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World Geography and Cultures

Reading Essentials and Note-Taking Guide

STUDENT WORKBOOK



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To the Student

The *World Geography and Cultures Reading Essentials and Note-Taking Guide* is designed to help you use recognized reading strategies to improve your reading-for-information skills. For each section of the student textbook, you are alerted to key content. Then, you are asked to draw from prior knowledge, organize your thoughts with a graphic organizer, and follow a process to read and understand the text. The **Reading Essentials and Note-Taking Guide** was prepared to help you get more from your textbook by reading with a purpose.

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Geography Handbook

Big Idea

Geography skills provide the tools for understanding relationships between people, places, and environments.

Use a chart like the one below to identify the continents in each hemisphere. Continents may appear in more than one hemisphere.

Hemisphere	Continents
Northern	
Southern	
Eastern	
Western	



Notes

Read to Learn

Globes and Maps (page 5)

Making Inferences

Read the section and answer the questions:

1. *Geographic information is shown most accurately on a*

_____ .

2. *Write a statement expressing the map scale 1:62,500:*

3. *Circle latitude in the following:*

29° 25' N 98° 30' W

A **globe** is a scale model of Earth. A **map** is a symbolic representation of all or part of the planet. **Cartographers** are mapmakers. An imaginary line along the curve of Earth is called a **great circle route**. A **map projection** projects the round Earth onto a flat surface. The three basic categories of map projections are **planar**, **cylindrical**, and **conic**. **Interrupted projections** resemble globes that have been cut apart and laid flat. On globes, a **grid system** is formed by lines of **latitude** and lines of **longitude**. Geographers divide Earth into halves, called **hemispheres**. North of the Equator is the **Northern Hemisphere**; south of the Equator is the **Southern Hemisphere**; east of the **Prime Meridian** for 180° is the **Eastern Hemisphere**; and west for 180° is the **Western Hemisphere**.

A map **key** explains symbols, colors, and lines used on a map; a **scale bar** shows the relationship between map measurements and actual distances on Earth; a **compass rose** indicates the four cardinal directions and sometimes intermediate directions. **Scale** relates measurements on a map with those on Earth's surface. A line of latitude crossing a line of longitude is the **absolute location**. The location of one place in relation to another is **relative location**.

Types of Maps (page 12)**Comparing and Contrasting**

Identify the correct type of map for each purpose: physical, thematic or political.

1. driving from New York City to Orlando, Florida

2. identifying the major agricultural products of the United States

3. identifying desert areas of South Asia

Physical maps show the location and **topography**, or shape of Earth's physical features. Physical maps show water features, such as rivers, streams, and lakes; and landforms, such as mountains, plains, plateaus, and valleys. Shading and texture are used to show general **relief**, differences in **elevation**, or height, of landforms. Some physical maps also show political features, such as boundary lines, countries, and states.

Political maps show the boundaries and locations of political units such as countries, states, counties, cities, and towns. Many features, including boundaries, capitals, cities, roads, highways, and railroads, are **human-made**, or determined by humans rather than nature. Physical features may also be shown on political maps. Nonsubject areas are usually set apart by a different color.

Thematic maps emphasize a single idea or a particular kind of information. **Qualitative maps** show information related to a specific idea. **Flow-line maps** illustrate the movement of people, animals, goods, and ideas, as well as physical processes.

Geographic Information Systems (page 15)**Making Inferences**

Which of the following are true about using GIS to make maps?

- a. many types of data can be shown*
- b. GIS data sources are always accurate*
- c. maps can be revised easily as new data is collected*

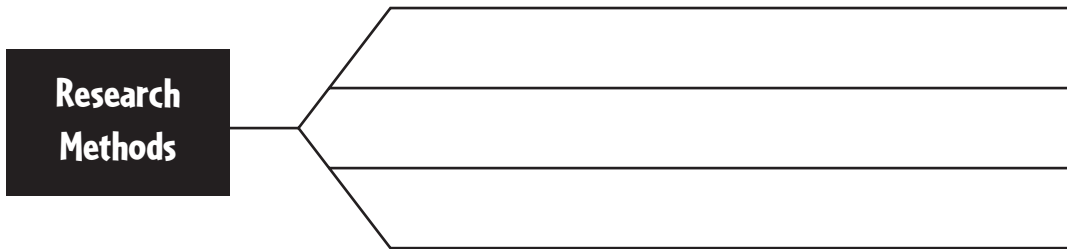
Most modern geographers use computers with software programs called **geographic information systems (GIS)** to make maps. A GIS accepts data from different sources—maps, satellite images, printed text, and statistics—and converts the data into digital code, which arranges it in a database. With GIS, each kind of information on a map is saved as a separate electronic layer. Cartographers use GIS to make maps and change them quickly and easily.

The Geographer's Craft

Big Idea

Geographers use six essential elements to organize and describe information about the Earth. Geographers study patterns of human and physical geography using direct observation, mapping, interviewing, statistics, and technology.

As you read, complete a graphic organizer similar to the one below by listing the specialized research methods geographers use.



Read to Learn

The Elements of Geography (page 17)

Identifying the Main Idea

Write the letter of the correct definition next to the correct term.

- a. movement
- b. site
- c. ecosystem
- d. region

- ___ 1. location
- ___ 2. areas with similar characteristics
- ___ 3. community of plants and animals
- ___ 4. how people settle the Earth

Spatial relationships are the links people and places have to one another because of their locations. **Site** refers to the specific location of a place, including its physical setting. **Situation** is an expression of relative location. A **place** is a particular space with physical and human meaning. A **region** may be defined by similar physical and human characteristics. A **formal region** is defined by a common characteristic, such as a product. A **functional region** is a central place and the surrounding area linked to it. A **perceptual region** is defined by popular feelings and images rather than by objective data.

Geographers study how physical features interact with plants and animals to create, support, or change **ecosystems**, communities of plants and animals that depend upon one another, and their surroundings, for survival. Recurring themes in geography are the ongoing **movement** of people, goods, and ideas, and **human-environment interaction**, or the study of the interrelationship between people and their physical environment.

Research Methods (page 21)**Predicting**

Preview the section, then write a sentence explaining what you think you will be learning.

Geographers study the Earth and patterns of human activities through direct observation. They also use remote sensing, such as aerial photographs or satellite images. **Cartography** involves designing and making maps, which show the location, features, patterns, and relationships of people, places, and things. Geographers use computers to organize and present numerical information, analyze the data to find patterns and trends, and use statistical tests to see whether their ideas are valid. **Geographic information systems (GIS)** are computer tools that process and organize data and satellite images with other types of information. Cartographers rely on computers to make maps, keeping each type of data on a separate digital layer.

Geography and Other Subjects (page 22)**Identifying the Main Idea**

As you read, write four subjects geographers may study.

Geographers use historical perspectives to understand what places looked like in the past, and study political patterns to see how different places are governed and how political boundaries have formed and changed. They are interested in how the natural environment has influenced political decisions and how governments change natural environments. Human geographers, or cultural geographers, use the tools of sociology and anthropology to understand world cultures. They study economies to understand how the locations of resources affect the ways people make, transport, and use goods, and where services are provided. They are interested in the interdependence of people's economic activities throughout the world.

Geography as a Career (page 23)**Identifying the Main Idea**

As you read, write four career opportunities for geographers.

Geographers have many career opportunities in teaching and education. Geographers also work as climate and weather experts, soil scientists, and environmental managers and technicians. Human geographers work in health care, transportation, population studies, economic development, and international economics. They may work as planners in local and state government agencies. Economic geographers examine human economic activities and their relationship to the environment. A regional geographer studies the features of a particular region and may assist government and businesses in making decisions about land use. Geographers also work as writers and editors.

Planet Earth

Big Idea

As part of a larger system called the solar system, Earth has water, land, and air that make the planet suitable for plant and animal life.

As you read about Earth, complete a graphic organizer similar to the one below by describing the four components of Earth.

Component	Description
Hydrosphere	
Lithosphere	
Atmosphere	
Biosphere	



Read to Learn

Our Solar System (page 31)

Identifying the Main Idea

Scan the section before you begin to read. Look for key words or phrases that will tell you what the text will cover. Write the key words or phrases:

Our solar system is made up of the sun and all the objects that revolve around it. The sun, the center of the solar system, is a ball of burning gases. The huge amount of matter contained in the sun creates a strong pull of gravity, which keeps Earth and other objects revolving around the sun.

Except for the sun, planets are the largest objects in the solar system. The inner planets, Mercury, Venus, Earth, and Mars, are called terrestrial planets. The outer planets, Jupiter, Saturn, Uranus, and Neptune, are the gas giant planets. Ceres and Pluto are dwarf planets.

Other objects that revolve around the sun include asteroids, comets, and meteoroids. Asteroids are small, irregularly shaped, planet-like objects. Comets are made of icy dust particles and frozen gases. Meteoroids are chunks of rock and iron.

Getting to Know Earth (page 32)

Formulating Questions

As you read the lesson, write down questions you have about what you read. When you have finished reading the lesson, answer your questions.

The Earth has a larger diameter at the Equator than from Pole to Pole, but the difference is less than 1 percent.

The surface of Earth is made up of water and land. About 70 percent of Earth's surface is water. Earth's **hydrosphere** consists of bodies of water, such as oceans, lakes, and rivers. About 30 percent of Earth's surface is land, or **lithosphere**. The lithosphere also includes the land beneath the oceans. Earth's **atmosphere** is a layer of gases extending above Earth's surface. Gases in the atmosphere include nitrogen, oxygen, and small amounts of argon and other gases. The part of Earth that supports life is the **biosphere**.

The natural features of Earth's surface are called landforms. Landforms are found on Earth's surface and under water. Seen from space, Earth's most visible landforms are the seven landmasses called continents. Australia and Antarctica stand alone. Europe and Asia are parts of one landmass called Eurasia. The Isthmus of Panama joins North and South America. At the Sinai Peninsula, the Suez Canal separates Africa and Asia. The **continental shelf** is an extension of the coastal plain.

Earth has great differences in the heights and depths of its surface. Mount Everest is the highest point at 29,035 feet (8,850 m) above sea level. The shore of the Dead Sea is the lowest point on dry land, at 1,349 feet (411 m) below sea level. Earth's deepest known depression lies in the Mariana Trench, a narrow underwater canyon about 35,827 feet (10,920 m) deep.

Forces of Change

Big Idea

The surface of the Earth has been shaped by the internal forces of tectonic activity as well as by the external forces of weathering and erosion.

As you read about the forces that change the Earth, use the major headings of the section to create an outline similar to the one below.

Forces of Change	
I. Earth's Structure	
A.	
B.	
II. Internal Forces of Change	
A.	
B.	



Notes

Read to Learn

Earth's Structure (page 35)

Identifying the Main Idea

As you read, fill in the blanks.

Earth's crust is broken into slabs of rock called

The theory that the continents were once joined then drifted apart is called

Earth is made of three layers. The **core** is at the center of the Earth. The **mantle** is a thick layer of hot, solid rock. The **crust** is a rocky shell that forms Earth's surface, and is broken into slabs of rock, called plates, that float on a layer in the mantle.

According to the theory of **continental drift**, all landmasses on Earth were once a supercontinent. The supercontinent broke down into smaller continents that have drifted apart and, in some places, recombined.

Many scientists believe that **plate tectonics**, the movement of plates of Earth's crust, created Earth's largest features. Plates are constantly moving and shaping the planet. As the plates move, they crash into each other, pull apart, or grind and slide past each other. When the plates spread apart, **magma**, or melted rock, pushes up from the mantle. Scientists estimate that plate tectonics has shaped Earth's surface for 2.5 to 4 billion years. However, scientists have not yet determined exactly what causes plate tectonics.

Internal Forces of Change (page 36)**Evaluating Information**

As you read this section, think about what facts you find interesting or surprising, and write them down.

Internal forces change the surface of Earth: mountains form when continental plates collide and when a sea plate collides with a continental plate in a process called **subduction**. Where continental and sea plates collide, pieces of Earth's crust come together slowly as the sea plate slides under the continental plate in a process called **accretion**. This movement can cause continents to grow outward. **Spreading** is a process in which sea plates pull apart, releasing magma.

Moving plates can sometimes squeeze the Earth's surface, causing **folds**, or bends in layers of rock. Grinding or sliding plates create cracks in the Earth's crust called **faults**. Earthquakes are caused by sudden, violent movements of tectonic plates along a fault line.

Volcanic eruptions can occur when one plate plunges beneath another. Volcanoes can also occur far from plate boundaries where magma from hot areas deep in the Earth blasts through the surface.

External Forces of Change (page 39)**Predicting**

Read the title and main headings of the section. Write a statement predicting what the lesson will be about and what will be included in the text.

External forces, such as wind and water, change Earth's surface. Physical **weathering** occurs when large masses of rock are broken down into smaller pieces. Chemical weathering changes the chemical makeup of rocks, as when rainwater containing carbon dioxide dissolves rocks.

Wind **erosion** is caused when winds pick up large amounts of soil and blow it away. Glacial erosion occurs when **glaciers** pick up rocks and soil as they move slowly downhill. When glaciers melt and recede, they can leave behind large piles of rocks and debris called **moraines**. Moraines can form long ridges of land or form dams that hold water back and create glacial lakes.

Water erosion is caused when streams of springwater or rainwater flow downhill, cutting into the land and wearing away soil and rock. The sediment then grinds away the surface of rocks along the stream's path. Over time, valleys and canyons are formed.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How do Earth's layers contribute to the planet's physical characteristics?

