphs, and maps that show the disaster's impact on public health and the environment.
- Include personal stories from individuals whose lives have been affected by the explosion.



GeoData

DAMAGE REPORT

- The Chernobyl plant is located about 80 miles north of Kiev, Ukraine's capital.
- The plant once employed nearly 9,200 people.
- On April 26, 1986, a poorly planned safety experiment led to the explosion at Chernobyl, which was made worse by a faulty reactor design.
- The reactor explosion was the world's worst civilian nuclear accident.
- The explosion contaminated around 100,000 square miles of land in Ukraine, Russia, and Belarus.
- Officials evacuated and resettled approximately 250,000 people from different towns around Chernobyl.
- Chernobyl continued to produce electricity until December 15, 2000, when officials finally shut down its last operating reactor.
- Costs related to the disaster have been estimated at over \$300 billion.



A HUMAN PERSPECTIVE Throughout history, human beings have migrated through Transcaucasia, which today consists of the republics of Armenia, Azerbaijan, and Georgia. Recent discoveries have shown just how early such migrations began. In the summer of 1999, a team of scientists discovered two 1.7-million-year-old human skulls in the Transcaucasian republic of Georgia. They were the oldest human fossils found outside Africa. Reports suggest that the skulls could belong to the first people to have migrated from Africa.

A Gateway of Migration

People have long used Transcaucasia as a migration route, especially as a gateway between Europe and Asia. Trade routes near the Black Sea

led to the thriving commercial regions of Mediterranean Europe. And trade routes leading to the Far East began on the shores of the Caspian Sea.

A VARIETY OF CULTURES

Because of the presence of so many trade routes, Transcaucasia has been affected by many different peoples and cultures. Today, more than 50 different peoples live in the region.

Migrants brought a great variety of languages to the region. Arab geographers called the region *Jabal Al-Alsun*, or the "Mountain of Language." The Indo-European, Caucasian, and Altaic language families are the region's most common.

MIGRATION BRINGS RELIGIONS

The people of Transcaucasia follow a number of different religions. However, most of the region's people belong to either the Christian or the Islamic faith.

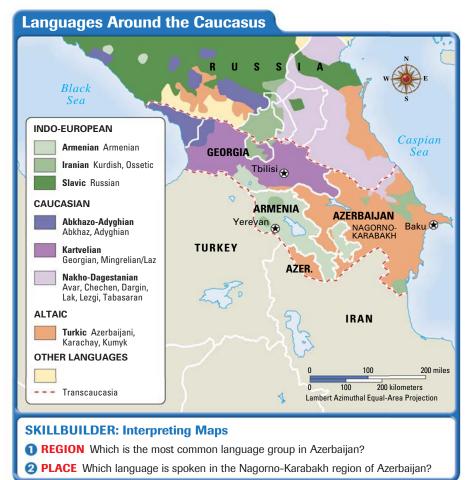
Main Ideas

- Transcaucasia has been a gateway between Europe and Asia.
- The Caspian Sea's oil and gas reserves have given the region great economic potential.

Places & Terms Red Army

supra

CONNECT TO THE ISSUES CONFLICT Ethnic tensions in Transcaucasia erupted in conflict after the fall of the Soviet Union.



These faiths arrived in the region at an early date, because Transcaucasia is close to the areas in Southwest Asia where the two religions began. Armenia and Georgia, for example, are among the oldest Christian states in the world. Armenia's King Tiridates III converted to Christianity in A.D. 300. A year later, he made his state the first in the world to adopt Christianity.

Not long after the 7th-century beginnings of Islam in Southwest Asia, Muslim invaders stormed into the southern Caucasus and converted many Transcaucasians to Islam. Today, the great majority of Azerbaijan's people are Muslim.

CONFLICT The region's diverse population has not always lived together in harmony. Tensions seldom erupted into open hostility under the rigid rule of the Soviets.

CONNECT TO

THE ISSUES

CONFLICT

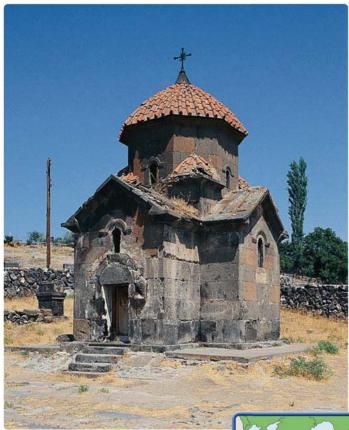
Why did

ethnic tensions

violence during

the Soviet era?

seldom erupt into



However, after the collapse of the USSR in 1991, tensions among different groups have resulted in violence. Civil war broke out in Georgia, and Armenia fought a bitter war with Azerbaijan over a disputed territory called Nagorno-Karabakh.

The story of conflict is not new to Transcaucasia. Its history of conflict, as you will read below, can be explained, in part, by its location.

A History of Outside Control

Over the centuries, Transcaucasia has been a place where the borders of rival empires have come together. Imperial armies have repeatedly invaded the region to protect and extend those borders.

CZARIST AND SOVIET RULE In the 18th century, the troops of the Russian Empire joined the list of invaders. Russia's southward expansion had begun as early as the 1500s, but it was only in the 1700s that the czar's army began making progress south of the Caucasus Mountains.

The inhabitants of the region resisted the Russians, but the czar's troops prevailed. By 1723, Peter the Great's generals had taken control of Baku, the capital of Azerbaijan. In 1801, Russia annexed Georgia. In 1828, Russian armies took control of a large stretch of Armenian territory, including the plain of Yerevan. By the late 1870s, the czar's troops had added Transcaucasia to the Russian Empire.

After the Russian Revolution in 1917, the Transcaucasian republics enjoyed a brief period of independence. By the early 1920s, however, the **<u>Red Army</u>**—the name of the Soviet military—had taken control of the region.



PLACE The beautiful Karmravor Church is located in the Armenian village of Ashtarak. It dates from the 7th century. How long after Armenia adopted Christianity was the church built? In the decades following the Soviet takeover, the people of Transcaucasia experienced the same painful economic and political changes as the rest of the Soviet Union. Many people lost their lives in famines triggered by the shift to collective farming or were killed because of their political beliefs. The republics of Transcaucasia regained their political independence in 1991 after the fall of the Soviet Union. Since then, the region's leaders have struggled to rebuild their nations' economies.

BACKGROUND

Stalin was especially harsh on Transcaucasia, even though he was from the Georgian town of Gori.

Economic Potential

Today, economic activity in the Transcaucasian republics ranges from the tourism and wine industries of subtropical Georgia to large-scale oil production in Azerbaijan.

AGRICULTURE AND INDUSTRY Although much of Transcaucasia's terrain is mountainous, each of the republics has a significant agricultural output. Transcaucasians have taken advantage of the region's climate and the potential of the limited amount of land fit for farming.

The humid subtropical lowlands and foothills of the region are ideal for valuable crops such as tea and fruits. Grapes are one of the most important fruit crops. Georgians use the grapes cultivated along their Black Sea coast to produce their famous wines. Georgia's mild climate also once fueled a profitable tourist industry.

There was little industry in Transcaucasia before the Soviet Union took control of the region. Soviet planners transformed Transcaucasia from a largely agricultural area into an industrial and urban region.

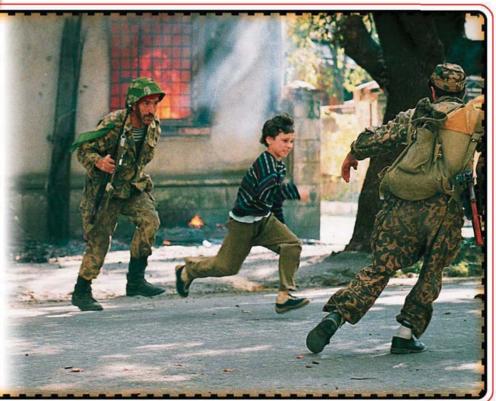


Trouble in Georgia

In the late 1980s, more than 3.6 million tourists visited Georgia each year. But tourism slowed to a trickle after ethnic conflict broke out in the region in the early 1990s.

One conflict took place in Abkhazia–a resort area that stretches for more than 100 miles along Georgia's Black Sea coast. Ethnic Abkhazians sought independence and rebelled against Georgia, which sent troops to prevent the uprising. The conflict remained unresolved at the beginning of 2001.

In this photo, from 1993, soldiers help a boy flee from street fighting in Sokhumi, the capital of Abkhazia.



A number of industrial centers built by the Soviets continue to produce iron, steel, chemicals, and consumer goods for the region's economy. But today, the oil industry is most important. The oil industry has an impact not only on oil-rich republics, such as Azerbaijan. It also affects Armenia and Georgia because oil producers want to build pipelines across their territory to bring the oil to market.

LAND OF FLAMES The significance of oil in the region has a long history. In fact, the name Azerbaijan means "land of flames." The republic's founders chose the name because of the fires that erupted seemingly by magic from both the rocks and the waters of the Caspian Sea. The fires were the result of underground oil and gas deposits.

DIVIDING THE CASPIAN SEA Since the breakup of the Soviet Union, Azerbaijan and the other four countries bordering the Caspian Sea have argued about whether the Caspian is an inland sea or a lake. The resolution of this argument will decide how resources are divided among the five countries.

If the Caspian is a sea, then each country has legal rights to the resources on its own part of the sea bed. If it is a lake, the law says that most of the resource wealth must be shared equally among each of the countries. Azerbaijan, with large reserves off its coast, says the Caspian is an inland sea. Russia, with few off-shore reserves, insists that the Caspian is a lake.

The oil industry has given the region's people hope for a better life. But oil revenue has benefited few Transcaucasians. Many continue to live in poverty.



Modern Life in Transcaucasia

Although times are tough for many, the region has much to offer, including a well-educated population and a reputation for hospitality.

AN EDUCATED PEOPLE The educational programs of the Soviet Union had a largely positive impact on its people. At the time of the Russian Revolution, only a small percentage of Transcaucasia's population was literate. Communist leaders decided to train a new generation of skilled workers who would be prepared to undertake the tasks of industrial development and modernization. They succeeded, as literacy rates in Transcaucasia rose to nearly 99 percent, among the highest in the world. Today, high quality educational systems remain a priority for Transcaucasians.

HOSPITALITY In their quest for a modern system of education, Transcaucasians have not forgotten the value of their traditions. Among the most important are the region's mealtime celebrations.



Seeing Patterns How can the geographic definition of a body of water affect economic relationships?





PLACE At a dinner party held in the Georgian town of Kutol, a woman raises her glass to deliver a toast. How do the foods you see in the image reflect what you have read about Georgia's climate? The Georgian *supra*, or dinner party, is one of the best examples of such gatherings. The word *supra* means tablecloth but also refers to any occasion at which people gather to eat and drink.

A *supra* involves breathtaking quantities of food and drink. Meals begin at a table spread with a great number of cold dishes. Two or three hot courses and fruit and desserts follow those. Georgians add locally grown foods, such as grated walnuts, garlic, and an array of herbs and spices to their recipes. And they are able to serve meals with remarkable freshness, thanks to the region's mild climate.

In addition to food and drink, a *supra* is accompanied by a great number of toasts, short speeches given before taking a drink. Georgians take the toasts very seriously because they show a respect for tradition, eloquence, and the value of bringing people together—a goal of great importance for the future of the region.

Assessment

Places & Terms

Explain the importance of each of the following terms.

- Red Army
- supra

2 Taking Notes

REGION Review the notes you took for this section.

Russia and the Republics

Transcaucasia

- How do Transcaucasia's republics differ in terms of religion?
- What sorts of activities take place during a Georgian *supra*?

3 Main Ideas

- How would you describe the ethnic and linguistic makeup of Transcaucasia?
- **b.** What roles did Russia and the Soviet Union play in Transcaucasia?
- **c.** How has the oil industry affected the people of Transcaucasia?

4 Geographic Thinking

Determining Cause and Effect How did the economic goals of the Soviet Union affect educational values in Transcaucasia? **Think about:**

- Transcaucasia's economy before the 1920s
- the impact of economic changes on the region's workers



MAKING COMPARISONS Carry out more research on the religions of Transcaucasia. Then write a **script** for a five minute documentary that compares the architectural styles used in two different houses of worship.



A HUMAN PERSPECTIVE Central Asia has inspired the dreams of many adventurers—and presented them with many dangers. In the 19th century, agents of the mighty British Empire found that even they were not safe there. In 1842, two British officers were captured in the Central Asian city of Bukhoro. For months, the city's ruler kept the men in an underground bug-pit that swarmed with ticks, rats, and scaly vermin. In June of that year, he forced the two officers to dig their own graves and then beheaded them. In spite of the dangers, people have journeyed across Central Asia throughout history.

A Historical Crossroads

Today, Central Asia consists of five independent republics: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. Travelers first began to make their way across the region in large numbers around 100 B.C. Many of them joined caravans making the 4,000-mile journey between China and the Mediterranean Sea.

THE SILK ROAD Traders called this route the **Silk Road**, after the costly silk they bought in China. In addition to silk, traders carried many other goods on their horses and camels. These included gold, silver, ivory, jade, wine, spices, amber, linen, porcelain, grapes, perfumes—even

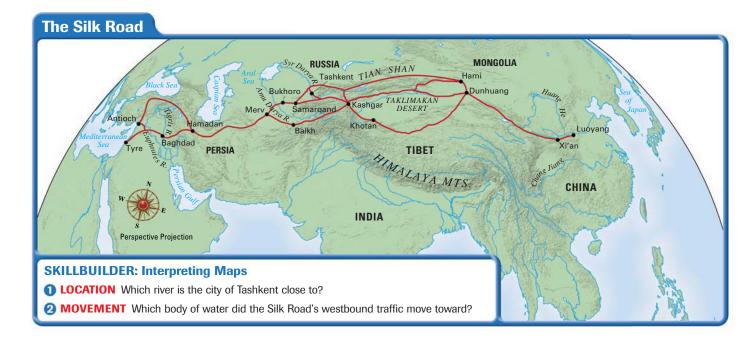
Main Ideas

- Soviet officials drew borders in Central Asia that are making it difficult for the region's new leaders to establish stability.
- Central Asians have preserved many cultural traditions despite decades of colonization.

Places & Terms

Silk Road	nomad
Great Game	yurt

CONNECT TO THE ISSUES NUCLEAR LEGACY Soviet nuclear testing will have a longterm impact on the region.





ostriches and acrobats. The Silk Road also became a route for spreading ideas, technology, and religion.

Traffic on the Silk Road slowed in the 14th century, giving way to less expensive sea routes. Even so, you can still experience the legacy of the Silk Road in the magnificent cities—such as Samarqand and Bukhoro—built to take advantage of the trade.

THE GREAT GAME Interest in Central Asia exploded again in the 19th century when Great Britain and the Russian Empire began to struggle for control of the region. Russian troops were moving southward, and British leaders wanted to stop the advance before the troops could threaten Britain's possessions in India.

Both sides recruited daring young officers who made journeys through the region in disguise. These officers worked to create maps of Central Asia and to win local leaders to their side. Arthur Connoly—one of the British officers executed in Bukhoro—called this struggle between the two empires the **Great Game**.

By the end of the 19th century, the Russian Empire had won control of Central Asia. In the 1920s, the Soviet Union took control and governed the region until 1991. Since the collapse of the Soviet Union, the Central Asian republics have been independent.

BACKGROUND

Bukhoro and Samarqand marked halfway points where travelers could meet and take advantage of the cities' markets and services.

An Uncertain Economic Future

In Chapter 15, you read about the problems caused by Soviet irrigation programs in Central Asia. Other Soviet programs have also caused problems in the region.

NUCLEAR TESTING Until the late 1980s, the Soviet nuclear industry was the economic mainstay of Semey (renamed Semipalatinsk), a city in northeastern Kazakhstan. Between 1949 and 1989, scientists exploded 470 nuclear devices in "the Polygon," a vast nuclear test site southwest of Semey.

The nuclear tests were so close to Semey that citizens could see the mushroom clouds of the above-ground explosions. Later, underground explosions cracked walls in towns 50 miles away. The testing caused widespread health problems. Winds spread nuclear fallout over a 180,000-square-mile area, exposing over a million people to dangerous levels of radiation. Exposure caused dramatic increases in the rates of leukemia, thyroid cancer, birth defects, and mental illness. Although testing at the site ended in 1989, the harmful effects of radiation will continue for years to come.

PETROLEUM AND PROSPERITY More hopeful is the potential for oil to bring wealth to Central Asia. Regional leaders see great promise in the oil and gas reserves of the Caspian Sea. In addition, engineers have recently discovered oil fields in Kazakhstan and Turkmenistan. These discoveries have triggered what many are calling the new "Great Game," as nations all over the world begin to compete for profits from the region's resources.

For Central Asia's resources to benefit its people, however, leaders must first establish stable political and legal institutions. The cultural geography of Central Asia, though, will make this goal

especially difficult to achieve.

Cultures Divided and Conquered

Central Asia has a large number of ethnic groups, as the chart to the right shows. Before the Russian Revolution, each group lived in a particular region where it could follow its own way of life.

SOVIETS FORM NATIONS When the Soviets took control of Central Asia, they used the differences among the ethnic groups to establish their own authority in the region.

Soviet planners carved the region into five new nations that corresponded to the largest ethnic groups—Kazakh, Kyrgyz, Tajik, Turkmen, and Uzbek. However, when they drew the borders of these nations, they deliberately left large numbers of one ethnic group as minorities in the neighboring republics of other ethnic groups.

That explains why Uzbeks form about 24 percent of the population of Tajikistan and why two of the major

Ethnic Groups

Central Asia (1999)			
Group	Percent		
Uzbek	41%		
Russian	15%		
Kazakh	15%		
Tajik	9%		
Turkmen	6%		
Kyrgyz	4%		
Ukrainian	2%		
German	1%		
Karakalpak	1%		
Tatar	1%		
Other	5%		
SOURCE: CIA World Factbook 1999			

SKILLBUILDER: Interpreting Charts

REGION What is the second largest ethnic group in Central Asia?



Seeing Patterns What are the harmful effects of nuclear testing?

growing up Kyrgyzstan

Like children in the other former Soviet republics, the young people of Kyrgyzstan face a future filled with challenges. But most of the country's young people are prepared to meet those challenges. Children in Kyrgyzstan go to school from the ages of 6 to 15, and the nation's literacy rate stands at more than 97 percent.

The children in this photo are celebrating a birthday with their family. They are in a yurt set up for the occasion. Among the dishes on the table are manti (sheep dumplings), irkat (a salad made of noodles and grated carrots), and kymys (a drink made from fermented horse milk).

If you lived in Kyrgyzstan, here is what you might experience:

- Since 75 percent of Kyrgyz practice
 Watching TV would also be Islam, you might be Muslim.
- You might become a farmer, since nearly half of Kyrgyzstan's people earn their living that way.
- You might find it hard to keep in touch with friends since just 8 out of 100 people own phones.
- difficult. Only 2 out of 10 people own a TV
- · You would earn the right to vote and become eligible for military service at the age of 18.

cities inside Uzbekistan, Samargand and Bukhoro, are populated by ethnic Tajiks. Ethnic Uzbeks also make up 9 percent of Turkmenistan's and nearly 14 percent of Kyrgyzstan's populations. Soviet leaders tried to prevent opposition to their rule by using the tensions that existed among these different groups.

LANGUAGE AND RELIGION Although the peoples of Central Asia are divided by a number of ethnic and political loyalties, there are unifying forces in the region as well. Islam, which was brought by Muslim warriors from Southwest Asia in the 8th and 9th centuries, is one of the strongest. Also, most Central Asians speak languages related to Turkish. Many people also speak Russian, once the region's official language.

The Survival of Tradition

Central Asia endured decades of upheaval under Russian and Soviet rule. Even so, many of the region's traditions have survived.

NOMADIC HERITAGE The expansive grasslands of Central Asia are ideal for nomadic peoples. Nomads are people who have no permanent home. As seasons change, they move from place to place with their animals in search of food, water, and grazing land.

During the years of Soviet control, the number of nomads in Central Asia decreased dramatically as officials forced people onto collective farms. Even so, you can still find nomads in the region. In central Kyrgyzstan, for example, herders set up their tents near Lake Song-Köl during the summer months. They bring their animals there to graze on the lush pastures of the valley.



Using the Atlas 4 Look at the maps on pages 338-339 and 341. Compare the political and ethnic borders in Central Asia. In which regions do you see a potential for conflict?

Because they are always on the move and must carry what they own, nomads have few possessions. They usually carry what is most useful. Even so, many of the possessions of Central Asia's nomads are both useful and beautiful.

YURTS Among the most valuable of the nomads' possessions are their tents—called **yurts**. Yurts are light and portable. They usually consist of several layers of felt stretched around a wooden frame, often made of willow. The outermost layer of felt is coated with the waterproof fat of sheep.

As the photo on page 378 shows, the inside of a yurt can be stunningly beautiful. To block the wind, nomads hang reed mats, intricately woven with the grasses of the steppe. For storage, they suspend woven bags on their tent walls. The inlaid wooden saddles of their horses and their carved daggers also ornament the yurt.

Perhaps the most beautiful and useful of all the yurt's furnishings are the handwoven carpets. Their elaborate designs, colored with natural plant and beetle dyes, have made the carpets famous. Nomads use them for sleeping, or as floor coverings, wall linings, and insulation.

PRESERVING TRADITIONS The nomadic lifestyle of the peoples of Central Asia is not nearly as widespread as it once was. But many people are working hard to preserve the tradition. One group has organized a network of shepherds' families in Kyrgyzstan who are willing to take in guests. In this way, tourists can experience the daily life of the shepherds, who, in turn, receive a source of income for their families. Central Asians will benefit greatly from such imaginative and productive uses of their traditions.



HUMAN-ENVIRONMENT INTERACTION Two

Kyrgyz men wrestle on horseback. This sport, in which contestants try to unseat their opponents, requires strength, skill, and good horsemanship.

Assessment

Places & Terms

Explain the importance of each of the following terms.

- Silk Road
- Great Game
- nomad
- yurt

ns 🛛 🙆 Taking Notes

REGION Review the notes you took for this section.



- What were some of the objects traded or transported over the Silk Road?
- Why have some people suggested that a new Great Game is beginning in Central Asia?

3 Main Ideas

- a. What was the cause of the Great Game?
- b. What impact has Soviet nuclear testing had in Central Asia?
- c. What are two important unifying forces in Central Asia?

4 Geographic Thinking

Drawing Conclusions How did the Soviet Union use the human geography of Central Asia to establish control of the region? **Think about:**

- ethnic groups in the region
- how Soviet planners drew borders





SEEING PATTERNS Carry out more research on the lives of nomads in Central Asia. Focus on the period before the Soviet Union took control of the region. Then make up a **diary entry** that describes the daily activity of a typical nomadic family.

INTER**ACTIVE**

Comparing Cultures

Homes and Shelters

The geography of the region in which people live influences the nature of their homes and shelters. People who live in forested areas, for example, might build log cabins. People living in grasslands, on the other hand, may use thatch—plant stalks and leaves—to build their homes. On these two pages, you will learn how homes in different parts of the world reflect local geographic possibilities and limitations.

Kyrgyzstan

Indonesia -



Arctic peoples in Canada and Greenland take advantage of their environment by using blocks of snow to build dome-shaped winter shelters called igloos. They sometimes add windows made with sheets of ice or seal intestines.

Spain

The portable yurts of Kyrgyz herders are suited to their nomadic lifestyle.

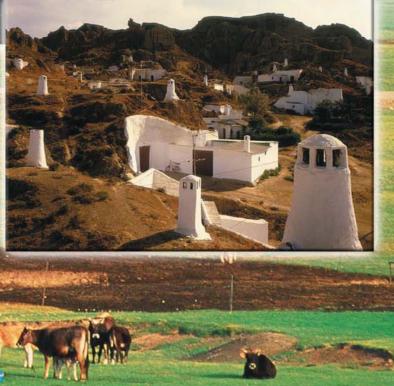


380 CHAPTER 16



The Korowai of Irian Jaya, Indonesia, live in tree houses that protect them from rival tribes, as well as the insects, scorpions, and snakes of the rain forest.

> People in the Spanish town of Guadix have turned underground caves into homes to protect against the region's extreme temperatures.



GeoActivity

CREATING AN EXHIBIT

Working with a partner, use the Internet to do research on homes in a region other than those shown on these two pages. Create an **exhibit** that shows the relationship between the region and its homes.

- Construct a model of the homes you are researching.
- Add a world map to the exhibit that shows where the homes are located.



GeoData

Igloos

- The blocks of snow in an igloo are about 2 feet high, 4 feet long, and 8 inches thick.
- An experienced builder can finish an igloo in one to two hours.

Caves

- About 50 percent of Guadix's inhabitants live underground.
- Some of Guadix's caves are quite luxurious, with marble floors, modern kitchens, fax machines, and Internet connections.

Tree Houses

- The Korowai people build tree houses as high as 150 feet above ground.
- Korowai tree houses have separate areas for men and women, each with its own entrance.

Yurts

- A nomadic family can set up their yurt in approximately a half-hour.
- Felt-the material used to cover yurts-is a fabric of compressed animal fibers, such as wool or fur.

Chapter () Assessment

VISUAL SUMMARY HUMAN GEOGRAPHY OF RUSSIA AND THE REPUBLICS

Subregions of Russia and the Republics

Russia and the Western Republics

- The explosive growth of the Russian Empire and the following decades of Soviet rule have had a lasting impact on both the physical and human geography of the region.
- The dramatic economic changes that accompanied the rise and fall of the Soviet Union affected both Russia and the Republics and the world.

O Transcaucasia

- Migrating peoples have created a mosaic of languages and ethnicities in Transcaucasia.
- Today, leaders in Transcaucasia are struggling to maintain harmony among the region's different cultural groups and bring stability to the region's three newly-independent republics.

🖲 Central Asia

- Central Asia's fractured cultural geography still reflects the political goals of the old Soviet government.
- Powerful unifying forces, such as Islam, may help the region's new republics as they continue to rebuild their social and economic systems.



Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- Baltic Republics
 czar
- 6. command economy
- 3. Russian Revolution
- 7. collective farm8. Red Army
- an Revolution
- USSR
 Cold War
- Silk Road
 yurt

B. Answer the questions about vocabulary in complete sentences.

- 11. What were the emperors of the Russian Empire called?
- **12.** What are the names of the three former Soviet republics located on the Baltic Sea?
- 13. What event ended the Russian Empire and the rule of the czars?
- 14. What is another name for the Soviet Union?
- **15.** What was the name of the 20th-century conflict between the United States and the Soviet Union?
- **16.** In what type of system are all major economic decisions made by the central government?
- 17. How did the Soviet Union turn agriculture into an industry?
- 18. What was the name of the Soviet military?
- **19.** What caravan route contributed to the growth of magnificent trading cities such as Samarqand?
- **20.** What is the name for the felt-covered dwellings of Central Asia's nomads?

Main Ideas

Russia and the Western Republics (pp. 361–369)

- 1. What former Soviet republics are located west of Russia?
- 2. What event delayed the growth of Russia before the 16th century?
- 3. What were the origins of the Cold War?
- **4.** What is the largest religious group in Russia and the Western Republics?

Transcaucasia (pp. 370–374)

- 5. Of what republics does Transcaucasia consist?
- **6.** Transcaucasia's location between which two seas made it an ideal migration route?
- 7. What factors may have contributed to instability in Transcaucasia?

Central Asia (pp. 375–381)

- 8. Of what republics does Central Asia consist?
- 9. Why did the Silk Road cross over Central Asia?
- 10. How did Islam become a major religion in Central Asia?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.



- a. What percentage of the Russian population lives in rural areas?
- b. What are the main religions in Transcaucasia?

2. Geographic Themes

Central Moscow

questions.

- a. **PLACE** Why did Azerbaijan's founders call it the "land of flames"?
- b. **LOCATION** Where was the Soviet nuclear test site called "the Polygon" located?

Geographic Skills: Interpreting Maps

Use the map to answer the following

1. LOCATION On what river does

3. **MOVEMENT** In which direction would you walk to get from Lenin's

Russia's capital lie?

3. Identifying Themes

Which country in Russia and the Western Republics has the greatest ethnic diversity, and what is its largest ethnic group? Which of the five themes applies to this situation?

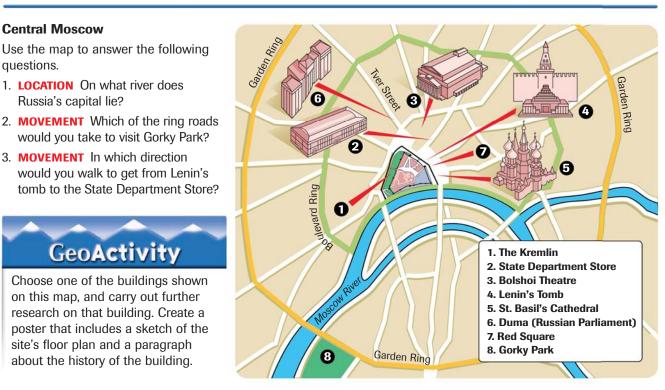
4. Making Comparisons

How did the rise of the Soviet Union affect Transcaucasia and Central Asia?

5. Making Generalizations

How can the type of government that a country has affect the kind of work the country's artists create?





GeoActivity

would you take to visit Gorky Park?

Choose one of the buildings shown on this map, and carry out further research on that building. Create a poster that includes a sketch of the site's floor plan and a paragraph about the history of the building.

INTERNET ACTIVITY

Use the links at **classzone.com** to do research on two of the former Soviet republics to the west of Russia. Focus on the characteristics of the republics' geography and people.

Creating Charts and Graphs Use your research to create charts and graphs that compare the two republics that you have chosen. List the Web sites that you used in preparing your report.

Chapter

SECTION 1 Regional Conflict

SECTION 2 The Struggle for Economic Reform

CaseStudy The Soviet Union's Nuclear Legacy

For more on these issues in Russia and the Republics . . . CURRENT EVENTS CLASSZONE.COM

This woman and child are from the Russian Republic of Chechnya. Russia invaded Chechnya twice in the 1990s to prevent the republic from becoming independent.

GeoFocus

What impact has the fall of the Soviet Union had on the region?

Taking Notes In your notebook, copy a cause-and-effect chart like the one below. Then take notes on causes and effects of some aspect of each issue.

	Causes	Effects
lssue I: Conflict		
lssue 2: Economy		
Case Study: Nuclear Legacy		

TODAY'S ISSUES Russia and the Republics



Regional Conflict

How do new nations establish law and order?

A HUMAN PERSPECTIVE The powerful central government of the Soviet Union once maintained tight control over Russia and the Republics. But when the Soviet Union collapsed in 1991, central authority weakened. Crime, conflict, and other signs of instability increased. As one former Soviet citizen put it, "We're floating in a zone of half-lawlessness, half-law. . . . We destroyed the old system but replaced it with nothing. There is a vacuum."

A number of ethnic and religious groups have taken advantage of this vacuum to seek control over their own affairs. In several regions, their demands have resulted in conflict. Leaders in these regions have tried to gain control over the conflicts and bring them to an end. The test for many leaders has been how to preserve law and order without

returning to the undemocratic rule of the Soviet era.

A Troubled Caucasus

Among the different subregions of the former Soviet Union, the Caucasus has experienced some of the most violent conflicts. The **Caucasus,** or Caucasia, is a region that straddles the Caucasus Mountains, which stretch between the Black and Caspian seas. To the north of the mountains lie republics that are part of Russiaincluding Chechnya, Dagestan, Ingushetia, and North Ossetia. To the south are the republics of Transcaucasia, which were once part of the Soviet Union but are now independent countries: Armenia, Azerbaijan, and Georgia.

The Caucasus is a land of great complexity. Inhabitants of the region, which is about the size of the state of California, speak dozens of distinct languages and belong to approximately 50 different ethnic groups.

Main Ideas

- Regional tensions, once under Soviet control, have flared up in Russia and the Republics.
- Some of the most violent conflicts have occurred in the Caucasus region.

Places & Terms

Caucasus Chechnya Nagorno-Karabakh



RUSSIA & REP

As the Soviet Union began to break up in the late 1980s, several of these ethnic groups began to take up arms to win their own independent territories. In the following decade, hundreds of thousands of people died in the conflicts that resulted.

CHECHNYA Among the republics that remained part of Russia after the collapse of the Soviet Union, **Chechnya** has experienced the worst vio-



lence. In response to Chechnya's demand for independence, Russia invaded Chechnya twice in the 1990s, causing over 100,000 casualties.

Russia first invaded Chechnya in 1994. By the spring of 1995, Russian troops were in control of more than two-thirds of the republic's territory, and they had captured the capital, Grozny, and other major towns. But Chechen rebels continued to fight from hideouts in the surrounding mountains. Unable to defeat the rebels, Russia reluctantly entered into a peace agreement with Chechnya, ending the first phase of the war in August 1996.

Russia invaded Chechnya again in October 1999. The invasion began after a series of bombings in Moscow

and other Russian cities that Russian leaders blamed on Chechen terrorists. The invasion continued into 2001. As of that time, no one was certain when the conflict would end.

GEORGIA Russia is not the only former Soviet republic that has experienced instability. The Ossetian people living in the central Georgian region of South Ossetia fought against Georgian troops off and on from 1989 to 1992. They wanted to unite South Ossetia with North Ossetia, located in Russia. This violent struggle resulted in 2,000 deaths and over 40,000 refugees before a truce put an end to the conflict in June 1992.

Following the truce in South Ossetia, another violent conflict erupted in Abkhazia, a once-popular resort region in northwestern Georgia. Abkhazians declared independence in July 1992. In the following months, they forced Abkhazia's Georgian population—over 250,000 people—to leave the region. Many died while crossing snow-covered mountains to safer areas. By September 1993, the Abkhazians had driven Georgian troops from the region. In spite of their success, Abkhazia still lay in ruins in 2001. And the fate of the Georgian refugees remained to be settled.

ARMENIA AND AZERBAIJAN Conflict has also plagued the region south of Georgia, where Armenia and Azerbaijan fought over a mountainous area of Azerbaijan called **Nagorno–Karabakh**. Leaders in Azerbaijan say that the region's history proves that Nagorno-Karabakh belongs to them. Armenia claims Nagorno-Karabakh because over three-quarters of its population is ethnic Armenian.

BACKGROUND

Chechens are the largest ethnic group in Chechnya and are predominantly Muslim.



PLACE This television image shows the results of a bomb attack in August 2000 in the Chechen town of Argun. A Russian soldier leads away a captured prisoner. Why might the Russian army have trouble defeating the Chechen rebels?

Thinking Seeing Patterns How are the two conflicts in Georgia that you read about similar?

Geographic

The dispute began long ago and was raging in the early 1920s, when the Soviet army took control of the region. Soviet authorities kept the dispute under control until the late 1980s, when Armenians and Azerbaijanis began to fight for control over the region.

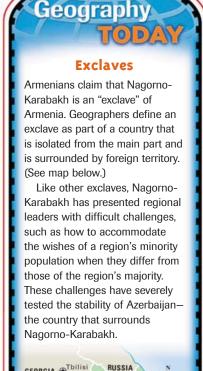
The fighting continued on and off for nearly six years. Eventually Armenia won control of the territory. A ceasefire was declared in 1994, but by then, tens of thousands of people had died. Nearly a million had become refugees.

Hope on the Horizon?

In spite of all this conflict in the region, many believe that there is some hope for the future. In April 2001, U.S. Secretary of State Colin Powell hosted a round of direct talks between the presidents of Armenia and Azerbaijan. The talks, which were held in Florida, were aimed at reaching a lasting peace settlement between the two nations. However, as of 2005, the dispute had not been resolved.

Fighting has continued in Chechnya, and the human costs of the war have continued to mount. In February 2001, Russian officials reported that more than 15,000 soldiers (2,700 Russians and 13,000 Chechen guerrillas) had died since the second war began. Public support for the war, which was high when it began in October 1999, is now declining. The economic costs of the war have also

become a burden. These factors may help to bring an end to the conflict. In the next section, you will read more about the economic challenges faced by Russian leaders since the fall of the Soviet Union.



GEORGIA STUIIIsi RUSSIA ARMENIA Verevan TURKEY AZER. NAGORNO KARABAKH Caspian Sea

Assessment

Places & Terms

Explain the importance of each of the following places.

- Caucasus
- Chechnya
- Nagorno-Karabakh

2 Taking Notes

REGION Review the notes you took for this section.

	Causes	Effects
lssue I: Conflict		

 Why might Abkhazia's tourist industry have declined in the 1990s?

3 Main Ideas

- a. Why did ethnic tensions in Russia and the Republics seldom result in armed conflict before the 1990s?
- b. Why did Russian troops invade Chechnya in 1994 and 1999?
- **c.** What led to the conflict between Armenia and Azerbaijan?

Geographic Thinking

Making Comparisons Why might ethnic differences cause problems in one region or society but not in another? Think about:

• the type of government in the region





ASKING GEOGRAPHIC QUESTIONS Search for articles on a conflict in Caucasia. Create **flash cards** that raise geographic questions about the conflict, such as "How did geography help keep Russian troops from defeating Chechen rebels?" The back of the card might read "Rebels hid in the region's mountainous terrain." Consider features of both physical and human geography.

The Struggle for Economic Reform

How does a nation change its economic system?

A HUMAN PERSPECTIVE Russians have faced many hardships since the breakup of the Soviet Union. But few have been as difficult to overcome as the collapse of the Soviet command economy. After the Soviet Union collapsed in 1991, the region's people began to participate in a capitalist system. One Russian bitterly summed up the sudden transition in this way: "You developed your capitalist markets in the West over hundreds of years, and our government wants our people to go to sleep one night in a Communist world and wake up the next morning in a capitalist one." One of the toughest problems facing Russia's leaders is how to carry out economic reforms without causing too much turmoil for the nation's citizens.

Steps Toward Capitalism

After the Soviet collapse, Russia tried to move quickly toward a capitalist system. This meant ending the tight control that the central government held over economic activity.

PRIVATIZATION In January 1992, Russia removed the price controls that had been set by the Soviet government on goods sold within the country. The effect was dramatic. Almost immediately, the prices of many goods increased by 250 percent.

In the same year, Russia began to sell government-owned businesses to individuals and private companies. This process was called **privatization**. But few Russians had enough money

to buy large businesses. So, leaders offered vouchers to the public. The vouchers were like loans that could be used to purchase businesses. The purchasers promised to repay the government with future profits.

But the policy had mixed success. Many of the new businesses were not profitable, and their owners were unable to repay their vouchers. The failures contributed to an economic crash in Russia in 1998. In spite of this shaky start, though, over 60 percent of the country's workforce worked in the private sector by the end of the 20th century.

THE HIGH COST OF ECONOMIC CHANGE Since the 1998 crash, Russia's economy has moved slowly toward recovery. But the movement toward a market economy has yet to benefit most Russians. By the end of the 1990s, nearly 40 percent of the Russian population lived

Main Ideas

- Russia has struggled to move from a command economy to a market economy.
- Russia's enormous size and widespread criminal activity have made economic reform difficult.

Places & Terms

privatization distance decay

The Voyageur Experience in World Geography Russia: Rebuilding a Nation



PLACE The many Western fast-food chains popping up in Moscow are symbols of economic change. Why might fast-food chains have been rare in Russia before 1991? far below the poverty line. Some people even wondered whether things had been better under the Soviet Union.

Obstacles to Economic Reform

Russians have made slow, if painful, strides toward capitalism. Even so, many obstacles remain. Russia's enormous size and the rise of organized crime are among the most important.

DISTANCE DECAY A major obstacle facing economic reformers is **distance decay**. This means that long distances between places make communication and transportation difficult. Russia is an enormous nation, stretching across 11 time zones. Spread over this vast area are 89 different regional governments. The interaction and cooperation of these regional leaders with Moscow is crucial if the government's economic reforms are to be successful. But because the central government in Moscow has been weak, officials far from the capital sometimes refuse to carry out the government's reform programs.

In the spring of 2000, Russian President Vladimir Putin created seven large federal districts to gain more control over regional leaders. Each has its own governor-general. Putin hopes that the heads of the new federal districts will force regional officials to carry out the economic reforms that Moscow wants.



Geographic Thinking Seeing Patterns

Some Russians have objected to the creation of new federal districts. Why might there be disagreement over the districts?



PLACE Officers from a special police force in Moscow arrest a suspected mafia car thief in August 1997. Why might organized crime present a special problem for the Russian government? **ORGANIZED CRIME** As the government tries to improve the economy, it must also face a powerful enemy—organized crime. The "Russian mafia," as criminal organizations in the republic are sometimes labeled, grew rapidly during the 1990s.

By the end of the decade, the mafia had created its own economy. In 1998, the government estimated that organized criminals controlled 40 percent of private companies and 60 percent of state-owned enterprises. Russian criminal activity also expanded outside of Russia. The mafia even tried to sell a Russian submarine to drug barons in Colombia.

The growth of organized crime has slowed economic reform by rewarding illegal activity over honest business. And because illegal activities often go undetected, the government cannot collect taxes on them. Russian officials have taken initiatives to combat organized crime, including the addition of more officers to a special tax police.

FUTURE PROSPECTS In February 2001, Russia's prime minister reported increases in tax and customs revenues. Government officials said the increases are a sign that the Russian economy is on track. If the growth in revenues continues, Russia will be better able to come to terms with the legacy of the Soviet Union and will be able to improve the living standards of its population.

In addition to the economic problems inherited from the Soviet Union, this legacy includes the problems created by Soviet nuclear programs, which you will read about in the next section.

Assessment

Places & Terms

Explain the importance of each of the following terms.

- privatization
- distance decay

REGION Review the notes you took
for this section.

2 Taking Notes

	Causes	Effects
Issue Z:		
Economy		
\sim	\sim	\sim

• Why did the Russian government issue vouchers in 1992?

 What impact might organized crime have on government revenue?

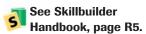
3 Main Ideas

- a. What is one of the toughest issues facing Russia's economic reformers?
- b. How has Russia moved toward a capitalist system?
- **c.** What are some of the obstacles to economic reform?

4 Geographic Thinking

Drawing Conclusions Why did President Putin establish seven new federal districts in Russia? **Think about:**

- the number of its regional governments
- Russia's size





SEEING PATTERNS Do research on a U.S. company doing business in Russia. Create a set of **guidelines** that the company might follow in conducting business in Russia.

RAND MENALLY Map and Graph Skills

Reading Line and Pie Graphs

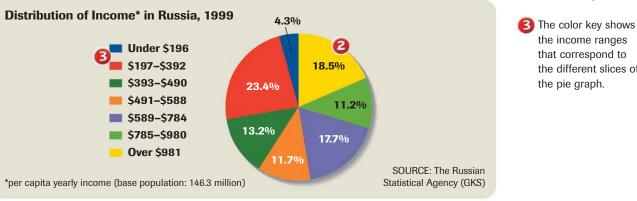
Russia's economy has changed dramatically since the fall of the Soviet Union. To keep track of these changes and plan for the future, economists gather statistics. Presenting statistical data visually in graph form makes the data easier to read.

THE LANGUAGE OF GRAPHS Line graphs show the relation between two variables. The line graph below shows changes in Russia's unemployment rate. The vertical axis lists rates of unemployment. The horizontal axis shows the passage of time.

Pie graphs use percentages to show the relationship of parts to a whole. The pie represents the whole, and each slice of the pie represents a part. The pie graph below shows the distribution of income in Russia.

Percentage of Russian Labor Force Unemployed, 1992–1999 After the Soviet Union and its command 15 economy collapsed in 12 1991, Russia became a separate republic. Percent 9 As it struggled to reform its economy, 6 the rate of unemployment began to rise. 3 0 SOURCE 2 In 1999, only 18.5 1994 1993 1995 1996 1992 1997 1998 1999 **IMF Staff Country** percent of Russia's Report No. 00/150, 2000 Year population earned more than \$981.





Map and Graph Skills Assessment

1. Seeing Patterns

What was the trend in Russia's unemployment rate after 1992? When did it begin to change?

2. Analyzing Data

What was Russia's unemployment rate in 1998?

3. Analyzing Data

What percentage of Russians earned less than \$491 in 1999?

the income ranges

that correspond to

the pie graph.

the different slices of

CASESTUDY

The Soviet Union's Nuclear Legacy

How have Soviet

new leaders?

decisions affected

A syou have read, the breakup of the Soviet Union sparked regional conflicts and economic hardship. Equally serious were the problems caused by the Soviet Union's nuclear programs. These included nuclear warheads atop ballistic missiles, poorly constructed and maintained nuclear power stations, and decaying nuclear waste dumps. All threatened the region's people and environment.

An Unwelcome Legacy

When the USSR fell apart in the early 1990s, leaders around the world had serious concerns about the fate of the region's nuclear weapons. The Soviet Union, which had once controlled those weapons, was now separated into 15 independent republics. World leaders wanted to know who was in control of the weapons, where they were located, and how well they were protected. They also wondered what would become of the nuclear scientists who had worked on the weapons systems.

The weapons industry was just part of the problem. As the 1986 disaster at Chernobyl had so clearly shown, many of the region's nuclear reactors were badly built and poorly managed. Many reactors of the same design as the one that exploded at Chernobyl still exist. Observers fear another disaster may occur in the region.



used a nuclear bomb to create this reservoir in Semey, Kazakhstan.

In 1965, Soviet officials

The Consequences of Collapse

The nuclear legacy of the USSR has had serious political, economic, and environmental consequences.

POLITICAL TENSIONS When the communist government could no longer keep the USSR together, the security of the region's nuclear materials became uncertain. This has caused political tension between the region's leaders and other nations, especially the United States.

In January 2000, a task force of former U.S. officials issued a report that suggested just how important the issue is. The report said that the possibility of Russian nuclear materials being stolen or misused is "the most urgent unmet national security threat" facing the United States. The task force recommended a \$30 billion program to help ensure the safety of Russia's nuclear weapons.

ECONOMIC HEALTH The Soviet Union's nuclear legacy also affects the economic health of Russia and the former Soviet Republics. For example, many regional leaders have been reluctant to shut down aging Soviet reactors because of the expense of building new plants that run on other kinds of fuel, such as natural gas.

Some republics have taken questionable steps to revive their economies. For instance, Russian lawmakers recently approved plans to make their country the world's nuclear dump. In January 2001, the Duma, or legislature, gave preliminary approval to a plan to import, store, and treat nuclear waste from other countries. Officials hope the project will earn Russia as much as \$21 billion over the next ten years.

ENVIRONMENTAL PROSPECTS Plans for the disposal of other nations' nuclear waste angered Russian environmentalists. But other developments have given some hope that the region's environmental prospects might improve. In December 2000, the government of Ukraine finally shut down the last active reactor at Chernobyl. Officials there pledged to spend millions of dollars on a new

PLACE A Ukrainian official examines a nuclear missile just before it is to be dismantled as part of a U.S.-sponsored program. Why would the United States sponsor this program in Ukraine?

protective dome for the site. Help has also come from overseas. In October 2000, a U.S.-funded treatment plant opened near

ed treatment plant opened near the White Sea. The 17-million-dollar facility will treat radioactive waste from Russia's fleet of nuclear submarines—waste that used to be dumped in the sea.

You will learn more about these developments as you examine the primary sources and complete the Case Study Project on the following pages.



PRIMARY SOURCE 🖪

SEE

SEE PRIMARY SOURCE

The Soviet Union's Nuclear Legacy 393

CASESTUDY

PROJECT

Primary sources A to D on these two pages offer different views of the Soviet Union's nuclear legacy. Use these resources and your own research to prepare a damage assessment report of the region's nuclear situation today.

> RESEARCH LINKS CLASSZONE.COM

Damage Assessment Report

Suggested Steps

- 1. Choose a nuclear threat to investigate and examine its political, economic, and environmental consequences.
- **2.** Use online and print resources to research your topic.
- **3.** Be sure your damage assessment includes both causes and effects. Also, explain the steps being taken by regional officials to address the problems.
- Search for interesting statistics, compelling stories, and first-person accounts to enliven your assessment.

- **5.** Provide maps, charts, graphs, and photos to add visual interest to the assessment.
- **6.** Prepare a brief oral introduction that introduces and explains your topic.

Materials and Supplies

- · posterboard
- · colored markers
- · computer with Internet access
- reference books, newspapers, and magazines
- printer

PRIMARY SOURCE

Political Cartoon This cartoon by Nick Anderson illustrates the frightening prospect of a collapsing nuclear superpower.

Image not available for electronic use. Please refer to the image in the textbook.

PRIMARY SOURCE 🔳

Editorial Commentary On January 21, 1999, the New York Times offered its comments on Russia's nuclear legacy.

There is no longer any threat of Russia's deliberately attacking the United States. But Moscow's still-formidable stocks of nuclear bombs, nuclear ingredients, and biological and chemical warfare agents pose a different kind of danger. Much of this material is inadequately secured, and the workers guarding it are paid poorly or not at all. That creates an unacceptably high risk that some material could be sold to potential aggressors like Iraq, Libya, North Korea, or Serbia. Many Russian weapons scientists are also unemployed or unpaid and vulnerable to foreign recruitment.

During the Cold War, the United States spent trillions of dollars to deter Russia from using its nuclear, biological, and chemical weapons. It would not take much more than \$10 billion to eliminate most of the risks from those weapons today.

PRIMARY SOURCE D

News Report In his dispatch of September 30, 1997, London Daily Telegraph reporter Christopher Lockwood relates yet another terrible tale from Russia's nuclear legacy of an environmental disaster waiting to happen.

Nothing on the outside indicates what lies within the retired Russian supply ship *Lepse* except the presence of a Kalashnikov-armed guard and the fact that the vessel is moored at the farthest possible point of the Atomplot shipyard in Murmansk.

In fact, *Lepse* may well be the most terrifying vessel on Earth, loaded with a deadly cargo of warped nuclear-reactor parts and spent fuel rods that would be sufficient to poison the world's population....

For the past six years, Norway and Finland have been negotiating with Russia in an attempt to clear up the mess left by Russia's Northern Fleet, which had its headquarters in Severomorsk, near Murmansk. About 200 disused nuclear reactors and tens of thousands of fuel rods are haphazardly stored at its bases around Murmansk, in the Kola Peninsula.

"If there is a catastrophe in the Kola Peninsula, it can affect the whole of Europe's climate, perhaps for hundreds of years," said Norwegian Defense Minister Joergen Kosmo.

PRIMARY SOURCE 💽

News Report On December 15, 2000, 14 years and 7 months after the reactor explosion at Chernobyl, Ukraine's president ordered the plant closed. The excerpt below, written by New York Times reporter Michael Wines, outlines the economic impact that the shutdown will have.

The closing of Unit 3 [the plant's last working reactor] will cut off 5 percent of the electricity supply in a nation already deeply in [debt] to Russia for natural gas and dogged by shortages in its shoddily run power grid.

The closing will also gradually eliminate jobs of thousands of Ukrainians whose work depends, directly or indirectly, on Chernobyl's continued operation as a power plant. Beyond the layoffs at the plant itself, thousands of Ukrainians provide goods or services to Chernobyl workers.

Ukraine also faces immense costs in the future– \$750 million to cover the disaster site with a new [protective dome], hundreds of additional millions of dollars to remove 180 tons of lethal melted fuel and steel from the damaged core of Unit 4 and to store it safely, millions to build a new heating system and other necessities for the crews that will permanently care for the idle reactor site and millions for solid and liquid waste-processing plants to handle the fuel from the closing of Unit 3.

PROJECT CheckList

fully researched my topic?

- balanced my report by discussing both sides of the issue?
- created informative visuals that make my report clear and interesting?
- practiced explaining my report?
- anticipated questions others might ask and prepared answers?

Chapter **(17)**> Assessment

VISUAL SUMMARY TODAY'S ISSUES IN RUSSIA AND THE REPUBLICS

Conflict

Regional Conflict

- Since the fall of the Soviet Union in 1991, a number of ethnic and religious groups have sought more control over their own affairs. Their demands have frequently led to conflict.
- Regional leaders who are trying to end these conflicts face a dilemma.
 How can they maintain order without resorting to the undemocratic rule of the past?

Economics

The Struggle for Economic Reform

- Another dilemma facing leaders in Russia and the former Soviet republics is how to move away from the old Soviet command economy toward a market economy.
- Leaders are struggling to make reforms without causing too much turmoil for citizens.

Government

The Soviet Union's Nuclear Legacy

- The impact of Soviet nuclear programs did not end with the fall of the Soviet Union in 1991. Russia and the Republics inherited the former state's nuclear weapons, power plants, and waste.
- This legacy has had serious political, economic, and environmental consequences.

Reviewing Places & Terms

- A. Briefly explain the importance of each of the following.
 - 1. Caucasus
- 4. privatization
- 2. Chechnya
- **5.** distance decay
- 3. Nagorno-Karabakh

B. Answer the questions about vocabulary in complete sentences.

- 6. In which nation is Chechnya located?
- **7.** Which region is the subject of a dispute between Armenia and Azerbaijan?
- **8.** How might a nation move from a command economy to a market economy?
- 9. What is another name for Caucasia?
- **10.** What is the name for the decreasing interaction between places as the distance between them increases?

Main Ideas

Regional Conflict (pp. 385–387)

- **1.** What is the connection between the fall of the Soviet Union and the outbreak of ethnic conflicts in Russia and the Republics?
- **2.** Why might ethnic tensions in the Caucasus be stronger than in other regions?
- **3.** In the Russian part of Caucasia, where has the most serious conflict taken place?

The Struggle for Economic Reform (pp. 388–391)

- **4.** Over the past decade, what has been one of the major goals of Russian economic reformers?
- 5. How have reformers moved Russia toward a market economy?
- 6. What are some of the problems faced by economic reformers?

Case Study: The Soviet Union's Nuclear Legacy (pp. 392–395)

- **7.** Why were world leaders concerned about the security of nuclear weapons in Russia and the Republics after 1991?
- 8. What other aspect of the Soviet nuclear legacy concerned observers?
- **9.** How has the United States assisted Russia in dealing with the nuclear legacy of the Soviet Union?
- **10.** How are the nuclear policies of Russia related to its economic problems?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.

	Causes	Effects
Issue I: Conflict		
Issue 2: Economy	$\langle \rangle$	

- a. What caused several ethnic groups in the Caucasus to believe they might successfully demand independence in the 1990s?
- b. What is the intended effect of Russia's new federal districts?

2. Geographic Themes

REGION Why did the division of the USSR into 15 independent republics concern observers of the region's nuclear programs?

Geographic Skills: Interpreting Graphs

Global Male Life Expectancy

Use the graph to answer the following questions.

- 1. **PLACE** How does male life expectancy in Russia differ from world trends?
- 2. **PLACE** What was the life expectancy of Russian men in 1990? In 2000?
- 3. **PLACE** What might account for the dip in life expectancy for Russian men?

GeoActivity

Create another line graph that shows how the population of Russia changed during the same period of time.

3. Identifying Themes

Why did the United States fund a nuclear waste treatment plant near the White Sea? Which of the five themes applies to this situation?

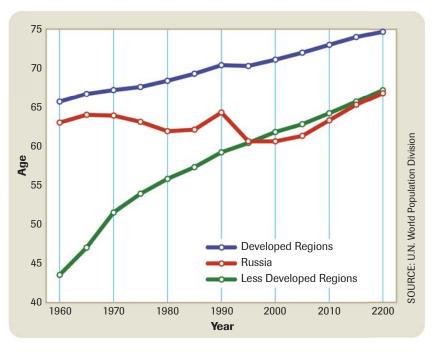
4. Making Inferences

Why might Russian economic reformers worry about causing too much hardship for citizens?

5. Drawing Conclusions

Why do you think Russian legislators want to import, store, and treat nuclear waste from other countries in spite of the environmental risks involved?





INTERNET ACTIVITY

Use the links at **classzone.com** to do research on current economic conditions in Russia. Compare the statistics you find on the Russian economy, such as inflation and poverty rates, with statistics on the U.S. economy. **Creating a Multimedia Presentation** Create a multimedia presentation of your findings. Include maps and graphs that visually present the information that you discovered.

Africa

PREVIEW: TODAY'S ISSUES IN AFRICA

UNIT ATLAS

Unit

Chapter 18 PHYSICAL GEOGRAPHY The Plateau Continent

Chapter 19 HUMAN GEOGRAPHY From Human Beginnings to New Nations

Chapter 20 TODAY'S ISSUES Africa

CaseStudy Effects of Colonialism Africa is the world's second largest continent. Its unique location almost centered over the equator —affects its vegetation, climate, and population patterns.



LOCATION A man prays in front of the pyramids at Giza in Egypt.



MOVEMENT

People travel to a market outside of Mali's Great Mosque in Djenné. The mosque is one of the world's largest mud-brick buildings.



GeoData

REGION Around 650 million of Africa's 800 million people live south of the Sahara. They are divided into more than 800 ethnic groups, each with its own language, religion, and culture.

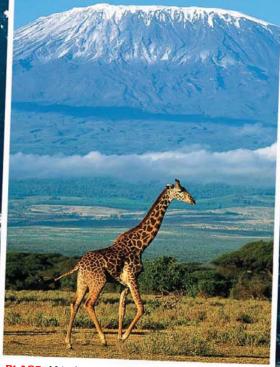
HUMAN-ENVIRONMENT INTERACTION

Roughly two-thirds of all Africans live in rural areas or small villages and earn a living as farmers.

PLACE The ancient Romans called the continent Africa, possibly from the Latin *aprica*, meaning "sunny," or the Greek *aphrike*, meaning "without cold."

For more information on Africa . . .

RESEARCH LINKS



PLACE Africa's tallest mountain, Mount Kilimanjaro, towers above northeastern Tanzania as a giraffe roams the grassy plain below.

Unit PREVIEW

Today's Issues in Africa

Africa faces the issues previewed here. As you read Chapters 18 and 19, you will learn background information. You will study the issues themselves in Chapter 20. In a small group, answer the questions below. Then have a class discussion of your answers.

Exploring the Issues 1. ECONOMIC

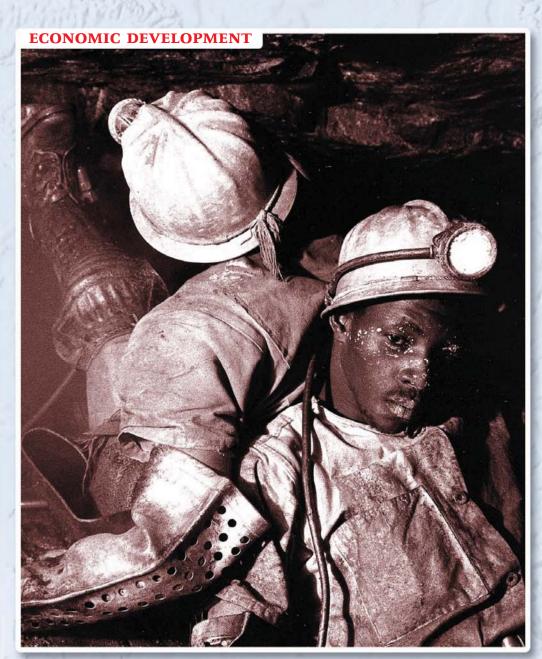
DEVELOPMENT Make a list of some of the pros and cons of economic development. How would economic development benefit people living in Africa?

2. HEALTH CARE Search the Internet for information about how African nations are trying to slow the spread of various diseases. What strategies and actions are being employed by these countries?

3. EFFECTS OF

COLONIALISM Find one news story about political or ethnic violence. How might colonialism be a cause or have contributed to the problem?

For more on these issues in Africa ... CURRENT EVENTS CLASSZONE.COM



How can African nations develop their economies?

African nations rely too much on the exportation of natural resources. These miners in Johannesburg, South Africa, mine gold, one of the country's main exports.



How can African countries eliminate the diseases that threaten their people and cultures?

A health clinic in Nairobi, Kenya, attempts to slow the spread of AIDS through various education programs.

CASESTUDY

How can African nations bring peace and stability to their people?

Many African countries are still suffering from the effects of colonialism. Africa's problems after colonialism are shown in this cartoon about the Democratic Republic of the Congo (formerly known as Zaire). This cartoon shows that there are no easy solutions.



Patterns of Physical Geography

Use the Unit Atlas to add to your knowledge of Africa. As you look at the maps and charts, notice geographic patterns and specific details about the region. After studying the graphs and physical map on these two pages, jot down in your notebook the answers to the questions below.

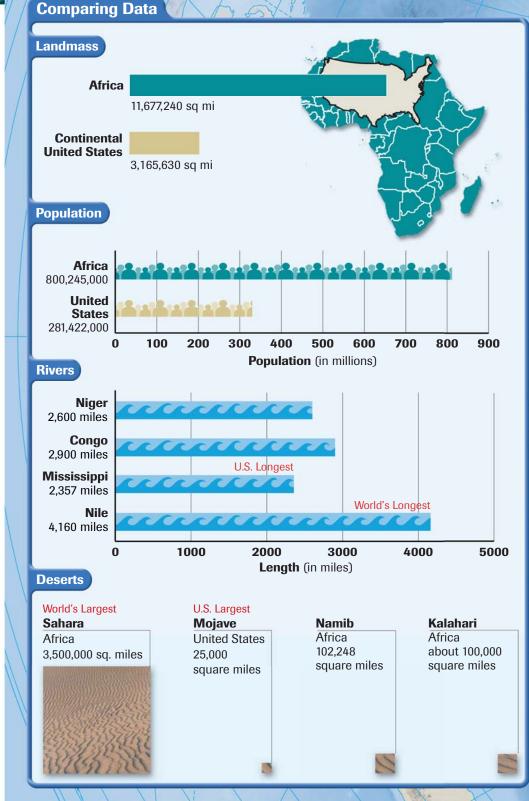
Unit

Making Comparisons

- 1. Compare Africa's size and population to that of the United States. How much larger in terms of population and size is Africa compared to the United States?
- **2.** Compare Africa's longest river, the Nile, to the Mississippi. How much difference is there in the lengths?
- **3.** How much bigger is the Sahara than the largest desert in the United States? What is the difference in size between the Sahara and the continental United States?

For updated statistics on Africa . . .







Patterns of Human Geography

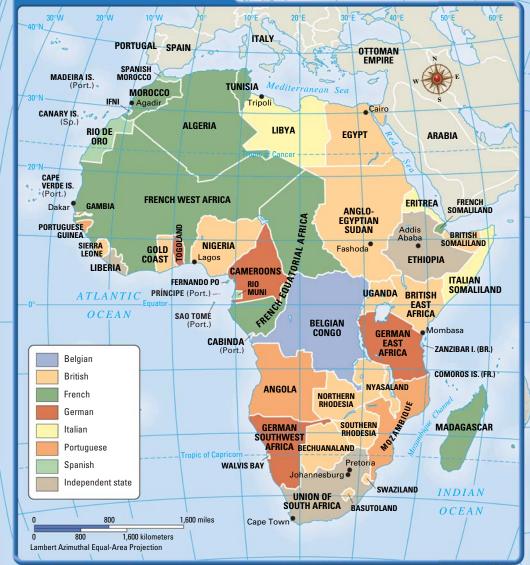
In the years preceding World War I (1914–1918), the political map of Africa changed dramatically. European colonial powers had replaced traditional African states and empires. Study the political maps of Africa in 1913 and Africa today to see how the continent changed by the end of the 20th century. Then answer these questions in your notebook.

Unit

Making Comparisons

- 1. What independent nations appear on the map of Africa in 1913 and also appear on the map of Africa today?
- 2. Which two European powers controlled the most land in Africa in 1913? Which country controlled the least amount?
- **3.** Which countries in Africa today formed French West Africa in 1913?
- **4.** Which three African countries emerged from colonialism with the most territory?

Colonialism in Africa, 1913





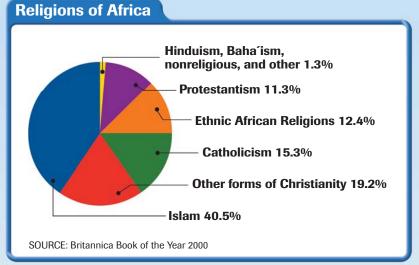


Regional Patterns

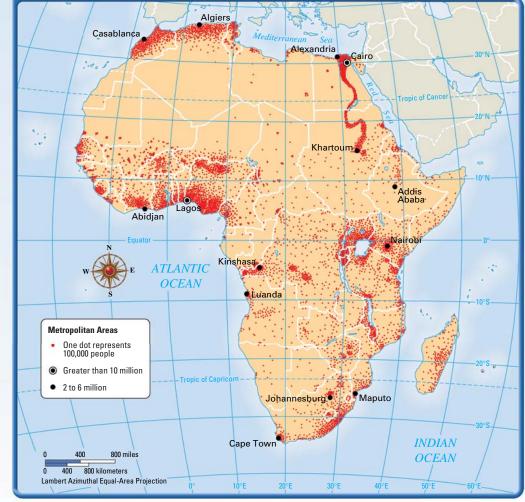
These two pages contain a graph and two thematic maps. The graph shows the religions of Africa. The maps show other important features of Africa: its diversity of languages and its population distribution. After studying these two pages, jot down in your notebook the answers to the questions below.