2. How do internal forces of change affect Earth's surface differently from external forces of change?

Expository Writing

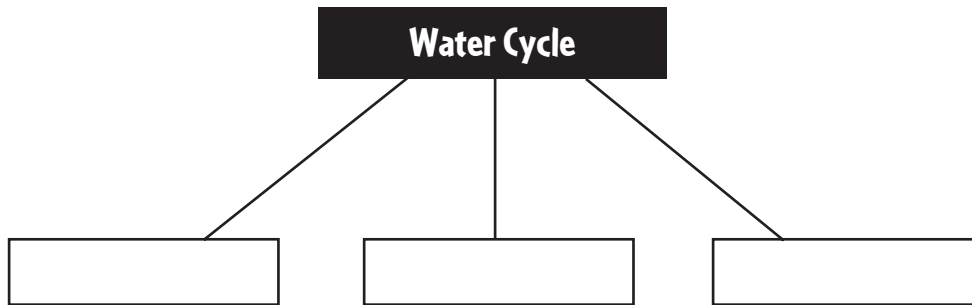
Describe how internal forces may have changed the surface of what is now North America over the past 225 million years.

Earth's Water

Big Idea

The water cycle keeps the amount of both freshwater and salt water on Earth fairly constant.

As you read, complete a graphic organizer similar to the one below by listing the processes that contribute to the water cycle.



Notes

Read to Learn

The Water Cycle (page 42)

Formulating Questions

As you read, write two questions about the main ideas presented in the text.

1. _____

2. _____

Almost all of the hydrosphere is salt water found in oceans, seas, and saltwater lakes. The rest is freshwater found in lakes, rivers, and groundwater.

The total amount of water on Earth does not change. The **water cycle** is the constant movement of water from the oceans to the air to the land and finally back to the oceans.

During **evaporation**, the sun's energy causes liquid water to change into vapor, or gas. Water vapor rises from the oceans, other bodies of water, and plants, and gathers in the air. When warm air cools, it changes to liquid water in a process called **condensation**. Tiny droplets of water form clouds. When clouds gather more water than they can hold, they release moisture, which falls to the Earth as **precipitation**—rain, snow, or sleet. Precipitation sinks into the ground and collects in streams and lakes, then is returned to the oceans. The water evaporates and the cycle begins again. The amount of water that evaporates is approximately the same amount that falls back to Earth.

Bodies of Salt Water (page 43)**Making Inferences**

First, read the section. Next, ask yourself, “what would this look like?”

Finally, write a description on the lines below.

About 70 percent of the Earth’s surface is water. Almost all of the Earth’s water is salt water.

About 97 percent of the Earth’s water consists of a continuous body of water that circles the planet. Geographers divide this expanse into four oceans: the Pacific, the Atlantic, the Indian, and the Arctic. The Pacific Ocean is the largest ocean. The Pacific covers more area than all Earth’s land combined, and is deep enough in some places to cover Mount Everest.

Seas, gulfs, and bays are bodies of salt water smaller than oceans. The Mediterranean Sea is almost entirely encircled by Europe, Africa, and Asia. The Gulf of Mexico is nearly encircled by the coasts of the United States and Mexico.

The water found in oceans is too salty for drinking, farming, or manufacturing. A process called **desalination** is used in some areas to remove the salt to turn salt water into freshwater.

Bodies of Freshwater (page 44)**Making Generalizations**

Read the title and quickly review the section to get a general idea of the content. Then write a sentence or two explaining what the lesson is about.

About 3 percent of the Earth’s total water supply is freshwater. Most of this 3 percent is not available for human consumption. More than 2 percent is frozen in glaciers and ice caps, and 0.5 percent is found beneath the Earth’s surface. Lakes, streams, and rivers contain less than 1 percent of Earth’s water.

A lake is a body of water completely surrounded by land. Most lakes contain freshwater. Most lakes were caused by glacial movement.

Flowing water forms streams and rivers. Rain, runoff, and water from tributaries or branches swell rivers as they flow toward a lake, gulf, sea, or ocean.

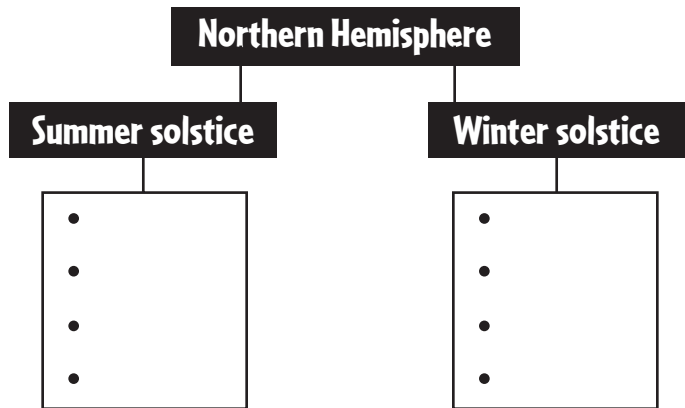
Groundwater is freshwater that lies beneath the Earth’s surface. Groundwater comes from rain and melted snow, and from water that seeps into the soil from lakes and rivers. An underground porous rock layer often saturated by slow flows of water is called an **aquifer**. Aquifers and groundwater are important sources of freshwater.

Earth–Sun Relationships

Big Idea

Earth’s position in relation to the sun affects temperatures, daytime and nighttime, and seasons on Earth, which in turn influence when and how people perform certain activities.

Complete a graphic organizer similar to the one below by listing the major characteristics of the summer and winter solstices.



Read to Learn

Climate and Weather *(page 51)*

Synthesizing Information

Would you want to know about the weather or climate if you were to visit

1. *Mexico next week?*

2. *Europe?*

3. *Australia in spring?*

Weather is the condition of the atmosphere in one place during a limited period of time. **Climate** is the term for weather patterns in an area over a long period of time. Earth’s axis is currently tilted at an angle of about $23\frac{1}{2}^{\circ}$. Earth makes one complete rotation on its **axis** every 24 hours. The angle of Earth’s tilt affects **temperature**. While Earth rotates on its axis, it orbits the sun, taking 365 days to complete one **revolution**. The revolution of the Earth, and its tilt, cause seasons.

Around March 21, called an **equinox**, the sun’s rays fall directly on the Equator. In the Northern Hemisphere the summer **solstice** occurs about June 21. Around September 23, the sun’s rays strike the Equator directly again, and fall begins in the Northern Hemisphere. The winter solstice begins about December 22. Because of the Earth’s tilt, one Pole receives nearly continuous sunlight for six months of the year, while the other Pole receives little or no sunlight.

The Greenhouse Effect (page 52)**Making Inferences**

Think about what you know about global warming.

How might global warming affect the area where you live?

When rays from the sun reach the atmosphere, some of them are reflected back into space, but enough radiation reaches the Earth to warm the land, water, and air.

Earth's atmosphere traps some heat like the glass in a greenhouse traps the sun's energy. This is called the **greenhouse effect**. Without the greenhouse effect, the Earth would be too cold for most living things.

Normally, the atmosphere provides the right amount of insulation to promote life on the planet. Many scientists believe that in recent decades a rise in atmospheric carbon dioxide (CO₂) levels has coincided with a rise in global temperatures in a trend known as **global warming**. Global warming is believed to be caused in part by burning fossil fuels, which release CO₂ into the atmosphere, trapping more heat.

Some scientists report that global warming will cause water to evaporate more quickly, increasing humidity and rainfall. Rapid evaporation from soil will cause land to dry out more quickly, so some areas will become drier.

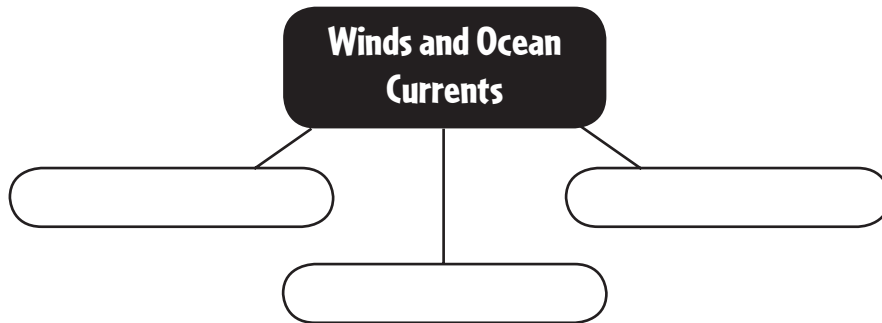
Scientists do not agree about global warming and its effects. Some scientists believe that a natural cycle is causing rising temperatures. Others claim that the evidence for global warming is inconclusive.

Factors Affecting Climate

Big Idea

Latitude, elevation, wind patterns, and ocean currents affect Earth's climates.

As you read about the factors affecting Earth's climate, create a web diagram like the one below by listing factors that cause both winds and ocean currents.



Notes

Read to Learn

Latitude, Elevation, and Climate (page 55)

Analyzing Information

After you read the section, write a sentence explaining the organization and list three main ideas.

During the Earth's annual revolution around the sun, the sun's direct rays fall upon the planet in a regular pattern correlated with latitude.

Within each latitude zone, climate follows general patterns. Low latitudes, between 30° S and 30° N latitude, including the Tropic of Cancer, the Tropic of Capricorn, and the Equator, have warm to hot climates. High latitudes are the Earth's polar areas. When either the Northern Hemisphere or the Southern Hemisphere is tilted toward the sun, its polar area receives nearly continuous, but indirect, sunlight. The most variable weather on Earth is found in the midlatitudes. Midlatitudes have a temperate climate with dramatic seasonal weather changes.

At all latitudes, elevation influences climate because of the relationship between elevation of a place and its temperature. Earth's atmosphere thins as altitude increases. Thinner air is less dense and retains less heat.

Winds and Ocean Currents (page 56)**Identifying the Main Idea**

What are two ways the sun's energy is distributed around the planet?

Air moving across the surface of the Earth is called wind. Winds occur because sunlight heats the Earth's atmosphere and surface unevenly.

Global winds blow in patterns called **prevailing winds**. The direction of prevailing winds is determined by latitude. Earth rotates to the east, so global winds are displaced clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere. This phenomenon, called the **Coriolis effect**, causes prevailing winds to blow diagonally. Trade winds are the prevailing winds in the low latitudes, westerlies are the prevailing winds in the midlatitudes, and in the high latitudes, prevailing winds are the polar easterlies. At the Equator, global winds are diverted, leaving a narrow, generally windless band called **doldrums**.

Ocean **currents** are caused by many of the same factors that cause winds. The Coriolis effect is also observed in ocean currents.

Wind and water affect weather. Water vapor forms in the atmosphere. As rising air cools when elevation increases, the water vapor forms clouds. Further cooling causes rain, which can help lower the temperature.

El Niño is a periodic change in the pattern of ocean currents, water temperatures, and weather in the mid-Pacific region that influences climate throughout the world.

Landforms and Climate (page 59)**Predicting**

Read the title and main headings of the section. Write a statement predicting what the section will be about and what will be included in the text.

Climates of places located at the same latitude can be very different, depending on physical features. Water temperatures are more uniform and constant than land temperatures, so coastal lands experience less changeable weather than do inland areas.

Mountain ranges influence precipitation and affect climate. Winds are pushed upward when they meet a mountain range. Rising air cools and precipitation is released on the mountain's **windward** side—the side facing the wind. After the precipitation is released, winds become warmer and drier as they go down on the opposite, or **leeward** side. The hot, dry air produces little precipitation in an effect known as a **rain shadow**.

World Climate Patterns

Big Idea

Geographers classify Earth’s climate and vegetation into regions.

Complete a graphic organizer similar to the one below by filling in a brief description of each climate region.

Climate	Description
Tropical	
Dry	
Midlatitude	
High latitude	
Highland	



Read to Learn

Climate Regions (page 61)

Identifying the Main Idea

Identify the five major climate regions and one smaller region within each region.

Each climate region has **natural vegetation**—plant life that grows in an area unchanged by human activity. Tropical wet climates are hot and wet, with poor soil and tropical rain forests. Tropical dry climates have dry winters, wet summers, and high year-round temperatures with grasses. Deserts are dry areas with sparse plant life and little rainfall. In some desert areas, underground springs support areas of lush vegetation called **oases**. Dry, treeless grasslands called steppes often border deserts.

Midlatitude climates include marine west coast, with cool summers and damp winters, **coniferous** and **deciduous** trees and **mixed forests**; Mediterranean, with mild, rainy winters, hot, sunny summers, and thickets of woody bushes and short trees; and humid subtropical, with short, mild winters, nearly year-round rain, and **prairies** and mixed forests. Landforms have the greatest influence on climate in humid continental regions.

High-latitude climates have freezing temperatures year-round, with vegetation limited to low bushes, short grasses, mosses, and lichens. Some areas of the subarctic have permanently frozen subsoil called **permafrost**. In Highland climates, temperatures are cooler, with mixed forests at the bases of mountain ranges, and meadows with small trees, shrubs, and wildflowers higher up.

Climate Changes (page 64)**Formulating Questions**

Think about human interaction with the environment and how it affects climate. Answer the question, “How might this human interaction affect the environment where I live?”

Climates change gradually over time. During the last 1 to 2 million years, the Earth passed through four ice ages, when glaciers covered large areas of the planet’s surface. One **hypothesis**, or scientific explanation, for these ice ages is that the Earth absorbed less solar energy because of variations in the sun’s output or variations in the Earth’s orbit. Another hypothesis suggests that dust clouds from volcanic activity reflected sunlight back into space.

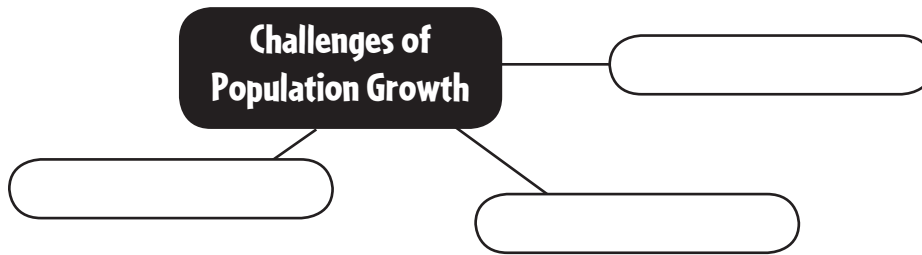
Burning of fossil fuels releases gases that mix with water in the air, forming acids that fall in rain and snow. Exhaust from burning fossil fuels in automobile engines and factories is heated by the sun’s ultraviolet rays, forming **smog**. Dams and river diversions may cause new areas to flood or to dry out, and may affect climate over time.