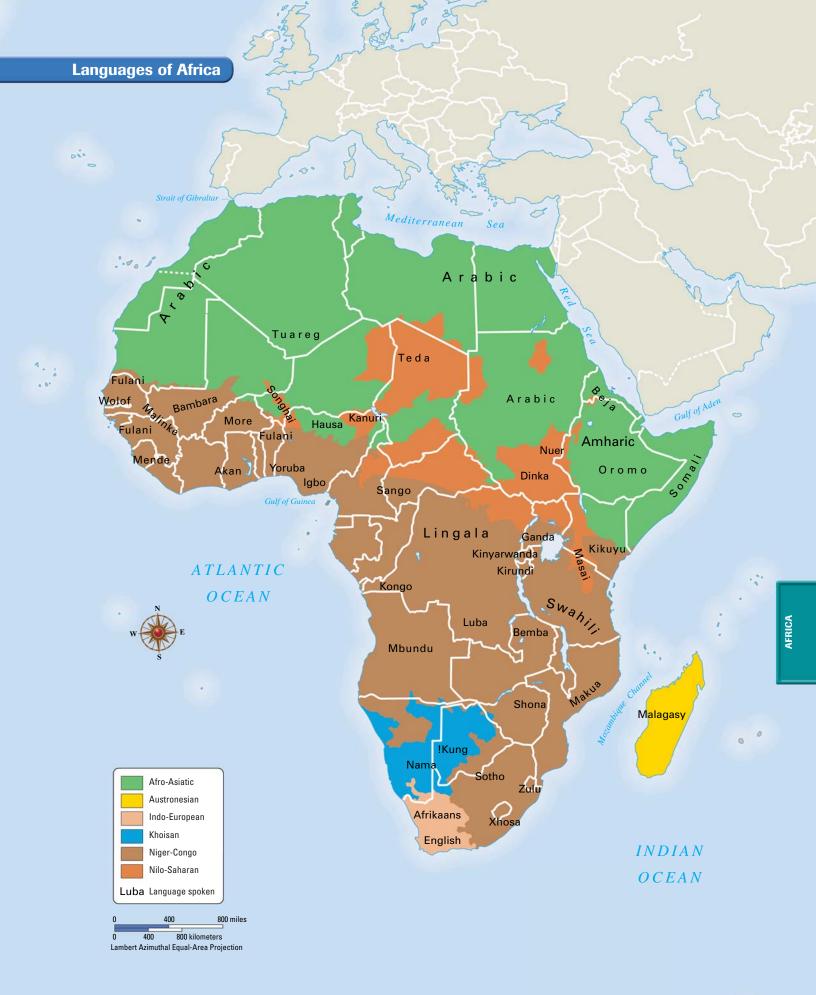
Making Comparisons

- 1. Where are most of the people in Africa living? In what areas of Africa are the fewest people living?
- **2.** What geographic factors may account for these population patterns?
- **3.** What do you notice about the number of languages in Africa? Do they belong to one language group or several?









Regional Data File

Life Exportencya Dirthrote

Infant Mortality

Dopulation

Study the charts on the countries of Africa. In your notebook, answer these questions.

Unit

Making Comparisons

- 1. Which three African countries have the most people? Locate them on the map. Are they also the largest countries in terms of total area?
- 2. Which three African countries have the fewest people? Locate them on the map. Are they the smallest countries in terms of total area?
- **3.** Look at Angola's life expectancy, infant mortality, and number of doctors. Judging from these statistics, does Angola have good health care?

(continued on page 410)

Notes:

- ^a Life expectancy figures for many African countries are declining significantly, mainly due to poverty,
- politics, and the spread of AIDS. ^b Doctors are defined as graduates of a school of medicine in any medical
- field. ° A comparison of the prices of the
- same items in different countries is used to figure these data.
- ^d Includes land and water, when figures are available.

For updated statistics on Africa . . .



Country Flag	Country/ Capital	Population (2000)	Life Expectancy ^a (years) (2000)		Infant Mortality (per 1,000 live births) (2000)	
C	Algeria Algiers	31,471,000	69	29	44.0	
2	Angola Luanda	12,878,000	47	48	125.0	
	Benin Porto-Novo	6,396,000	50	45	93.9	
	Botswana Gaborone	1,576,000	44	32	57.2	
*	Burkina Faso Ouagadougou	11,946,000	47	47	105.3	
×	Burundi Bujumbura	6,054,000	47	42	74.8	
*	Cameroon Yaoundé	15,422,000	55	37	77.0	
	Cape Verde Praia	401,000	68	37	76.9	
*	Central African Republic, Bangui	3,513,000	45	38	96.7	
	Chad N'Djamena	7,977,000	48	50	109.8	
^w :) _*	Comoros Moroni	578,000	59	38	77.3	
*	Congo, Democratic Republic of, Kinshasa		49	48	108.6	
	Congo, Republic of, Brazzaville	2,831,000	48	40	108.6	
	Côte d'Ivoire Yamoussoukro	15,980,000	47	38	112.2	
*	Djibouti Djibouti	638,000	48	39	115.0	
ġ	Egypt Cairo	68,344,000	65	26	52.3	
L	Equatorial Guinea Malabo	453,000	50	41	108.0	
0	Eritrea Asmara	4,142,000	55	43	81.8	

Doctors ^b (per 100,000 pop.) (1992–1998)	GDP° (billions \$US) (1999)	Import/Export ^c (billions \$US) (1997-1999)	Literacy Rate (percentage) (1998–1999)	Televisions (per 1,000 pop.) (1996–1998)	Passenger Cars (per 1,000 pop.) (1996–1997)	Total Area^d (square miles)	
85	147.6	9.3 / 13.7	66	68	17	919,590	•
8	11.6	3.0 / 5.0	42	124	21	481,351	*
6	8.1	0.566 / 0.396	38	91	6	43,483	1
24	5.7	2.05 / 2.36	76	27	53	231,804	
3	12.4	0.572 / 0.311	22	6	3	105,869	*
6	4.2	0.108 / 0.056	46	10	2	10,759	*
7	31.5	1.5 / 2.0	74	81	7	183,591	4
17	0.618	0.225 / 0.038	73	45	29	1,557	5-1-1-
4	5.8	0.17 / 0.195	44	5	3	240,534	M
3	7.6	0.359 / 0.288	39	2	1	495,752	-
7	0.41 (1998)	0.05 / 0.009	59	4	18	719	4
7	35.7	0.46 / 0.53	59	43	7	905,365	4
25	4.15	0.77 / 1.7	78	8	10	132, 047	3
9	25.7	2.6 / 3.9	45	70	11	124,503	*
14	0.55	0.44 / 0.26	62	73	31	8,958	C.
202	200.0	15.8 / 4.6	54	127	20	386,900	
25	0.96	0.3 / 0.555	81	162	9	10,830	- 1 A
3	2.9	0.44 / 0.053	52	14	2	47,320	-

Regional Data File

Making Comparisons (continued)

Unit

- **4.** Use the map on page 405 to choose a country in East Africa. How many televisions and cars does it have per 1,000 people? How does that compare to the United States?
- **5.** Make a list of the top three African countries in GDP. Where are these countries located? Do you notice any pattern?
- 6. Use the map on page 405 to identify two countries in Southern Africa. For each of those countries, calculate per capita GDP by dividing total GDP by population. Which country has the higher per capita GDP?

(continued on page 412)

Notes:

- ^aLife expectancy figures for many African countries are declining significantly, mainly due to poverty, politics, and the spread of AIDS.
- ^b Doctors are defined as graduates of a school of medicine in any medical field.
- ^c A comparison of the prices of the same items in different countries is used to figure these data.
- ^d Includes land and water, when
- figures are available.

Country Flag	Country/ Capital	Population (2000)	Life Expectancy (years) (2000)		Infant Mortality (per 1,000 live births) (2000)	
	Ethiopia Addis Ababa	64,117,000	46	45	116.0	
	Gabon Libreville	1,226,000	52	38	87.0	
	Gambia Banjul	1,305,000	45	43	130.0	
*	Ghana Accra	19,534,000	58	34	56.2	
	Guinea Conakry	7,466,000	45	42	98.0	
*	Guinea-Bissau Bissau	1,213,000	45	42	130.0	
	Kenya Nairobi	30,340,000	49	35	73.7	
*	Lesotho Maseru	2,143,000	53	33	84.5	
*	Liberia Monrovia	3,164,000	50	50	139.1	
	Libya Tripoli	5,114,000	75	28	33.3	
	Madagascar Antananarivo	14,858,000	52	44	96.3	
	Malawi Lilongwe	10,385,000	39	41	126.8	
	Mali Bamako	11,234,000	53	47	122.5	
*	Mauritania Nouakchott	2,670,000	54	41	92.0	
	Mauritius Port Louis	1,189,000	70	17	19.4	
*	Morocco Rabat	28,778,000	69	23	37.0	
*	Mozambique Maputo	19,105,000	40	41	133.9	
*/	Namibia Windhoek	1,771,000	46	36	68.3	

Doctors^b (per 100,000 pop.) (1992-1998)	GDP° (billions \$US) (1999)	Import/Export ^c (billions \$US) (1997-1999)	Literacy Rate (percentage) (1998-1999)	Televisions (per 1,000 pop.) (1996–1998)	Passenger Cars (per 1,000 pop.) (1996–1997)	Total Area^d (square miles)	
4	33.3	1.25 / 0.42	36	5	0.8	471,776	•
19	7.9	1.2 / 2.4	63	136	21	103,346	*
4	1.4	0.201 / 0.132	35	4	7	4,127	
6	35.5	2.5 / 1.7	69	115	5	92,100	1
13	9.2	0.56 / 0.695	36	41	2	94,925	-
17	1.1	0.023 / 0.027	37	N/A	3	13,948	
13	45.1	3.3 / 2.2	81	21	10	224,960	¥
5	4.7 (1998 est.)	0.7 / 0.235	82	24	3	11,720	
2	2.85	0.142 / 0.039	38	27	9	43,000	4
128	39.3	7.0 / 6.6	78	143	126	679,358	-
11	11.5	0.793 / 0.6	65	46	4	226,658	1
2	9.4	0.512 / 0.51	58	2	3	47,747	3
5	8.5	0.65 / 0.64	38	11	3	478,764	-
14	4.9	0.444 / 0.425	41	91	7	397,955	
85	12.3	2.1 / 1.7	84	228	61	790	
46	108.0	9.5 / 7.1	47	160	39	172,413	1
4	18.7	1.44 / 0.3	42	4	4	302,328	7
30	7.1	1.5 / 1.4	81	32	38	318,000	T

Unit Ounit Country Flag Court Country Country

Regional Data File

Making Comparisons (continued)

7. Calculate the GDP per capita for Sierra Leone, Zambia, and Eritrea by dividing GDP by population. Where do those countries rank in life expectancy? What might be the relationship between a country's GDP and its life expectancy?

Sources:

ABC-CLIO CIA World Factbook 2000 online Columbia Gazetteer Population Reference Bureau 2000

online

Statesman's Yearbook 2001 UN Human Development Report 2000

U.S. Census Bureau online

World Almanac 2000

World Health Organization online N/A = not available

Notes:

- ^a Life expectancy figures for many African countries are declining significantly, mainly due to poverty, politics, and the spread of AIDS.
- ^b Doctors are defined as graduates of a school of medicine in any medical field.
- ^c A comparison of the prices of the same items in different countries is used to figure these data.

^d Includes land and water, when figures are available.

Country Flag	Country/ Capital	Population (2000)	Life Expectancy (years) (2000)		Infant Mortality (per 1,000 live births) (2000)	
•	Niger Niamey	10,076,000	41	54	123.1	
	Nigeria Abuja	123,338,000	52	42	77.2	
R	Rwanda Kigali	7,229,000	39	43	120.9	
* *	São Tomé and São Tomé	Príncipe 160,000	64	43	50.8	
*	Senegal Dakar	9,481,000	52	41	67.7	
	Seychelles Victoria	82,000	71	18	8.5	
	Sierra Leone Freetown	5,233,000	45	47	157.1	
*	Somalia Mogadishu	7,253,000	46	47	125.8	
	South Africa, F Cape Town/Bloe	Pretoria/ 43,421,000 emfontein	55	25	45.4	
	Sudan Khartoum	29,490,000	51	33	69.5	
*	Swaziland Mbabane	1,004,000	38	41	107.7	
	Tanzania Dodoma	35,306,000	53	42	98.8	
*	Togo Lomé	5,019,000	49	42	79.7	
٢	Tunisia Tunis	9,619,000	69	22	35.0	
\$	Uganda Kampala	23,318,000	42	48	81.3	
Ĭ	Zambia Lusaka	9,582,000	37	42	109.0	
	Zimbabwe Harare	11,343,000	40	30	80.0	

United States	281,422,000	77	15	7.0	
Washington, D.C.					

Doctors^b (per 100,000 pop.) (1992–1998)	GDP° (billions \$US) (1999)	Import/Export ^c (billions \$US) (1997-1999)	Literacy Rate (percentage) (1998-1999)	Televisions (per 1,000 pop.) (1996–1998)	Passenger Cars (per 1,000 pop.) (1996–1997)	Total Area^d (square miles)	
4	9.6	0.266 / 0.269	15	26	4	489,189	
19	110.5	10.0 / 13.1	61	67	5	356,669	1
4	5.9	0.242 / 0.071	64	N/A	2	10,169	
47	.169	0.02 / 0.005	73	227	30	372	
8	16.6	1.2 / 0.925	36	41	12	76,124	4
132	.59	0.363 / 0.091	84	190	85	178	je ¥. ∙v n
7	2.5	0.166 / 0.041	31	26	4	27,699	
4	4.3	0.327 / 0.187	24	13	2	246,200	7
56	296.1	26.0 / 28.0	85	125	102	471,445	1
9	32.6	1.26 / 0.58	56	141	1	967,494	
15	4.2	1.05 / 0.825	78	107	29	6,705	
5	23.3	1.44 / 0.828	74	21	2	364,898	-
8	8.6	0.45 / 0.4	55	20	17	21,853	1
70	52.6	7.47 / 5.8	69	198	28	63,378	¢.
4	24.2	1.1 / 0.471	65	26	1	91,134	-
7	8.5	1.15 / 0.9	76	137	16	290,585	2
14	26.5	2.0 / 2.0	87	29	3	150,820	•
251	9,255.0	820.8 / 663.0	97	847	489	3,787,319	



 $\mathbf{18}$

SECTION 1 Landforms and Resources

SECTION 2 Climate and Vegetation

SECTION 3 Human–Environment Interaction

The Zambezi River plunges over Victoria Falls on the border between Zambia and Zimbabwe.

GeoFocus

What effect does physical geography have on the lives of Africans?

Taking Notes Copy the graphic organizer below into your notebook. Use it to record information about the physical geography of Africa.

Landforms	
Resources	
Climate and Vegetation	
Human-Environment Interaction	

PHYSICAL GEOGRAPHY OF AFRICA The Plateau Continent

Landforms and Resources

A HUMAN PERSPECTIVE Angola's rebel leader Jonas Savimbi kept his forces fighting by bargaining with arms dealers and haggling with international diamond traders. Diamonds—one of the world's most precious and valuable gems—have enriched some of Africa's countries, including Botswana and South Africa. However, in other diamond-rich countries such as Angola, people use diamonds to fund costly and bloody civil wars. Rebel groups in Angola and the Angolan government sold diamonds on the world market and then used the money from the sale to buy weapons. The sale of diamonds funded a war that killed more than 500,000 Angolans and left more than 4 million homeless. A country's or continent's resources are used for a variety of purposes.

Main Ideas

- A large plateau covers most of Africa.
- Africa's natural resources made it appealing to European colonizers.

Places & Terms

basin Nile River rift valley Mount Kilimanjaro escarpment

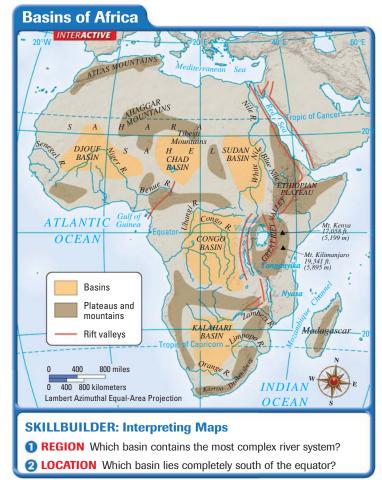
CONNECT TO THE ISSUES COLONIALISM Africa's valuable resources still attract the world's industrialized countries.

A Vast Plateau

Africa's shape and landforms are the result of its location in the southern part of the ancient supercontinent of *Pangaea*, which you read about in Chapter 2. About 200 million years ago, *Pangaea* began to break up. Over thousands of years, North and South America, Antarctica, Australia, and India drifted into their current positions. Present-day Africa, however, moved very little.

AFRICA'S PLATEAU A huge plateau covers most of Africa. It rises inland from narrow lowlands along the coast. Except for the coasts of Mozambique and Somalia, much of the continent lies at least 1,000 feet above sea level. This plateau is Africa's most prominent physical feature. As a result, geographers sometimes refer to Africa—the world's second largest continent as the "plateau continent."

BASINS AND RIVERS Throughout this plateau lie several huge **basins**, or depressions, which you'll notice on the map on the right. Each basin spans more than 625 miles across and is as much as 5,000 feet deep. Water collects in the Chad Basin, and rivers flow through the Sudan, Congo, and Djouf basins.



The world's longest river, the **<u>Nile River</u>**, flows more than 4,000 miles through Uganda and Sudan and into Egypt. Its waters have provided irrigation for the region for thousands of years. More than 95 percent of Egyptians depend on the Nile for their water. In fact, the average population density along the Nile is more than 3,320 people per square mile. Compare that to the average population density of 177 people per square mile in all of Egypt.

Africa's rivers contain many waterfalls, rapids, and gorges. These features make the rivers less useful for transportation than shorter rivers on other continents. The 2,900-mile-long Congo River forms the continent's largest network of waterways. But a series of 32 cataracts, or waterfalls, makes large portions of that river impassable.

Furthermore, meandering courses also make Africa's rivers difficult to use for transportation. For example, the Niger River begins in West Africa and flows north toward the Sahara, where it forms an interior delta and turns to the southeast. It then cuts through Nigeria and forms another huge delta as it empties into the Gulf of Guinea.

Distinctive African Landforms

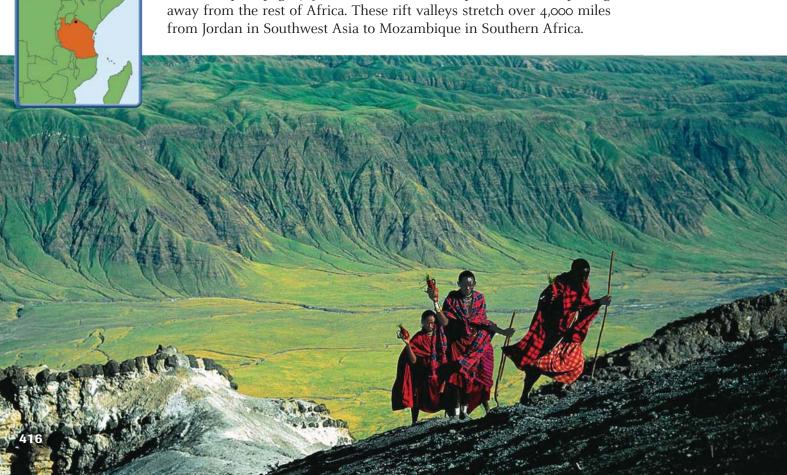
Africa does not have a long chain of mountains, such as the Rocky Mountains in North America or the Himalayas in Asia. However, Africa's valleys and lakes add to the continent's varied landscape.

RIFT VALLEYS AND LAKES The continent's most distinctive landforms are in East Africa. As the continental plates pulled apart over millions of years, huge cracks appeared in the earth. The land then sank to form long, thin valleys—called **rift valleys**. The rift valleys, which you can see on the map on page 415, show that the eastern part of Africa is pulling away from the rest of Africa. These rift valleys stretch over 4,000 miles from Jordan in Southwest Asia to Mozambique in Southern Africa.



Using the Atlas Use the physical map on page 403 to find out what other rivers in Africa follow winding courses.

PLACE Masai tribespeople climb the walls of the Great Rift Valley in Tanzania. How were the rift valleys formed?





Making Comparisons How is Lake Victoria different from Lake Tanganyika?

CONNECT TO

DEVELOPMENT

wealth translated

into wealth for most of its

citizens?

Why hasn't Africa's mineral

THE ISSUES

ECONOMIC

A cluster of lakes formed at the bottoms of some of these rift valleys. These African lakes are unusually long and deep. Lake Tanganyika, the longest freshwater lake in the world, stretches about 420 miles and reaches a depth of more than 4,700 feet.

However, Africa's largest lake, Lake Victoria, sits in a shallow basin between two rift valleys. It is the world's second largest freshwater lake but is only 270 feet deep.

MOUNTAINS Africa contains mainly volcanic mountains. Mount Kenya and <u>Mount Kilimanjaro</u>, Africa's highest mountain, are both volcanoes. Volcanic activity also produced the Ethiopian Highlands, the Tibesti Mountains in the Sahara, and Mount Cameroon in West Africa. In addition, volcanic rock covers the Great Escarpment in Southern Africa. An <u>escarpment</u> is a steep slope with a nearly flat plateau on top. The Great Escarpment marks the edge of the continent's plateau in Southern Africa.

Africa's Wealth of Resources

The story of Africa's natural resources is at once a story of plenty and one of scarcity. Africa has a huge amount of the world's minerals. But many African countries lack the industrial base and money to develop them.

A WEALTH OF MINERALS Africa's minerals make it one of the world's richest continents. African nations contain large amounts of gold, platinum, chromium, cobalt, copper, phosphates, diamonds, and many other minerals. For example, South Africa is the world's largest producer of chromium. Chromium is an element used in manufacturing stainless steel.

South Africa also produces nearly 80 percent of the

world's platinum and nearly 30 percent of the world's gold. Another important resource, cobalt, is used in high-grade steel for aircraft and industrial engines. African nations produce about 42 percent of the world's cobalt, mostly from the Democratic Republic of the Congo and Zambia. Ores and minerals account for more than half of the total value of Africa's exports.

Africa's great mineral wealth, however, has not meant economic prosperity for most of its population. In the 19th and 20th centuries, European colonial rulers developed Africa's natural resources for export to Europe to manufacture goods there. As a result, many African nations have been slow to develop the infrastructure and industries that could turn these resources into valuable products.

OIL RESOURCES Libya, Nigeria, and Algeria are among the world's leading petroleum producers. Other countries, such as Angola and Gabon, have huge untapped oil reserves. Libya, Nigeria, Algeria, and Angola combine to produce over seven percent of the world's oil.

Angola illustrates why valuable resources don't always benefit most Africans. Recently discovered offshore oil deposits will likely enable

ECONOMIC DEVELOPMENT Oil Pipeline

connect

The people of Chad and Cameroon gaze out at the construction of a new 665-mile oil pipeline with a sense of hope and worry. With new income from the oil, Chad plans to improve education, social services, and its infrastructure.

However, leaders are concerned because past African oil exploration has caused corruption, civil wars, poverty, and serious environmental damage.

Furthermore, people in Cameroon worry because the pipeline travels through otherwise untouched tropical rain forest. This pipeline represents a test for new African development policies.

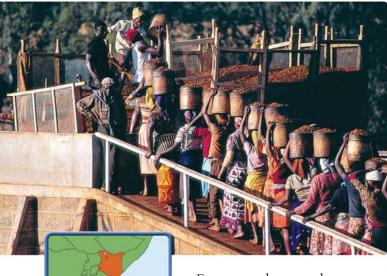


AFRICA

Angola to surpass Nigeria as Africa's most oil-rich country. American oil companies pay Angola a fee for drilling rights and the oil. However, the Angolan government spends the money on an ongoing civil war. This war is caused in part by ethnic divisions resulting from years of colonialism. Angola invests little money in schools, hospitals, or other public infrastructure.



Seeing Patterns How does Angola make money from its resources?



MOVEMENT Kenyan workers carry coffee berries to a pulping machine.

Diversity of Resources

From rain forests to roaring rivers, Africa possesses an incredible diversity of resources.

MAJOR COMMODITIES After oil, coffee is the most profitable commodity in Africa. Even though few Africans drink coffee, the continent grows 20 percent of the world's supply.

Lumber is another important commodity. Nigeria leads African nations in lumber exports and ranks eighth worldwide in that area. However, logging is depleting Africa's forests.

Every year loggers clear an area of land in Africa about twice the size of New Jersey. Other major commodities include sugar, palm oil, and cocoa. Côte d'Ivoire is the world's largest exporter of cocoa beans, the main ingredient in chocolate.

Agriculture is the single most important economic activity in Africa. About 66 percent of Africans earn their living from farming. In addition, farm products account for nearly one-third of the continent's exports. Farmers benefit from Africa's climate, which you will read about in the next section.

Assessment

Places & Terms

Identify and explain where in the region these would be found.

basin

STION

- Nile River
- rift valley
- Mount Kilimanjaro
- escarpment

2 Taking Notes

PLACE Review the notes you took for this section.

Landforms	
Resources	
\sim	

- What types of landforms are found in Africa?
- What kinds of resources does Africa possess?

3 Main Ideas

- a. Why is Africa called the "plateau continent"?
- **b.** What are some of Africa's distinctive landforms?
- c. Why do you think Africa's abundance of natural resources has not translated into economic wealth for most of its population?

Geographic Thinking

Seeing Patterns How has Africa's physical geography affected its ability to use its resources for economic development? **Think about:**

• its use of rivers for transportation

See Skillbuilder Handbook, page R8.



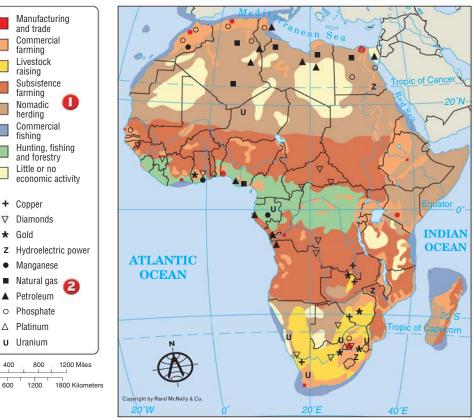
EXPLORING LOCAL GEOGRAPHY Examine a physical map of your state or region. Then study the map on page 403 to determine which African country has the most similar physical geography to your region or state. Create a **Venn diagram** identifying which physical features your state or region has in common with that country and the features that are different.

RAND MENALLY Map and Graph Skills

Reading an Economic Activity Map

Subsistence farming and nomadic herding are the primary economic activities in large sections of Africa. Even though African nations have a wealth of natural resources, mining and drilling for these resources are not evenly distributed throughout the continent. The thematic map below shows a wide variety of economic activities in Africa.

THE LANGUAGE OF MAPS An economic activity map is a thematic map that shows the location of economic activities over a large area such as a continent.



Economic Activities in Africa

Each color represents the economic activity in which the majority of people are engaged.

2 The black symbols represent major drilling and mining for natural resources.

3 The symbols and colors show the combination of economic activities and natural resources in a particular location. For example, this map shows that Southern Africa contains livestock raising, mining, commercial fishing, and commercial farming.

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Map and Graph Skills Assessment

1. Making Generalizations In what region of Africa does most of the livestock raising take place?

2. Making Inferences

Why do you think so many manufacturing and trade centers are located near rivers or on the coasts?

3. Drawing Conclusions

What is the most common type of farming done in Africa?

Climate and Vegetation

A HUMAN PERSPECTIVE In 1352, 48-year-old Ibn Battuta, a great traveler from Morocco, set out for the empire of Mali in West Africa. His most challenging obstacle was the Sahara, a desert nearly the same size as the continental United States. Battuta and his caravan set out in February. They traveled only in early morning and early evening to avoid the midday heat. Even so, they still battled temperatures of nearly 100 degrees during the day and freezing temperatures at night. Reaching Mali around April, Batutta covered more than 1,000 miles, all on foot. The Sahara today remains just as hazardous—fewer than 2 million of Africa's approximately 800 million people live in it.

A Warm Continent

You can see from the map on page 421 that Africa lies almost entirely between the tropic of Cancer and the tropic of Capricorn. This location gives most of Africa warm, tropical temperatures.

THE DESERTS The **Sahara** is the largest desert in the world. Sahara actually means "desert" in Arabic. It stretches about 3,000 miles across the continent, from the Atlantic Ocean to the Red Sea, and also runs 1,200 miles from north to south. Temperatures can rise as high as 136.4°F in the summer, hot enough to fry an egg on the sand. But temperatures can also fall below freezing at night in winter.

Only about 20 percent of the Sahara consists of sand. Towering mountains, rock formations, and gravelly plains make up the rest. For instance, the Tibesti Mountains, located mostly in northwestern Chad, rise to heights of more than 11,000 feet. Other African deserts include the Kalahari and the Namib.

Travel in the Sahara is risky because of the extreme conditions. Many travelers rely on the camel as desert transportation. A camel can go for

Main Ideas

- Africa contains dry and hot deserts, warm tropics, and permanently snowcapped mountains.
- Africa's vegetation includes thick rain forests, tall grasslands, and desert areas.

Places & Terms

Sahara	
aquifer	
oasis	

Serengeti Plain canopy

CONNECT TO THE ISSUES ECONOMIC DEVELOPMENT

Africa's tropical rain forests are being cut down for farmland and valuable timber.

PLACE Rolling sand dunes are only a small part of the Sahara's varied landscape.

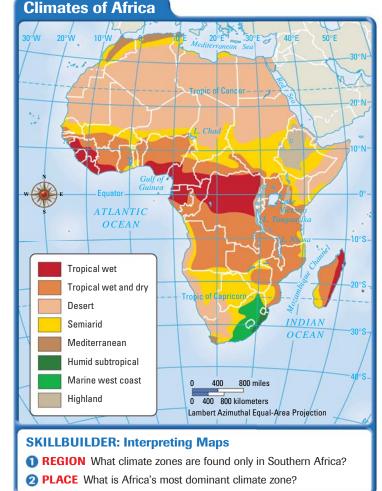
How might an expanding desert affect the lives of the people living near it?



up to 17 days without water. In addition, wind-blown sand has little effect on a camel. It closes its nostrils and just keeps walking.

Ironically, as much as 6,000 feet under this hottest and driest of places lie huge stores of underground water called **<u>aquifers</u>**. In some places, this water has come to the surface. Such a place is called an **<u>oasis</u>**. It supports vegetation and wildlife and is a critical resource for people living in the desert.

THE TROPICS Africa has a large tropical area—the largest of any continent. In fact, nearly 90 percent of the continent lies within the tropics of Cancer and Capricorn, as you can see on the map to the right. Temperatures run high most of the year. The hottest places are in the parts of the Sahara that lie in the nation of Somalia. July temperatures average between 110°F and 115°F almost every day. Differences in temperature between winter and summer in the Tropics are barely



Geographic Thinking

Using the Atlas Which climate regions of Africa do the tropics of Cancer and Capricorn pass through? noticeable. Differences in temperature between night and day actually tend to be greater than any difference between seasons. A saying in Africa says that nighttime is the "winter" of the tropics.

Sunshine and Rainfall

Rainfall in Africa is often a matter of extremes. Some parts get too much rain, while other parts receive too little. The amount of rainfall can also vary greatly from year to year as well as season to season. These variations have had a tremendous impact on East Africa, which endured several droughts in the 1980s and 1990s.

RAINFALL PATTERNS The rain forest in Central Africa receives the most precipitation, as rain falls throughout the year. Most of the rest of Africa, however, has one or two rainy seasons. Africa's tropical savanna stretches through the middle of the continent. It covers nearly half the total surface area of Africa. Rainy seasons in this area can last up to six months. The closer an area is to the equator, the longer the rainy season. The closer an area is to the desert, the longer the dry season.

Africa's west coast also receives a great deal of rain. The region around Monrovia, Liberia, experiences an average annual rainfall of more than 120 inches. In contrast, many parts of Africa barely get 20 inches of rain over the course of a year. In the Sahara and other deserts, rain may not fall for years. Children living in those areas may not see rain until they are five or six years old!

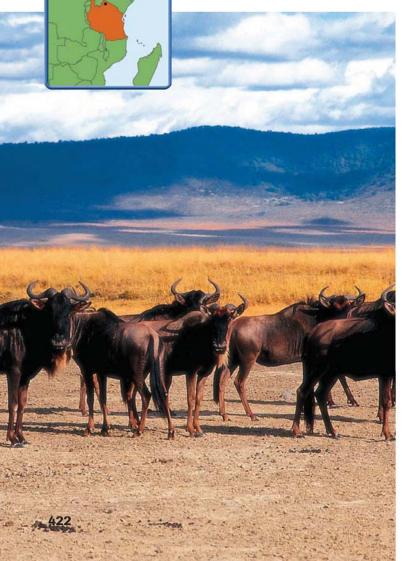
AFRICA'S MODERATE AREAS A Mediterranean climate exists on the northern and southern tips of the continent. Clear, blue skies in these places are normal. Rain falls usually only in the winter—December and January in North Africa and June and July in Southern Africa. Summer temperatures in Johannesburg, South Africa, average around 68°F.

A Grassy Continent

Africa's vegetation—like its climate—is almost mirrored north and south of the equator. Africa's vegetation consists of grasslands, rain forests, and a wide variety of other plant life.

TROPICAL GRASSLAND Tropical grassland covers most of the continent. One example of this grassland is the <u>Serengeti Plain</u> in northern Tanzania. Its dry climate and hard soil prevent the growth of trees and many crops, but these conditions are perfect for growing grass. Serengeti National Park, located within the Serengeti Plain, contains some of the best grasslands in the world. Some of these grasses can grow taller than the average person. The abundance of grass makes Serengeti National Park an ideal place for grazing animals. Huge herds of wildebeests, gazelles, and zebras roam there. It is the place where

PLACE These wildebeests live in Serengeti National Park, which was founded in 1951. How might the park help conservation efforts in Africa?



the largest numbers of land mammals still make annual migrations.

Africa's Extremes

An enormous tropical rain forest stretches across Central Africa.

RAIN FOREST The major rain forests of Africa sit on the equator in the area of the Congo Basin. One square acre of rain forest can contain almost 100 different kinds of trees. It may also be home to hundreds of species of birds. The massive number of plants, leaves, and trees block out much of the sunlight that would otherwise hit the floor of the rain forest. Beneath this umbrella of vegetation, the air is hot and filled with moisture. As a result, plants and other vegetation quickly decompose, or decay. For example, a fallen leaf in Europe decomposes in about a year. A leaf on the jungle floor in Africa decomposes in about six weeks.

Most animals in a rain forest live in the canopy. The **<u>canopy</u>** refers to the uppermost layer of branches, about



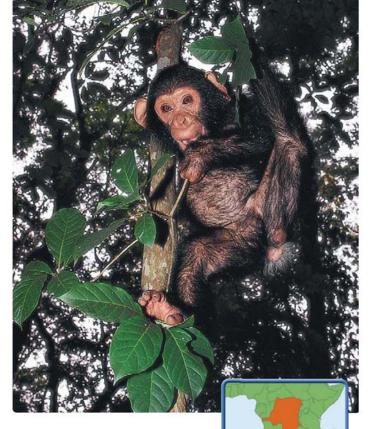
Seeing Patterns How do rain forests maintain such a high level of moisture?

BACKGROUND

Serengeti means "endless plains" in the Masai language. BACKGROUND

The National Cancer Institute estimates that 70 percent of the plants found useful for cancer treatment are found only in rain forests. 150 feet above the ground. Birds, monkeys, and flying foxes move from tree to tree and enjoy the bounty of the rain forest. A large number of snakes live in these rain forests, too. The Gaboon viper, the largest African viper, can weigh as much as 18 pounds and have fangs more than two inches long. Another snake, the black-necked cobra, can shoot its venom more than eight feet through the air.

However, farmers using slash-andburn agricultural methods are endangering the existence of the rain forest. As you read in Chapter 9, slash-andburn farming is a method in which people clear fields by cutting and burning trees and other vegetation, the ashes of which fertilize the soil. After farmers have exhausted the soil, they burn another patch of forest.



Slash-and-burn farming is responsible for the nearly complete destruction of Madagascar's rain forest. Experts estimate that over half of Africa's original rain forest has been destroyed.

VARIETIES OF PLANTLIFE All of Africa's regions contain a variety of vegetation. North Africa contains sizable oak and pine forests in the upper reaches of the Atlas Mountains. The mangrove tree of West Africa sprouts up along river banks in swamps and river deltas. Mangrove tree roots are breeding grounds for fish. They also help to build up dry land by holding silt. In the next section, you will read about different ways that people in Africa have interacted with their environment.

MOVEMENT Animals, such as this chimpanzee, move about the Ituri rain forest in the Democratic Republic of the Congo.

Assessment

Places & Terms

Explain the meaning of each of the following terms.

- Sahara
- aquifer
- oasis
- Serengeti Plain
- canopy

2 Taking Notes

PLACE Review the notes you took for this section.

Climate and

- Vegetation
- What are the different climates found in Africa?
- How does climate affect the vegetation of Africa?

3 Main Ideas

- **a.** What is the largest climatic feature in Africa?
- **b.** Why does most of Africa have high temperatures?
- **c.** What are the different kinds of vegetation growing in Africa?

4 Geographic Thinking

Making Comparisons What are the similarities between the climates of Africa north and south of the equator? **Think about:**

- the Sahara
- where the equator cuts across Africa





MAKING COMPARISONS Choose a place in Africa and a place in the United States at about the same latitude. Use encyclopedias or the Internet to compare the climate and vegetation of the two places. Create a **chart** comparing the two locations.

Human–Environment Interaction

A HUMAN PERSPECTIVE Akierou Awe lives in a mud-brick house in Nigeria's **Niger delta**, a region that contains most of Nigeria's oil. On the morning of July 10, 2000, Awe's four sons had been collecting fuel from a leaking pipeline to help scrape out a living in this poverty-stricken region. They hoped to resell the fuel for more than the going rate of 21 cents a quart. Suddenly, an explosion shook the area, and a fire spread along a mile-long stretch of the pipeline. The blast killed more than 300 people, including three of Awe's sons. This accident is one of many in the recent past that have claimed the lives of hundreds of Nigerians. Nigeria has become one of the top oil producers in the world, but at the cost of thousands of lives and major environmental ruin in the region.

Desertification of the Sahel

Sahel means "shore of the desert" in Arabic. You can see from the physical map on page 403 that the Sahel is a narrow band of dry grassland that runs east to west along the southern edge of the Sahara. People use the Sahel for farming and herding. Since the 1960s, the desert has spread into the Sahel. This shift of the desert is called desertification. **Desertification** is an expansion of dry conditions into moist areas that are next to deserts. Normally, it results from nature's long-term cycle, but as you can see in the illustration below, human activity is speeding up the process.

HUMAN CAUSES OF DESERTIFICATION Geographers and other scientists have identified several human activities that increase the pace of desertification. For example, allowing overgrazing of vegetation by

Main Ideas

- The Sahara's expansion is causing problems for Africa's farmers.
- The Nigerian oil industry has caused serious environmental damage in the Niger delta.

Places & Terms

Niger delta Sahel desertification Aswan High Dam silt

CONNECT TO THE ISSUES COLONIALISM European colonialism has caused political, economic, and environmental problems in Africa today.

The Process of Desertification

- The Sahel receives little rainfall. The vegetation lives in a fragile state, having barely enough water and food to survive.
- 2 Farming, overgrazing by livestock, and burning wood for fuel all contribute to desertification.

П

livestock exposes the soil. Animals also trample the soil, making it more vulnerable to erosion.

Farming also increases the pace of desertification. When farmers clear the land to plant crops, they expose the soil to wind, which can cause erosion. In addition, when farmers drill for water to irrigate crops, they put further stress on the Sahel. Widespread drilling and more irrigation increase salt levels in the soil, which prevent the growth of vegetation.

Increasing population levels are an indirect cause of desertification. More people require more food. As a result, farmers continue to clear more land for crops, burn more wood for fuel, and overfarm the land they already have.

RESULTS OF DESERTIFICATION Desertification has affected many parts of Africa. For example, large forests once existed around Khartoum, Sudan. In addition, desertification is slowly destroying a tropical rain forest around Lake Chad in the southern edge of the Sahel. Slowing desertification is difficult. Some African countries have increased tree planting and promoted more efficient use of forests and farmland in hopes of slowing the process.

Harming the Environment in Nigeria

Another environmental issue concerns the discovery of oil in Nigeria in 1956. Rich oil deposits in the Niger delta made Nigeria one of Africa's wealthiest countries. However, in drilling for oil, the Nigerian government and foreign oil companies have often damaged the land and harmed the people living in the Niger delta.

A MAJOR OIL PRODUCER Nigeria is the sixth leading oil exporter in the world. Two million barrels are extracted each day, much of it shipped to the United States. Oil accounts for 80 to 90 percent of Nigeria's income.

During the 1970s, high oil prices made Nigeria one of the wealthiest nations in Africa. As a result, the government borrowed heavily against the future sale of its oil. However, oil prices eventually fell, and the Nigerian government owed millions of dollars to other nations, including the United States. Mismanagement, poor planning, corruption, and a decline in oil prices left Nigeria poorer than before the oil boom.

> With less vegetation covering the soil, any rain that falls evaporates quickly. Over the years, the wind then blows the dry soil into a desert-like state.



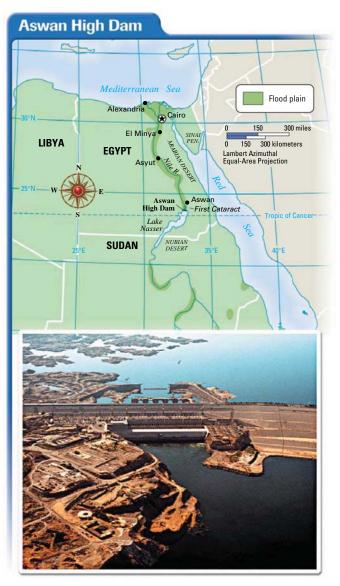
Using the Atlas Refer to the physical map on page 403. What countries are probably most affected by desertification of the Sahel?

During desertification, dry grasses die and are

replaced by tougher plants like shrubs. These

plants do not cover the soil as well as grass.

DESTROYING THE LAND AND PEOPLE The damage caused by oil companies and the Nigerian government has been severe. More than 4,000 oil spills have occurred in the Niger delta over the past four decades. Cleanup operations have been slow and sometimes non-existent. Fires often resulted, causing acid rain and massive deposits of soot, and people in the region contracted respiratory diseases. In addition, between 1998 and 2000, oil pipeline explosions killed more than 2,000 people—including three of Akierou Awe's sons.



HUMAN-ENVIRONMENT INTERACTION The

Aswan High Dam has helped Egypt control the flooding of the Nile River. What are some of the benefits of the Aswan High Dam? Many of these explosions were not accidents but were caused intentionally. Bandits, in cooperation with corrupt government officials and the military, drain fuel from the pipelines and then resell it. In 1999, these bandits damaged about 500 pipelines. Once the bandits finish draining oil, local villagers arrive. They use small cans to collect any spilled oil and then sell it.

A NEW START In May 1999, Olusegun Obasanjo became Nigeria's new president. Although a former Nigerian military leader himself, he has distanced himself from the armed forces. He has started many economic reforms and fired corrupt government officials. Now he faces the task of finding ways for Nigeria to benefit from oil.

Controlling the Nile

Egypt faces environmental challenges caused by another resource—water. Throughout history, the Egyptians have tried to control the floodwaters of the Nile River. Ancient Egyptians built canals and small dams. In spite of these efforts, though, the people still experienced cycles of floods and droughts. To solve these problems, Egyptians completed the first Aswan Dam on the Nile in 1902, which quickly became outmoded.

Geographic Thinking Control of the second se

THE ASWAN HIGH DAM Four miles upriver from the first Aswan Dam, the Egyptians cut a huge channel through the land beside the Nile River. The builders used the rocks from the channel as a base for their new creation—the **Aswan High Dam**—which was completed in 1970. Lake Nasser, which Egypt shares with Sudan, is the artificial lake created behind the dam. It stretches for nearly 300 miles.

BACKGROUND

The channel next to the Aswan High Dam produces about 40 percent of Egypt's electricity, and Lake Nasser supports commercial fishing.



Seeing Patterns How do farmers fertilize their land now that the dam traps all the silt?

The dam gives farmers a regular supply of water. It holds the Nile's floodwaters, releasing them as needed so that farmers can use the water effectively for irrigation. As a result of the dam, farmers can now have two or three harvests per year rather than one. Irrigation canals even keep some fields in continuous production through the use of artificial fertilizers. The dam has increased Egypt's farmable land by 50 percent. The dam has also helped Egypt avoid droughts and floods.

PROBLEMS WITH THE DAM Though the dam has provided Egypt with many benefits, it has also created some problems. During the dam's construction, many people had to be relocated, including thousands of Nubians, whose way of life was permanently changed. In addition, one of ancient Egypt's treasures, the temples at Abu Simbel, had to be moved. Other smaller ancient treasures could not be saved and now lie at the bottom of Lake Nasser.

The dam also decreased the fertility of the soil around the Nile. First, the river no longer deposits its rich **silt**, or sediment, on the farmland. Farmers must now rely on expensive artificial fertilizers to enrich the soil. Second, this year-round irrigation has resulted in a rising water table in Egypt. As a result, salts from deep in the earth have decreased the fertility of the soil. Before the dam was built, floodwaters flushed out the salt. Now expensive field drains have to be installed.

Rates of malaria and other diseases have increased due to greater numbers of mosquitos, which thrive in the still waters of Lake Nasser and the irrigation canals. Furthermore, because Lake Nasser holds the floodwaters, Egyptians lose millions of gallons of fresh water every year to evaporation. Measuring the success of the Aswan High Dam is difficult. For all the ways it has helped Egyptians, it has also created new problems.

Assessment

Places & Terms

Explain the meaning or identify the location of each of the following terms.

- Niger delta
- Sahel
- desertification
- Aswan High Dam
- silt

s 🛛 🕘 Taking Notes

HUMAN-ENVIRONMENT

INTERACTION Review the notes you took for this section.

Human-Environment

Interaction

- Which activities illustrate human control of the environment?
- Which examples illustrate an environment changed by humans?

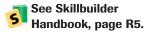
3 Main Ideas

- **a.** What are some of the causes of desertification?
- b. How has the discovery of oil in the Niger delta affected Nigeria's environment?
- c. What were some of the reasons that the Egyptian government built the Aswan High Dam?

4 Geographic Thinking

Drawing Conclusions Do you think that the benefits of the Aswan High Dam have outweighed its problems? **Think about:**

 the dam's effect on Egypt's food supply and farmers





ASKING GEOGRAPHIC QUESTIONS Study the map of the Aswan High Dam on page 426. Write three geographic questions about the map, such as one concerning the location of the dam. Write a **report** answering one of your three questions. Then present your findings to the class.

Chapter (18) Assessment

VISUAL SUMMARY **PHYSICAL GEOGRAPHY OF AFRICA**

Landforms and Resources

- A large plateau covers most of Africa.
- Long, thin valleys, called rift valleys, stretch along East Africa.
- Africa contains many valuable resources including oil, diamonds, and gold.

Climate and Vegetation

- The Sahara, the largest desert in the world, stretches across northern Africa.
- Nearly 90 percent of Africa lies within the Tropics.
- A large, grassy area called the Serengeti Plain provides an ideal natural habitat for Africa's wild animals.

Human-Environment Interaction

- Desertification results from nature's cycle, farming, overgrazing, and clearing too much land for crops.
- People and the environment in Nigeria have suffered as a result of the country's poor management and corruption of the oil industry.
- The Aswan High Dam helped to increase Egypt's food supply but has also caused environmental problems.

Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- 1. Nile River
- **2.** rift valley
- **3.** escarpment 4. Sahara
- 7. Sahel
- 8. desertification
- 9. Aswan High Dam

6. Serengeti Plain

5. oasis

10. silt

B. Answer the questions about vocabulary in complete sentences.

- **11.** What is sediment that is deposited on farmland by rivers and also acts as a fertilizer?
- **12.** What is the longest river in the world?
- **13.** What does the pulling apart of continental plates create?
- 14. What is the largest desert in the world?
- **15.** What is the process in which dry conditions spread into areas that are moist?
- 16. Where do Africa's large mammal migrations take place?
- **17.** What supports vegetation and is a critical resource for people living in the desert?
- **18.** What is a narrow region of grassland on the southern edge of the Sahara?
- **19.** What marks the edge of Africa's plateau in Southern Africa?
- **20.** Which of the terms above is an example of how humans have adapted to the environment?

Main Ideas

Landforms and Resources (pp. 415-419)

- 1. In what ways does the Nile River support life?
- 2. What are some of the abundant resources in Africa?
- 3. Why does oil in Angola not always benefit Angolans?

Climate and Vegetation (pp. 420–423)

- 4. What is the physical geography of the Sahara?
- 5. What is the general pattern of rainfall in Africa?
- 6. How does the Serengeti Plain help support much of Africa's wildlife?
- 7. What are some of the benefits of rain forests?

Human-Environment Interaction (pp. 424–427)

- **8.** How might desertification affect people's lives in the Sahel?
- 9. What are some problems created by the Nigerian oil industry?
- **10.** What are some of the problems created by the Aswan High Dam?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.

Landforms	
Resources	

- a. Why has Africa not been able to take advantage of its abundant resources?
- b. What are some of the problems facing Africa's rain forests?

2. Geographic Themes

- a. **REGION** What are some of the aspects of Africa's physical geography that make interior transportation difficult?
- b. **LOCATION** In what way does Africa's location impact its climate?

Geographic Skills: Interpreting Maps

Profile of Africa

Use the profile to answer the following questions.

- 1. PLACE What is the tallest landform on the map?
- 2. **MOVEMENT** How many feet would a person have to climb to reach the peak of the Ahaggar Mountains from the lowest point at this latitude?
- 3. **REGION** How does this profile illustrate Africa's nickname as the plateau continent?



How does desertification alter Africa's surrounding environment? Which of the five themes of geography apply to this situation?

4. Making Generalizations

How has the Aswan High Dam affected the lives of Egyptians?

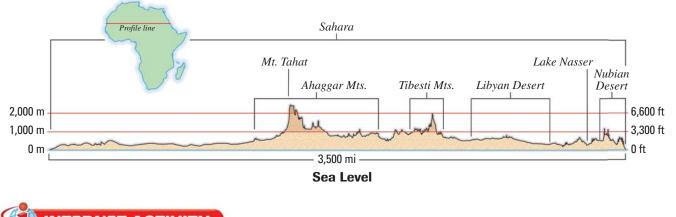
5. Seeing Patterns

Has the Nigerian oil industry and the Aswan High Dam had positive or negative effects on the surrounding environment? Explain.





Sketch your own profile of Africa. Use this profile as a model for your own map. Examine the physical map on page 403 and choose a latitude from which to draw your profile.



INTERNET ACTIVITY

Use the links at **classzone.com** to do research about desertification. Focus on determining the long-term effects of desertification in the Sahel.

Creating a Multimedia Presentation Combine charts, maps, or other visual images in an electronic presentation showing how the Sahel will be affected by desertification. Chapter

SECTION 1 East Africa

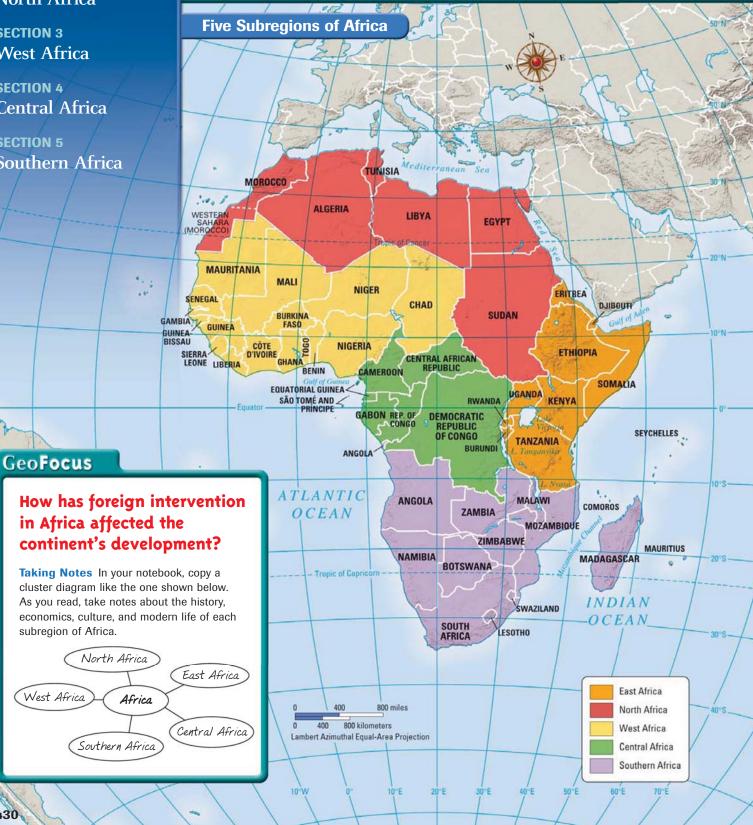
SECTION 2 North Africa

SECTION 3 West Africa

SECTION 4 Central Africa

SECTION 5 Southern Africa

HUMAN GEOGRAPHY OF AFRICA From Human Beginnings to New Nations





A HUMAN PERSPECTIVE East Africa is called the "cradle of humanity" because of the large number of prehistoric human remains found in the region. In 1931, Louis Leakey, an English archaeologist, began doing research in **Olduvai Gorge**, located in northern Tanzania. Olduvai Gorge has contained the most continuous known record of humanity. The gorge has yielded fossils from 65 individual hominids, or humans that walk upright. In 1959, Leakey and his wife, Mary Leakey, discovered a fossil there of a species called *Homo habilis*, the first human creatures to make stone tools. They lived about two million years ago. Throughout history, East Africa has been a crossroads of humanity because of its geographic position near seas and oceans.

Main Ideas

- East Africa is known as the "cradle of humanity."
- East Africa's location has made it a trading center.

Places & Terms

Olduvai Gorge Aksum Berlin Conference cash crop Masai pandemic

CONNECT TO THE ISSUES ECONOMIC DEVELOPMENT

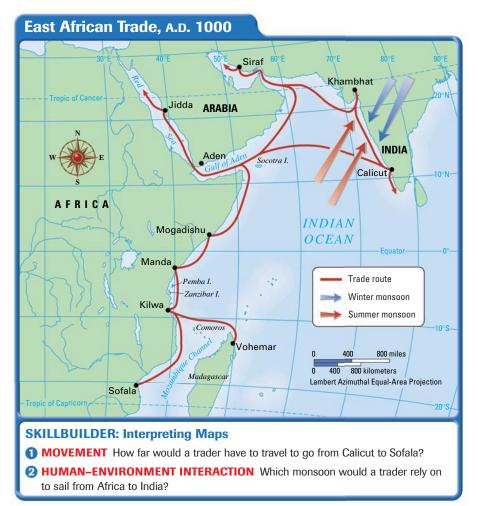
East Africa's political conflicts have limited its economic development.

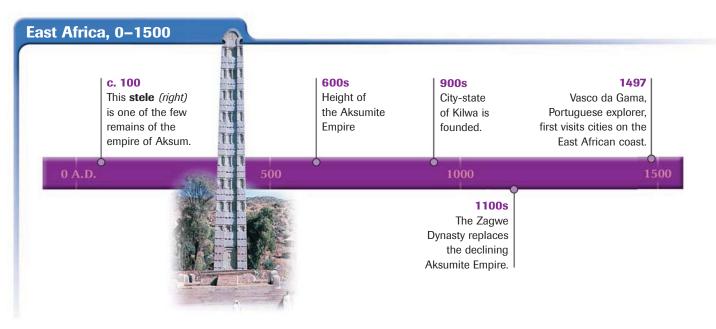
Continental Crossroads

Bounded on the east by the Red Sea and Indian Ocean, East Africa includes Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Seychelles, Somalia, Tanzania, and Uganda. Scientists believe that the world's first humans lived there.

A TRADING COAST East Africa was also a place where early civilizations developed. An important civilization was **Aksum**, which emerged in present-day Ethiopia in the A.D. 100s. Its location on the Red Sea and the Indian Ocean made it an important trading center and contributed to its expansion and power. People from Aksum regularly traded with the people of Egypt and the eastern Roman Empire.

During the sixth century, however, Aksum lost many trading partners, and several geographic factors weakened the empire. Traders on routes between the eastern Mediterranean region and Asia began passing through the Persian Gulf rather than





the Red Sea. In addition, the cutting down of forests and overuse of the soil led to a population decline, which reduced the empire's power.

Around the seventh century, Arab, Persian, and Indian traders once again made East Africa an international trading center. By 1300, many trading cities dotted the eastern coast of Africa. The trading city of Kilwa emerged as one of the most important cities of the time. Kilwa flourished on the southern coast of what is now Tanzania. All this movement of goods, ideas, and people made East Africa a cultural crossroads.

Colonization Disrupts Africa

In the 19th century, Europe's industrialized nations became interested in Africa's raw materials. Those European nations wanted to colonize and control parts of Africa to obtain those resources.

SCRAMBLE FOR AFRICA Europeans did not want to fight over Africa. To prevent European wars over Africa, 14 European nations convened the **Berlin Conference** in 1884–1885 to lay down rules for dividing Africa. No African ruler was invited to attend this conference, even though it concerned Africa's land and people. By 1914, only Liberia and Ethiopia remained free of European control.

Nations that attended the Berlin Conference decided that any European country could claim land in Africa by telling other nations of their claims and by showing they could control the area. The European nations divided Africa without regard to where African ethnic or linguistic groups lived. They set boundaries that combined peoples who were traditional enemies and divided others who were not. Europe's division of Africa is often cited as one of the root causes of the political violence and ethnic conflicts in Africa in the 20th century.

ETHIOPIA AVOIDS COLONIZATION Ethiopia is one country that escaped European colonization. Ethiopia's emperor, Menelik II, skillfully protected his country from the Italian invasion with weapons from France and Russia. In addition, the Ethiopian army had a greater knowledge of the area's geography than did the Italians. As a result, Ethiopia defeated Italy in 1896.



Seeing Patterns Which group of nations participated in the Berlin Conference? Which group did not?

BACKGROUND

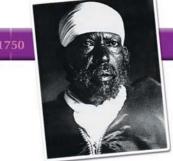
The Ethiopian victory was the first time native Africans successfully defended themselves against a colonial power.

1978

Jomo Kenyatta (right), Kenya's first prime minister and an important African leader, dies.

1952

The Mau Mau rebellion against the British begins in Kenya.



1873

1855

Kassa Hailu consolidates his rule

> over present-day Ethiopia.

East Africa's busiest slave market, Zanzibar, closes.

1896 Ethiopian forces under **Menelik** II *(far left)* defeat Italians. 1994 Hundreds of thousands die in battles between the Hutu and the Tutsi ethnic groups in Rwanda.

CONFLICT IN EAST AFRICA By the 1970s, most of East Africa had regained its independence from Europe. However, internal disputes and civil wars became a serious problem. For example, colonialism inflamed the peoples of Rwanda and helped to cause a bloody conflict in the 1990s.

One cause of those problems was that European colonial powers had not prepared East African nations for independence. Furthermore, the ethnic boundaries created by the Europeans forced cultural divisions that had not existed before colonialism. Those cultural divisions often caused internal conflicts among native groups. Colonialism also greatly affected the economy of East Africa, which today centers around tourism and farming.

Farming and Tourism Economies

Agriculture forms the economic foundation of East Africa. In addition, East Africa's world-famous wildlife parks generate millions of dollars of revenue.

FARMING IN EAST AFRICA East Africa is more than 70 percent rural. Since European colonization in the 19th century, countries have relied more on **<u>cash</u> <u>crops</u>** such as coffee, tea, and sugar, which are grown for direct sale. They bring in much-needed revenue but reduce the amount of farmland that otherwise could be devoted to growing food for use in the region. Relying on cash crops for revenue can be risky because the price of crops varies according to the world market.

East Africa's agricultural balance is changing, however, because people are leaving farms for greater economic opportunities in cities. For example, Addis Ababa, the capital of Ethiopia, has grown by more

EGION

Ethiopia-Eritrea War

In 1993, Eritrea gained its independence from Ethiopia after a violent and bloody war. But in 1998, the two countries became embroiled in a border conflict over the town of Badme.

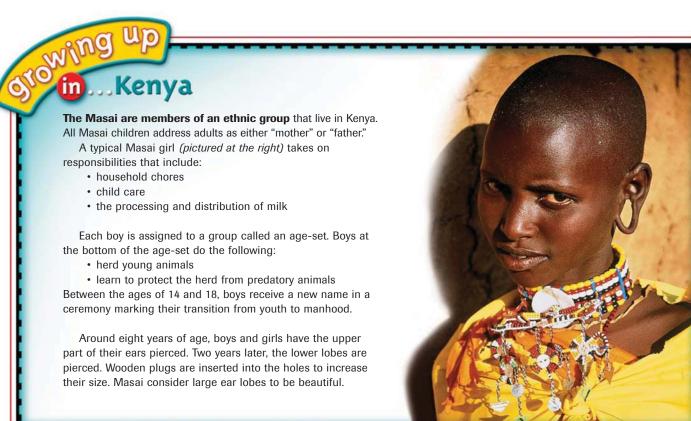
Ethiopia occupied the town because it included an Ethiopian ethnic group. Eritrea responded by blocking Ethiopia's access to the Red Sea. This blockade cut off Ethiopia from its only port, making it a landlocked country.

In 1999, the fighting became full-scale conventional warfare. More than 100,000 people were killed on both sides. The conflict had a devastating impact on the people and the economies of the two countries.





Seeing Patterns How does growing cash crops both help a country's economy and hurt the people living in the country?



than one million people since 1991. However, such rapid population growth can put a strain on a city's resources and a country's agricultural production.

TOURISM CREATES WEALTH AND PROBLEMS One of the main economic activities in East Africa is tourism. The region's vast wildlife parks in Kenya, Uganda, and Tanzania are world famous. In 1938, Europeans created the game reserves because they were killing animals for sport at a high rate. Most African peoples did not need the parks because they hunted only for survival. However, the wild animal parks, which are no longer used for hunting, have now become important sources of income for Africans, generating millions of dollars each year from tourists.

Competing demands for the parkland exist, though. For example, Kenya's increasing population requires more food. As a result, some groups want to eliminate or reduce the size of the wildlife reserves to create more farmland. Some desperate farmers have even begun to plow the land around the parks.

Maintaining Traditional Cultures

East Africa's position as a major trading region has given it a diverse culture. It is a melting pot of more than 160 different ethnic groups.

CULTURES OF EAST AFRICA Two major ethnic groups in East Africa are the **Masai** and the Kikuyu. The Masai, whom you read about above, are an East African ethnic group that lives on the grasslands of the rift valleys in Kenya and Tanzania. Most of the Masai herd livestock and farm the land.

Typical Masai dress includes clothes made from calfskin or buffalo hide. Women wear long skirt-like robes, while men wear a shorter

BACKGROUND

Serengeti National Park in Tanzania covers nearly 6,000 square miles and contains 35 species of plains animals and 350 species of birds. version of the robe. They often grease their clothes with cow fat to protect themselves from the sun and rain. The Masai are also known for making intricate beadwork and jewelry.

The Kikuyu are the largest ethnic group in Kenya, numbering around 6.6 million. Their homeland is centered around Mount Kenya. Like the Masai, the Kikuyu traditionally were herders. However, today the Kikuyu live throughout the country and work in a variety of jobs. During British colonial rule, the Kikuyu organized a society called the Mau Mau, which fought against the British. The British killed around 11,000 Africans—mostly Kikuyu—during the Mau Mau rebellion between 1952 and 1960.

Health Care in Modern Africa

The people of East Africa face many health care problems. The most critical is acquired immune deficiency syndrome (AIDS), which spread throughout Africa in the 1980s and 1990s.

HEALTH CARE IN AFRICA AIDS has become a pandemic and is having a devastating effect on the continent. A **pandemic** is an uncontrollable outbreak of a disease affecting a large population over a wide geographic area.

AIDS is caused by the human immunodeficiency virus (HIV). People infected with HIV do not necessarily have AIDS and can carry HIV for years without knowing it. As a result, AIDS statistics can be misleading. The number of people who have AIDS lags behind the number of those infected with HIV. Though AIDS education is increasing, some governments hide the scope of the disease. Many doctors in Africa say that more AIDS cases exist than are reported.

Some medical geographers predict that the populations of Africa's worst affected countries could decline by 10 to 20 percent.

You will read more about AIDS and other major health issues in Chapter 20. In the next section , you will learn about North Africa.

Assessment

Places & Terms

Identify these terms and explain their importance in the region's history or culture.

- Olduvai Gorge
- Aksum

STION

- Berlin Conference
- cash crop
- Masai
- pandemic

2 Taking Notes

PLACE Review the notes you took for this section.

East Africa



- How did Aksum's location help the empire grow?
- What are some of the problems created by tourism?

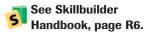
3 Main Ideas

- a. Why did East Africa become an international trading center early in its history?
- b. How did the Berlin Conference change Africa?
- **c.** How is AIDS affecting the population of Africa?

4 Geographic Thinking

Making Generalizations In what way has colonialism affected East Africa? Think about:

- the Berlin Conference
- problems in the 20th century





SEEING PATTERNS Do research to learn about two ethnic groups other than the Masai and the Kikuyu in East Africa. Create a **time line** tracing the origins of those ethnic groups to the present day. Examine the groups' history, movement patterns, and evolution of their lifestyles.



Seeing Patterns How have the

lives of the Kikuyu changed during

the last century?

Famine in Somalia

Famine—an extreme and long-term shortage of food—causes widespread hunger and sometimes death to millions of people. Natural causes, such as weather, plant diseases, and massive insect infestations, can cause famine. Drought is the most common natural cause. In addition, human beings can cause famine. Wars and political violence often destroy crops and prevent the adequate distribution of food. The worst famines usually involve a combination of both human and natural causes. The Horn of Africa, which includes Ethiopia and Somalia, has been the site of recent famines in the 1980s and 1990s.

50sters



Natural Causes

A lack of rain in successive seasons resulted in drought. Drought prevented the growth of enough food to feed the country's population.

Human Causes

Somali gunmen often looted relief shipments and then extracted payment for protecting relief workers. Other political causes, such as disagreements between warring factions, also prevented the delivery of food supplies.



Results

Thirsty Somalis plead for water delivered by the International Red Cross in Baidoa, Somalia, in 1992. Aid agencies estimated that famine killed between 25 and 50 people a day in this town in 1992.



GeoActivity

UNDERSTANDING FAMINE

Working with a partner, use the Internet to research different international aid organizations. Then write a **news report** about those organizations.