World Population

Big Idea

Population growth and distribution influence where people live and how they change the natural environment.

As you read about changes in world population, create a web diagram like the one below by listing the challenges created by population growth.



Notes

Read to Learn

Population Growth (page 71)

Drawing Conclusions

Read the section to learn about factors affecting population growth. Then write a general statement based on these factors.

Nearly 6.5 billion people live on Earth, inhabiting about 30 percent of the planet's land.

Scientists use statistics to learn about population growth. The **birthrate** is the number of births per year for every 1,000 people. The **death rate** is the number of deaths per year for every 1,000 people. **Natural increase** is the difference between an area's birthrate and its death rate. **Migration** must also be considered when examining population growth. The **demographic transition** model uses birthrates and death rates to show changes in population trends of a country or region. A high birth rate combined with a low death rate reduces **doubling time**, the number of years it takes a population to double in size.

Populations that grow rapidly use resources more quickly. The world's population is unevenly distributed by age, with the majority of some countries' populations being infants and young children.

Some countries have experienced negative population growth, in which the annual death rate exceeds the birthrate.

Population Distribution (page 72)**Synthesizing Information**

Read the section, then answer the questions.

1. About what percentage of the Earth's land is actually inhabited?

2. Arvada, Colorado, has a population of 103,966 and an area of 32.7 sq. mi. Cambridge, Massachusetts, has a population of 100,135 and an area of 6.43 sq. mi. Which city has the denser population?

Just as the world's population growth rate varies among the Earth's regions, the planet's **population distribution**, the pattern of human settlement, is also uneven. Only about 30 percent of the Earth's surface is made up of land. Much of that land is not fit to live on. Almost everyone on Earth lives on a little less than one-third of the planet's land.

Europe and Asia are the most densely populated continents. Where populations are highly concentrated, many people live in metropolitan areas.

To find out how crowded a place is, geographers measure **population density**, which is the total population of a country divided by its total land area. Two countries with the same number of people may not have the same population density. For example, Bolivia and the Dominican Republic have similar populations, but the Dominican Republic has a smaller land area, and so it is more densely populated than Bolivia.

Because the measure of population density includes all the land area of a country, it does not account for uneven population distribution within a country.

Many people are moving from city to city, suburb to suburb, and from rural areas to cities. The growth of city populations because of migration is called urbanization.

When people emigrate from the country of their birth, they are known as emigrants in their homeland and called immigrants in their new country. People who flee their country because of wars, food shortages, or other problems, are called refugees.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What factors affect a country's population growth rate?

2. Why is the world's population unevenly distributed?

Expository Writing

Japan has a population of about 128 million people, with a population density of 876 people per sq. mi. (343 people per sq. km). However, the percentage of people 65 years and older is about 21 percent, and growing rapidly, while the percentage of people 0–14 years of age is about 13.6 percent of the population and declining. In 2005, the birth-rate for Japan was 8.4. Write a paragraph about some of the economic challenges the country of Japan may face in the next 25 years.

Global Cultures

Big Idea

The spatial interaction of cultures can spread new ideas, establish trading relationships, cause wars, and build political partnerships.

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



Notes

Read to Learn

Elements of Culture (page 76)

Identifying the Main Idea

As you read the section, write down the elements of culture and the functions of each element.

Culture is the way of life of a group of people who share similar beliefs and customs. People communicate information and experiences and pass on cultural values and traditions through language. Large groups of languages having similar roots are called **language families**. In many cultures, religion enables people to find a sense of identity. In every culture, members of society fall into various smaller social groups. In all cultures, the family is the most important group. Most cultures are also made of social classes. Cultures may also include people who belong to different **ethnic groups**. Governments maintain order, provide protection from outside dangers, and supply other services to people. Governments are organized according to levels of power and by the type of authority.

Geographers look at economic activities to study how a culture uses natural resources and to analyze the ways in which people obtain, use, and sell goods and services. Geographers divide the Earth into **culture regions**, which include countries that may share similar economic systems, forms of government, and social groups.

Cultural Change (page 78)**Predicting**

Preview the section to get an idea of what is ahead.

First, skim the section. Then write a sentence explaining what you think you will be learning.

The process of spreading new knowledge from one culture to another is called **cultural diffusion**.

The earliest humans were nomads. About 10,000 years ago, many of these nomads became farmers. This shift from gathering food to producing food is known as the Agricultural Revolution. By about 3500 B.C., some of these early farming villages evolved into civilizations.

The world's first civilizations are known as **culture hearths**. The most influential culture hearths developed in areas that make up the modern countries of Egypt, Iraq, Pakistan, China, and Mexico. Each of these areas started as farming settlements, and had a mild climate and fertile land. The areas were each located near a major river or source of water, and the people irrigated the land and were able to grow surplus crops.

Because more food was available, fewer people farmed the land. People created new technology and carried out specialized economic activities that spurred development of long-distance trade. Wealth from trade led to the rise of cities and complex social systems. The ruler of a city needed an organized government. Officials and merchants created writing systems to record and transmit information.

Ideas and practices spread through trade and travel, and through migration. Migrants often blend their cultures with those of the people in the migrants' adopted countries.

Cultural diffusion has increased rapidly during the last 250 years. In the 1700s and 1800s, industrialized countries began to mass-produce goods, and their economies changed dramatically. This development, known as the Industrial Revolution, led to social changes. At the end of the 1900s, the world experienced the information revolution. Computers now make it possible to store huge amounts of information and send it all over the world instantly, linking cultures of the world more closely than ever before.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What factors define a culture?

2. What developments have affected interaction between cultures in recent years?

Descriptive Writing

Imagine what your daily life would be like if the information revolution had not occurred, and there were no personal computers, information storage devices, or Internet. Write a paragraph describing what your day would be like, from the time you wake up to the time you go to sleep.

Political and Economic Systems

Big Idea

Political and economic systems provide the organization and power for groups of people to control Earth's surface.

Use the major headings of the section to create an outline similar to the one below.

Political and Economic Systems
I. Features of Government
A.
B.



Read to Learn

Features of Government (page 101)

Formulating Questions

As you read, write a question about the main ideas presented in the text.

A **unitary system** of government gives all key powers to the national or central government. A **federal system** divides the powers of government between the national government and state or provincial governments. Another similar type of government structure is a confederation, a loose union of independent territories.

In an **autocracy**, such as a totalitarian dictatorship or a **monarchy**, the power and authority to rule belong to a single individual. An **oligarchy** is any system of government in which a small group holds power. A **democracy** is any system of government in which leaders rule with the consent of the citizens. Democratic countries have representative democracies, in which the people elect representatives. Many democratic countries, such as the United States and France, are republics, in which voters elect all major officials. The head of government is usually a president elected for a specific term.

Not every democracy is a republic. The United Kingdom is a democracy with a monarch as head of state. This monarch's role is ceremonial, and elected officials hold the power to rule.

Economic Systems (page 103)

Identifying the Main Idea

Scan the text and look for key words or phrases that will tell you what the section is about. Use the key words and phrases to write a statement explaining what the section is about.

All economic systems make three basic economic decisions: (1) what and how many goods and services should be produced, (2) how they should be produced, (3) who gets the goods and services that are produced.

In a **traditional economy**, habit and custom determine the rules for all economic activity. In a **market economy**, individuals and private groups make decisions about what to produce. A market economy is based on free enterprise, the idea that individuals have the right to own property or businesses and make a profit with only limited government interference. Another term for an economic system organized this way is capitalism. A **mixed economy** is one in which the government supports and regulates free enterprise through decisions that affect the marketplace. The government works to keep competition fair and to work for the benefit of the people.

A **command economy** is one in which the government owns or directs the means of production and controls the distribution of goods. Countries with command economies try to distribute goods and services equally among all citizens. Communism requires strict government control of almost the entire society, including the economy.

Socialism allows a wider range of free enterprise alongside government-run activities. The main goals of socialism are: (1) equal distribution of wealth and economic opportunity; (2) society's control of all major decisions about production; and (3) public ownership of most land, factories, and other means of production. Some socialist countries, like those in Western Europe, are democracies. Under democratic socialism, people elect their political leaders

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What are the differences between the major types of national government in the world today?

2. Give examples of the major types of economic systems in the world.

Expository Writing

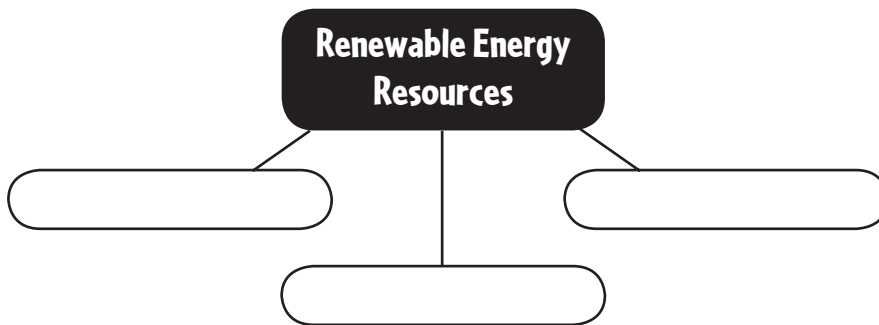
You live within a democratic government system and a market economy. Write a paragraph explaining some of the advantages to you under this government and economic system, as well as some of the disadvantages.

Resources, Trade, and the Environment

Big Idea

People are dependent on the world's natural resources for survival, but certain economic activities can threaten humans' future access to these resources.

As you read about natural resources, complete a web diagram similar to the one below by listing types of renewable energy resources.



Notes

Read to Learn

Resource Management *(page 106)*

Evaluating Information

Read the section, then decide whether you agree or disagree with the environmental experts on methods to manage resources. Explain your position.

Elements from the Earth that are not made by people but can be used by them for food, fuel, or other necessities are called **natural resources**. Renewable resources cannot be used up or can be replaced naturally or grown again in a relatively short amount of time. Nonrenewable resources, such as minerals and fossil fuels, cannot be replaced.

Because fossil fuels and other nonrenewable resources cannot be replaced, they must be conserved. Environment experts have encouraged people to replace their dependence on fossil fuels with the use of renewable energy resources including hydroelectric power, solar energy, and nuclear energy.

Economies and World Trade (page 107)**Identifying the Main Idea**

After reading the section, list three ways countries have become increasingly interdependent.

Primary economic activities involve taking or using natural resources directly from the Earth. Secondary economic activities use raw materials to produce something new and more valuable. Tertiary economic activities provide services to people and businesses. Quaternary economic activities are concerned with the processing, management, and distribution of information.

Economic activities, including **industrialization**, or the spread of industry, influence a country's level of development. Countries with much technology and manufacturing are called **developed countries**. **Newly industrialized countries** have moved from primarily agricultural to primarily manufacturing and industrial activities. Countries working toward greater manufacturing and technology activities are called **developing countries**.

The unequal distribution of natural resources and differing labor costs and education levels promote a complex network of trade among countries.

Some governments add barriers to trade to help their own economy. Barriers may include adding a tariff, or tax, to the price of imported goods, putting a quota, or number limit on importing a particular product from a particular country, or imposing an embargo, banning trade with another country altogether. **Free trade** is the removal of trade barriers so that goods can flow freely among countries.

People and the Environment (page 109)**Identifying the Main Idea**

What are three ways world economic activities have led to environmental pollution?

1. _____

2. _____

3. _____

Pollution is the release of unclean or impure elements into the air, water, and land.

Earth's bodies of water normally renew themselves, but can be polluted when oil tankers and offshore drilling rigs cause oil spills; when chemical waste enters the water supply; and when fertilizers and pesticides seep into groundwater. Land pollution occurs when chemical waste poisons topsoil, or when solid waste is dumped in landfills. Radioactive waste and toxic runoff can also leak into the soil.

The main source of air pollution is the burning of fossil fuels. Burning fuel gives off poisonous gases. Acidic chemicals in air pollution also combine with precipitation to form acid rain. When forests are destroyed by acid rain, less oxygen is produced by photosynthesis.

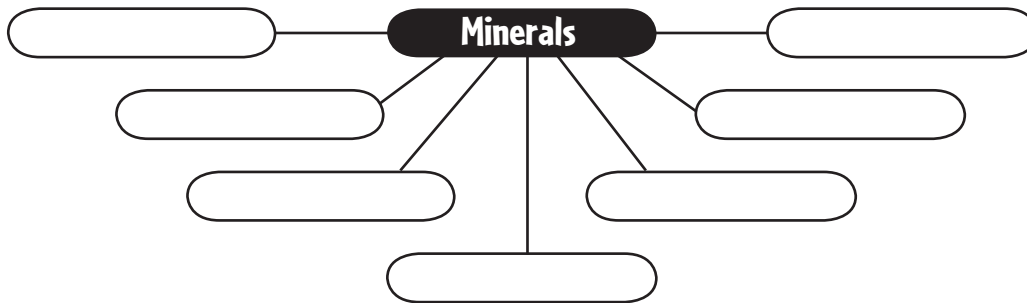
As humans expand their communities, they threaten natural ecosystems. Because the Earth's land, air, and water are interrelated, what harms one part of the system harms all the other parts.

The Land

Big Idea

A variety of landforms, water systems, and natural resources have played an important and changing role in the development of the United States and Canada.

Complete a web diagram similar to the one below by listing the major minerals found in the United States and Canada.



Read to Learn

Landforms *(page 131)*

Making Inferences

How have the landforms of the United States and Canada affected human settlement?

Collisions between tectonic plates formed the Pacific Ranges. The Rocky Mountains link the United States and Canada. Dry basins and plateaus are found between the Pacific Ranges and the Rockies. Canada's plateaus are colder and narrower than those in the United States. The Great Plains extend across the center of the region east of the Rockies. The land slopes to the Central Lowlands along the Mississippi River.