- Create a visual aid comparing the various groups.
- Include information about how the groups are funded.



GeoData

FAMINE IN SOMALIA

In the early 1990s, more than 300,000 Somalis died of famine, and another 30,000 died in a related civil war.

- Principal causes included drought, desertification, and civil war.
- Underlying causes, such as increased growth of cash crops and reliance on livestock, stemmed from a history of foreign intervention dating back to Italian and British colonization in the 19th century.

OTHER FAMINES

1876–1878 India Drought caused famine that killed about five million people.

1932–1934 Soviet Union Between six and eight million peasants died because of actions by the government.

1958–1960 China Around 20 million people died during government reforms.

Disasters! 437



A HUMAN PERSPECTIVE According to legend, around 814 B.C. a Phoenician queen founded **Carthage**, one of the great cities of ancient Africa. She located it on a peninsula on the Gulf of Tunis. The location was ideal. The Lake of Tunis protected the rear of the peninsula from invasion. In addition, because Carthage was on the coast of the Mediterranean Sea, it had access to trading routes. Consequently, it became a trading and commercial force in the ancient world for hundreds of years. Carthage's history shows that a city's or a civilization's geographic position always plays an important part in its ability to thrive and grow.

Roots of Civilization in North Africa

North Africa includes Algeria, Egypt, Libya, Morocco, Sudan, and Tunisia. Egypt and the Nile River valley formed a cultural hearth, a place where ideas and innovations come together to change a region. Those ideas and innovations reached other regions through cultural diffusion.

EGYPT BLOSSOMS ALONG THE NILE The Nile River made possible the existence of the great civilization of ancient Egypt. The river flooded at roughly the same time every year, providing the people with water and rich soil for their crops. The ancient Greek historian Herodotus remarked in the fifth century B.C. that Egypt was the "gift of the Nile."

Egyptians had been living in farming villages around the Nile River since 3300 B.C. Each village followed its own customs and rituals.

Around 3100 B.C., a strong king united all of Egypt and established the first Egyptian dynasty. The history of ancient Egypt would span 2,600 years and around 30 dynasties. During the Middle Kingdom, Egyptian god-kings, called Pharaohs, ruled Egypt. Egyptians believed that those kings ruled even after death, and they built pyramids to house the Pharaohs' remains.

Movement influenced ancient Egypt and the Nile valley. Egyptian ideas about farming, the building of their cities, and their system of

Main Ideas

- The Nile River valley and ancient Egypt, one of the world's great civilizations, formed a cultural hearth.
- North Africa shares the Arabic language and the Islamic religion and culture with Southwest Asia.

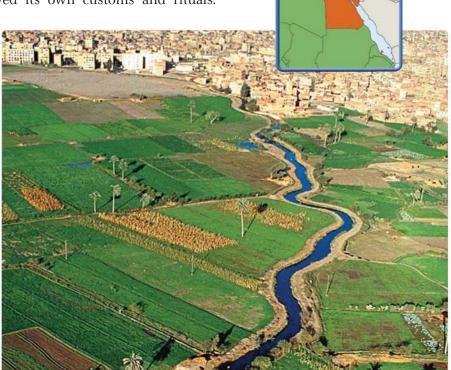
Places & Terms

Carthage Islam *rai*

CONNECT TO THE ISSUES ECONOMIC DEVELOPMENT The discovery of oil in North Africa has helped the region's economy to grow.

HUMAN-ENVIRONMENT

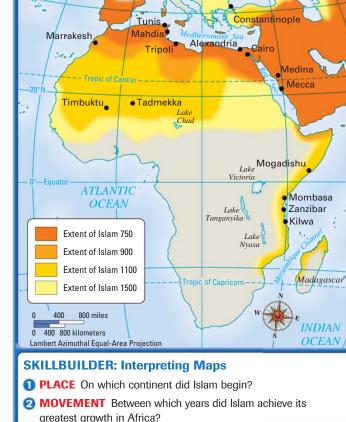
INTERACTION An irrigation ditch from the Nile River nourishes the fields outside Al Fayyam, Egypt. Why has Egypt been called the "gift of the Nile"?



writing may have come from the Mesopotamians, who lived in what is now Southwest Asia. Egyptians pioneered the use of geometry in farming to set boundaries after the Nile's annual flood. Furthermore, Egyptian medicine was famous throughout the ancient world. Egyptians could make splints for broken bones and effectively treat wounds and fevers. Trade and travel on the Nile River, the Mediterranean and Red seas, and overland trade routes helped spread those practices.

ISLAM IN NORTH AFRICA North Africa lies close to Southwest Asia and across the Mediterranean Sea from Europe. As a result, it has been invaded and occupied by many people and empires from outside Africa. Greeks and Romans from Europe and Phoenicians and Ottoman Turks from Southwest Asia all invaded North Africa.

Islam, however, remains the major cultural and religious influ-



Expansion of Islam, 750–1500

INTERACTIVE

ence in North Africa. Islam, a monotheistic religion, is based on the teachings of the prophet Muhammad, whom you will read about in Chapter 22. Muslim invaders from Southwest Asia brought their language, culture, and religion to North Africa. Beginning in A.D. 632, the successors of Muhammad began to spread Islam through conquest and through trade. Around 634, Muslim armies swept into lower Egypt, which was then part of the Byzantine Empire. By 750, Muslims controlled most of North Africa. Muslims bound their territory together with a network of sealinked trading zones. They used the Mediterranean Sea and the Indian Ocean to connect North Africa and Europe with Southwest Asia.

Economics of Oil

North Africa began with an economy based on agriculture. Over the course of its history, it evolved into an economy based on the growth of cash crops and mining. Today, the economy revolves around the discovery of oil in the region.

BLACK GOLD Oil has transformed the economies of some North African countries, including Algeria, Libya, and Tunisia. In Algeria, oil has surpassed farm products as the major export and source of revenue. Furthermore, oil makes up about 99 percent of Libya's exports. Libya and Algeria supply the European Union with much of its oil and gas.



Using the Atlas Using the map on this page and the unit atlas on page 405, identify the first Islamic countries in Africa. AFRICA

Although oil has helped the economies of those countries, it has also caused some problems. For example, Libya's labor force cannot meet the demands of the oil industry because of a lack of training and education. Oil companies therefore are forced to give many high-paying jobs to foreign workers. Despite the oil industry, overall unemployment is still a problem. As a result, large numbers of North Africans have migrated to Europe in search of jobs.

A Culture of Markets and Music

North African culture is a combination of Arabic influences and traditional African ethnic groups.

NORTH AFRICAN *SOUKS Souks,* or marketplaces, are common features of life in North Africa. A country *souk* opens early in the morning. Tents are erected, and storytellers, musicians, and fortunetellers entertain the crowds. A typical city *souk* is located in the *medina,* or old section, of a North African town or city. A *medina* has narrow, winding streets. Some of the best *souks* in North Africa can be found in Marrakesh, Morocco. The markets are known for high-pressure sales, and shoppers must be prepared to bargain fiercely for the lowest price.

Geographic

Thinking

Comparisons

country and city souks alike?

How are

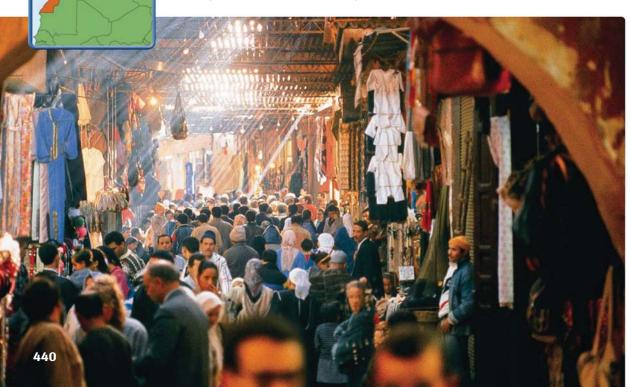
Different?

Making

In both the city and the country, people fill the *souks* throughout the day. All kinds of bartering and haggling take place for a range of products, including brightly colored clothes, spices, and a variety of foods. The aroma of lamb, spices, and animals fills the air. It is also a place where one can eat traditional foods such as couscous, a kind of steamed grain.

PROTEST MUSIC Algeria is home to **rai**, a kind of music developed in the 1920s by poor urban children. *Rai* was at first carefree and centered around topics for youths. The music is fast paced and contains elements of popular Western music.

Before Algerian independence in 1962, however, performers began using *rai* to communicate Algerian resentment toward their French col-



MOVEMENT

Moroccans flood this typical market in Marrakesh. What role do markets play in the movements of goods and people? onizers. After independence, the Algerian government tried to ban *rai*. In the 1990s, Islamic fundamentalists have criticized *rai* for its Westernstyle qualities. *Rai* is now used as a form of rebellion against Islamic fundamentalists, especially by women.

Changing Roles of Women

Modern life in North Africa is in a constant state of change. The role of women, especially, has shifted during the past several years.

WOMEN AND THE FAMILY North African households tend to be centered around males. Men go out to work in offices or on farms. Few women hold jobs after they marry. Men and women also generally eat and pray separately.

Women's roles, however, are changing, especially in Tunisia, where having more than one wife at a time has been abolished. It has also increased the penalty for spousal abuse. Moreover, either spouse can now seek a divorce. In addition, Tunisia no longer permits preteen girls in arranged marriages and requires equal pay for equal jobs.

Women in North Africa have also made gains outside the home, particularly in cities. Growing numbers of them, for instance, have professional jobs. Women hold seven percent of Tunisia's parliamentary seats and manage nearly nine percent of the businesses in Tunis, the capital of Tunisia.

In the next section, you will read about how trade formed the foundation of ancient civilizations in West Africa.

MOVEMENT Two

women in Western-style clothing pause outside a popular marketplace in Marrakesh, Morocco.





AFRICA

Assessment

Places & Terms

Identify these terms and explain their importance in the region's history or culture.

- Carthage
- Islam
- rai

2 Taking Notes

PLACE Review the notes you took for this section.

North Africa

 What is the single biggest cultural influence in North Africa?

Africa

• Which commodity supports some of North Africa's economies?

3 Main Ideas

- **a.** How did the Nile help support the growth of ancient Egypt?
- b. Where did Islam spread after its beginnings in Southwest Asia?
- c. In which ways have women's roles changed in North Africa?

4 Geographic Thinking

Drawing Conclusions How has Islam influenced life in North Africa? **Think about:**

- its impact on women
- the religion that people practice





SEEING PATTERNS Use the Internet or encyclopedias to learn about all the economic and recreational activities supported by the Nile River. Then create an **illustration** of the Nile River with those activities taking place.



A HUMAN PERSPECTIVE A visit to **Gorée Island**, off the coast of Senegal, can be a moving experience. This island served as one of the busiest points for exporting slaves during the slave trade. From the mid-1500s to the mid-1800s, Europeans transported about 20 million Africans through Gorée Island. The island has a slave house, a dark, damp building that housed captive Africans. Europeans packed these captives onto slave ships bound for plantations in the Americas. Approximately 20 percent of all Africans died on the transatlantic voyage—and the rest never saw their West African homes or families again. Slavery had a profound effect on West Africa that is still being felt there today.

A History of Rich Trading Empires

West Africa includes Benin, Burkina Faso, Cape Verde, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo. West Africa is a cultural hearth, and its ideas and practices spread to North America and Europe.

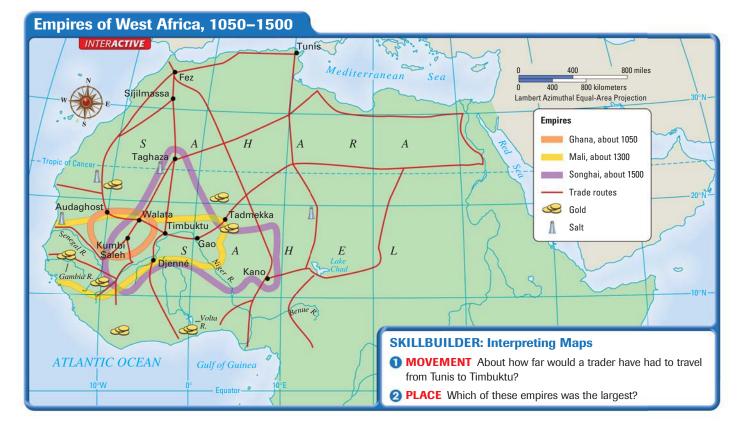
Main Ideas

- Wealth from the gold and salt trades supported a series of West African empires.
- West Africa has a rich cultural tradition that has influenced many parts of the world.

Places & Terms

Gorée Island stateless society Ashanti

CONNECT TO THE ISSUES COLONIALISM European nations took raw materials from West Africa. Today many West African countries rely on exports to support their economies.



THREE TRADING EMPIRES The empires of Ghana, Mali, and Songhai thrived in West Africa because of their location on trade routes across the Sahara. Gold and salt were the main products traded. By A.D. 200, trade across the Sahara had existed for many years.

Many of the trade routes crossed an area farmed by the Sonike people. They called their leader *ghana*, or war chief. Traders began to refer to this area as Ghana, which grew rich from taxing the traders who passed through its territory. Traders exchanged mostly gold and salt. Ghana became an empire around A.D. 800 but began to decline in power by the end of the 11th century.

By 1235, the kingdom of Mali emerged. Mali's first great leader, Sundiata, conquered Ghana. He promoted agriculture and reestablished the gold and salt trade. Some experts estimate that until 1350, about two-thirds of the world's gold came from West Africa. Around 1400, Mali declined because of a lack of leadership and the discovery of new gold fields farther east.

Around 1400, the empire of Songhai replaced Mali. Sunni Ali ruled for 28 years, beginning in 1464. In 1591, a Moroccan army invaded Songhai and defeated it, destroying the empire.

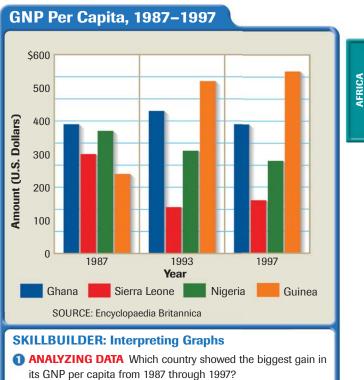
STATELESS SOCIETIES West Africa is filled with many different cultures and peoples. Before colonialism, some of these people lived in what are called stateless societies.

A **<u>stateless society</u>** is one in which people rely on family lineages to govern themselves, rather than an elected government or a monarch. A lineage is a family or group that has descended from a common ancestor. Members of a stateless society work through their differences to cooperate and share power.

One example of a stateless society is the Igbo of southeast Nigeria. Relying on family lineages worked well for the Igbo and other African societies. However, many stateless societies faced challenges from 18thand 19th-century European colonizers, who expected one ruler to govern the society.

West Africa Struggles Economically

Trade is as important to West Africa today as it was in the past. The economic well-being of West Africa is based on the sale of its products to industrialized countries in Europe, North America, and Asia. The economies of West Africa range in strength from the relatively solid economy of Ghana to the weak economy of Sierra Leone.



2 ANALYZING DATA Which country showed the biggest drop in its GNP per capita during those years?

Seeing Patterns Why did three empires prosper and grow in this area of West Africa?

BACKGROUND

One stateless society, the Nuer of southern Sudan, organized thousands of people without an official ruler. **GHANA'S STABILITY** Ghana's economy relies primarily on the export of gold, diamonds, magnesium, and bauxite to the industrialized world. Ghana has a per capita income of \$1,900, the second highest in West Africa. However, its per capita income is low compared to the industrialized world.

Ghana's transition from colonialism to democracy has had setbacks, including military rule and civil war. However, in 1992, 1996, and 2000, Ghana held free and fair elections. As a result of this new political stability, the economy is growing at a healthy rate. But other West African countries have not been as fortunate.

HUMAN-ENVIRONMENT INTERACTION A

West African weaver makes *kente* cloth. What are some skills that a weaver might need? **PROBLEMS IN SIERRA LEONE** The worst economic conditions in West Africa exist in Sierra Leone, which once produced some of the world's highest-quality diamonds. However, years of political instability and civil wars have left the economy in shambles. In addition, a relatively uneducated population—with a 31 percent literacy rate—leaves a shortage of skilled workers. Finally, the road and transportation system contains few highways and only 800 miles of roads. In contrast, Benin, another West African country close to Sierra Leone in size, has about 5,000 miles of roads.



Seeing Patterns How is the economy of Ghana similar to those of the ancient West African kingdoms?



Cultural Symbols of West Africa

West African cultures, such as the Ashanti and Benin, have produced elaborate craftwork and colorful textiles.

ASHANTI CRAFTS The <u>Ashanti</u>, who live in what is now Ghana, are known for their work in weaving colorful *asasia*—what Westerners usually call *kente* cloth. The designs of *kente* cloth contain colorful woven geometric figures with specific meanings. Only royalty were allowed to wear *kente* cloth.

Other crafts include making masks and carving wooden stools. An Ashanti stool symbolizes the unity

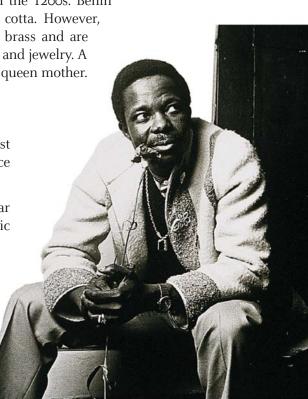
between ancestral spirits and the living members of a family. Fathers often give their sons a stool as their first gift. In the case of kings, the stool represents the unity of the state with its people.

BENIN ART The kingdom of Benin, which has no direct connection with the current country of Benin, arose in what is now Nigeria in the 1200s. Benin artists made beautiful objects of metal and terra cotta. However, their most important works were fashioned from brass and are called Benin "bronzes." They include statues, masks, and jewelry. A common subject of Benin "bronzes" was that of the queen mother.

Music in Daily Life

Music is a large part of life in West Africa. West African music has become an important influence on world music.

WEST AFRICAN MUSIC West African popular music involves a blend of traditional African music with American forms of jazz, blues, and reggae which also had their origins in West Africa because of the slave trade and the contact between the two regions. Over the years, West African musicians used French and English lyrics to attract an international audience. West African music is played on a wide variety of drums and other instruments such as the kora, a cross between a harp and a lute. The kora originated in what is now Guinea-Bissau.



King Sunny Adé, also known as the "minister of enjoyment," is a popular musician from Nigeria. King Sunny and his band, the African Beats, play an informal type of music characterized by tight vocals, complex guitar work, traditional talking drums, percussion instruments, and the pedal steel guitar and accordion.

In Section 4, you can read more about culture and life in Central Africa.

MOVEMENT King Sunny Adé's music blends sounds from North America and West Africa. How do you think music moved from West Africa to North America?



Places & Terms

Identify these terms and explain their importance in the region's history or culture.

- Gorée Island
- stateless society
- Ashanti

ns 🛛 🙆 Taking Notes

HUMAN-ENVIRONMENT

INTERACTION Review the notes you took for this section.



- How did natural resources affect the ancient empires in West Africa?
- How do stateless societies differ from those with a centralized government?

3 Main Ideas

- **a.** What three empires flourished because of trade in West Africa?
- What are some of the roadblocks to economic development in West Africa?
- what is the significance of the stool in Ashanti society?

4 Geographic Thinking

Making Comparisons How do the economics of Sierra Leone and Ghana differ? Think about:

- Ghana's political stability
- the state of infrastructure in Sierra Leone





MAKING COMPARISONS Review the information about the West African economies on pages 443–444. Using the Internet or encyclopedias, find the per capita income of four other West African countries during the last ten years. Then create a **chart** comparing their growth or decline during that time.

INTERACTIVE

Comparing Cultures

Feasts

All over the world, people celebrate certain events by holding a ritual feast. The autumn harvest, when the season's crops are gathered, is an important time in most cultures. As a result, many people have a special meal to celebrate the earth's bounty. Most harvest feasts are accompanied by a legend or story that tells of the feast's origins. For example, the American harvest feast began in 1621 when Pilgrims invited Native Americans to join them in a three-day celebration marking the harvest.





People in India celebrate *Sankranti* by eating on traditional banana leaf plates. *Sankranti* celebrates the end of the year's harvest. Rice is a staple of this meal.

Chinese celebrate the moon festival in Hong Kong. Throughout history, the Chinese have planted and harvested according to the moon. The Chinese eat moon-shaped pastries filled with red bean and lotus seed paste.



Americans gather for their Thanksgiving feast. Roast turkey, potatoes, and pumpkin pie are traditional dishes for this meal.

A Ga chief in Ghana shares ceremonial food and drink during the Homowo harvest feast. The meal includes palm oil fish stew consisting of steamed corn dough, bream (fish), and okra.

GeoActivity

EXPLORING TRADITIONAL FEASTS Working with a small group, use the Internet to research another feast from another culture. Then create a **presentation** about this feast.

- Write a short paragraph about the origin of the feast.
- Gather pictures of the traditional foods eaten at the feast.
- Identify other rituals besides eating that are part of this celebration.



GeoData

Homowo harvest feast

- According to traditional beliefs, any Ga person failing to celebrate Homowo will incur the wrath of deceased ancestors and die.
- Some Homowo events include opening the fishing season and house purification.

Thanksgiving

 Abraham Lincoln officially proclaimed Thanksgiving a national holiday in 1863. Canada first adopted Thanksgiving as a national holiday in 1879.

Sankranti

 A general housecleaning and the burning of unwanted possessions symbolizes the destruction of evil. Children also fill the sky wih kites in a kite-flying spectacle.

Moon Festival

- During the Tang Dynasty (A.D. 618–906), the moon festival was made an official holiday.
- During the Yuan Dynasty (1279–1368), Mongolians had taken over China. So the Chinese hid messages inside moon cakes to communicate with each other about their plans for rebellion.



A HUMAN PERSPECTIVE A Congo riverboat ride from Kinshasa to Kisangani in the Democratic Republic of the Congo is a journey all visitors should take. The riverboat is essentially a floating village. Each barge shakes with music and dancing. In addition, the Congolese fill the riverboat with market stalls stocked with all types of food. The smell of smoked fish and a variety of live animals, including monkeys, tortoises, and crocodiles, fills the air. Farmers slaughter pigs and goats on board, and merchants bargain with each other for a range of products. The journey can present a valuable snapshot of life in Central Africa.

Bantu Migrations and Colonial Exploitation

Central Africa includes Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Equatorial Guinea, Gabon, and São Tomé and Princípe. Europeans first began their African colonization in Central Africa.

BANTU MIGRATIONS The Bantu are a group of peoples and cultures who speak one of the Bantu languages. Beginning around 2000 B.C. in what is now southeastern Nigeria, the Bantu people moved southward throughout Africa. On the way they spread their languages and their cultures. This mass migration is called the **Bantu migrations**.

The Bantu may have begun this journey because of a land shortage. The Bantu migrations are a key event in Africa's history. They produced a great diversity of cultures but also helped link various areas of the continent. Today, around 120 million Africans speak one of the hundreds of Bantu languages.

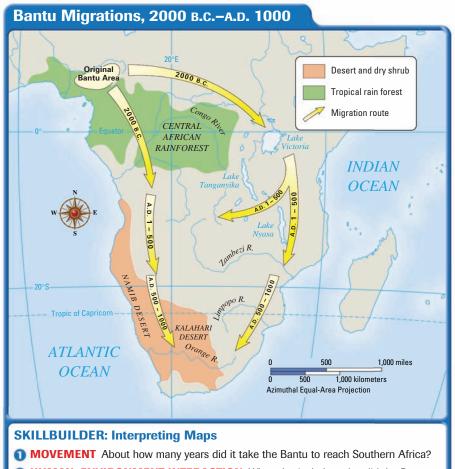
Main Ideas

- The Bantu migrations helped to populate the African continent.
- European nations divided Africa without regard to ethnic groups or language.

Places & Terms

Bantu migrations King Leopold II Mobutu Sese Seko Fang sculpture

CONNECT TO THE ISSUES COLONIALISM European colonial policies so divided Africans that the region suffers from ethnic conflict today.



2 HUMAN–ENVIRONMENT INTERACTION What physical obstacles did the Bantu have to overcome on their journey south?



Seeing Patterns How did European traders obtain slaves from Africa's interior? **THE SLAVE TRADE** Europeans wanted slaves for their plantations in the Americas. In the 15th century, the Portuguese established the island of São Tomé off the coast of what is now Gabon as the initial base for trade in African captives. European traders traveled to Africa and waited on the coast. African merchants then brought potential slaves to them. The merchants traded for guns and other goods.

Many African rulers took part in the slave trade. They already had been selling slaves to other African rulers and Arabs. So, they saw no difference in selling them to Europeans. Some Africans, however, objected. One African ruler protested to the king of Portugal.

Nevertheless, by the end of the slave trade in 1870, Europeans had transported millions of slaves to the Americas and Europe.

START OF COLONIALISM In the mid-1800s, Central Africa consisted of hundreds of different ethnic groups, which followed traditional religions and spoke hundreds of different languages. Politically, they ranged from large empires to small villages. Europeans had been in Africa since the mid-15th century but had stayed mainly on the coast. The rugged interior geography of Africa prevented further movement.

But that changed when **King Leopold II** of Belgium developed an interest in the Congo after it had been explored in the 1870s. He wanted to open the African interior to European trade along the Congo River. By 1884,

Leopold controlled this area and paved the way for the Berlin Conference, which you read about in Section 1. The Berlin Conference established this area as the Congo Free State. Leopold used forced labor to gather rubber, palm oil, ivory, and other resources.

EFFECTS OF COLONIALISM During the 19th and 20th centuries, primarily the Belgians and French colonized Central Africa. Most Central African countries gained their independence in the 1960s, but the borders imposed on the Africans during colonialism posed problems. Those borders disrupted long-standing systems of government in Africa, did not consider ethnic regions, and grouped traditional enemies together.

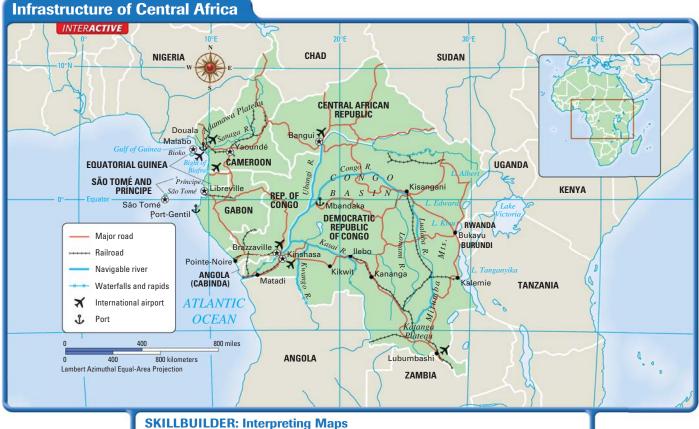
Before colonization, a village, a tribal chief, or a group of elders would consult with various leaders within a village to make decisions that affected only that village. This type of organization is a stateless society, which you read about on page 443 in Section 3. During colonization, Europeans installed more centralized governments that destroyed the organizing principle of stateless societies. After colonization ended, new African governments in the 1960s were then forced to govern a diverse population. Inexperienced leaders were often corrupt and abused their power.



IN THE RUBBER COILS.

MOVEMENT King Leopold II of Belgium takes control of Central Africa. Why is King Leopold shown as a serpent? AFRICA

CONNECT TO THE ISSUES COLONIALISM Why did Africa become such a prized place for European powers?



SKILLBUILDER: Interpreting Maps

1 MOVEMENT Why do you think most of the transport routes begin in the middle of the continent and end on the coast?

MOVEMENT What different modes of transport would you use to take goods from Kisangani in the Democratic Republic of the Congo to the coast?

The Economic Legacy of Colonialism

The economic geography of Central Africa is similar to that of the other regions of Africa. Many of the countries suffer from a lack of infrastructure and rely too much on the export of raw materials.

ECONOMIC EFFECTS Central Africa's economy is still recovering from the effects of colonialism: the loss of resources, the disruption of its political systems, and the cultural and ethnic oppression of its people. European colonizers invested little in Central Africa. The only economic infrastructure they developed was to aid the removal of raw materials. They left little money to develop roads, railroads, airports, or a productive education system for the people of those countries.

CONGO'S ECONOMIC CHAOS A good example of economic problems caused by colonization can be seen in the Democratic Republic of the Congo. The country possesses huge amounts of natural resources such as gold, copper, and diamonds. However, European colonization and a personal desire for power and riches by postcolonial leaders left the country in a state of disarray.

In the Democratic Republic of the Congo, for example, **Mobutu Sese** Seko, the country's leader from 1967 until 1997, brought the country's businesses under national control. He then began to take kickbacks in order to profit from this reorganization. The country's economy, educational system, and social structure began a rapid decline thereafter.

CONNECT TO THE ISSUES **ECONOMIC** DEVELOPMENT Why are many African countries still having difficulty developing their economies?

Mobutu used the army to maintain his own power. His regime finally gave way in 1997 to that of Laurent Kabila. But Kabila's leadership only led to more violence in Central Africa. By 1999, Angola, Namibia, Zimbabwe, Chad, Rwanda, and Uganda all had troops in the Democratic Republic of the Congo and were competing for its territory and resources. In 2001, Kabila was assassinated, and his son Joseph succeeded him. The Democratic Republic of the Congo is still struggling to establish a stable political system.

The Influence of Central African Art

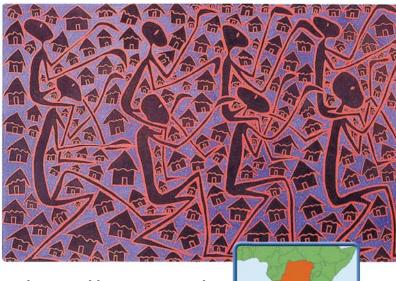
Central African art shares common ideas and themes with art in other parts of Africa, including expressions of traditional African cultures and the struggle against colonialism.

CENTRAL AFRICAN ART For much of the 20th century, some of Central Africa's art has reflected attitudes toward colonialism. After having attained independence in the 1960s, however, these countries wanted to establish their own identities. As a result, many countries banned Western influences in their art. For example, in the 1970s, Mobutu Sese Seko launched a pro-

gram to promote African—in particular, Congolese—culture above that of the West. Artists who participated wanted to recover the personality of African art by using materials they considered African in origin.

Today, artists from a new generation who did not experience colonialism are coming of age. They are focusing on issues of political instability, urban life, social justice, and crime.

FANG SCULPTURE Prior to the 20th century, few people in Europe knew much about African



art. However, in 1907 the famous Spanish artist Pablo Picasso saw a display of African **Fang sculpture** in Paris, and it captivated him. After that, Picasso began using African themes in his work.

The Fang, who live in Gabon, southern Cameroon, and Equatorial Guinea, are famous for their carvings. They carve wooden masks, which are painted white with facial features outlined in black. They also carve boxes that contain the skulls and bones of deceased ancestors. These boxes are decorated with figures to protect their contents.

Improving Education

In recovering from the effects of colonialism, Central African countries are placing their hopes on education. Improved education should produce more skilled workers and citizens who are better able to participate in democratic governments.

COLONIALISM How might Mobutu's arts program have been a reaction against colonialism?

CONNECT TO

THE ISSUES

In this painting, When

There is Work, the

Village Expands, the houses in the back-

ground represent the

village. The people

moving in front are cooperating to make the village grow.

HEALTH CARE Ebola Virus

connec

The Ebola virus, named after the Ebola River, first emerged in 1976 in the northern Democratic Republic of the Congo.

People affected by the virus develop fever, severe headaches, and loss of appetite. Blood clots form on internal organs, such as the liver and brain. This causes uncontrolled bleeding from parts of the body, such as the eyes or ears. Death usually occurs within 2 to 21 days, and no known cure exists.

One outbreak occurred in October 2000 in Uganda. Those cases appeared in a refugee camp. Unsanitary conditions are one cause of disease associated with the Ebola virus.



EDUCATION FACES BARRIERS Adequate schooling for many of Africa's young people is in short supply. In 2001, experts estimate that less than half of sub-Saharan Africa's 16- to 20-year-olds attend school. Education problems in Central Africa include a shortage of trained teachers, a high dropout rate, and a shortage of secondary schools.

Central Africa's more than 700 languages also pose barriers. The language used in school is often different from the one used at home. For example, in Gabon—a former colony of France—French is the only language of instruction, though most people speak one of the Bantu languages outside the classroom.

LEARNING IN CENTRAL AFRICA Students' education varies in Central Africa. In Cameroon, most children leave school at around the age of 12. In the Central African Republic, children between the ages of 6 and 14 are required to go to school.

Many Central African countries are improving their educational systems, however. In 1991, Cameroon created two new universities. In addition, Libreville University in Gabon, founded in the 1970s, now has more than 4,000 students.

The Republic of the Congo offers vocational, agricultural, and teacher training courses. In addition, many countries are starting programs to educate young people about health care issues such as the spread of disease. Those countries hope that better education will slow the spread of AIDS, the Ebola virus, cholera, and other diseases.

You will read in Section 5 about how ancient trade networks and gold formed the economic foundation of Southern Africa.