The Canadian Shield, a giant core of rock centered on the Hudson and James Bays, makes up the eastern half of Canada and the northeastern United States. The heavily eroded Appalachian Mountains are North America's oldest mountains and the continent's second-longest mountain range. Between the mountains and the coastal lowlands is the Piedmont, a wide area of rolling hills. In the southeast, the gulf Coastal Plain extends westward to Texas.

The islands of the United States and Canada were created in part by geologic forces. Oceanic islands, such as Hawaii, are volcanic. Continental islands are unsubmerged parts of the continental shelf.

Water Systems (page 132)**Identifying the Main Idea**

Identify four fresh-water systems in the United States and Canada, and state how they are important to economic development.

1. _____

2. _____

3. _____

4. _____

A **divide** is a high point or ridge that determines the direction in which rivers flow. East of the Continental Divide, waters flow toward the Arctic Ocean, Hudson Bay, the Atlantic Ocean, and the Mississippi River System, which empties into the Gulf of Mexico. To the west, waters flow into the Pacific Ocean.

In the west, rivers have their **headwaters** in the Rockies, and **tributaries** connect with the major rivers. The Mississippi River begins in Minnesota as a narrow stream and becomes one of North America's longest rivers.

In the eastern United States, a boundary called the **fall line** marks where the higher land of the Piedmont drops to the lower Atlantic Coastal Plain. Eastern rivers break into rapids and waterfalls along the fall line.

The St. Lawrence River flows from Lake Ontario to the Gulf of St. Lawrence in the Atlantic Ocean, forming part of the border between the United States and Canada. Niagara Falls, on the Niagara River, forms another part of the border. The falls are a major source of hydroelectric power for both countries.

In northern Canada, glacial dams created Great Bear Lake and Great Slave Lake. Glaciers also formed the Great Lakes. Large deposits of coal, iron, and other minerals near the lakes helped industrial development and urban growth.

The greatest link between inland and coastal waterways is the Great Lakes–St. Lawrence Seaway System.

Natural Resources (page 134)**Predicting**

Read the title and main headings of the lesson. Write a statement predicting what the lesson will cover.

- _____

The United States and Canada have petroleum, natural gas, and coal, which are forms of **fossil fuels**. Gold, silver, and copper are found in the Rocky Mountains. Iron and nickel are found in parts of the Canadian Shield, and iron ore is found in northern Minnesota and Michigan. Canada's minerals include potash, copper, gold, and silver.

Conservation and land preservation are important issues for today's mining industry. Mineral resources are nonrenewable. Mining involves heavy equipment, uses large quantities of water, and moves a great deal of rock and other natural materials, so it can damage land, water, and air systems.

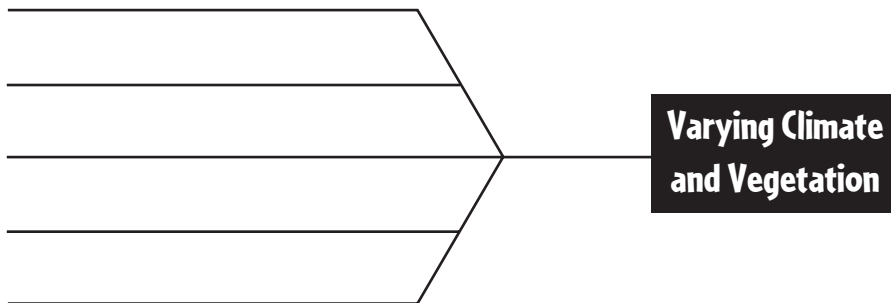
Timber is a vital resource for the United States and Canada. **Fisheries** in the coastal waters are essential to the region's economy. In recent years, overfishing has caused fish stocks to decrease rapidly. **Aquaculture**, or fish farming, has become a growing economic activity.

Climate and Vegetation

Big Idea

Location and landforms affect climate regions and natural vegetation of the United States and Canada.

Complete a graphic organizer similar to the one below by listing the factors that contribute to the varying climate and vegetation found in the northern areas of the United States and Canada.



Notes

Read to Learn

Southern Climates (page 139)

Comparing and Contrasting

As you read, summarize the reasons for differences in the southern climates of the United States.

The subtropical climate of the Southeast is rainy, with long, muggy summers and mild winters. The Atlantic Ocean borders the Southeast, so there is no dry season. Deciduous forests extend to Louisiana. Wetlands and swamps shelter a variety of vegetation and wildlife. **Hurricanes**, ocean storms hundreds of miles wide with winds of 74 miles per hour (119 km per hour) or more, occur in late summer and early autumn.

The extreme southern tip of Florida has a tropical climate with a distinct dry season in winter. Hawaii and Puerto Rico have tropical wet climates that support lush rain forests.

Because of the rain shadow effect on the leeward side of mountains, a steppe or desert climate is found in much of the area between the Pacific Ranges and the Rocky Mountains. The highest temperature ever recorded in the United States, 134° F (57° C), was at Death Valley.

A Mediterranean climate is characteristic of central and southern California. The climate is confined to coastal areas and is characterized by mild, wet winters and hot, dry summers. The vegetation is drought-resistant woodland known as **chaparral**.

Northern Climates (page 140)**Making Inferences**

As you read the section, ask yourself, What would this look like? Write a description of the landscape.

The Great Plains has a humid continental climate, with bitterly cold winters and hot summers. **Prairies**, naturally treeless expanses of grasses, spread across the middle of the Great Plains. Each year, rainfall ranges from 10 to 30 inches (26 to 76 cm). The prairie grasses grow up to 6 to 12 feet (1.8 to 3.7 m) and may grow half an inch (1.3 cm) a day. In spring and summer, thunderstorms called **supercells** often spawn tornadoes.

Some areas west of the Great Plains have a steppe climate, with a mixture of vegetation depending on latitude or elevation. Elevation gives the higher reaches of the Rockies and Pacific Ranges a highland climate, with coniferous forests below the **timberline**, the elevation above which trees cannot grow, and lichens and mosses growing above it. In early spring, snows are melted by a warm, dry wind called the **chinook**.

The interplay of ocean currents and westerly winds with the Pacific Ranges gives much of the Pacific coast a marine west coast climate. Parts of the region receive more than 100 inches (254 cm) of rain each year. Winters are rainy, and summers are cloudless and cool. Ferns, mosses, and coniferous forests grow there.

High-Latitude Climates (page 142)**Making Inferences**

Read the section. How do you think the few people who live in high-latitude climates make a living?

Large parts of Canada and Alaska lie in the high latitudes and have a subarctic climate with frigid winters. A high atmospheric pressure area over the Canadian subarctic causes cold winds that chill much of the United States during the winter.

In winter, **blizzards** occur in many parts of northern North America with winds of more than 35 miles per hour (56 km per hour), heavy or blowing snow, and visibility of less than 1,320 feet (402 m) for three hours or more.

Vegetation includes coniferous and mixed deciduous and coniferous forests between Newfoundland and the Yukon Territory. Lands along the Arctic coast are in the tundra climate zone. Tundra vegetation, consisting of sedge, cotton grass, and lichens, is found along the coasts of Greenland. In Greenland's few ice-free areas, some dwarfed birch, willow, and alder scrubs survive. Few people inhabit Greenland because of its harsh climate.

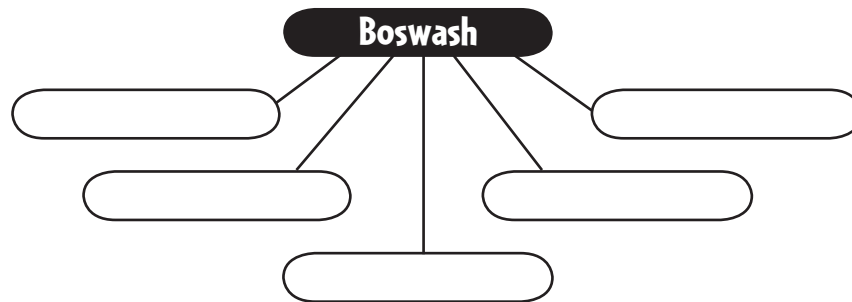
Interior Greenland has an ice cap climate, with layers of ice and snow, often more than 2 miles (3 km) thick, that constantly cover the ground. Lichens are the only form of vegetation that survive there.

The United States

Big Idea

The cultural geography of the United States has been influenced by Native Americans, European settlement, and modern industrialization.

Complete a web diagram similar to the one below by listing the cities that comprise the Boswash megalopolis.



Notes

Read to Learn

Population Patterns (page 149)

Making Inferences

As you read, try to answer the question:

Why did immigrants call the United States the land “where the streets are paved with gold”?

The movement of people into one country from another is called **immigration**. Many people in the United States are immigrants or descendants of immigrants. It is believed that the first peoples moved into the region from Asia about 20,000 years ago. Today, their descendants are known as Native Americans.

Population density in the United States is about 80 people per square mile (32 people per sq. km). Outside urban areas, the population is widely distributed. Since the 1970s, many people have been drawn to the **Sunbelt**, an area with a mild climate located in the American South and Southwest.

The movement of people from rural areas to cities is called **urbanization**. Most people now live in **metropolitan areas**, which are cities with at least 50,000 people and their **suburbs**. The spread of people and suburban development is called **urban sprawl**.

Along the Atlantic coast, closely linked metropolitan areas form the Boswash **megalopolis**. Pacific coast cities link to Asian economies. The growth of inland cities is influenced by proximity to rivers and lakes.

History and Government (page 150)**Identifying the Main Idea**

Put the following events in the history of the United States in the correct order:

- ___ transcontinental railroads completed
- ___ nomads crossed land bridge from Asia
- ___ European migration
- ___ industrialization began

Archaeologists believe nomads from Asia and from Central and South America may have populated North America thousands of years ago, at about the same time. European immigration began in the mid-1500s. The Spanish explored the southern parts of the region, and the French settled in the northeast. By the 1700s, Britain controlled much of the Atlantic coast. Settlers pushed out Native Americans.

During the 1800s, the United States gained land and natural resources. Native Americans lost lands and traditional ways of life were restricted. Industrialization transformed the United States. Factories were set up along the fall line in the Northeast, and coal in the Midwest made it a leading center of industry. Cotton became a major cash crop in the South and depended on the labor of enslaved Africans. Many enslaved people fled along the **Underground Railroad**. Tensions between the industrialized North and the agricultural South mounted until the American Civil War began.

During the late 1800s, Great Plains settlers developed **dry farming** and used steel plows and steam tractors to plant and harvest large areas of land. During the 1900s, two world wars spurred economic growth, and the population became more mobile and urbanized. After September 11, 2001, the United States launched a war on terrorism.

Culture (page 153)**Identifying the Main Idea**

As you read, make an outline of the section using the bold-faced headings.

English is the main language in the United States, but people also speak or use words and phrases from other languages. People who are **bilingual** learn to speak English in addition to their native language. Spanish is the second most commonly spoken language in the United States today.

Most people are Christians. Judaism, Islam, Hinduism, and Buddhism are among other religions commonly practiced.

The **literacy rate** is 97 percent. Substantial resources are devoted to health care, but many people are unable to afford health insurance, or health care even when they have insurance.

The first Americans integrated art, music, and storytelling into daily life. **Jazz**, developed in African American communities, blends African rhythms with European harmonies. The United States has had a strong cultural influence on the rest of the world.

Foods are relatively inexpensive, and there are many housing choices. Married-couple families make up about 50 percent of households in the United States.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How are population patterns in the United States influenced by the region's physical geography and by the development of industry and technology?

2. What are four cultural elements influenced by the immigrant roots of the United States?

Descriptive Writing

Write a biography of an early settler in the United States from the time he or she arrives in New York harbor in 1845, at the age of 20, until his or her death at the age of 70.

Canada

Big Idea

Canada’s cultural geography has been shaped by European immigration and physical geography.

Complete a graphic organizer like the one below by listing details about the arts in Canada. Then give an example of each. It might be the name of an author, a dance company, or a type of visual art.

Art Form	Example



Read to Learn

Population Patterns (page 156)

Analyzing Information

What are some factors that influenced settlement of Canada’s Maritime Provinces, the U.S.–Canada border, and the Prairie Provinces?

Immigrants came to Canada in search of political and religious freedom, economic and educational opportunities, and refuge from war. **Loyalists** who fled to Canada after the American Revolution settled in the Maritime Provinces. A **province** is a political unit.

Today, more than one-third of Canadians identify themselves as being of mixed ethnic origins. About 1 million people identify themselves as Native American, **Inuit** (Arctic native peoples of North America), or of mixed European and Native American ancestry.

Rugged terrain and a bitterly cold climate make much of Canada inhospitable to human settlement, and about 90 percent of the population lives along the U.S.–Canada border. Average population density is about 8 people per square mile (3 people per sq. km). Over the past 100 years, most internal migration has been west to the Prairie Provinces of Manitoba, Saskatchewan, and Alberta, where oil and natural gas were discovered in the 1960s. Most of Canada’s population lives in the urban areas of Toronto, Montreal, Vancouver, and Edmonton.

History and Government (page 157)**Synthesizing Information**

Read the section, then use each of the following terms in sentences that reflect their meaning: dominion, Parliament, Quebecois

After Europeans arrived in the 1400s, the native populations of Canada declined. The British eventually drove the French from the Hudson Bay area. In 1774 the Quebec Act gave French settlers the right to keep their language, religion, and system of laws and also extended Canadian territory south to the Ohio River, which angered American colonists.

The Dominion of Canada was founded in 1867. A **dominion** is a partially self-governing country. The link to Great Britain ended in 1982, and today Canada is a constitutional monarchy. The national legislature is called **Parliament**. The prime minister is the head of government.

In the 1800s, increased immigration from Great Britain fueled French nationalism among the **Quebecois**, Quebec's French-speaking inhabitants. Immigrants also came from Germany, Scandinavia, Ukraine, and Japan, and Canada also began sheltering enslaved people who had escaped from the United States. During westward expansion, immigrants pushed Native Americans off their lands.

The United States–Canada Free Trade Agreement (FTA) and the **North American Free Trade Agreement (NAFTA)** have eliminated tariffs and other trade barriers between Canada and the United States. Many in Quebec support **separatism**, the breaking away of one part of the country to create a separate country.

Culture (page 159)**Drawing Conclusions**

As you read, write three details about the cultural characteristics of Canada. Then, write a conclusion based on those details.

Canada has two official languages, English and French. Christians make up the largest religious group. Other religions include Islam, Buddhism, Hinduism, Judaism, and Sikhism.

Canada has a literacy rate of 97 percent, and a network of public and private schools. The Canadian government helps pay for health care for its citizens.

Museums and scholars now appreciate the art of native peoples. A group of painters called the Group of Seven painted the rugged landscape of Canada's far north. The earliest Canadian literature was written by French explorers, missionaries, and settlers, and had strong historical and religious themes. Important Canadian writers of the twentieth century include Hugh MacLennan and Margaret Laurence.

Toronto is a major production center, and is home to the Toronto Symphony Orchestra and the National Ballet of Canada.

Canadians enjoy a high standard of living. Married-couple families account for about 70 percent of households. Canada has an aging population. Life expectancy averages about 80 years.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What are two economic factors that encouraged growth of Canada's western population?

2. How do the country's religious practices and languages reflect the immigrant history of Canada?

Descriptive Writing

Imagine that the American colonies did not separate from Great Britain and remained a part of the British Empire. How might the history and development of Canada have been affected?

The Economy

Big Idea

The economies of the United States and Canada have grown and changed according to where and how the citizens of the two countries live.

Complete a graphic organizer similar to the one below by identifying the location of the “belt” regions listed.

“Belt” Region	Location
Wheat Belt	
Corn Belt	
Rust Belt	
Manufacturing Belt	



Read to Learn

Economic Activities *(page 167)*

Drawing Conclusions

As you read, finish the sentences:

Web page design is part of a

_____ economy.

Corn used to produce ethanol is an agricultural

_____.

The United States and Canada have **market economies** and are developing **postindustrial** economies, which emphasize service and high-tech businesses. About 75 percent of the region’s workers are employed in service jobs located in the **central business district** of urban areas. High-tech industries are less dependent on location than manufacturing and agriculture.

In the late 1900s, heavy industry left cities in the Manufacturing Belt to relocate south to the Sunbelt. Areas with older abandoned industrial areas acquired the nickname the “Rust Belt.” Many of those cities have converted factories for use in new industries, a process called **retooling**.

Farms in the region produce agricultural **commodities**. Most farms are family-run. Canada has less **arable** land than the United States but devotes 167 million acres to farming. The average size of farms has increased since the 1950s, while the number of farmers has decreased. Agricultural activities and products include cattle ranching and other livestock production, growing wheat in the Wheat Belt, and growing corn in the Corn Belt. Because of improved feed sources and automation, dairy farms are found in every American state and many Canadian provinces.

Transportation and Communications (page 168)**Identifying the Main Idea**

1. *The most popular form of passenger travel is*
 - a. *by railroad.*
 - b. *by automobile.*
 - c. *by mass transit.*
 - d. *by airplane.*
2. *U.S. broadcasting is owned by*
 - a. *the government.*
 - b. *a monopoly.*
 - c. *private companies.*
 - d. *universities.*

The road network in the U.S. is densest along the east and west coasts and along the Mississippi and Ohio River valleys. Most of Canada's roads are in the southern part of the country. Burning gasoline causes air pollution that affects most urban areas. Mass public transportation in some areas reduces the number of vehicles. The region's airports are used for long-distance travel. Passenger railroads and buses account for a small portion of the region's passenger travel.

Freight is carried by railroads, along inland waterways, and by long-haul trucks. Airplanes handle overnight deliveries. Gas and oil are carried by pipelines.

The region's communication networks include cellular and digital services. Business transactions and personal communications are also handled over the Internet. The region has thousands of television stations, radio stations, newspapers, and magazines. Canada's broadcasting and publishing services are publicly owned, while private companies operate these services in the United States. U.S. government regulations ensure that there is no communications **monopoly**, or total control of an industry by one person or company.

Trade and Interdependence (page 170)**Identifying the Main Idea**

Use the key words and phrases from the text to write statements explaining the lesson content.

The United States and Canada are part of the **global economy**, the merging of economies in which countries are interconnected and become dependent on one another for goods and services.

The U.S. has a **trade deficit** because it spends more on imports than it earns from exports. Some countries charge **tariffs**, or taxes on imports, that raise the price of U.S. products. Canada has a **trade surplus** because it earns more from exports than it spends on imports. The 1989 U.S.–Canada Free Trade Agreement (FTA) removed trade restrictions between the countries. In 1994 the North American Free Trade Agreement (NAFTA) eliminated trade barriers between the United States, Canada, and Mexico. Some businesses are now **outsourcing** to produce parts and products for domestic use or sale.

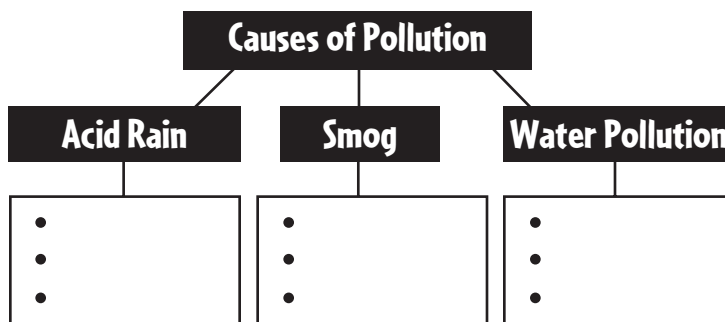
The Smart Border action plan between the U.S. and Canada enhances border security by encouraging the monitoring of the flow of people and goods, securing infrastructure, and sharing information. The Free and Secure Trade (FAST) program establishes complete and reliable records for all cargo.

People and Their Environment

Big Idea

People of the United States and Canada are seeking ways to manage resources, overcome the effects of pollution, and avoid further damage to the environment.

As you read about the types of pollution affecting the United States and Canada, complete a graphic organizer similar to the one below by listing the causes of pollution.



Notes

Read to Learn

Managing Resources (page 173)

Determining Cause and Effect

1. Before levees were built around New Orleans, the city was protected by _____.

2. Zebra mussels, which clog water intake valves in the Great Lakes, are a(n) _____ species brought in with the ballast on ships.

The United States and Canada do not always wisely manage their natural resources. **Clear-cutting**, or cutting down a whole forest for its timber, has destroyed many of the region's old-growth forests, endangered wildlife, and caused erosion and flooding. Wetland areas are disappearing as they are converted to agricultural or urban land uses. Wetlands protect water supplies and fisheries, and buffer coastal areas from storms and floods.

Resource mismanagement includes ignoring the balance between species in various ecosystems. **Overfishing** has depleted many of the region's fisheries. Because some types of wildlife have been hunted or driven away, other types of wildlife populations have grown out of control. Introduction of non-native plant and animal species causes environmental problems such as blocked waterways, crop destruction, and displacement of crucial native species. Efforts to reverse environmental damage have begun, but the region has a long way to go toward achieving the sustainable use of its natural resources.

Human Impact (page 174)**Problems and Solutions**

As you read, answer the following questions:

1. One way to reduce acid rain is to reduce

_____.

2. Hybrid vehicles help reduce smog because they use less

_____.

3. If _____ were not dumped into water illegally, water would be less polluted.

4. Construction of _____ has helped make the Nashua River safe for wildlife and people.

Acid rain is precipitation that forms when cars, power plants, and factories release chemical emissions that react with water vapor in the air. Acid rain corrodes buildings, damages crops, and pollutes soil and water. Much of the acid rain in Canada comes from the United States.

The sun's rays interact with automobile exhaust gases and industrial emissions, forming a visible haze called **smog**. In many urban areas, when officials find dangerous levels of smog, they issue alerts urging people to stay indoors and may also prohibit non-essential driving and the use of other gasoline-powered engines. Car manufacturers are producing hybrid vehicles and are researching vehicles that use fuel cells, biofuels, and solar power. Legislation has reduced the amount of pollutants in fuels. Smog can be reduced by walking, bicycling, or using public transportation.

Industrial wastes cause water pollution. Industries also cause thermal pollution in water. Runoff from fertilizers and pesticides also pollutes water. Water pollution speeds **eutrophication**, the process by which a body of water becomes rich in dissolved nutrients. As a result, excess algae growth can deplete the water's oxygen, leaving none for fish.

In 1972 the United States and Canada signed the Great Lakes Water Quality Agreement to combat pollution in the Great Lakes. The United States passed the Clean Water Act, mandating measures to restore the quality of U.S. waters. The passage of NAFTA has moved some environmental concerns to the U.S.–Mexico border, where rapid industrial growth along the Rio Grande threatens the environment.

Future Challenges (page 176)**Identifying the Main Idea**

Which of the following has had the greatest impact on global warming?

- a. use of fossil fuels**
- b. agricultural runoff**
- c. clear-cutting forests**
- d. nuclear plants**

Global warming is caused by natural forces, such as volcanic eruptions, and by human activity. Clearing of forests and burning of fossil fuels has resulted in the greenhouse effect.

In the Arctic regions of Alaska and Canada, thinning sea ice has forced caribou, polar bears, and seals to move farther north. Permafrost is beginning to thaw, buckling the land, weakening the foundations of houses, and causing villages to sink.

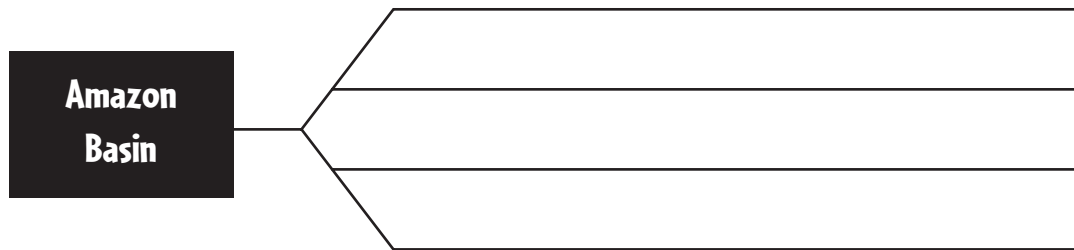
The United States and Canada are working to lessen dependence on fossil fuels. Government subsidies encourage utilities to limit emissions and include renewable energy sources, such as solar panels and biofuels, in their future plans. Dependability, efficiency, and cost are considered when examining whether these sources can keep up with the region's energy needs.

The Land

Big Idea

The rugged Andes and the massive rivers of Latin America influence human settlement in the region.

Complete a graphic organizer similar to the one below by listing the countries drained by the Amazon Basin.



Read to Learn

Landforms (page 203)

Drawing Conclusions

What qualities have attracted settlers to Latin America's mountains and plateaus?

Latin America is often divided into three areas: Middle America, which includes Mexico and seven countries in Central America; the Caribbean; and South America.

Mountains extend the entire length of Latin America. The rugged landscape of Latin America is caused by its location along the Pacific Ring of Fire. The Sierra Madre mountains are in Mexico. The Central Highlands are a chain of volcanic mountains in Central America. The Andes, the world's longest mountain range, consist of **cordilleras**, or ranges that run parallel to each other. The peaks in Peru and Bolivia encircle the **altiplano**, or high plain.

The Mato Grosso Plateau covers much of central Brazil. The Brazilian Highlands is a vast plateau further east in Brazil. Its eastern edge forms an **escarpment**, or a steep cliff or slope, that plunges sharply into the Atlantic Ocean.

Narrow lowland areas lie along most coasts of Latin America. Inland areas of South America have large grasslands, including the **llanos** of Colombia and Venezuela, and the **pampas** in Argentina and Uruguay. Cowhands called *llaneros* or *gauchos* drive herds of cattle across the plains.

Water Systems (page 205)**Formulating Questions**

As you read, write two questions about the main ideas presented in the text.

After you have finished reading, write the answers to these questions.

Latin America's waterways are used for transportation. Flowing through the heart of South America, the Amazon River is the world's second longest river. Hundreds of smaller rivers join the Amazon as it flows from the Andes to the Atlantic Ocean, forming the Amazon Basin.

Another river system is formed by the Parana, Paraguay, and Uruguay Rivers. It provides **hydroelectric power**, or electricity generated from the energy of water. These rivers flow into an estuary, an area where the tide meets a river current, called the Rio de la Plata.

The Rio Grande forms part of the border between Mexico and the United States. The human-made Panama Canal is also an important waterway that enables ships to travel between the Atlantic and Pacific Oceans without sailing around the southern tip of South America.

Latin America has few large lakes, but Lake Titicaca in the Andes of Bolivia and Peru is the world's highest navigable lake. Lake Maracaibo in Venezuela is the region's largest lake.

Natural Resources (page 206)**Predicting**

Preview the lesson to get an idea of what is ahead. First skim the section, then write a sentence or two explaining what you think you will be learning.

After you have finished reading, revise your statements as necessary.

Some countries in the region are among the world's leading producers of energy resources. Major oil and gas deposits lie in mountain valleys or in offshore areas that have helped to boost the economies of Mexico and Venezuela.

Latin America is also rich in mineral resources such as gold, silver, emeralds, copper, and bauxite—the main source of aluminum.

Because of the region's diverse landforms, not all countries in the region share equally in its natural resources. Furthermore, many economic, social, and political factors keep many resources from being fully developed.

Climate and Vegetation

Big Idea

Location and landforms result in vertical climate zones and tropical areas in Latin America.

As you read about the climate of Latin America, complete a graphic organizer similar to the one below by filling in the characteristics of the five vertical climate zones.

Climate Zone	Characteristics
tierra caliente	



Notes

Read to Learn

Elevation and Climate (page 208)

Making Inferences

Based on what you know about the tierra templada, why do you think more people live in this climate zone than any other?