Assessment

Places & Terms

Identify these terms and explain their importance in the region's history or culture.

- · Bantu migrations
- King Leopold II
- Mobutu Sese Seko
- Fang sculpture

2 Taking Notes

MOVEMENT Review the notes you took for this section.



- How did the Bantu migrations affect Africa's population?
- Who were the first Europeans to establish the African slave trade?

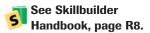
3 Main Ideas

- **a.** How did colonialism in Central Africa begin?
- b. What are the subjects of the works of today's artists in Central Africa?
- c. What problems does education face in Central Africa?

4 Geographic Thinking

Seeing Patterns How did colonialism affect most African countries? Think about:

- their natural resources
- 20th century conflicts





EXPLORING LOCAL GEOGRAPHY Review the information about the Central African infrastructure on page 450. Create a **sketch map** showing all the major roads, highways, and railroads in your own neighborhood.

BACKGROUND

People from other countries make up the entire staff at the one technical school and the three secondary schools in São Tomé and Princípe.



A HUMAN PERSPECTIVE In April 2000 in Zimbabwe, armed men attacked the farmhouse of a white farmer whose family has lived in Zimbabwe for generations. A political crisis that goes back to Britain's colonial rule caught white farmers in a violent crossfire. British colonial rule ended in 1980, but more than 4,000 white farmers in Zimbabwe still own one-third of the best land in a country of about 10 million blacks. The British and the white farmers have made attempts to equalize land ownership, but Zimbabwe's leaders have not taken advantage of these opportunities. Instead, they have targeted individual white farmers who own that land. This conflict illustrates a critical issue in all of Southern Africa—that blacks far outnumber whites but still own little of the land.

Gold Trade Builds Empires

Southern Africa includes Angola, Botswana, Comoros, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe. The history of Southern Africa involves a blending of colonialism with African cultures and the development of gold-trading empires.

GOLD TRADE SPAWNS GREAT ZIMBABWE The majority of the people in Southern Africa are Bantu-speaking peoples, including the Shona people. Around 1000, the Shona established a city called **<u>Great Zimbabwe</u>** in what is now the country of Zimbabwe.

From the 1200s to the 1400s, Great Zimbabwe became the capital of a thriving gold-trading area. But for unknown reasons, around 1450 the Shona abandoned Great Zimbabwe. One theory is that cattle grazing had exhausted the nearby grasslands, and overfarming had ruined the soil.

MUTAPA EMPIRE According to local legend, a man named Mutota left Great Zimbabwe around 1440 and settled in a fertile valley to the north. He founded a new state to replace Great Zimbabwe. By the time Mutota died, the **Mutapa Empire** extended throughout all of present-day Zimbabwe except the eastern part.

Main Ideas

- Great Zimbabwe and the Mutapa Empire thrived on the gold trade.
- The wealth of Southern Africa is tied to the land, and conflicts over land and resources often result.

Places & Terms

Great Zimbabwe Mutapa Empire apartheid Nelson Mandela

CONNECT TO THE ISSUES HEALTH CARE AIDS threatens Southern Africa's youth and could significantly reduce the region's population.

PLACE Pictured below are the walls of Great Zimbabwe. What do the materials used to build the walls reveal about the local physical geography?





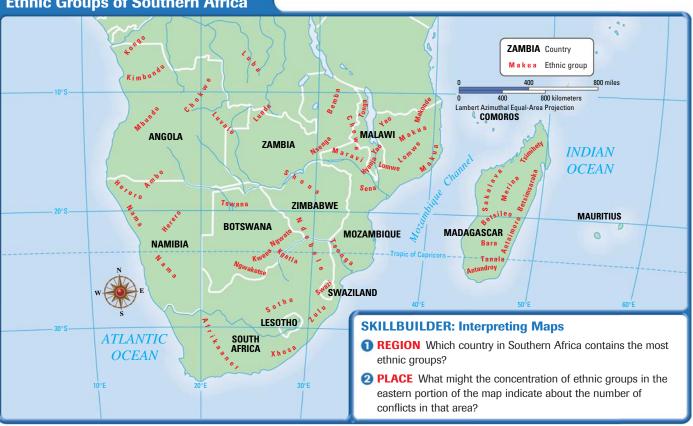
The Mutapa Empire thrived on the gold trade. In the 1500s, however, the Portuguese arrived and began interfering with the politics there. Soon, the Mutapa Empire began to decline. This event showed the increasing role Europeans would play in Southern Africa.

ETHNIC CLASH FOR SOUTHERN AFRICA As Europeans migrated to Southern Africa in the 1700s and 1800s, their presence led to conflicts with Africans. As the map below shows, many different ethnic groups were already living in Southern Africa. They competed with each other and with the Europeans for control of the land. In the early 19th century, the Zulu controlled a large area in Southern Africa. However, the British defeated the Zulu and by the late 19th century had taken over their land.

In the 1890s, the British battled the Dutch farmers, or Boers, in the Boer War for control of the region. The Boers had arrived in Southern Africa in the mid-1600s. The British won the war and formed the Union of South Africa in 1902. South Africa is currently a country in the region of Southern Africa.

THE POLICY OF APARTHEID IN SOUTH AFRICA In 1948, the white minority government of South Africa instituted a policy of **apartheid**, or complete separation of the races. It banned social contact between blacks and whites and established segregated schools, hospitals, and neighborhoods. Although blacks made up 75 percent of the population, they received only a small percentage of the land. The government kept the best land for whites.

In 1912, blacks had founded the African National Congress (ANC) to fight for their rights. In 1949, **Nelson Mandela** emerged as one of the



Ethnic Groups of Southern Africa

Geographic Thinking

Seeing Patterns What led to the conflicts between Europeans and groups of people already living in Southern Africa?

BACKGROUND

Segregation is the separation of people on the basis of race or ethnicity.

leaders of the ANC, and he led a long struggle to end apartheid that resulted in his being imprisoned. By the 1980s, nations around the world—including the United States—pressured South Africa to end apartheid. In 1989, F. W. de Klerk became the president, and he wanted to change South Africa.

As a result, South Africa experienced a peaceful revolution, and the government ended its apartheid laws. An election that involved members of all races in South Africa took place in 1994. Mandela, having been released from prison, won the election and became president. In 1996, the government passed a new, democratic constitution that guarantees the rights of all citizens.

Southern Africa Grows Economically

The economies of Southern African countries are some of the most advanced in Africa. However, many countries are struggling to raise the standard of living for blacks, who get the worst jobs, own the least productive land, and attend the worst schools.

SOUTH AFRICA The policy of apartheid has hurt the economy of South Africa. Because of apartheid, foreign nations imposed economic sanctions that prevented their countries from conducting business with or investing in South Africa. In addition, the policy led to poor education of blacks, creating an uneducated mass of young people. As a result, two economies exist in South Africa.

One segment of South Africa has an upper-middleincome economy like that of the United States. South Africa possesses great cities with huge industrial complexes, such as Johannesburg and Cape Town. It also has modern, mechanized farms and large ranches. In contrast, though, South Africa also has poverty-stricken rural areas. Black townships and shantytowns also fill portions of the cities. Furthermore, the government currently faces problems arising from unequal land distribution and a severe housing shortage.

SUCCESS AT A COST Botswana illustrates a problem that exists in many African countries today. It made a great deal of money from valuable resources but has serious agricultural problems and an unequal distribution of wealth. Botswana gained its independence from Britain in 1966 and subsequently experienced long-term economic growth. In 1966, its per capita income stood at \$69. In 1997, that figure had risen to \$3,900 per capita.

Southern Africa, 1800–2000



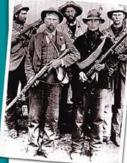
1836

Boers (right)

come into conflict with native groups

in Southern Africa.

1819 The **Zulu** *(left)* establish their supremacy in Southern Africa.



1891 DeBeers gained 90 percent of African diamond industry.

1912 The African National Congress is formed.

1948 Apartheid begins in South Africa.

1973 Swaziland bans political parties, and its king assumes absolute power.



The world's largest diamond, called the **"Star of Africa,"** (above) is cut in South Africa.

1994

Nelson Mandela and F. W. de Klerk (below) shake hands after Mandela wins South Africa's first multiracial election.



Making Comparisons What are the two segments of South Africa's economy? Botswana's wealth is based on minerals. People discovered diamonds there shortly after the country's independence from Britain. By 1995, Botswana had become the world's third largest diamond producer. Diamonds account for more than 63 percent of government revenue. A problem, however, is the uneven distribution of the profits—an issue in many African countries.

Approximately 80 percent of the people work as farmers and never benefit from the diamond revenue. The other 20 percent grow wealthy from diamond money. One problem developing from this unequal distribution is that wealthy people are purchasing large tracts of land for cattle ranching from poor farm owners. As a result, poor farmers often move to less productive land. Meat production then increases, but overall food production actually decreases. The country winds up producing only 50 percent of the food needed to feed its population. The rest must be imported or come from international aid.

AIDS AFFECTS SOUTHERN AFRICA By 1999, the most severe AIDSaffected countries were in Southern Africa. In Zimbabwe and Botswana, for example, more than 25 percent of all adults were infected with HIV, the virus that causes AIDS. In Botswana, the life expectancy was 60 years old in 1994 but had declined to 39 years of age in 1999. The disease also has far-ranging implications for any country's economic well-being. In Botswana, many highly trained diamond sorters have died from the disease.

Celebrations of Southern Africa

Southern Africa is a rich mosaic of cultures and traditions. More than any other region, it is a mix of African and European cultures.

A VARIETY OF DANCES Celebrations and festivals are a large part of life in Southern Africa. The Chewa people perform a dance called the *gule wa mkulu*, which reflects their traditional religious beliefs. Dancers dress in ragged costumes of cloth and animal skins. They wear masks and sometimes walk on stilts.

The Tumbuka people in northern Malawi perform the *vimbuza*, a dance performed by healers who wish to cure people of sickness. Other dances include the *benji* dance of the Yao people in southern Malawi. This dance, performed by Yao warriors, pokes fun at what these warriors saw as the desire of the European militaries to march and have parades.

REGION Colorfully painted Ndebele houses, like the one shown below, are common in South Africa. Why might the Ndebele have painted their houses in this way?

for set allow yes 456

In Madagascar, during the *hira gasy* festival, costumed groups of 25 or more people play music, perform dances, and act out stories. The themes are upbeat and praise the virtues of honesty and respect for elders.

Living in Southern Africa

Johannesburg, South Africa, is one of Southern Africa's largest cities and offers its residents a variety of opportunities and experiences.

JOHANNESBURG About 100 years ago, Johannesburg began as a small mining town and grew because of nearby gold reserves. Today, greater Johannesburg is a city of more than six million people with many different ethnicities and lifestyles. The center of Johannesburg looks like most modern big cities, with a cluster of skyscrapers dotting the skyline. However, as a result of apartheid, greater Johannesburg developed into two different cities. To the north lie the spacious suburbs that were once exclusively white. To the south are poor black townships.

MODERN AND TRADITIONAL LIFESTYLES Some Southern Africans live a modern lifestyle as doctors, lawyers, and businesspeople. These people live in tree-lined suburbs that look no different from those found in the United States. Many blacks, on the other hand, because of apartheid's legacy, still work in menial and unskilled jobs. They still live in the former black-only homelands and shantytowns.

Some ethnic groups of Southern Africa follow more traditional patterns as farmers, traders, or herders. For example, the Zulu either work in menial jobs, such as mining, or cling to their traditional roles as farmers and metalworkers. The Zulu have a long tradition of making hoes, spears, axes, and other tools and weapons.

In the next chapter you will read more about major issues facing Africa today, including economic development, health care, and the effects of colonialism.

Assessmen

Places & Terms

Identify these terms and explain their importance in the region's history or culture.

- Great Zimbabwe
- Mutapa Empire
- apartheid
- Nelson Mandela

2 Taking Notes

PLACE Review the notes you took for this section.



. What was the basis for the growth of Great Zimbabwe?

 How would you describe the occupations of the people who live in Southern Africa?

3 Main Ideas

- a. Who ended the system of apartheid in South Africa?
- b. How is AIDS affecting Botswana's economy?
- c. What are some of the major traditional cultural activities in Southern Africa?

🙆 Geographic Thinking

Identifying and Solving Problems How did apartheid affect the economy of South Africa? Think about:

- how blacks were treated
- international economic sanctions





MAKING COMPARISONS Review the information about Botswana's economy on pages 455-456. Using the Internet or encyclopedias, find out where the major natural resources are located in each country of the region. Then create a resources map of Southern Africa.

Southern Africa 457



Seeing Patterns What resource fueled the growth of both Johannesburg and Great Zimbabwe?

Chapter (19) Assessment

VISUAL SUMMARY HUMAN GEOGRAPHY OF AFRICA

Subregions of Africa

🖲 East Africa

- East Africa's location on the Red Sea and Indian Ocean has made it a major trading center throughout history.
- AIDS has become a major health problem in East Africa.

🖲 North Africa

- The Nile River supported the growth of ancient Egypt.
- Islam is the major cultural and religious influence in North Africa.

💛 West Africa

- Gold and salt provided the basis for three great empires in West Africa.
- Many of West Africa's economies rely too much on exporting raw materials.

Central Africa

- The Bantu migrations helped to populate the African continent.
- Colonialism caused long-term damage to the economies and cultures of African nations.

Southern Africa

- Gold provided the basis for great empires in Southern Africa.
- Apartheid hurt the economies of Southern Africa because of international economic sanctions and inadequate education of blacks.



Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- Berlin Conference
 pandemic
- **3.** Islam
- 4. stateless society
- 5. Ashanti

Fang sculpture
 Great Zimbabwe

6. Bantu migrations

- e eeelety
- 9. apartheid
- 10. Nelson Mandela

B. Answer the questions about vocabulary in complete sentences.

- **11.** Which term is used to describe the policy used to separate blacks and whites in South Africa?
- 12. What type of art influenced some of Pablo Picasso's work?
- **13.** What meeting by European nations set the rules and conditions for the takeover of Africa?
- 14. Which African people place a high value on wooden stools?
- 15. What is the system called that uses family lineages to govern people?
- **16.** Who led the ANC in the second half of the 20th century and helped to end apartheid in South Africa?
- 17. What is the largest cultural and religious influence in North Africa?
- 18. Which empire thrived on the gold trade in Southern Africa?
- **19.** What term describes a disease outbreak affecting a large population in a wide geographic area?
- **20.** What movement of people helped to bring a sense of unity of language to much of Africa?

Main Ideas

East Africa (pp. 431-437)

- **1.** How did East Africa's location help it to become a major international trading center?
- 2. What impact did the Berlin Conference have on Africa?

North Africa (pp. 438-441)

- 3. How did Islam become the biggest influence in North Africa?
- 4. How have women's roles in North Africa changed over the years?

West Africa (pp. 442-447)

- **5.** What are the similarities and differences among the three West African kingdoms of Ghana, Mali, and Songhai?
- 6. What are some of the problems faced by West African economies?

Central Africa (pp. 448-452)

- 7. Why were the Bantu migrations important in African history?
- 8. What are some of the problems facing education in Central Africa?

Southern Africa (pp. 453-457)

- 9. How have natural resources affected the economy of Southern Africa?
- 10. How was apartheid brought to an end?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.



- a. How were the precolonial kingdoms of West Africa similar to or different from the precolonial kingdoms of Southern Africa?
- b. How did colonialism change Africa and its people?

2. Geographic Themes

- a. **MOVEMENT** How did the movement of Islam from Southwest Asia to North Africa affect the African continent?
- b. HUMAN-ENVIRONMENT INTERACTION What role did natural resources play in the colonization of Africa?

Geographic Skills: Interpreting Graphs

Languages of Nigeria

Use the graph below to answer the following questions.

- 1. ANALYZING DATA What percentage of Nigerians speak English?
- 2. **MAKING GENERALIZATIONS** Which language group is the most commonly spoken?
- 3. **MAKING INFERENCES** How might the number of languages in Nigeria affect a newly formed democratic government?



How did natural resources affect the formation of ancient African kingdoms and empires? Which of the five themes apply to this situation?

4. Making Comparisons

How did stateless societies in Africa differ from centralized governments?

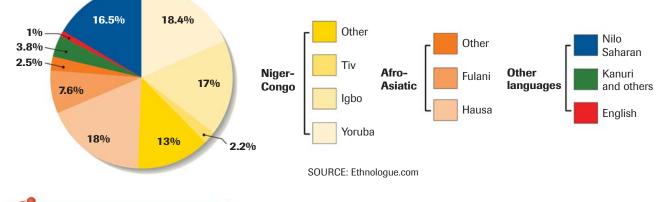
5. Determining Cause and Effect

What prompted the Berlin Conference, and what effects did it have on Africa's culture and economy?





Choose another country in Africa. Then using the library, encyclopedias, or other reference books, create your own language pie chart.



INTERNET ACTIVITY

Use the links at **classzone.com** to do research on the people of one African country. Look for such information as age range, religions, ethnic groups, literacy rates, and per capita income.

Constructing a Population Pyramid Using the information you have gathered, construct a population pyramid describing the population characteristics of the society you have chosen.



SECTION 1 Economic Development

SECTION 2 Health Care

CaseStudy Effects of Colonialism

For more on these issues in Africa . . . CURRENT EVENTS CLASSZONE.COM

Miners in Johannesburg, South Africa, dig for gold.

Geo**Focus**

How are African nations trying to resolve the issues facing their countries?

Taking Notes In your notebook, copy a cause-and-effect chart like the one shown below for each issue. Then take notes on the causes and effects of the issues.

	Causes	Effects
lssue I: Economic Development		
lssue 2: Health Care		
Case Study: Effects of Colonialism		

today's issues Africa

Economic Development

How can African nations develop their economies?

A HUMAN PERSPECTIVE Mauwa Funidi wonders about the future of her country, the Democratic Republic of the Congo, as she looks around the rundown university library where she works. She has not been paid her salary of 12 dollars per month in many months. Classes at the university have been suspended because of a lack of funds. Funidi survives only by selling little bags of charcoal on the streets of Kisangani. Funidi, like many other Africans, is trying to scrape out a living on a continent where people's standard of living has gotten worse over the last 30 years. Nevertheless, many African countries have vowed to change their fortunes with better government, better relations with neighbors, more investment in education, and a diverse economy.

Africa's Economy Today

Most African nations have little manufacturing of their own. Their economies are based on providing raw materials—oil, minerals, or agricultural products—to the world's industrialized countries.

A HISTORY OF PROBLEMS As you learned in the previous chapter, European colonizers exploited Africa's resources and people during the past few centuries. Millions of Africans were sold into slavery, and countless others have died in Africa from harsh working conditions while obtaining raw materials for foreign interests. In addition, the land has been mined and drilled with little regard for the environment. This history of exploitation has limited Africa's economic growth and fostered political instability. Without

political stability, consistent economic growth is difficult.

AFRICA'S ECONOMIC STATUS

Today, most African countries are worse off economically than they were in the 1960s, just after many of them gained independence from European colonizers. In the last 30 years, average incomes in Africa have decreased, while they have increased in most of the rest of the world. Africa accounts for only 1 percent of total world GNP and 1.5 percent of total dollar value of world exports—both

Main Ideas

- Africa's history of colonization has had long-term effects on its economy.
- Barriers to African economic development include illiteracy, foreign debt, and a lack of manufacturing industries.

Places & Terms

"one-commodity" country commodity diversify small numbers compared to Africa's population and natural resources. The whole of Africa's economy is about as large as that of Argentina's.

Furthermore, the economic infrastructure needed for substantial growth is not in place. Roads, airports, railroads, and ports are not adequate to help African nations further their economic growth.

In addition, most Africans don't have access to computers or other aspects of high technology. High technology has fueled economic growth in other parts of the world such as North America, Europe, and Asia.

On the Road to Development

Despite this legacy of exploitation, African nations are struggling to build economies based on the careful use of natural and human resources.

REDUCING DEBT AND INCREASING COOPERATION When the colonial nations pulled out of Africa, they often left the newly independent nations without money for transportation, education, and businesses. To build their economies, African countries borrowed heavily. By 1997, total public debt of sub-Saharan African governments—about 227 billion dollars—was strangling them. As a result, many Western leaders have urged their countries to forgive Africa's debts so that it has more money to build its economies.

Another way that Africa seeks to improve its economy is through regional cooperation. The Economic Community of West African States



1 HUMAN-ENVIRONMENT INTERACTION What is the most common commodity of these countries?
 2 REGION Which region has the most one-commodity countries?

(ECOWAS) and the Southern African Development Community (SADC) are both striving to promote trade. For example, ECOWAS is working toward removing duties and creating a common currency. Efforts of SADC include working to improve the transportation and communication infrastructures.

BUILDING INDUSTRIES The economy of many African nations is based on the export of raw materials. Furthermore, several of Africa's countries rely on just one or two principal commodities for much of their earnings. These are called *"one-commodity"* countries. A commodity is an agricultural or mining product that can be sold. The value of a commodity varies from day to day based on worldwide supply and demand. That makes the economies of the producing nations-especially "one-commodity" countries-unstable. Economists believe African nations must **diversify**, or create variety in, their economies and promote manufacturing to achieve economic growth and stability.



Why do you think good roads are important to the functioning of an economy?

BACKGROUND

In 1998, over 57 percent of Africa's total GNP went to repaying its debts.

BACKGROUND

The Highland's Water Project of Lesotho will eventually allow the country to generate its own electricity, instead of having to buy it from South Africa.



Seeing Patterns Why do you think education is important to Africa's economy? Some African nations are making strides toward that goal. In East Africa, Djibouti is using its location on the Gulf of Aden to establish a major international shipping center.

Educating Workers

A key to developing Africa's economies is improving its education system to provide people with a high level of skills. African nations must also find ways to prevent their educated citizens from leaving the continent.

IMPROVING EDUCATION A large barrier to economic development in Africa is an unschooled population. For example, the average length of school attendance for African women has increased only by 1.2 years in the last 40 years. In some countries, such as Angola and Somalia, civil wars have all but destroyed the school systems.

Some African countries, however, are making progress. For example, in Algeria, 94 percent of the country's school-age population receive a formal education. Mauritius has also made huge gains. Currently, 83 percent of Mauritians over the age of 15 are literate.

REVERSING THE BRAIN DRAIN Another priority is slowing the departure of African professionals to Western countries. In 1983, the International Organization for Migration began a campaign to encourage these professionals to return home.

As Africa moves into the 21st century, efforts to improve education, invest in industry, and create stable governments provide hope for the future.

Geography TODAY

Hi-Tech Tracking

As the scorching sun of the Kalahari Desert beats down on Karel Kleinman, he puts information into a palm-sized computer. Kleinman tracks animals in the same desert as his Koi grandfather did. But now Kleinman uses high technology to follow the animals.

Louis Liebenberg of South Africa developed this application to collect information about animals more efficiently. For example, some of the data will help protect certain species from drought. Liebenberg's idea both protects Africa's resources and shows how well-educated people can solve problems.



AFRICA

Assessment

1) Places & Terms

Explain the meaning of each of the following terms.

- "one-commodity" country
- commodity
- diversify

2 Taking Notes

PLACE Review the notes you took for this section.

	Causes	Effects
Issue 1		
\sim		\sim
 What are so 	me of the o	causes of

- economic problems of African countries?
- What impact is Africa's debt having on its ability to build its economy?

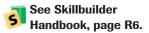
3 Main Ideas

- **a.** What has happened to people's incomes over the last half-century?
- b. What is one problem for "one-commodity" countries?
- c. Why is improving education important to Africa's economy?

Geographic Thinking

Making Generalizations What actions should African nations take to form a solid economic foundation? Think about:

- economic cooperation
- education





EXPLORING LOCAL GEOGRAPHY Find out how your city or state promotes economic development. Learn about laws passed to promote growth or tax breaks given to certain industries. Then write a **news article** on the topic.

RAND Menally Map and Graph Skills

1

GOUD

STREET

0

Copyright by Rand McNally & Co

Copyright by Rand McNally & Co.

С

3

2

Reading a City Map

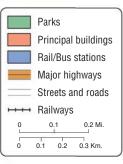
Johannesburg, South Africa, is one of the youngest major cities in the world. It grew rapidly following the discovery of gold in 1886. Today, it is South Africa's largest city and the country's financial and industrial center. Looking at the city map below, you can see that the streets of the city center are laid out in a grid. A grid is something resembling a framework of crisscrossing parallel bars.

THE LANGUAGE OF MAPS A **city map** is essentially another kind of road map. However, it is usually set at a larger scale than a state road map in order to show greater detail to guide both visitors and residents. Many city maps show the names of streets, major tourist attractions, bus and train stations, and other useful buildings.

Johannesburg, South Africa B С PRETORIA STREET STREE 3 KOTZE FWI With 1 Fast Ca STREE R STREET JORISSEN KORT DE SM STREE 2 WOLMARANS 2 ELIZABETH EE DRI STREE ΕT MONDS S RE 3 EPP 0 Johannesburg Stock Exchange NEWTOWN Public STREET MARKET PRESIDENT STREET COMMISSIONER

В





- Points of interest are shown to help tourists plan their visit.
- Labeling major streets is necessary to guide people around the city.

Letters at the top and bottom and numbers on the sides identify the grid sections created by the black lines. The grid sections help readers find places on the map. Most city maps have an index listing places on the map and the grid sections where they appear.

Map and Graph Skills Assessment

1. Making Generalizations

Α

If you took the train into Johannesburg, how would you get to the railway museum by foot and about how long would it take?

2. Drawing Conclusions

Where is the most likely place for a picnic in this part of the city? What are the place's index coordinates?

3. Making Inferences

If you spent a weekend in Johannesburg, what are at least five activities available to you in the city?



How can African countries eliminate the diseases that threaten their people and cultures?

A HUMAN PERSPECTIVE On June 1, 2001, Nkosi Johnson died from the human immunodeficiency virus (HIV)—the virus that causes **acquired immune deficiency syndrome (AIDS)**. He was the longest living South African child born with HIV. In February, he celebrated his 12th birth-day—but weighed just 27 pounds. Living with a foster mother, the child had become a symbol of hope in a nation suffering from AIDS. He frankly discussed the problems of the disease and received cheers at the world's largest AIDS conference in Durban, South Africa, in July 2000. His plight was typical of many on the continent, as African nations struggle to deal with this and other diseases.

Disease and Despair

Controlling AIDS and other diseases is essential if Africans are to improve their quality of life and live a normal lifespan.

SERIOUS DISEASES African nations are threatened by a variety of diseases. Inadequate sanitation and lack of a clean water supply can lead to **cholera**, an infection that is often fatal if not treated. In 2000–2001, widespread flooding caused some cases of cholera in Mozambique, but international relief efforts prevented a widespread outbreak.

Main Ideas

- Epidemic diseases are killing Africa's people in huge numbers.
- African nations and countries around the world are using a variety of methods, including education, to eradicate disease.

Places & Terms

AIDS cholera malaria tuberculosis UNAIDS

Diseases in Africa, 1900 and 2000



Malaria First reference in Greece around 400 _{B.C.}

Sleeping Sickness First described around A.D. 1300 in present-day Mali.

Smallpox First evidence c. 1156 B.C. in Egypt. Eradicated A.D. 1977.

Leading Diseases

Malaria Ninety percent of world's estimated 250 million malaria cases occur in Africa.

Sleeping Sickness Affects 60 million people annually in Africa.

AIDS Origins of HIV traced to Central Africa in 1959.

SKILLBUILDER: Interpreting Charts

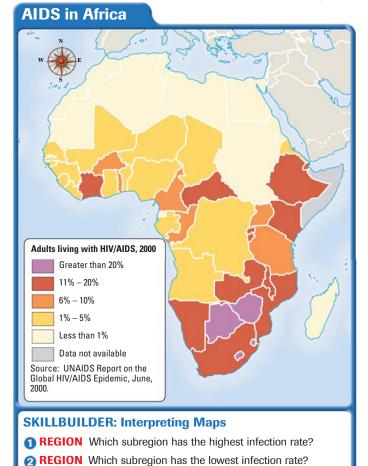
MAKING COMPARISONS What was a leading disease in Africa in 1900 but not in 2000?
 DRAWING CONCLUSIONS What disease occurs in Africa in 2000 but not in 1900?

Mosquitos carrying **malaria**—an infectious disease marked by chills and fevers that is often fatal—are common in African countries. The disease has become resistant to standard drugs because of overuse of those drugs in treating the disease during the past several decades. AIDS and HIV, however, create the most severe problems. Seventy percent of the world's adult AIDS cases and 80 percent of the world's children with AIDS are in African nations. AIDS is often accompanied by **tuberculosis**, a respiratory infection spread between humans.

AIDS Stalks the Continent

In 2000, AIDS took the lives of three million people worldwide. Of these, 2.4 million lived in sub-Saharan Africa. In Swaziland, three of every four deaths were attributed to AIDS. The AIDS epidemic in Swaziland has caused life expectancy there to drop from 58 years to 39 years. In 2000, nearly 26 million people in Africa were living with either HIV or AIDS.

A HIGH PRICE TO PAY Widespread disease has economic consequences. People who are sick work less or not at all, earn less, and thus are pushed further into poverty. Economists project that by 2010, the GDP of South Africa will be 17 percent lower than it would have been if not for AIDS. Furthermore, AIDS patients' medical care is also expensive. **UNAIDS**, the UN program that studies the world's AIDS epidemic,



estimates that \$4.63 billion will be needed to fight AIDS in Africa.

Nations Respond

Response to these epidemics comes both from African nations and from countries around the world.

A VARIETY OF ANSWERS To fight malaria and other insect-borne diseases, African nations have used spraying programs since the 1930s to reduce the number of insects. In 2000, the Global Fund for Children's Vaccines pledged more than \$250 million for use over the next five years for immunization programs in Africa, Asia, Latin America, and Europe.

Some African countries are fighting disease by improving their health care systems. Gabon, for example, has used oil revenues to improve its health care system substantially. In addition, the African Development Fund approved a loan of nearly 12.3 million dollars to enable Mozambique to upgrade its public health facilities. BACKGROUND

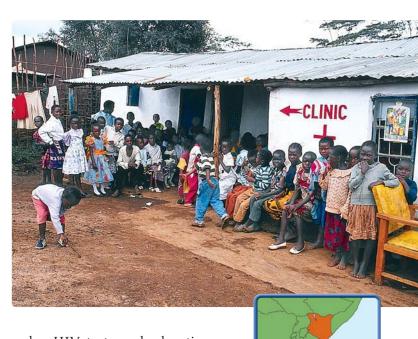
According to the U.S. Agency for International Development, by 2010, nearly 30 million children will have lost at least one parent to AIDS.

Using the Atlas Using the Atlas Using the atlas and the map on the left, which other countries could rely on revenues from oil to improve their health care systems?

STRATEGIES AGAINST AIDS

Fighting and preventing AIDS is being done on many levels. In December 2000, South Africa and Brazil reached an agreement to work together on AIDS prevention and care. Brazil's public health policies to combat AIDS and other diseases are considered a model for developing countries.

SUCCESS STORIES Two countries, Uganda and Senegal, have had success in reducing the spread of HIV. Uganda's government has spearheaded efforts to combat AIDS. For example, in



ase **PLACE** Kenyans gather outside a health clinic near Nairobi to learn about the dangers of AIDS.



Making Comparisons What are the differences in the ways that Uganda and Senegal have tried to slow the spread of AIDS?

1997, Uganda began to offer same-day HIV tests and education programs. Infection rates among 15 to 24 year olds have dropped by 50 percent. On the other hand, Senegal has controlled the spread of the disease from the outset through an intensive education program. Infection rates have remained below two percent since the mid-1980s.

UNAIDS says that HIV infection rates in 2000 in sub-Saharan Africa dropped by 200,000 cases from 1999. However, UNAIDS cautions that the drop in HIV infection rates could mean that almost as many people are dying of AIDS as are being infected with HIV. Nevertheless, many African nations are taking action. With these efforts, African countries can build an effective health care system and make progress against the epidemics that threaten its peoples and cultures.

-Assessment

Places & Terms

Explain the meaning of each of the following terms.

- AIDS
- cholera
- malaria
- tuberculosis
- UNAIDS

2 Taking Notes

PLACE Review the notes you took for this section.

	Causes	Effects
lssue 2		
\sim		

- What are some of the serious diseases affecting African countries?
- How has AIDS affected Swaziland?

3 Main Ideas

- **a.** What are some of the causes of cholera and malaria?
- b. How is AIDS affecting the population of Africa's countries?
- **c.** Why might the drop in HIV infection rates not indicate progress in slowing AIDS?

4 Geographic Thinking

AFRICA

Identifying and Solving Problems How have African nations slowed the spread of the continent's diseases? Think about:

- the different programs
- international cooperation





MAKING COMPARISONS Using encyclopedias or the Internet, find out what the leading diseases are in the United States and identify their primary causes. Compare your findings to the leading diseases in Africa in a **chart** on the topic.

CASESTUDY

EFFECTS OF COLONIALISM

How can African nations bring peace and stability to their people?



Young people celebrate Namibia's independence from South Africa in 1990.



frica, at the beginning of the 19th century, was home to great empires and rich cultures such as the Zulu, the Ashanti, and the Hausa. At the end of the 19th century, Africa was a place of European colonial power and oppression. European governments and financial agents based in such places as French West Africa, Belgian Congo, and British East Africa controlled much of the continent. Africa has not been the same since. Much of the poverty and violence of the 20th century is the direct result of colonialism. As you read the Case Study, consider how Africa might overcome the legacy of European colonialism.

Colonizing Africa

During the 15th century, Portuguese ships, looking for trade routes to Asia, landed in Africa. Soon other European countries established coastal trading stations there.

EUROPEANS IN AFRICA By the mid-1800s, Europeans knew of Africa's rich natural

resources. They wanted these raw materials to fuel their own industrial economies and to establish markets to sell and trade their goods. In 1884–1885, the Berlin Conference, which you read about in Chapter 19, set down rules for dividing up Africa. European colonial control of Africa began to end in the early 20th century, but most African countries gained their independence in the 1960s. The Europeans did longterm damage to Africa, affecting its cultural and ethnic boundaries, and ruining its economy.

Challenges of Independence

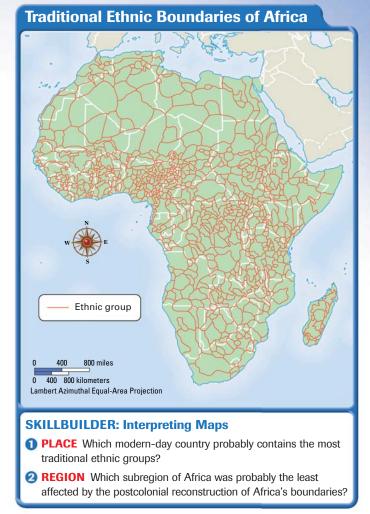
When the European colonial powers were forced to leave Africa, the newly independent African countries did not have stable governments in place. For the next 40 years, many of the newly established African nations and their peoples suffered through dictatorships and civil wars. Many of these conflicts had lasting consequences for the continent's economy and the people's well-being.

COLONIAL TRANSITION European governments did not understand the incredible ethnic diversity in Africa. Certain African ethnic groups are living together today only because European colonizers established national borders that grouped them together. Examine the map on page 469 and you will see the ethnic and cultural complexity in



Africa. Each area marked by a red line is an ethnic group. Many of these groups now reside together in the present-day countries created by Europeans. Many groups living in the same country are historical enemies. For example, German and Belgian colonial governments aggravated historically tense relations between the Hutu and Tutsi ethnic groups in present-day Rwanda and Burundi. In the early 1990s, the ethnic violence between these two groups resulted in a war that led to the deaths of hundreds of thousands of people.

Because of the way these colonial borders were drawn, many African governments had difficulty getting different ethnic groups to cooperate in building stable democracies. Dictators, such as Mobutu Sese Seko of what is now the Democratic Republic of the Congo, became common. In addition, many Africans had no experience living in democratic governments.



CAUSE FOR HOPE Establishing a democratic tradition is a primary goal for many African nations. Only through political stability can a nation bring peace and prosperity to its people. In the past decade, some African nations have been making progress. In 1994, the white minority government in South Africa finally yielded power to the black majority, ending decades of government-sanctioned racial discrimination and social injustice.

MOVEMENT Voters line up during elections in South Africa. How will elections help improve the lives of people in Africa?

Furthermore, in 2001, Ghana swore in a new president in a peaceful

transfer of power, unlike the coups and assassinations that had occurred during previous changes of government. These events are promising in a continent that is hoping for radical progress in the 21st century. Complete the Case Study Project on the following two pages to learn more about how Africa is dealing with the effects of colonialism.



SEE PRIMARY SOURCE

CASESTUDY

Primary sources A, B, C, D, and E on these two pages are about colonial and postcolonial Africa. Use these resources along with your own research to prepare a news report on postcolonial Africa.

P R O J E C T News Report

Suggested Steps

- 1. Select one African country to study.
- 2. Use online and print resources to research your country's precolonial, colonial, and postcolonial history.
- 3. Highlight its people, resources, colonizers, and postcolonial activity.
- 4. Prepare a news report on the current status of your country, covering such topics as conflicts, the health and welfare of its people, the economy, and prospects for the future.
- 5. Practice your news report in front of a small audience. Ask them for ways to improve it.
- 6. Use a tape recorder or video recorder to tape your broadcast.

Materials and Supplies

- · computer with Internet access
- · reference books, newspapers, magazines, and encyclopedias
- · tape recorder or video recorder

PRIMARY SOURCE 🖪

Eyewitness Account In his desire for more and more rubber from the Congo, Belgian King Leopold II adopted terrorism as his preferred method of persuasion. In 1899, the British vice consul offered this eyewitness account.

RESEARCH LINKS CLASSZONE.COM

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An example of what is done was told me up the Ubangi [River]. This officer's method was to arrive in canoes at a village, the inhabitants of which invariably bolted on their arrival; the soldiers were then landed, and commenced looting, taking all the chickens, grain, etc. out of the houses; after this, they attacked the natives until able to seize their women; these women were kept as hostages until the chief of the district brought in the required number of kilograms of rubber. The rubber having been brought, the women were sold back to their owners for a couple of goats apiece, and so he continued from village to village until the requisite amount of rubber had been collected.

PRIMARY SOURCE

Statement of Principle Kwame Nkrumah was the leader of postcolonial Ghana until he was overthrown in 1966. In his book, I Speak of Freedom, *published in* 1961, he wrote about his hopes for postcolonial Africa.

For centuries, Europeans dominated the African continent. The white man [claimed] the right to rule and to be obeyed by the non-white; his mission, he claimed, was to "civilize" Africa. Under this cloak, the Europeans robbed the continent of vast riches and inflicted unimaginable suffering on the African people. All this makes a sad story, but now we must be prepared to

bury the past with its unpleasant memories and look to the future. All we ask of the former colonial powers is their goodwill and cooperation to remedy past mistakes and injustices and to grant independence to the colonies in Africa.

It is clear that we must find an African solution to our problems, and that this can only be found in African unity. Divided we are weak; united, Africa could become one of the greatest forces for good in the world.

PRIMARY SOURCE 🖸

News Analysis Ron Daniels, writing in the magazine Black World Today, offered this analysis of the Trade and Development Act of 2000. This law recognizes the need to promote economic growth and reduce poverty in Africa, but the law only helps a small number of countries.

How ironic, tragic even, that as we prepare to enter a new century and millennium, Africa, the motherland, is so afflicted by poverty, underdevelopment, hunger, disease, corruption, and debt that African leaders, out of desperation . . . , are in effect begging to be recolonized. How ironic that the continent whose historical underdevelopment under slavery and colonialism, whose vast human and material resources contributed mightily to the enrichment and development of Europe and America must now turn to the former slavemasters and colonizers for a "bail-out."

PRIMARY SOURCE

Political Cartoon Cartoonist Alan King drew this cartoon in 1996. The cartoon appeared in the Ottawa Citizen in Ottawa, Canada. King shows the unending cycle of indecisive attitudes on the part of the international community. The Democratic Republic of the Congo, which was formerly known as Zaire, suffers from these indecisive attitudes.

PRIMARY SOURCE D

Editorial Commentary On January 8, 2001, the New York Times editorial page included this essay on the changes that have taken place in Ghana. The editorial was titled "An African Success Story."

In its first two decades of independence, the West African nation of Ghana was an archetypal political disaster, brought low by successive coups and dictatorships, corruption and near total economic collapse. Today, Ghana is a welcome African example of legitimate democracy and successful economic reform. In an unusually peaceful transfer of power, a civilian government that grew out of a military regime has accepted an election defeat and surrendered power to the opposition.

John Kufuor, an Oxford-trained lawyer and businessman, and the leader of Ghana's opposition New Patriotic Party, was sworn in as president yesterday. He defeated John Atta Mills, the incumbent vice president, in an election widely viewed as free and fair. President Jerry Rawlings, the charismatic former flight lieutenant who has dominated Ghana for nearly 20 years, stepped down after reaching a constitutional two-term limit as elected president.





Chapter (20) Assessment

VISUAL SUMMARY

Economics

Economic Development

- Africa's economy suffered because many European nations exploited Africa for its resources.
- African nations are concentrating on economic cooperation and economic diversification to build their economies.
- Many African nations are improving their educational systems to produce skilled workers.

Environment

Health Care

- Diseases are killing millions in Africa. They include cholera, malaria, tuberculosis, and AIDS.
- AIDS is threatening the continent's population and reducing life expectancies in many countries.
- Many African nations are improving efforts to educate citizens about AIDS.

Government

Effects of Colonialism

- European nations began colonizing Africa once exploration revealed a vast amount of valuable natural resources.
- Colonialism caused much political and ethnic violence because it disrupted many long-standing political and ethnic boundaries.

Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- **1.** "one-commodity" country **5.** cholera
- 2. commodity
- 7. tuberculosis
- diversify
 AIDS
- 8. UNAIDS

6. malaria

B. Answer the questions about vocabulary in complete sentences.

- **9.** What is a nation called when it relies on one product for its economic well-being?
- **10.** What is the name of the disease that is carried by a mosquito and was also a leading disease in both 1900 and 2000?
- **11.** What is the name of the respiratory disease that often accompanies AIDS?
- **12.** What is the process whereby countries employ many different ways to help their economies grow?
- **13.** What disease is spread by poor sanitation and a polluted water supply?
- **14.** What is a product called that is bought and sold and has value in a worldwide market?
- 15. Which organization tracks the world's AIDS problem?

Main Ideas

Economic Development (pp. 461–464)

- 1. How has Africa's economic status changed during the past 40 years?
- **2.** What is one of the main problems preventing Africa from spending money on economic development?
- **3.** What is a danger with a country's having only one valuable product that it relies on for its economic well-being?

Health Care (pp. 465–467)

- **4.** How are African nations fighting some of the diseases afflicting their continent?
- 5. What are some of the economic implications of disease in Africa?
- 6. What do Uganda's and Senegal's AIDS programs have in common?
- 7. Why might the drop in HIV infection rates be misleading?

Effects of Colonialism (pp. 468–471)

- **8.** What are some of the empires and peoples that controlled areas of Africa at the beginning of the 19th century?
- **9.** What was one of the main reasons that European countries wanted to control Africa?
- **10.** Why did colonization cause so much political and ethnic violence in the 20th century?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.

	Causes	Effects
Issue I: Economic Development		
Issue 2: Health Care		
\sim \sim \sim		

- a. What is the primary foundation for most African nations' economies?
- b. How might disease and economic development be related?

2. Geographic Themes

- a. **MOVEMENT** How are diseases such as malaria and cholera spread?
- b. **REGION** In what way is the modern map of Africa not a true reflection of the continent's people?

Geographic Skills: Interpreting Maps

Dates of African Independence

Use the map at right to answer the following questions.

- 1. **PLACE** Which two countries remained free of European control?
- 2. **PLACE** Which country most recently gained its independence?
- 3. **REGION** Which decade saw the most countries gain independence?



Choose one country in West Africa that was once controlled by France. Then using the library, encyclopedias, or other reference books, research how France's influence is still felt today in that country's economy, government, schools, and language.

INTERNET ACTIVITY

Use the links at **classzone.com** to do research on the postcolonial economy of one African country. Look for attempts to diversify the economy, education programs, growth in per capita income, and amount of manufacturing.

Writing About Geography Write a report of your findings. Include charts, pie graphs, and other visuals to help present the information. List the Web sites that you used as sources.

3. Identifying Themes

How would you relate one of the five themes of geography to the primary way in which African nations support their economies?

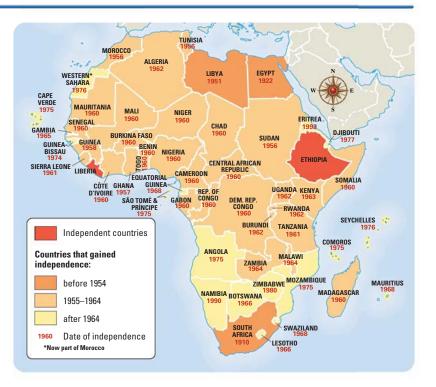
4. Making Inferences

How do you think Africa's economic health affects the spread of diseases such as cholera and AIDS?

5. Drawing Conclusions

How important do you think regional cooperation is in building Africa's economy? Why?





Southwest Asia

PREVIEW: TODAY'S ISSUES IN SOUTHWEST ASIA

UNIT ATLAS

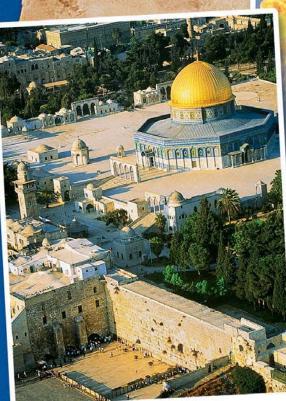
Unit

Chapter 21 PHYSICAL GEOGRAPHY Harsh and Arid Lands

Chapter 22 HUMAN GEOGRAPHY Religion, Politics, and Oil

Chapter 23 TODAY'S ISSUES Southwest Asia

CaseStudy Religious Conflict Over Land Southwest Asia, sometimes called a cradle of civilization, is the home of oil rich lands, vast deserts, and difficult political problems.



PLACE Two holy places in Jerusalem, Israel, can be seen in this photograph: a shrine known as the Dome of the Rock, which is sacred to Muslims, and the Western Wall, a spot sacred to Jews.



HUMAN-ENVIRONMENT INTERACTION Flares of burning natural gas are common sights at oil wells in the Al-Ghawar oil field in Saudi Arabia.



GeoData

REGION More than half of the world's oil reserves are found in this region.

HUMAN-ENVIRONMENT INTERACTION

Some experts believe that the freshwater supplies of the Arabian peninsula will be exhausted in the next 25 to 30 years.

LOCATION Southwest Asia connects three continents: Europe, Asia, and Africa.

For more information on Southwest Asia ...





MOVEMENT Crossing the desert areas of Southwest Asia by land would be almost impossible without oases to provide water and a resting place. This oasis was on the caravan route from Yemen to Palestine.

Unit PREVIEW

Today's Issues in Southwest Asia

Today, Southwest Asia faces the issues previewed here. As you read Chapters 21 and 22, you will learn helpful background information. You will study the issues themselves in Chapter 23.

In a small group, answer the questions below. Then participate in a class discussion of your answers.

Exploring the Issues 1. POPULATION

RELOCATION Think about why a group of people may leave a place they call home. What problems might relocation cause for the group? Then make a list of the reasons people relocate and the problems that are caused by moving.

2. ECONOMIC

DEVELOPMENT Make a list of major rivers found in the region and a list of major rivers found in the United States. How do the lists compare? What does this suggest about scarce resources in the region?

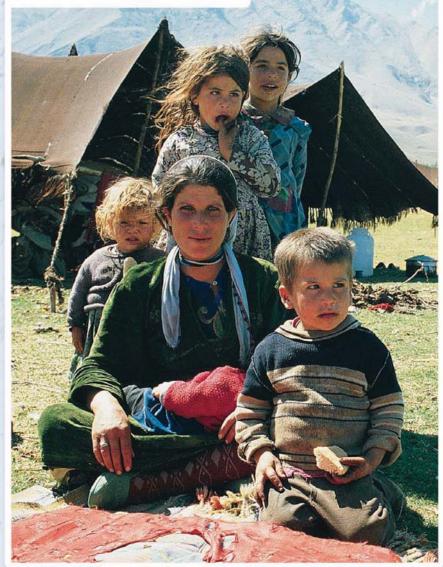
3. RELIGIOUS CONFLICT

Study the cartoon on page 477. Who are the figures in the cartoon?

For more on these issues in Southwest Asia . . .



POPULATION RELOCATION



What kind of population movement is taking place in Southwest Asia?

This nomadic Kurdish family rests in the hills of eastern Turkey. The Kurds claim a homeland that crosses the boundaries of five countries: Turkey, Iraq, Iran, Syria, and Armenia.

<image>

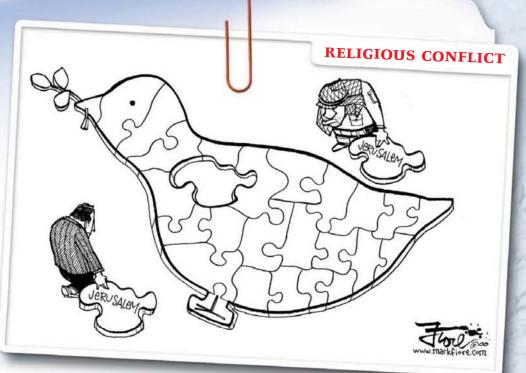
How can oil wealth help develop the region's economies?

Wealth from oil wells, like this one located at Al Ghawar in Saudi Arabia, may be used to develop economic activities that do not depend on oil.

CASESTUDY

Who should control Jerusalem?

In this cartoon, the dove symbolizes peace between Arabs and Israelis in Southwest Asia. Jerusalem plays a vital role in the peace process.



SW ASIA

Patterns of Physical Geography

Use the Unit Atlas to add to your knowledge of Southwest Asia. As you look at the maps and charts, notice geographic patterns and specific details about the region. For example, the chart gives details about the mountains and deserts of Southwest Asia.

Unit

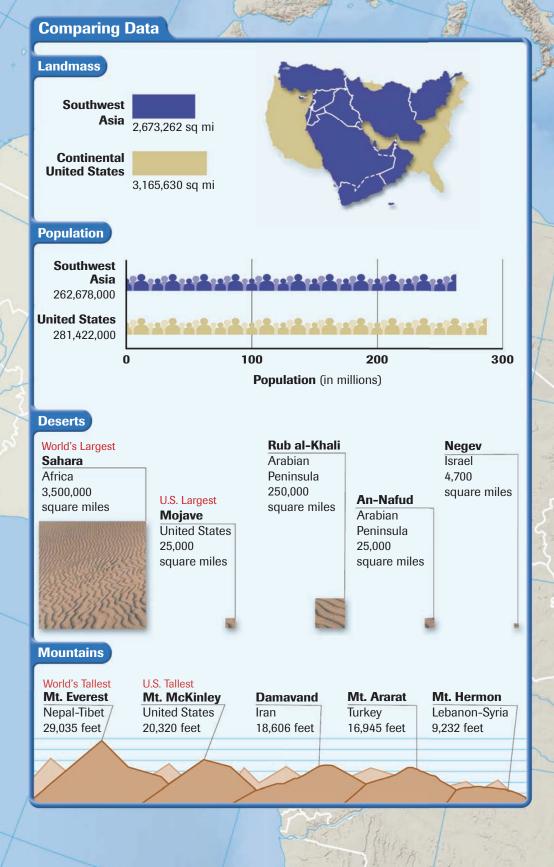
After studying the graphics and physical map on these two pages, jot down answers to the following questions in your notebook.

Making Comparisons

- 1. Which of Southwest Asia's deserts is about the same size as the Mojave Desert of the United States?
- 2. How do the tallest mountains of Southwest Asia compare to the tallest U.S. mountain?
- **3.** Which mountain chains cut off Turkey and Iran from the rest of the region? How might isolation affect the way a country develops economically?

For updated statistics on Southwest Asia . . .







Patterns of Human Geograph

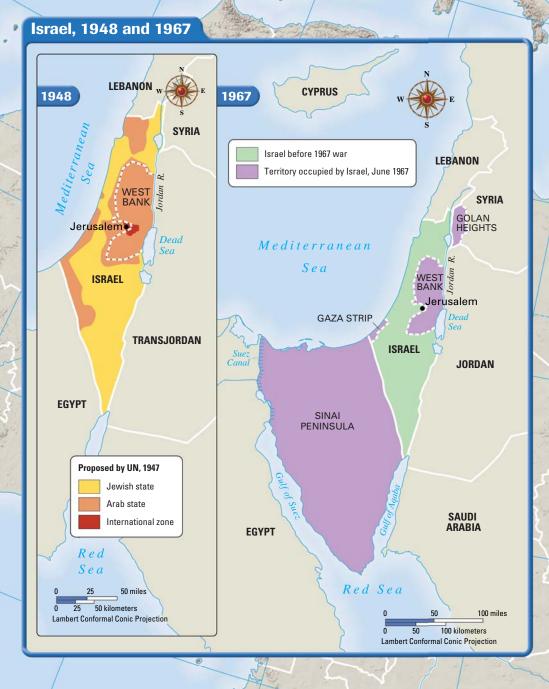
After World War II (1939-1945), the nation of Israel was created in 1948. Since that time, the peoples and nations of the region have been in conflict with one another.

Unit

Study the political map of Southwest Asia and the Israel maps at the right to see how possession of the lands changed. Then write the answers to these questions in your notebook.

Making Comparisons

- **1.** Which areas did Israel occupy in 1967?
- **2.** Study both maps of Israel and the political map and write a sentence describing the changes in land possession from 1948 to the present.
- **3.** What nation is in possession of the Sinai Peninsula today?
- 4. Which four nations surround the Golan Heights? Who controls the area?





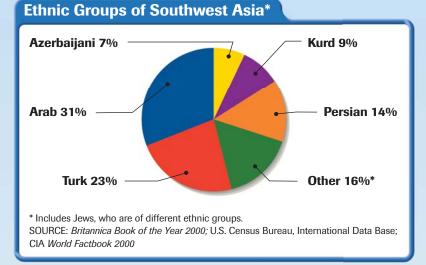


Regional Patterns

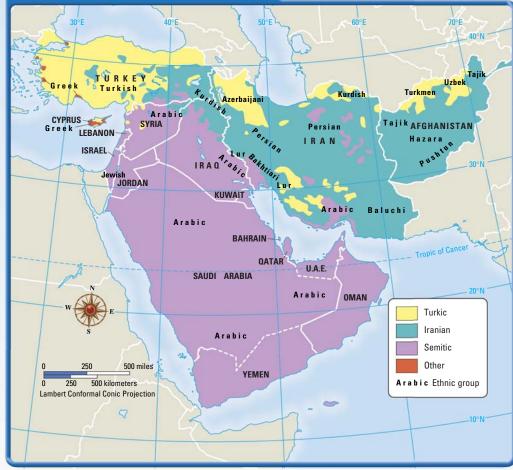
These two pages contain a graph and three thematic maps. The graph and two of the maps show the ethnic and religious diversity of Southwest Asia. The third map shows you how people in the region earn a living. After studying these two pages, answer the questions below in your notebook.

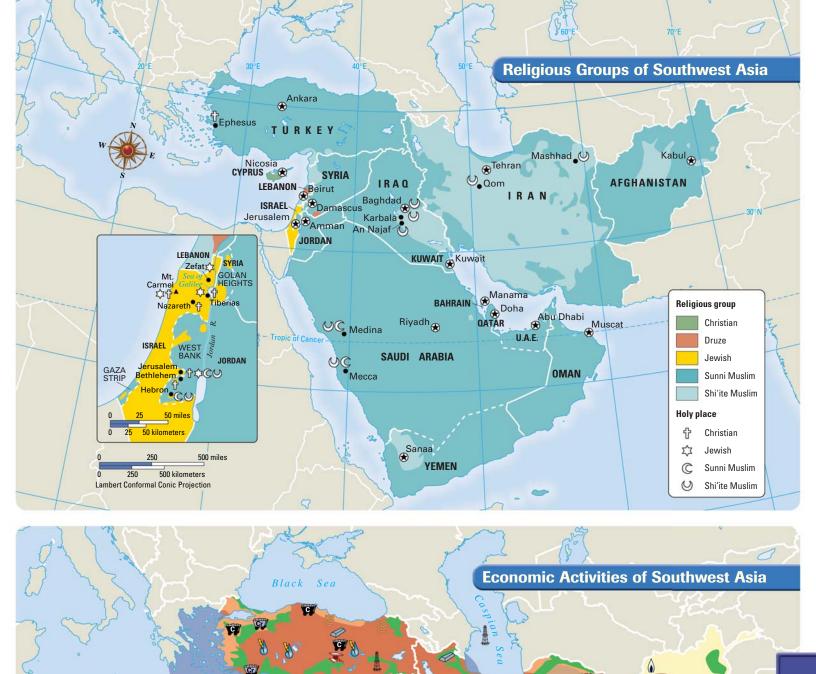
Making Comparisons

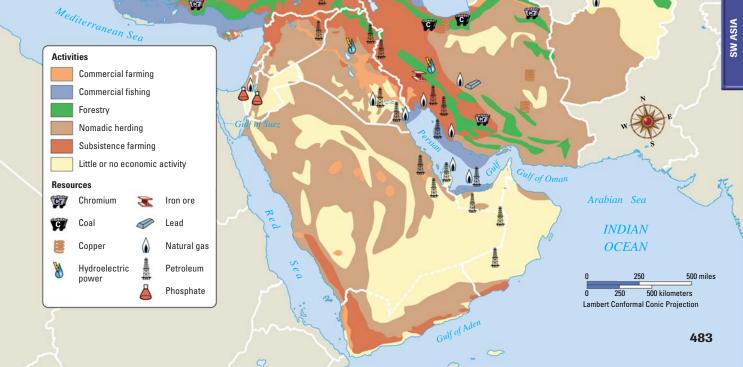
- 1. What percentage of the population is Kurdish and where are Kurds found in the region?
- 2. What area has holy places for three major religions? Why might the location of these places be a problem?
- **3.** What energy sources are found in the region?
- 4. What is the main economic activity in the region? What does that suggest about the land and the population on it?



Ethnic Regions of Southwest Asia







Regional Data File

Population

Life Expectancy Birthrate Infant Mortality

Study the information on the countries of Southwest Asia. In your notebook, answer these questions. Country

Country/

Washington, D.C.

Unit

Making Comparisons

- 1. Which nations have more doctors per 100,000 population than the United States?
- 2. Study the information to determine which nation after Afghanistan is the poorest. On which categories did you base your judgment?
- **3.** Using the map on page 479, make a list of the nations that border the Persian Gulf. How many of those nations have more exports than imports?

Sources:

- Human Development Report 2000, UN International Data Base, U.S. Census Bureau online
- Merriam-Webster's Geographical Dictionary, 3d ed., 1997

World Education Report 2000, UNESCO online

World Population Data Sheet 2000, Population Reference Bureau online WHO Estimates of Health Personnel,

online

- World Almanac and Book of Facts 2001
- World Factbook 2000, CIA online

Notes:

- ^a A comparison of the prices of the same items in different countries is used to figure these data.
- Includes land and water, when figures are available.

For updated statistics on Southwest Asia . . .



Country Flag	Country/ Capital	Population (2000 estimate)	Life Expectancy (years) (2000)		Infant Mortality (per 1,000 live births) (2000)	
Q	Afghanistan Kabul	26,668,000	46	43	149.8	
	Bahrain Manama	691,000	69	22	8.1	
	Cyprus Nicosia	882,000	77	14	7.8	
e e e e e e e e e e e e e e e e e e e	Iran Tehran	67,411,000	69	21	30.8	
*****	lraq Baghdad	23,115,000	59	38	127.0	
\$	Israel Jerusalem	6,227,000	78	22	6.0	
	Jordan Amman	5,083,000	69	33	34.0	
	Kuwait Kuwait	2,190,000	72	24	12.5	
*	Lebanon Beirut	4,202,000	70	23	34.5	
×	Oman Muscat	2,353,000	71	44	25.0	
	Qatar Doha	591,000	72	20	20.0	
#200 	Saudi Arabia Riyadh	21,607,000	70	35	46.4	
* *	Syria Damascus	16,482,000	67	33	34.6	
C*	Turkey Ankara	65,311,000	69	22	37.9	
	United Arab Emirates Abu Dhabi	2 ,835,000	74	24	16.0	
	Yemen Sanaa	17,030,000	59	39	75.3	
	United States	281,422,000	77	15	7.0	

Doctors (per 100,000 (1996–1998	pop.)	GDP ^a (billions \$US) (1998-1999)	Import/Export ^a (billions \$US) (1998-1999)	Literacy Rate (percentage) (1998–1999)	Televisions (per 1,000 pop.) (1998)	Passenger Cars (per 1,000 pop.) (1996-1997)	Total Area^b (square miles)	
11		21.0	0.2 / 0.1 1996	32	10	2	250,775	
100		8.6	3.5 / 3.3	87	467	242	255	₩. ŧ
255		ypriot 9.0 ypriot 0.8	GrkCyp 3.5 / 1.1 TrkCyp 0.4 / 0.1	97	322	316	3,572	
85		347.6	13.8 / 12.2	75	63	26	635,932	
55		59.9	8.9 / 12.7	54	80	32	168,927	4
385		105.4	30.6 / 23.5	96	290	224	7,992	1
166		16.0	3.0 / 1.8	89	80	40	34,575	*
189		44.8	8.1 / 13.5	81	370	318	6,880	4
210		16.2	5.7 / 0.9	85	366	325	3,949	ŧ
133		19.6	5.4 / 7.2	69	657	108	82,000	*
126		12.3	4.2 / 6.7	80	401	151	4,400	6
166		191.0	28.0 / 48.0	75	257	89	865,000	
144		42.2	3.2 / 3.3	73	67	9	71,498	*
121		409.4	36.0 / 26.0	84	189	53	301,380	-
181		41.5	27.5 / 34.0	75	104	144	32,278	4
23		12.7	2.3 / 2.0	44	28	15	203,849	×.
251		9,255.0	820.8 / 663.0	97	847	489	3,787,319	



SECTION 1 Landforms and Resources

SECTION 2 Climate and Vegetation

SECTION 3 Human–Environment Interaction

Wind-shaped sand dunes in Arabia's An-Nafud Desert sometimes reach a height of 600 feet.

PHYSICAL GEOGRAPHY OF SOUTHWEST ASIA Harsh and Arid Lands



Geo**Focus**

Why does the physical geography make this a vital region?

Taking Notes Copy the graphic organizer below into your notebook. Use it to record information from the chapter about the physical geography of Southwest Asia.

Landforms	
Resources	
Climate and Vegetation	
Human-Environment Interaction	

Landforms and Resources

A HUMAN PERSPECTIVE Artillery shells and sniper fire rained down on the lands below a small plateau in southwestern Syria. Airplanes bombed the military positions on the plateau itself. Families in nearby villages huddled in their homes, hoping for the shelling to stop. Israeli Army engineers struggled to build a road to enable tanks to reach the top. Thousands died in the 1967 war when Syria and Israel fought for control of the **Golan Heights**, also called Al Jawlan, a hilly plateau overlooking the Jordan River and the Sea of Galilee. This landform's strategic location has made it the site of conflict in Southwest Asia for decades. It is one of many landforms that divide the region.

Landforms Divide the Region

People sometimes picture Southwest Asia as a region of rippling sand dunes and parched land occasionally interrupted with an oasis. But the lands of Southwest Asia actually range from green coastal plains to snow-peaked mountains. Southwest Asia forms a land bridge connecting Asia, Africa, and Europe. As you can see on the map on page 37, the region is situated at the edge of a huge tectonic plate. Parts of the Arabian Peninsula are pulling away from Africa, and parts of the Anatolian Peninsula are sliding past parts of Asia. Still other plates are pushing up mountains in other areas of the Asian continent.

PENINSULAS AND WATERWAYS The most distinctive landform in Southwest Asia is the Arabian Peninsula, which is separated from the continent of Africa by the Red Sea on the southwest and from the rest of Asia by the Persian Gulf on the east. The Red Sea covers a rift valley created by the movement of the Arabian plate. The Zagros, Elburz, and Taurus mountains at the north side of the plate cut off part of the region from the south. Another important landform in the region is the

Anatolian Peninsula, which is occupied by the country of Turkey. It marks the beginning of the Asian continent. (See the map on page 479.)

Both peninsulas border on strategic waterways. On the southwest side of the Arabian Peninsula are the Red Sea and a strategic opening to the Mediterranean Sea—the Suez Canal. Goods from Asia flow through this canal to ports in Europe and North Africa.

Main Ideas

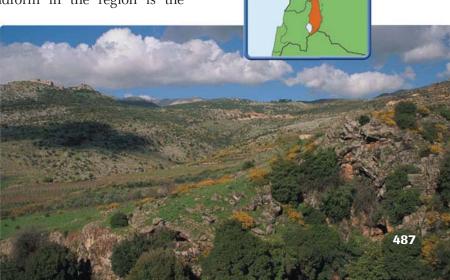
- The Southwest Asian landforms have had a major impact on movement in the region.
- The most valuable resources in Southwest Asia are oil and water.

Places & Terms

Golan Heights wadi Tigris River Euphrates River Jordan River Dead Sea

CONNECT TO THE ISSUES RESOURCES Enormous oil reserves have brought changes to the economic and political standing of this region.

PLACE The Golan Heights are a strategic location near the source of water in the region. How will control of this area affect those who live on lands below the top of the plateau?