Some climates of Latin America are affected more by elevation than by latitude. Spanish terms are used to describe five vertical climate zones that occur as elevation increases.

Tierra helada, or frozen land, is a zone of permanent snow and ice on the peaks of the Andes.

The **puna** is a cold zone between 12,000 and 16,000 feet, which supports some grasses.

Tierra fría, or cold land, lies between 6,000 and 12,000 feet. Frosts are common during winter. Potatoes and barley grow well there.

Tierra templada, or temperate land, lies between 2,500 and 6,000 feet. Vegetation includes broad-leafed and coniferous evergreens. Crops include coffee and corn. More people live in this vertical climate zone than any of the others.

Tierra caliente, or hot land, is at the lowest elevations between sea level and 2,500 feet. Vegetation is rain forest, and crops include bananas, sugar, rice, and cacao.

Climate and Vegetation Regions (page 209)**Formulating Questions**

As you read the lesson, write down questions you have about what you read. When you have finished reading the lesson, answer your questions.

Large areas of Latin America have some type of tropical climate with lush vegetation.

A tropical wet climate with hot temperatures and large amounts of rainfall year-round dominates much of the region. The world's largest tropical rain forest covers the Amazon Basin. Trees grow so close together that they form a continuous layer of leaves called a **canopy**. The Amazon rain forest has more types of plants and animals than anywhere else on Earth.

A tropical dry climate has hot temperatures, large amounts of rainfall, and a long dry season. This climate is found in southwestern Mexico, most Caribbean islands, and north central South America. Many grasslands flourish in this climate region.

A humid subtropical climate has short, mild winters and long, hot and humid summers. This climate is found over much of southeastern South America. Short grasses are the natural vegetation of these areas today. Farmers plant crops in this region to hold the topsoil in place.

A desert climate is dry year-round. This climate is found in parts of northern Mexico, coastal Peru, Argentina, and Chile. There is little vegetation in this climate region, but prickly cacti and drought-resistant plants have adapted to the harsh environment.

A steppe climate has hot summers, cool winters, and light rainfall. The vegetation is grassy or lightly forested. This climate is found in northern Mexico, northeastern Brazil, and south central South America.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. Which climate regions are represented in Latin America?

2. How do Latin America’s location and landforms affect climates even within particular regions?

Descriptive Writing

Pretend you are on a hiking tour of one of the climate regions of Latin America. In the form of a journal entry, write about the area you are hiking by describing its vegetation and climate.

Chapter 9, Section 1 (Pages 216–220)

Mexico

Big Idea

Mexico has been shaped by the civilizations of the Maya and the Inca, and by the Spanish.

As you read, complete a graphic organizer similar to the one below by listing the reasons why many people migrate from rural areas to urban areas.

Reasons for Internal Migration



Notes

Read to Learn

Population Patterns (page 217)

Predicting

Preview the section to get an idea of what is ahead. First, skim the section. Then write a sentence or two describing what you think you will be learning. After you have finished reading, revise your statement as necessary.

In Mexico, the ancestors of Native Americans were the first people to settle the region. For this reason, Native Americans today are known as **indigenous** peoples, or peoples descended from an area's first inhabitants.

Mexico's first inhabitants probably migrated from Asia 40,000 years ago. They evolved into their own cultural groups and developed highly organized civilizations. Eventually, a blending of peoples of Native American and European descent created a new ethnic group called **mestizo** that currently makes up the largest part of the population.

Mexico is the world's most populous Spanish-speaking country. People migrate to urban areas, primarily Mexico City, because of limited agricultural land and lack of access to social services in rural areas. This one-way migration pattern results in rapid **urbanization**—the migration of people from the countryside to cities and the natural population growth within urban areas.

With more than 19 million people, the region's largest **megacity**—a city with more than 1 million people—is Mexico City. Mexico city is a **primate city**, an urban area that dominates its country's economy, culture, and political affairs.

History and Government (page 218)**Analyzing Information**

Based on what you have read, what types of factors led to Mexico being taken over by caudillos after winning its independence?

Centuries before Europeans arrived, the Maya and the Aztec Empires flourished in the area that is now Mexico.

The Maya dominated southern Mexico, established cities, developed calendars, and made **glyphs**, picture writings carved in stone, on temples to honor their gods and record history.

The Aztec civilization arose in central Mexico in the A.D. 1300s. Its capital was built on an island in a lake that is now the site of Mexico City. To feed the growing population, they grew crops on **chinampas**—floating “islands” made from large rafts covered with mud from the lake bottom.

Spanish **conquistador**, or conqueror, Hernán Cortes defeated the Aztec in 1521 and claimed Mexico for Spain. For the next three centuries, Mexico was governed by royally appointed officials known as **viceroy**s.

Mexico was the first country in the region to gain its independence in 1821. Power struggles, public dissatisfaction, and revolts led to a chaotic situation in the new republic. It was during this time that a new kind of leader emerged—the **caudillo**, or dictator. With the backing of military forces and wealthy landowners, caudillos became absolute rulers. In 1917 reforms established Mexico as a federal republic.

Culture (page 219)**Making Inferences**

Think about the Mexican family. Why do Mexicans place so much emphasis on family life?

Spanish is the official language of Mexico, and is spoken by more than 95 percent of the people. Nearly 90 percent of Mexico’s population is Roman Catholic. Some indigenous peoples blend traditional Maya beliefs with Roman Catholic beliefs. This blending of beliefs and practices is called **syncretism**.

Government promotion of literacy has led to gains in education. As employment and education improve, health problems linked to poverty and **malnutrition**—a condition caused by a lack of proper food—decrease.

Early Native American architecture includes Maya pyramids and Aztec temples and palaces. Some of these buildings were decorated with **murals**, or wall paintings, and **mosaics**, pictures or designs made with colored stone or tile.

Mexicans highly value the family. Each person is part of an **extended family** that includes great-grandparents, grandparents, aunts, uncles, and cousins, as well as parents and children.

Popular sports in Mexico are bullfighting, *fútbol* (soccer), baseball, and jai alai, a game much like handball. Almost any social occasion is a party—a *fiesta*.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

- 1.** What contributions have Latin America's Native American empires made to the region's cultural development?

- 2.** How has European rule influenced Mexico's political and social structures?

Expository Writing

Write a paragraph that describes how Mexico's sporting activities are influenced by a variety of cultures. Some external research may be necessary.

Central America and the Caribbean

Big Idea

Native American, European, and African cultures have influenced Central America and the Caribbean.

As you read, complete a graphic organizer similar to the one below by identifying the many ethnic groups that make up the population of Central America and the Caribbean.



Read to Learn

Population Patterns *(page 222)*

Determining Cause and Effect

What has led to a scarcity of jobs and housing in many cities in the region?

In Central America, people of Maya descent, European descent, and mestizos make up a majority of the population. In the Caribbean, European immigrants and people of African descent form a large part of the population.

Most people live in the Pacific coast highlands in Central America. Caribbean countries combine small land areas with large, rapidly growing populations. External migration has been occurring in both areas because large populations are seeking better economic opportunities and escape from civil wars and unstable politics. Internal migration throughout Central America and the Caribbean has increased urban growth. The majority of the urban population lives in capital and port cities.

Unfortunately, people migrating to cities cause rapid population growth, making jobs, housing, electricity, and drinking water less accessible.

History and Government (page 223)**Formulating Questions**

As you read the lesson, write down questions you have about what you read. When you have finished reading the lesson, answer your questions.

Columbus's voyages from 1492 to 1504 led to Spanish exploration and colonization of the Caribbean islands. Columbus's arrival in the Americas also set off one of the most significant events in world history—the Colombian Exchange. This movement of plants, animals, and infectious diseases between Europe and the Americas began as Europeans claimed lands in the Americas for Spain, Portugal, France, and Britain.

Balboa was the first to grasp the unique geographic features of Panama. The Panama Canal was eventually created as a waterway between the Atlantic and Pacific Oceans.

François Toussaint-Louverture, a soldier born to enslaved parents, led a revolt of enslaved Africans in Haiti. By 1804 Haiti had won its independence from France. Cuba won its independence from Spain in 1898. In 1823 independent Central American provinces formed a federation called the United Provinces of America, which eventually separated into five separate countries.

Today, many countries in Central America and the Caribbean are struggling to end corrupt politics and violence and bring economic benefits to all their citizens.

Culture (page 225)**Determining Cause and Effect**

Why is family structure in the Caribbean often matriarchal?

Spanish is the primary language of most countries in Central America. In the Caribbean, many European languages are spoken. Each country has its own **dialects**, or forms of a language unique to a particular place or group. Many people speak one of many forms of **patois**, dialects that blend several languages. Many religions are practiced in the region, including Roman Catholic, Protestant Christianity, Hinduism, Islam, Santería, and voodoo.

Children are generally required to complete elementary school, but many do not because of economic and accessibility issues. Countries with highly developed welfare systems have better standards of living and higher life expectancies. Countries with less-developed economies have little money to spend on health care and have more disease and malnutrition.

Arts practiced in the region include woodcarving, pottery, metalwork, weaving, and handwoven textiles.

In Central America, the importance of one's family in a community is a factor that determines one's social class. In the Caribbean, the structure is often **matriarchal**, or ruled by a woman such as a mother, grandmother, or aunt.

Popular sports, especially in the Caribbean, are baseball, basketball, and volleyball.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What is the dominant religion in the region?

2. What ethnic groups make up the populations of Central America and the Caribbean?

Informative Writing

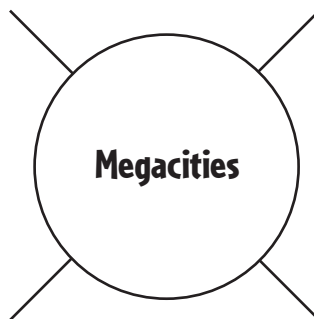
Write a paragraph that describes what the explorer Balboa noticed about the geographic features of Panama that helped make it such an important area today.

South America

Big Idea

South America has been influenced by Native American and European cultures, migration, physical geography, and urbanization.

As you read, complete a web diagram similar to the one below by listing South America’s megacities.



Notes

Read to Learn

Population Patterns (page 228)

Making Inferences

Why would highly skilled and educated workers want to leave South America?

South America is home to an ethnically diverse population of 373 million people. Many indigenous groups live in the Andes region of Ecuador, Peru, and Bolivia. People from Asia, Europe, and Africa have migrated to South America.

Due to physical geography, most South Americans live along its edges. Brazil changed its capital to an interior city in order to draw people away from the coasts. But with large land areas, most countries in the region have low population densities.

Violence and poor economic prospects are motivating many people to leave South America, but compared to Mexico, migration to the United States is low. Even so, some countries are experiencing **brain drain**, or the loss of their more highly educated and skilled workers to other countries.

Today, the population is disproportionately urban due to migration. This urbanization is the cause of many challenges in the region, including housing, employment, maintaining infrastructure, crime, and traffic.

History and Government (page 229)**Identifying the Main Idea**

After you finish reading, write a sentence or two describing what you think is the main idea of the lesson.

Before the Incas, other indigenous groups developed agriculturally based societies. The Inca ruled through a general government headed by an emperor. Inca peoples were skilled in engineering and built a network of roads and irrigation systems. With no written language, Incas kept financial and historical records using **quipu**, a series of knotted cords of various colors and lengths.

The Inca's great mineral wealth enticed the Spanish conquistadors to destroy the empire. Other European nations also settled in the region and set up highly structured political systems. These colonies became sources of wealth for home countries. Diseases and labor hardships dramatically reduced the Native American population, so Europeans imported African slaves.

Encouraged by other successful revolutions, most South American countries had achieved independence by the mid-1800s. This post-colonial period was politically and economically unstable, with elites gaining power through force. Today, although many of the countries are democratic, they are still seeking to overcome corrupt politics, violence, and social and economic challenges.

Culture (page 231)**Determining Fact from Opinion**

Which of the following is an opinion about religion in South America?

- a. Roman Catholicism is the most popular religion in the region.*
- b. Macumba mixes West African religions with Roman Catholicism*
- c. The diversity of religions will lead to violence in the region.*

South America is one of the world's most culturally diverse areas. Spanish, Portuguese, Dutch, and French are each spoken in different parts of the region. Many Native American languages have also survived. Most South Americans are Roman Catholic and other religions include Protestant Christianity, Hinduism, Buddhism, Shinto, Islam, Judaism, and Eastern Orthodoxy.

Many countries have improved literacy rates by devoting more funds to public schools. Some public universities provide higher education at little or no cost. In other countries, education is considered a luxury. Some areas with stable economies have better health care and people live longer. But health concerns are still prevalent in rural areas and amongst the poor.

Native American arts have survived in many different forms such as architecture, arts and crafts, and music. Spanish influence is seen in art forms as well. Many South American writers, such as Gabriel García Márquez, have won international recognition.

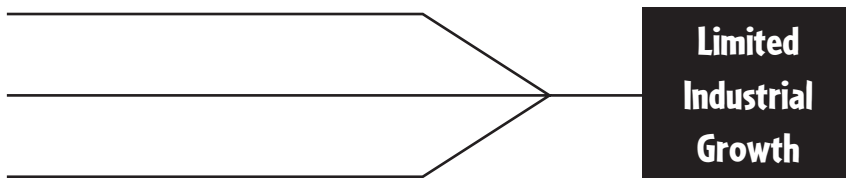
Urban and upper-class families typically consist of nuclear households. Loyalty to extended family remains strong. Soccer is a major sport in South America. Carnival is a festival celebrated before Easter.

The Economy

Big Idea

The economies of most Latin American countries still depend on agriculture, but many of the region’s countries are trying to develop their economies by promoting trade within the region and with the rest of the world.

As you read about economic activities in Latin America, complete a graphic organizer similar to the one below by listing factors that limit industrial growth.



Read to Learn

Economic Activities (page 243)

Analyzing Information

As you read the section on agriculture, think about its organization and main ideas. Then write a sentence explaining the organization and list three main ideas.

Latin American countries **export**, or sell to other countries, much of their farm products. Farmland has been distributed among wealthy landowners and a larger group of farm workers called **campesinos**. **Latifundia** are large agricultural estates owned by wealthy families and businesses. **Minifunda** are small areas of land farmed by campesinos to feed their families. Latin America’s physical geography is suitable for **cash crops** produced in large quantities to be sold or traded, such as coffee, bananas, and sugarcane.

Most Latin American countries are **developing countries** working toward a greater use of manufacturing and technology. In 2006 manufacturing accounted for only 4 percent of Mexico’s **gross domestic product (GDP)**, the value of goods and services produced in the country in a year. **Service industries** that provide services rather than goods have been growing in many countries of the region.

Industrial growth has been slowed by several factors, but American and Japanese firms have built **maquiladoras** or foreign-owned factories, along the United States-Mexico border. These are located in **free trade zones** in which trade restrictions do not apply.

Transportation and Communications (page 245)**Formulating Questions**

As you read, write two questions about the main ideas presented in the text.

After you have finished reading, write the answers to these questions.

Building roads and railroads in Latin America has been difficult and slow. Many governments lack the money for building projects. The rugged mountains, dense rain forests, and deserts are other barriers to building roads and railroads. The region's major road system is the Pan-American Highway. This road runs from northern Mexico to southern Chile, linking more than a dozen Latin American capitols. Important water systems in the region include the Amazon River, the Paraná-Paraguay, and the Panama Canal. All major cities in the region have airports.

The major sources of information in the region are newspapers, radio, and television. Governments may sometimes censor information. Few people have telephones in their homes. In larger cities, many people use cellular phones. Internet use in Latin America is expected to grow rapidly.

Trade and Interdependence (page 246)**Determining Cause and Effect**

Why are some people in the United States against the CAFTA agreement?

Latin America depends on foreign trade to get the goods it cannot produce. In 1992 Mexico, the United States, and Canada signed the North American Free Trade Agreement (NAFTA). This agreement has increased the flow of goods, services, and people among the three countries. NAFTA has helped increase Mexico's exports and has provided thousands of new jobs.

The United States and six Central American countries signed the Central American Free Trade Agreement (CAFTA) in 2005 to lower trade barriers. Critics of this trade agreement fear additional job losses in the United States and worker exploitation.

Many Latin American countries have large foreign debts. These debts keep some countries from financing industrial development. Some international organizations are looking for ways to offer debt relief.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What is the basis of the economies of many Latin American countries?

2. What are the causes and consequences of Latin America's economically dependent status?

Expository Writing

Write a paragraph that describes the advantages and disadvantages of the North American Free Trade Agreement (NAFTA) for Mexico.

People and Their Environment

Big Idea

Rapidly increasing human populations and consumer demand for natural resources place tremendous stress on these resources and pose serious challenges for the preservation of rain forests in Latin America.

As you read about concerns for the rain forest, use the major headings of the section to create an outline similar to the one below.

<p>I. Managing Resources</p> <p>A.</p> <p>B.</p> <p>II. Human Impact</p> <p>A.</p> <p>B.</p>



Notes

Read to Learn

Managing Resources (page 251)

Determining Cause and Effect

What is one major unintended effect of slash-and-burn farming?

Latin American rain forests are disappearing as a result of **deforestation**—the clearing or destruction of forests. One solution is to work toward **sustainable development**, technological and economic growth that does not use up an area’s resources.

One cause of deforestation in the Amazon basin is **slash-and-burn farming**. This involves clearing portions of the rain forest by cutting down plants and trees, drying them out, and then burning them to make the soil more fertile. But frequent flooding of the region causes fertile soil to wash away. This process has accelerated under pressure to meet the growing demand for soybeans.

Deforestation is a direct danger to the world’s biodiversity and rain forest resources, such as medicines. Almost 20 percent of the Amazon rain forest has been destroyed.

The region’s countries face social and economic issues that make it difficult to stop deforestation. **Reforestation**, or the planting of young trees on the land, is a possible solution to the problem. Developing new methods of farming, mining, and logging, along with conservation, can protect the forests and help the economy.

Human Impact (page 252)**Synthesizing Information**

What factors combine to lead to increased air pollution in Latin American cities?

Latin America faces environmental challenges from rapid urbanization. This happens when a city's rate of population growth is greater than the available resources. Many people cannot find jobs or housing when they move to the city. They often end up living in **shantytowns**, makeshift communities on the edge of cities. Shantytowns are often especially susceptible to natural disasters, such as mudslides and floods, because of their locations. Shantytowns lack running water and underground sewage systems, so disease can spread rapidly. Many people develop malnutrition.

Air pollution is common because there are few clean air laws. Latin American governments and international agencies are working to help solve the problems of rapid urbanization.

Multinational firms and free-trade agreements have increased industrial growth in some countries, which has led to increased environmental risks.

Future Challenges (page 253)**Making Generalizations**

Why are Latin American countries generally susceptible to natural disasters?

Latin America faces many regional and international challenges.

Border disputes have erupted over the rights to natural resources. Money that could be used for development has instead been used in border wars. However, economic incentives may encourage countries to resolve their differences.

The physical geography of the region makes it vulnerable to natural disasters, such as hurricanes. Regional governments are cooperating in the use of technology to track these storms. Scientists are also collecting information about volcanic eruptions in the Caribbean. This information will help produce more detailed forecasts and predictions around the world.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How has development affected Latin America's forest resources?

2. What challenges are posed by the growth of Latin America's urban population?

Expository Writing

The countries of Latin America are facing many challenges of regional and international significance. Write a paragraph that describes at least two of these issues and how these might have an impact outside of the region.

The Land

Big Idea

Physical forces shaped Europe’s landforms, water systems, and natural resources. These features have shaped the lives of people living in Europe. Complete a web diagram similar to the one below by filling in the natural resources found in Europe.



Notes

Read to Learn

Landforms (page 281)

Identifying the Main Idea

1. *What landforms cover most of the European mainland?*

2. *What are three effects of glaciers on Europe’s landmasses?*

Erosion and **glaciation**, the process in which glaciers formed and spread, rounded Europe’s northwestern mountains. The Pyrenees, the Alps, and the Carpathians are in southern Europe. The Northern European Plain stretches from southeastern England and western France to Poland, Ukraine, and Russia.

Loess, rich soil left by glaciers, covers the southern edge. The Great Hungarian Plain extends from Hungary to Croatia, Serbia, and Romania.

Europe’s coastline touches the Atlantic Ocean and the Baltic, North, Mediterranean, and Black Seas. Since the Middle Ages, the Dutch have built **dikes**, large banks of earth and stone, to hold back water, forming reclaimed lands called **polders**.

Northern peninsulas include the Scandinavian Peninsula with its **fjords**, steep-sided inlets by the sea, and Denmark’s Jutland Peninsula, extending into the North Sea. Southern peninsulas include the Iberian Peninsula, the Italian Peninsula, and the Balkan Peninsula.

Europe’s islands include Iceland, the British Isles, and islands in the Mediterranean and Adriatic Seas.

Water Systems (page 283)**Making Inferences**

As you read the lesson, look for clues in the descriptions that might help you answer the question:

How does Europe's network of rivers and canals contribute to industrial development in the region?

Many of Europe's rivers flow from mountain and highland areas to the coasts. Connecting navigable rivers with canals has made it possible to use natural waterways for transportation and has made waterways accessible to many parts of the region. Rivers and canals provide water for irrigation and electricity.

The short rivers of the Scandinavian Peninsula do not provide easy connections between cities. Rivers on the Iberian Peninsula are generally too narrow and shallow for large ships. Oceangoing ships reach the port of London on England's Thames River.

Relatively long rivers in Europe's interior link inland areas and provide links to the sea. The Rhine River is the most important river in western Europe. It flows from the Swiss Alps through France and Germany and into the Netherlands, connecting many industrial cities to the port of Rotterdam on the North Sea.

The Danube River, eastern Europe's major waterway, flows from southern Germany's Black Forest through Hungary and Romania to the Black Sea. The Main River, a tributary of the Rhine, is connected to the Danube by the Main-Danube Canal, linking the North Sea with the Black Sea.

Other major European rivers include the Seine, Rhone, and Loire in France; the Elbe and Weser in Germany; the Vistula in Poland; the Po in Italy; and the Dnieper in Ukraine.

Natural Resources (page 284)**Identifying the Main Idea**

Why was the discovery of iron and coal deposits in Europe important?

Coal and iron ore found in Europe were important to the development of modern industry. Europeans rely on oil, gas, and nuclear and hydroelectric power. Oil and natural gas deposits under the North Sea contribute to Europe's energy needs. Major reserves of coal are located in the United Kingdom, Germany, Ukraine, and Poland. Coal is an important resource, but is being replaced by cleaner-burning natural gas.

France lacks oil and gas reserves and has invested in nuclear power. In places where other fuels are scarce, Europeans burn peat. There are deposits of iron ore in Sweden, France, and Ukraine. Other mineral resources in Europe include bauxite, zinc, and manganese.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. Give one example of each of the following European landforms: a landform affected by glaciation; a landform affected by wind; a landform affected by tectonic or volcanic activity.

2. Why are rivers vital to Europe's economy?

Expository Writing

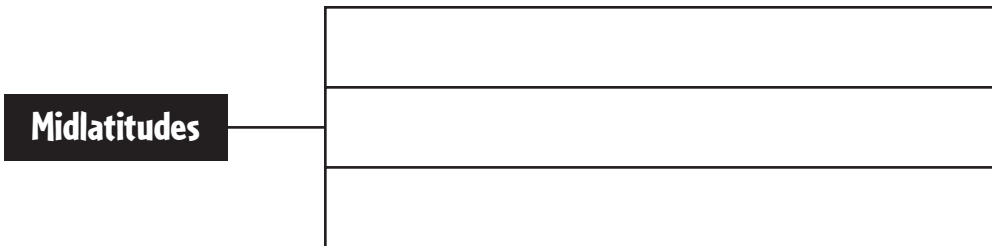
The Rhine River flows through three countries from its source in the Swiss Alps, along part of the border between France and Germany, through Germany for most of its length, to its final destination in the North Sea off the Netherlands. Write a paragraph about the political or economic challenges the countries along the river's course face.

Climate and Vegetation

Big Idea

Latitude, mountain barriers, ocean currents, and proximity to large bodies of water affect Europe’s climate and vegetation.

As you read about the climates of Europe, complete a graphic organizer similar to the one below by listing and describing the types of climate regions found in the midlatitudes.



Notes

Read to Learn

Influences on Climate *(page 286)*

Predicting

Before you read the lesson, predict what you believe are the major influences on climate in Europe. As you read the lesson, adjust or change your prediction.

Europe’s northern latitude and its proximity to the sea influence its climate and vegetation. Westerly winds and presence of large mountain ranges also affect climate.

Western and southern parts of Europe, along large bodies of water, benefit from warm maritime winds, and have a generally mild climate compared to other places at the same latitude. For example, Paris, France, and Boston, Massachusetts, are at about the same latitude, yet January temperatures in Paris are milder than those in Boston due to the warm winds brought by the North Atlantic Current that moves along the European coast. Parts of eastern and northern Europe have a colder climate than western and southern Europe because of their distance from the warming effects of the Atlantic Ocean.

Natural vegetation in the region varies from forests and grasslands to tundra plants and small shrubs.

Climate Regions (page 287)**Identifying
the Main Idea**

As you read the lesson, write the letter of the correct climate description next to the correct region.

___ 1. Europe's high-latitudes

___ 2. western Europe

___ 3. southern Europe

___ 4. eastern Europe

___ 5. the Alps

___ 6. southeastern Europe; the Meseta

a. highland climate; foehns may trigger avalanches

b. dry steppe

c. bitterly cold winter, cool summer; permafrost

d. marine west coast

e. Mediterranean climate; siroccos may bring high temperatures

f. humid continental

Europe's far north high-latitude climates have bitterly cold winters and short, cool summers. The tundra has **permafrost**, soil that is permanently frozen below the surface, and supports mosses, small shrubs, and summer wildflowers. The subarctic climate supports a vast coniferous forest.

The Norwegian Current and the North Atlantic Current bring a marine west coast climate to western Norway and southern parts of Iceland and Sweden, with cool summers, mild winters, and abundant annual precipitation. Parts of eastern Norway and southern Sweden and Finland sheltered by mountains have a humid continental climate with warm summers, cold winters, and moderate precipitation.

Most of western Europe has a marine west coast climate with mild winters, cool summers, and abundant rainfall. The Gulf Stream and the North Atlantic Current bring warm waters from the Gulf of Mexico and regions near the Equator, and prevailing westerly winds carry warm, moist air to western Europe. Natural vegetation includes deciduous trees, as well as coniferous trees in cooler Alpine mountain areas, up to the **timberline**, the elevation above which trees cannot grow.

Southern Europe's Mediterranean climate has hot, dry summers and mild, rainy winters. A humid subtropical climate stretches from northern Italy to the central Balkan Peninsula. The Alps block moist Atlantic winds, so less precipitation falls in southern Europe than in northwestern Europe. Local winds may change normal weather patterns. The **mistral**, a strong north wind from the Alps, can send bitterly cold air into southern France. **Siroccos**, high, dry winds from North Africa, may bring high temperatures to the region. Vegetation includes drought-resistant shrubs and small trees.

Eastern Europe has a humid continental climate with cold, snowy winters and hot summers. Warm ocean currents have less influence, so summer and winter temperatures vary more widely. Vegetation is generally a mix of deciduous and coniferous forests.

The Alps have a highland climate with colder temperatures and more precipitation than nearby lowland areas. Dry winter winds called **foehns** blow down from the mountains into valleys and plains and can trigger **avalanches**, destructive masses of ice, snow, and rock sliding down mountainsides.