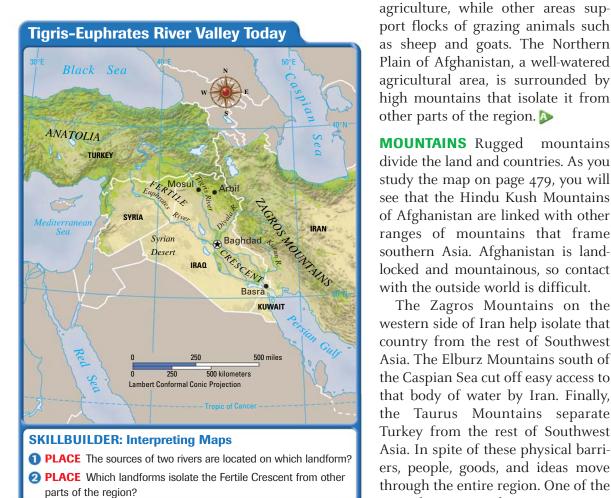


The Anatolian Peninsula is located between the Black Sea and the Mediterranean Sea. Two narrow waterways, the Bosporus Strait and the Dardenelles Strait, are situated at the west end of the peninsula. Both straits have always been highly desirable locations for controlling trade and transportation to Russia and the interior of Asia.

Farther south is a narrow passageway leading from the Arabian Sea to the Persian Gulf called the Straits of Hormuz. These straits are the only waterway to the huge oilfields of Kuwait, Saudi Arabia, and Iraq. Because access to oil is essential to the world-wide economy, this waterway is very important.

PLAINS AND HIGHLANDS Much of the Arabian Peninsula is covered by plains. Because of the dry, sandy, and windy conditions, few activities using the land take place here. Most of the land is barren with some low hills, ridges, and wadis, which are riverbeds that remain dry except during the rainy seasons. On the southwestern corner of the peninsula, a range of mountains-the Hejaz Mountains-pokes out of the land. People living on the Arabian Peninsula have adapted to the harsh conditions by living nomadic lives in search of water.

The heart of Iran is a plateau surrounded by mountains. Isolated and very high, the land is a stony, salty, and sandy desert. The foothills surrounding the plateau are able to produce some crops. Much of the Anatolian Peninsula is also a plateau. Some areas are productive for



port flocks of grazing animals such as sheep and goats. The Northern Plain of Afghanistan, a well-watered agricultural area, is surrounded by high mountains that isolate it from other parts of the region.

MOUNTAINS Rugged mountains divide the land and countries. As you study the map on page 479, you will see that the Hindu Kush Mountains of Afghanistan are linked with other ranges of mountains that frame southern Asia. Afghanistan is landlocked and mountainous, so contact with the outside world is difficult.

The Zagros Mountains on the western side of Iran help isolate that country from the rest of Southwest Asia. The Elburz Mountains south of the Caspian Sea cut off easy access to that body of water by Iran. Finally, the Taurus Mountains separate Turkey from the rest of Southwest Asia. In spite of these physical barriers, people, goods, and ideas move through the entire region. One of the ways they move is by water.

BACKGROUND The Persian Gulf is also called the Arabian Gulf.



Making Comparisons How are the plateaus of Iran and Anatolia different?

PLACE

HEME

The Dead Sea

The Dead Sea is a landlocked salt lake, so salty that almost nothing can live in the water. It has been described as the world's largest spa. (A spa is a place with healing waters.) For thousands of years, people have come to the edges of the landlocked sea to bathe in its mineral waters and soak in its black mineral mud.

Imagine floating in water so salty that you cannot sink. Salt concentration in the Dead Sea water is 31.5 percent, nine times higher than in the world's oceans. The evaporation rate of the water is about 55 inches per year, keeping the water very salty despite the flow of fresh water from the Jordan River.

CONNECT TO

RESOURCES Why is control of

water resources

important in this

region?

THE ISSUES



WATER BODIES Southwest Asia is almost completely surrounded by bodies of water. They provide vital avenues for trade and access to other parts of the region and to the rest of the world. However, because much of the region is arid, there are few rivers that flow the entire year. As you can see on the map on page 488, two of the most important rivers—the **Tigris** and the **Euphrates**—supported several ancient river valley civilizations in an area called the Fertile Crescent. They included Sumerians, Assyrians, Babylonians, and Chaldeans.

Today, the Tigris and Euphrates flow through parts of Turkey, Syria, and Iraq. The valleys are fertile, well watered, and good for agriculture. The two rivers flow almost parallel to each other for hundreds of miles before joining at a place called Shatt al Arab. They spread out into slow moving water and swamps, finally emptying into the Persian Gulf.

Tumbling down from the mountains of Lebanon near Mt. Hermon, the **Jordan River** provides one of the most precious resources in the entire region—water. Farther south, the river serves as a natural boundary between Israel and Jordan. The Jordan River flows into the salty waters of the **Dead Sea**, a landlocked salt lake. The Dead Sea is so salty that only bacteria can live in the waters. Thousands of years ago the earth was heaved up on the south end of the area now controlled by Israel. The outlet to the sea was blocked, creating the salt lake. The Dead Sea is 1,349 feet below sea level—the lowest place on the exposed crust of the earth. (See The Dead Sea, above.)

Resources for a Modern World

It is almost impossible to think about resources in Southwest Asia without including oil. It is the region's most abundant resource. Major oil

SW ASIA



HUMAN– ENVIRONMENT INTERACTION Men work at an oil drilling compound in the Rub

al-Khali desert. How will oil drilling change this area? fields are located in the Arabian Peninsula, Iran, and Iraq, with natural gas fields close by. Since these fossil fuels run cars and trucks, factories, and power plants all over the world, they provide the major portion of income for nations with petroleum reserves.

AN OIL-RICH REGION Today, about one-half of the world's oil reserves are found in Southwest Asia, along the coast of the Persian Gulf, and at offshore drilling sites in the Gulf itself. The presence of these large reserves has made the region important because so many countries, including the United States, depend on its oil.

OTHER RESOURCES The most valuable resource in parts of Southwest Asia is water. In mountainous lands such as Turkey, Iran, Lebanon, and Afghanistan, water is plentiful compared to the rest of the region. It can be harnessed for hydroelectric power. However, elsewhere, water is a scarce resource that must constantly be guarded and carefully used. Efforts to conserve water have

been a part of the culture of the people living in the region for thousands of years. \triangleright

Southwest Asia has deposits of other resources such as coal, metallic minerals such as copper, and non-metallic minerals such as potash and phosphates. However, the deposits are scattered and not very large. Iran and Turkey have good-sized deposits of coal. Around the Dead Sea are significant reserves of salts such as calcium chloride. However, these salt deposits, which are used in manufacturing and chemical processes, have not been heavily developed.

The harsh land and the desert climate that you will learn about in the next section make life in this region a challenge.

Assessment

Places & Terms

Identify and explain where in the region these would be found.

- · Golan Heights
- wadi

TION

- Tigris River
- Euphrates River
- Jordan River
- Dead Sea

2 Taking Notes

LOCATION Review the notes you took for this section.

Landforms	
Resources	\sim

- Which waterways are considered important for trade?
- In which area of the region are the greatest deposits of oil found?

3 Main Ideas

- **a.** In what ways do landforms divide the region?
- **b.** Why are the Red Sea and Suez Canal of strategic value in the region?
- c. How did the presence of oil in the region change the region's importance in the global economy?

Geographic Thinking

Geographic Thinking

Making

Comparisons

🚭 Why might

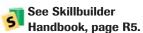
power be better

to use than oil?

hydroelectric

Drawing Conclusions Which resource do you believe is more important in Southwest Asia–water or oil? Think about:

- the scarcity of water
- the economic value of oil





MAKING COMPARISONS Study the map on page 483, focusing on energy sources in the region. Create a **map** that shows the location of these energy sources. Label each country that has such sources.

Climate and Vegetation

A HUMAN PERSPECTIVE In the spring of 1999, three Canadian explorers retraced the steps of Sir Wilfred Thesiger's 1946 epic journey across the Rub al-Khali on the Arabian Peninsula. It is one of the most extreme deserts in the world. Like Sir Wilfred, they crossed using camels, not four-wheel drive vehicles. But unlike Sir Wilfred, the Canadians were equipped with late 20th-century explorers' tools—personal location beacons, a satellite phone for communications, and laptop computers for recording details of the journey. Crossing this great arid expanse was physically challenging and took 40 days to complete. But for many of the region's inhabitants, survival in the lands of this region is a challenge every day.

Variety in Arid Lands

Southwest Asia is extremely arid. Most areas receive less than 18 inches of precipitation a year. A huge portion of its land area is covered with rough, dry terrain that varies from huge tracts of sand dunes to great salt flats. Study the Map Skills on page 494 to learn more about desert vegetation. Because the region is so dry, its rivers do not flow year round. The vegetation and animals living in the desert can survive on

little water and in extreme temperatures. In many areas of Southwest Asia, irrigation has transformed the deserts into productive farmland.

In other parts of the region, a Mediterranean climate prevails, making the land green and lush for at least part of each year. The land in Southwest Asia is broken up by ranges of mountains and plateaus. As a result, highland climates are found in many parts of the region.

Deserts Limit Movement

Spread across the region, the deserts effectively reduce travel and limit almost all human-environment interaction. The surfaces of the desert may be covered with sand, salt, or rocks.

SANDY DESERTS The most famous desert in the region is the **Rub al-Khali**, also known as the Empty Quarter. A local name for the desert is the "place where no one comes out." It is a vast desert

Main Ideas

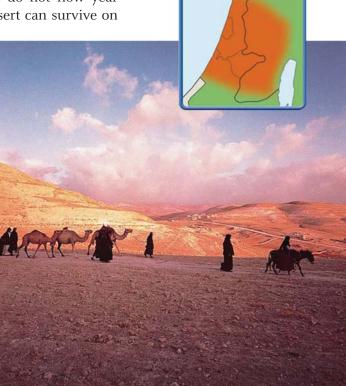
- Most of Southwest Asia has a very arid climate.
- Irrigation is critical to growing crops in this very dry region.

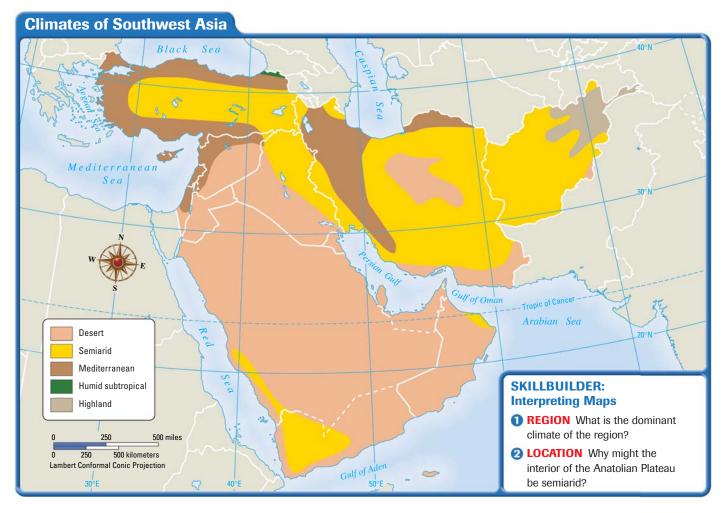
Places & Terms

Rub al-Khali oasis salt flat

CONNECT TO THE ISSUES POPULATION RELOCATION The climate of Southwest Asia limits interaction between countries in the region.

MOVEMENT A Bedouin caravan crosses a dry, rocky desert in Judea, a part of Israel. **How do conditions in the desert restrict movement?**





approximately the size of Texas—on the Arabian Peninsula. It is one of the largest sandy deserts in the world, covering about 250,000 square miles with sand ridges and dunes that reach as high as 800 feet. During the summer, the temperature on the surface of the sand often exceeds 150°F. As many as 10 years may pass without rainfall.

Next to the Rub al-Khali is the An-Nafud Desert. An occasional oasis interrupts its reddish dunes. An **oasis** is an area in the desert where vegetation is found because water is available, usually from underground springs. Severe sandstorms and brutal heat make this desert a barrier to travel across the Arabian Peninsula.

Extending north from the An-Nafud is the Syrian Desert. It separates the coastal regions of Lebanon, Israel, and Syria from the Tigris and Euphrates valleys. (See the map on page 479.) Finally, the desert area that occupies parts of Israel is the Negev Desert. Unlike some deserts, this one produces crops through extensive irrigation.

SALT DESERTS As you learned in Chapter 3, lands in the rain shadow of a mountain range are usually arid or semiarid. Lands in Iran are good examples of this effect. In Iran, the high mountains block rain, and dry winds increase evaporation. So when winds evaporate the moisture in the soil, chemical salts remain, creating a **salt flat**. In Iran there are two salt flat deserts—the Dasht-e Kavir in central Iran and the Dasht-e Lut in eastern Iran. The lands here are salt-crusted, surrounded by quick-sand-like salt marshes, and extremely hot. These rugged lands are almost uninhabited and are barriers to easy movement across Iran.

Geographic Thinking

Seeing Patterns How is it possible for crops to be produced in desert areas?

Semiarid Lands

On the fringes of the deserts are regions with a semiarid climate. These semiarid areas have warm to hot summers with enough rainfall to support grass and some low-growing shrubs. Both cotton and wheat can be grown in this climate. The lands offer good pasture for animals. In Turkey, large herds of mohair goats graze on these lands. Their hair, and fabrics made from it, are among Turkey's exports.



Well-Watered Coast Lands

Although much of Southwest Asia is arid or semiarid, it does have some areas with adequate rainfall. Along the Mediterranean coast and across most of Turkey, hot summers and rainy winters like those in southern California create a good climate for growing citrus fruits, olives, and vegetables. Because of mild winter temperatures in winter and heavy irrigation in the dry summer, farmers can grow crops year round. The Mediterranean climate is a comfortable one in which to live, so these areas are heavily populated.

For thousands of years, the valleys of the Tigris and Euphrates have been the site of intensive farming. Both Turkey and Iraq have constructed dams on the rivers to provide irrigation water all year long.

Climate, vegetation, and landforms have had a major impact on human-environment interaction in Southwest Asia. In the next section, you will see how oil and water have shaped life in this region.

PLACE Workers pick cotton in a field in Turkey. Which of Turkey's climates would be good for cotton production?

Assessment

Places & Terms

Identify and explain where in the region these would be found.

- Rub al-Khali
- oasis

Geographic

B How are Turkey

Thinking

Comparisons

and southern California similar?

Making

salt flat

2 Taking Notes

PLACE Review the notes you took for this section.

Climate and	
Vegetation	

- What are the two types of deserts in this region?
- Why are the coast lands heavily populated?

3 Main Ideas

- **a.** How do deserts affect movement in the region?
- b. In what ways are the semiarid lands different from the desert?
- c. What agricultural products are raised in the coastal areas?

4 Geographic Thinking

Making Comparisons How do the two types of deserts in the region differ from each other? **Think about:**

- characteristics of deserts
- location of deserts





MAKING COMPARISONS Do some research on the deserts identified in this section. Create a **database** showing information about those deserts. Consider including such information as type, location, and size.

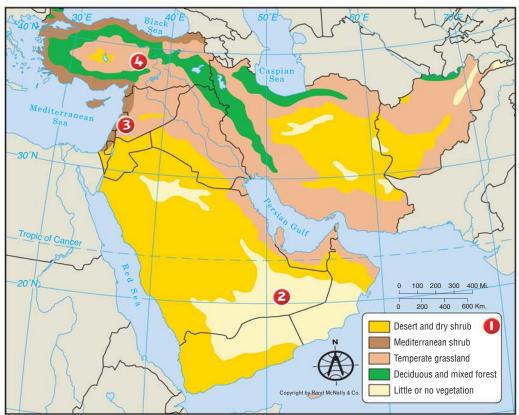
RAND MENALLY / Map and Graph Skills

Reading a Vegetation Map

Southwest Asia is a region with large areas of vegetation specially adapted for dry conditions. The natural vegetation of a region depends on many factors, including soil type, location, elevation, and climate type.

THE LANGUAGE OF MAPS A vegetation map shows the location of major types of plants in a region. It includes the natural vegetation found in the area and usually does not include plants introduced as agricultural crops. The map uses colors to indicate the vegetation types. Unlike the map boundaries, the boundaries on earth for the areas are not rigid but gradually blend into each other.

Vegetation of Southwest Asia



The key illustrates the types of vegetation found in the region. Each color on the map represents the major vegetation in that area.

💫 This area has little or no vegetation, and probably is a desert.

Areas along the coasts of large bodies of water often have different vegetation from the kinds found inland.

Look for patterns that might give you clues about landforms in the region. Here, the mixed forest may indicate a mountainous area.

Copyright by Rand McNally & Co.

Map and Graph Skills Assessment

1. Making Generalizations What type of vegetation is found in the lands bordering the Persian Gulf?

2. Making Comparisons

Along which bodies of water is the vegetation region different from regions farther inland?

3. Drawing Conclusions

In general, how would you describe the vegetation of this region?

Human–Environment Interaction

A HUMAN PERSPECTIVE Icebergs for fresh water? As you have seen, fresh water is in short supply in Southwest Asia. In 1977, a Saudi prince, Muhammad ibn Faisal, formed a company to investigate the possibility of towing icebergs from Antarctica to the port of Jidda on the Red Sea. The icebergs would then be melted to release huge quantities of fresh water. It cost one million dollars to find out that no ship was powerful enough to tow an enormous iceberg, and there was no way to keep the iceberg from breaking up on the way. In 1981, the iceberg project was suspended. This story illustrates just how precious fresh water is in Southwest Asia. For centuries, people living in the region have struggled to find fresh water for themselves and for crops.

Providing Precious Water

Water has been a valuable resource since life began on earth. Even though oil brings a great deal of money into Southwest Asia, the most critical resource in this dry region is water. Fresh water supplies are available only in small amounts and not consistently. Ancient civilizations constantly faced the problem of finding and storing

water in order to survive and prosper. Today, the same challenge exists for modern nations. To find reliable water supplies, nations today use both ancient and modern practices. The pictures on page 496 include examples of both ancient and modern techniques for providing water.

DAMS AND IRRIGATION SYSTEMS Ancient practices for providing water work well for small fields but are not efficient for large-scale farming. To meet the needs of large farms and for growing populations, countries must construct dams and irrigation systems. Turkey is building a series of dams and a man-made lake on the upper Euphrates River. The dams and lake will provide water and hydroelectricity for parts of the country. But the project is controversial—countries downstream from the dam will lose the use of the water for irrigation or hydroelectricity.

The National Water Carrier project in Israel carries water from the northern part of the country to sites in the nation's center and south. The water comes from mountain areas, including the Golan Heights, the Jordan River, and Lake Kinneret (Sea of Galilee). Some of the water is used in agricultural projects in the Negev Desert, and some for drinking

Main Ideas

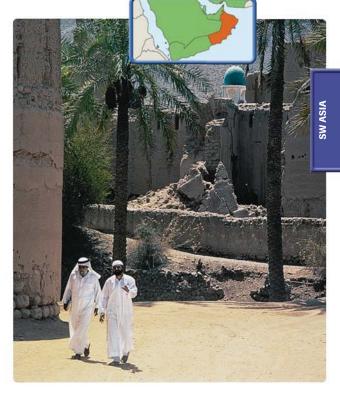
- Water is critical to regional physical survival and economic development.
- Discovery of oil increased the global economic importance of Southwest Asia.

Places & Terms

drip irrigation crude oil desalinization refinery fossil water

CONNECT TO THE ISSUES RESOURCES Southwest Asian nations face the challenge of how to use the income from oil resources to develop their economies.

PLACE Date palms thrive in this oasis in the arid country of Oman. **Where does the water for an oasis come from?**



Human–Environment Interaction 495





- **Drip irrigation** places water just at the root zone, reducing evaporation of precious water. This system is located in the Negev Desert in Israel.
- A bag of water is collected by using this pump. It is a part of a **qanat**-a system of underground brick-lined tunnels and wells that collect runoff water from the mountains.
- This irrigation canal in Oman has delivered water for over a thousand years. The canals are carefully maintained to provide water for agriculture.
- A noria-or waterwheel run by the flow of water or by animal power-is used to lift water from the river to the fields. These two are located in Syria on the Orontes River.



water. Because the water sources flow through several countries and access to the water is restricted, the National Water Carrier Project is a source of international conflict.

MODERN WATER TECHNOLOGY Several countries in the region use **drip irrigation.** This is the practice of using small pipes that slowly drip water just above ground to conserve water used for crops. Other nations are developing ways to use ocean water. **Desalinization**, the removal of salt from ocean water, is done at technically sophisticated water treatment plants. However, the desalinated water may be too salty to use for irrigation so it is used in sewage systems. Desalinization plants are very expensive and cannot provide adequate quantities of water to meet all the needs of people in Southwest Asia. Another alternative source of water, especially for agriculture, is the treatment of wastewater. Wastewater treatment plants constructed in the region fail to generate enough water to meet all the needs.

Water pumped from underground aquifers is called **fossil water**, because it has been in the aquifer for very long periods of time. Fossil water has very little chance of being replaced because this region has too little rainfall to recharge the aquifers. It is estimated that at the current rate water is being pumped, only about 25 to 30 years of water usage remain. Finding ways to conserve or even reuse water must be a top priority for the nations of this region.

Comparisons Making Comparisons How are the water projects of Turkey and Israel different?

Oil From the Sand

The oil fields discovered in the sands of Southwest Asia have been a bonanza for the region. These fields contain about one-half of all of the petroleum reserves in the world. Petroleum is the source of gasoline for automobiles, heating oil, and the basis of many chemicals used to make everything from fertilizers to plastics. Thus, petroleum products are an important part of the world economy. Having huge oil resources makes Southwest Asia a very important region economically.

FORMING PETROLEUM Oil and natural gas deposits were formed millions of years ago when an ancient sea covered the area of Southwest Asia. Microscopic plants and animals lived and died in the waters. Their remains sank and became mingled with the sand and mud on the bottom of the sea. Over time, pressure and heat transformed the material into hydrocarbons, which form the chemical basis of oil and natural gas.

Oil and natural gas do not exist in large pools beneath the ground, but are trapped inside rocks. You could hold a rock containing oil in your hand and not be able to see the oil because it is trapped in the microscopic pores of the rock. The more porous the rock, the more oil can be stored. A barrier of nonporous rock above the petroleum deposit prevents the gas or oil from moving out of the rock and to the surface.

Engineers use sophisticated equipment to extract, or remove, the oil. It also takes technical skill and special equipment to find deposits of oil. For this reason, oil was not discovered in some parts of the region until the 1920s and 1930s.

Ruins vs. Water

Geograp

In 2000, archaeologists in southeastern Turkey unearthed parts of the ancient city of Zeugma, revealing magnificent Roman mosaics—only to realize that a man-made lake would soon submerge the new find.

Located about half a mile away from an historic treasure, Birecik Dam is part of a chain of dams located on the Euphrates River. It was built to provide water for irrigation and hydroelectric power for the region.

Archaeologists had only a few months to save outstanding examples of Roman art, such as the mosaic you see below. The rising waters covered the art before all of it could be rescued.

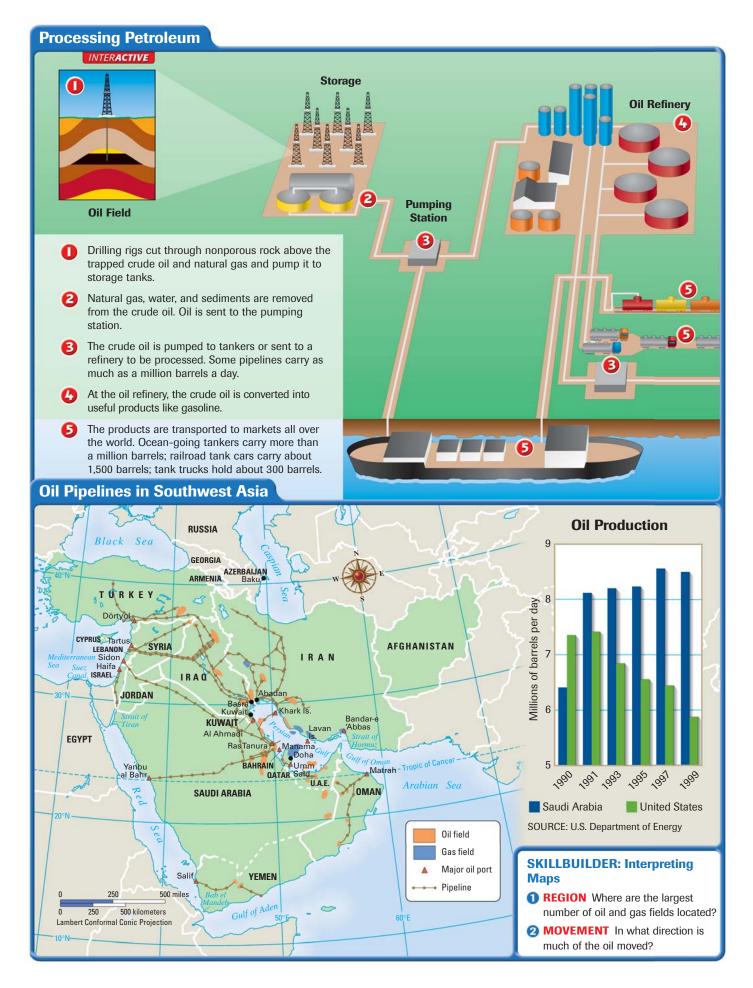


EARLY EXPLORATION Industrialization and the increasing popularity of automobiles made petroleum a highly desired resource. Beginning in the late 1800s, oil companies searched all over the world for oil resources. The first Southwest Asia oil discovery was in 1908 in Persia, now known as Iran. In 1938, oil companies found more oil fields in the Arabian Peninsula and Persian Gulf. Then, World War II interrupted further exploring. In 1948, oil companies discovered portions of what would become one of the world's largest oil fields at *al-Ghawar*, just on the eastern edge of the Rub al-Khali. This field contains more than one-quarter of all Saudi Arabia's reserves of oil.

TRANSPORTING OIL Petroleum that has not been processed is called **crude oil**. Crude oil pumped from the ground must be moved to a **refinery**. The job of a refinery is to convert the crude oil into useful products. Pipelines transport the crude oil either to refineries or to ports where the oil is picked up by tankers and moved to other places for processing. Study the diagram on page 498 to learn how oil is processed and moved.



Seeing Patterns Why did oil companies continue to search for oil deposits in Southwest Asia?





Using the Atlas Use the maps on pages 481 and 498. What countries would likely receive oil shipments from ports located on the Mediterranean Sea? Placement of pipelines depends on the location of existing ports or access to worldwide markets. Study the map on page 498. Notice that in this region, the pipelines move the crude oil to ports on the Persian Gulf, the Red Sea, and the Mediterranean Sea. From these locations, oil tankers carry the petroleum to markets in the rest of the world.

In some places, refineries process the crude oil near ports. Tanks to hold the oil products are located at port facilities. Many Southwest Asian nations have updated and outfitted their ports to service the very large ocean-going tankers.

RISKS OF TRANSPORTING OIL Moving oil from one location to another always involves the risk of oil spills. The largest oil spill ever recorded occurred in January 1991, during the Persian Gulf War. A series of tankers and oil storage terminals in Kuwait and on islands off its coast were blown up. More than 240 million gallons of crude oil were spilled into the water and on land.

Buried pipelines in Southwest Asia help reduce the danger of aboveground accidents. However, oil spills on land do happen. Because oil is such a valuable commodity, the pipelines are carefully monitored for any drop in pressure that might signal a leak in the line. Any leaks are quickly repaired.

On the other hand, ocean-going tankers transporting oil are at a much higher risk for causing pollution. Many tankers operate in shallow and narrow waterways such as the Red Sea, the Suez Canal, the Persian Gulf, and the Straits of Hormuz. Here, there is danger of oil spills due to collisions or running aground. Most modern tankers have double hulls so that minor accidents will not result in oil spills. In addition, oil-producing nations in Southwest Asia have taken legal steps to protect their environments.

In the next chapter, you will learn more about the people and cultures of the subregions of Southwest Asia.

Assessment

Places & Terms

Identify and explain where in the region these would be found.

- drip irrigation
- desalinization
- fossil water
- crude oil
- refinery

s **2** Taking Notes

HUMAN-ENVIRONMENT

INTERACTION Review the notes you took for this section.

Human-Environment

Interaction

- What are some ways water is supplied in this region?
- In what ways is oil moved from the source to the market place?

3 Main Ideas

- a. Why must both ancient and modern water supply methods be used in the region?
- b. Why might water projects in Southwest Asia cause controversy?
- **c.** What are some of the risks in transporting oil?

4 Geographic Thinking

Making Inferences What impact has technology had on the supply of oil and water in the region? Think about:

- finding large reserves of oil or water
- environmental hazards





ASKING GEOGRAPHIC QUESTIONS Study the map of oil pipelines on page 498. Devise three geographic questions about the map, such as "What problems might there be in choosing locations for these pipelines?" Choose one of your questions and write several **paragraphs** answering the question. Present your findings to the class. Be sure to identify your data sources.

Chapter (21) Assessment

VISUAL SUMMARY PHYSICAL GEOGRAPHY OF SOUTHWEST ASIA

Landforms

Peninsulas: Anatolian, Arabian

Mountain Ranges: Hindu Kush, Elburz, Zagros, Taurus

Major Waterways: Tigris, Euphrates, Jordan, Red Sea-Suez Canal, Bosporus Strait, Straits of Hormuz

Resources

- Water is a scarce resource.
- Oil is an abundant resource that shapes the region's economy.

Climate and Vegetation

Deserts:

- Rub al-Khali, An-Nafud, Syrian, and Negev are mostly sandy.
- Dasht-e Kavir and Dasht-e Lut are salt flat deserts.

Human-Environment Interaction

- Water is provided through both old and new technologies.
- Oil is pumped from the ground, processed, and transported out of Southwest Asia.

Reviewing Places & Terms

A. Briefly explain the importance of each of the following.

- Golan Heights
- **2.** wadi
- 3. Tigris River
- 4. Euphrates River
- 5. oasis

desalinization
 crude oil

7. drip irrigation

6. salt flat

10. refinery

B. Answer the questions about vocabulary in complete sentences.

- 11. Where would you most likely find a wadi?
- 12. The Golan Heights are an example of which type of landform?
- 13. Where were several ancient river valley civilizations located?
- 14. Which terms above deal with water usage?
- 15. Why are refineries needed?
- 16. Where might you find a refinery?
- **17.** Why is drip irrigation used?
- 18. Where would you find a salt flat desert in Southwest Asia?
- 19. What is the source of water for an oasis?
- 20. What are drawbacks to using water from a desalinization plant?

Main Ideas

Landforms and Resources (pp. 487–490)

- 1. How do the landforms of the region restrict movement?
- **2.** What are the most valuable resources in the region and why are they valuable?
- 3. How large are the oil reserves in the region?

Climate and Vegetation (pp. 491–494)

- 4. What types of deserts are found in the region?
- 5. Why is extensive irrigation needed in the region?
- 6. Where in the region are well-watered lands found?

Human-Environment Interaction (pp. 495–499)

- **7.** What are some examples of the ways in which water is provided in the region?
- 8. In what ways do major water projects cause political problems?
- 9. Where are the major oil fields in the region located?
- 10. What are some dangers in transporting oil?

Critical Thinking

1. Using Your Notes

Use your completed chart to answer these questions.

Landforms	
Resources	
$\langle \land \land \land \land$	\sim

- a. How are landforms and desert climate connected?
- b. How is oil production related to the economy of the region?

2. Geographic Themes

- a. LOCATION Why is the relative location of Southwest Asia important to world trade of oil?
- b. **PLACE** Why is the Persian Gulf considered a strategic location?

Estimated Worldwide Oil Reserves

page 733 for more on cartograms.)

of reserves for the United States?

GeoActivity

Create a three-dimensional model to show the information on the carto-

gram. Be sure to label each of the

countries and give an approximate

total amount of oil reserves.

oil reserves?

Geographic Skills: Interpreting a Cartogram

3. Identifying Themes

Why are the Tigris and Euphrates rivers so important to Southwest Asia? Which of the five themes applies to this situation?

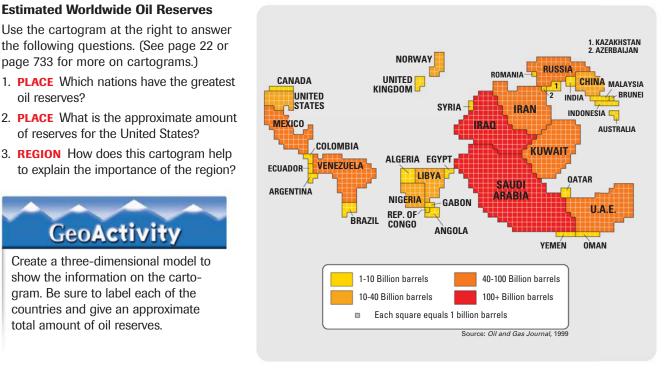
4. Making Generalizations

In what ways do oil and water shape the lives of the people of Southwest Asia?

5. Making Inferences

How does climate affect the distribution of population in the region?

Additional Test Practice, **TEST PRACTICE** pp. S1–S37 CLASSZONE.COM



INTERNET ACTIVITY

Use the links at **classzone.com** to do research about oil production. Find out what products are made from crude oil.

Creating Graphs and Charts Create an illustrated chart showing the types of products that are produced from petroleum. List the Web sites that you used in preparing your report.