In southeastern Europe, a steppe climate, with hot summers and extremely cold winters, extends from Hungary, Serbia, Montenegro, and Romania, through Ukraine and Central Asia. Precipitation levels vary. Farming is difficult because of the extreme temperatures, periods of drought, poor and easily eroded soils, and high winds. Parts of the Meseta, an interior plateau located on the Iberian Peninsula, also have a dry steppe climate.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What are the major influences on climate in Europe?

2. How do winds affect the climate regions of Europe?

Expository Writing

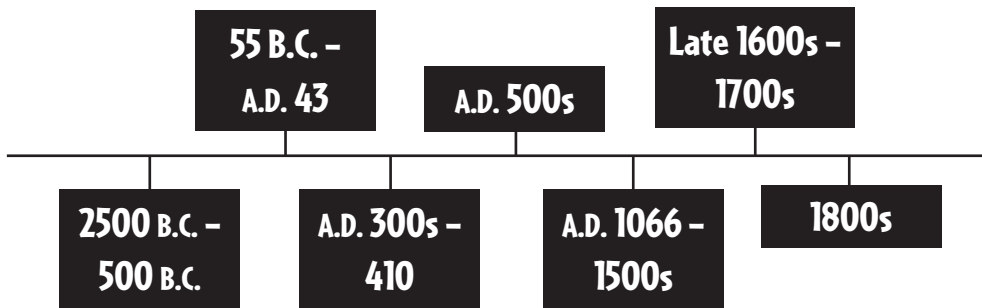
The city of Dublin, Ireland, is at about 53° N latitude, and has an average January high temperature of about 44° F (about 6.6° C). The city of Duluth, Minnesota, is at about 48° N latitude, and has an average January high temperature of about 16° F (about -8.88° C). Write a paragraph explaining possible reasons that the average high winter temperatures are so different although the latitudes are similar.

Northern Europe

Big Idea

The cultures of northern Europe have created an industrialized landscape of successful nations and strong economies.

Complete a time line like the one below by recording key events in northern Europe’s history.



Read to Learn

Population Patterns (page 295)

Identifying the Main Idea

Write the letter of the correct description next to the correct term.

- ___ 1. *immigrate*
- ___ 2. *refugee*
- ___ 3. *migrate*

- a. *move from one area to another*
- b. *person who flees to another country for safety*
- c. *move into one country from another country*

The British Isles include the United Kingdom and Ireland. The United Kingdom includes England, Wales, Scotland, and Northern Ireland. Celtic peoples were followed by Romans, Normans, and other invaders. In the last century, large **immigrant** communities have settled in the United Kingdom. European **refugees**—people who flee to another country for safety—settled in Great Britain, which includes England, Scotland, and Wales, at the end of World War II.

Swedes, Norwegians, and Danes have a shared Germanic heritage, related languages, and similar ways of life. Immigrants from eastern Europe are reshaping Scandinavian cultures.

The United Kingdom is the most densely populated country in the subregion. Denmark and Ireland are also densely populated. Scandinavia has lower population densities.

Internal and external migration shaped the subregion. Internal migration from rural areas to urban areas is often driven by poverty in rural areas. Economic troubles also drive external migration.

The subregion’s largest and oldest urban area is London, the capital of the United Kingdom. Stockholm, Sweden, has about 1.7 million people.

History and Government (page 296)**Identifying the Main Idea**

Write the letter of the correct definition next to the correct term.

- ___ 1. *Middle Ages*
- ___ 2. *Reformation*
- ___ 3. *Enlightenment*
- ___ 4. *Industrial Revolution*

- a. *replaced human labor with machines*
- b. *period between ancient and modern*
- c. *religious movement; brought Protestantism to Europe*
- d. *valued reason and questioned tradition*

Britain's earliest people may have crossed a land bridge from mainland Europe over 500,000 years ago. Between A.D. 43 and the A.D. 400s, Britain was part of the Roman Empire. The Angles, Saxons, and Jutes invaded during the early **Middle Ages**, the period between ancient and modern times, which lasted from about A.D. 500 to A.D. 1500. Vikings raided European coasts during this period, leading to the development of Denmark, Sweden, and Norway.

In 1066 the Normans established **feudalism**—a system in which monarchs, or lords, gave land to nobles in return for pledges of loyalty. Denmark, Norway, and Sweden were united throughout the 1400s, but then divided. The **Reformation** was a religious movement of the 1500s that lessened the power of the Roman Catholic Church and introduced Protestantism to Europe. During the early 1700s, a movement called the **Enlightenment** valued reason and questioned tradition. Many northern Europeans fought for a voice in government. The **Industrial Revolution** transformed manufacturing by replacing human labor with machines. Industrial and social changes created **industrial capitalism**, an economic system in which owners used profits to expand their companies. Poor working conditions led to the birth of **communism**—a philosophy that called for economic equality and ownership of resources by workers. After World War II, the division of Europe led to the **Cold War**, a power struggle between the Soviet-controlled Communist world and the non-Communist world.

Northern European countries belong to the **European Union (EU)**. The goal of the EU is a united Europe in which goods, services, and workers can move freely among member countries.

Culture (page 298)**Drawing Conclusions**

In what ways do countries in northern Europe care for their populations?

Northern Europe's languages are mostly Indo-European, such as Swedish and English. Most countries are Protestant, but there are many minority religions. In northern Europe, literacy rates are nearly 100 percent. Countries such as Sweden, known as **welfare states**, offer complete social welfare and health-care programs to their citizens.

In the late 1700s, **romanticism** focused on emotions, historical events, and the struggles of individuals. The works of Hans Christian Andersen and William Shakespeare are known throughout the world.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

- 1. Over the past 100 years, how has immigration influenced the populations of countries in Northern Europe?

- 2. How has physical geography helped shape the population patterns of northern Europe?

Expository Writing

Although they do not all provide the same benefits to their citizens, all the Countries in northern Europe are welfare states. Education, health-care, unemployment benefits, disability payments, retirement benefits, child care, parental leave, and housing subsidies may be guaranteed by the government. Write a paragraph comparing some of the advantages and disadvantages of living in a country that is a welfare state.

Western Europe

Big Idea

The countries of western Europe form a cultural subregion influenced by its location, history, and its revolutionary role in world events.

As you read about western Europe, use the major headings of the section to create an outline like the one below.

<p>I. Cultural Characteristics</p> <p>A.</p> <p>B.</p> <p>II. The Arts</p> <p>A.</p> <p>B.</p>



Notes

Read to Learn

Population Patterns (page 300)

Making Inferences

Read the section for clues to help you answer the question:

How is a guest worker different from an immigrant?

The current populations of France, the Netherlands, Belgium, and Switzerland are made up of two or more ethnicities that have blended over centuries. Germany and Austria were once nearly ethnically homogenous; today numerous ethnic groups live in both countries.

France has many immigrants, especially Muslims from Algeria and Morocco. Since the 1950s, Germany has invited **guest workers**—foreigners who work on a temporary basis in a country other than ones in which they are citizens—to be part of its workforce.

Western Europe is densely populated. Germany is the most populous country in Europe. Population centers in France include Paris and the Mediterranean coast. The Netherlands and Belgium have the highest levels of population density due to their small land areas and major urbanization.

Migration in western Europe consists mostly of people moving to urban areas. Suburbanization, in which people move from large cities to nearby suburbs, is common. Since World War II, immigration has led to urban growth.

History and Government (page 301)**Identifying the Main Idea**

Write the letter of the correct definition next to the correct term.

- ___ 1. *Crusades*
- ___ 2. *Reformation*
- ___ 3. *Enlightenment*
- ___ 4. *Holocaust*

a. *mass killing of European Jews*

b. *a series of religious wars to win Palestine from Muslim rule*

c. *religious movement; brought Protestantism to Europe*

d. *encouraged democracy and social change*

Celts once populated much of western Europe. Romans held much of their land for hundreds of years. The Basque people lived in the Pyrenees well before the Celts. Frisians settled in the northern part of the Netherlands on the North Sea around 400 B.C.

After the fall of the Roman Empire, the Franks established an empire and spread Roman Catholicism. The Holy Roman Empire lasted from about A.D. 962 until about 1806. Beginning in the A.D. 1000s, European armies fought the **Crusades**—a series of brutal religious wars—to win Palestine from Muslim rule.

The late 1400s brought the Renaissance. During the Reformation, new Protestant religions appeared, and some countries experienced religious civil wars. After the Thirty Years' War (1618–1648), France emerged as a major power. In the 1700s, the French Revolution overthrew the monarchy, which was restored by 1815. The Enlightenment encouraged democracy and social change. In the mid-1800s, the kingdom of Prussia unified Germany.

Rivalries between the Central Powers and the Allies led Europe into World War I. The peace treaty demanded that Germany make **reparations**, or payment for damages. The **Holocaust**, the mass killing of more than 6 million European Jews, occurred during World War II. After World War II, the division of Germany into Communist East Germany and democratic West Germany lasted until the fall of the Soviet Union in 1991. In the 1950s, Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany grew closer economically and politically. This unity led to the European Union.

Culture (page 302)**Identifying the Main Idea**

Complete the following sentence with terms from the lesson:

An artistic movement called _____ depicted everyday life, while the _____ movement captured immediate experiences of the natural world.

Realism—an artistic movement that focused on accurately depicting the details of everyday life—rose in the mid-1800s. Later in the century, the **impressionists** moved outdoors to capture immediate experiences, or “impressions,” of the natural world.

Most people in western Europe speak Indo-European languages, including German and French. The Basque language, Euskera, is not related to any other language. Many countries have one or more official languages.

Western Europe is Christian, and most are Roman Catholic.

Western Europe is 98–100 percent literate, and laws provide for education of all students. Europeans have a high standard of living. Many governments provide social services. Western Europe has an aging population with declining birthrates and death rates.

The people enjoy a variety of sports and leisure activities.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

- 1.** What are three ways that religion has helped shaped the history and governments in western Europe?

- 2.** How did World War II help shape the population patterns of western Europe?

Expository Writing

The people of western Europe have a high standard of living, and governments provide citizens with medical care, maternity and retirement benefits, and other services. The population in Western Europe is aging, with declining birthrates and death rates. Write a paragraph about some of the social problems Western Europe may face in the next twenty-five years.

Southern Europe

Big Idea

The centuries-old cultures of southern Europe have created modern industrialized nations that still maintain distinct lifestyles.

As you read about the history of southern Europe, complete a graphic organizer like the one below by listing the accomplishments of the Greeks and the Romans.

People	Accomplishments
Greeks	
Romans	



Read to Learn

Population Patterns *(page 307)*

Making Inferences

Read the section for clues to help you answer the question:

How has access to the sea affected the historical population patterns of the countries of southern Europe?

The people of Italy are mostly Italian. Their ancestors established the region's first civilization. The peoples of Spain include the Iberians. Catalans, in northeastern Spain and the separate state of Andorra, speak the Romance language of Catalan.

The language and culture of Greece dates back at least 3,500 years, and includes the seafaring Minoans and Mycenaeans. Portugal's long coastline has made it accessible throughout history, resulting in a homogenous mix of early European ethnic groups.

Italy is southern Europe's most populated country. Vatican City, located within the city of Rome, is home to the Roman Catholic Church and is the world's smallest independent state. Spain has a lower population density than most of Europe. Its population is concentrated in coastal areas and around major industrial areas. Southern Europe has a long history of emigration. More recently, immigration has outpaced emigration in southern Europe. Many people are moving to urban areas.

Rome, Italy's capital, was once the center of the Roman Empire. Athens, the capital of Greece, was the center of a classical civilization.

History and Government (page 308)**Drawing Conclusions**

Read the section. Then number the following events in the history of southern Europe in order:

_____ *the Renaissance begins in Italy*

_____ *Rome falls to Germanic forces*

_____ *Italy is unified*

_____ *Greece is ruled by a military dictatorship*

_____ *Athens introduces democracy*

_____ *the Roman Republic reaches its height*

Ancient Greece reached its peak between the 400s B.C. and 300s B.C. Greeks formed separate communities called **city-states**, linked by Greek language and culture. The city-state of Athens introduced democracy to the West. Italy's Roman Republic reached its height between 27 B.C. and A.D. 180. Rome made breakthroughs in government and law. Christianity became the official religion of the Roman Empire before the empire fell to Germanic forces in the 400s. The eastern empire, with its capital at Constantinople, survived. It was eventually called the Byzantine Empire. Germanic groups founded separate kingdoms and accepted Roman Catholicism. Italy was fragmented for hundreds of years. In 711 a Muslim group called Moors invaded Spain and held it for over 700 years.

The **Renaissance**, Europe's period of artistic and intellectual achievement, began in the 1300s in Italy and spread across the continent. Other powers were attracted to Italy's wealth and culture. Spain and Portugal grew rich in the 1500s from establishing trade routes and colonies.

Nationalism, independence movements, civil wars, dictatorships, and world wars marked the 1800s and 1900s. Spain and Portugal lost overseas territory. Greece won independence from Turkey. Italy united in 1870. During the two world wars, the subregion was a battleground. Spain was neutral, but suffered a civil war in the 1930s. Later, the subregion allied itself with Western democracies. Greece was ruled by a military dictatorship from 1967 to 1974. Today, the countries of southern Europe have democratically elected governments and are members of the European Union.

Culture (page 309)**Identifying the Main Idea**

What are the main religions found in southern Europe?

Literacy rates in the region are above 95 percent. Education is compulsory for children. Health care varies. Governments fund all health-care programs and provide other social services.

The dominant Romance languages are Indo-European languages derived from Latin, and include Italian, Spanish, and Portuguese. The majority of the population of Italy, Spain, and Portugal is Roman Catholic. Most people in Greece belong to the Greek Orthodox Church. Immigration has caused the growth of the Muslim population in Italy and Spain.

Ancient Greeks and Romans developed many basic architectural elements. Many of the world's greatest works of art have come from southern Europe. Soccer is the most popular sport. Bullfighting events are an important tradition in Spain and Portugal. Family gatherings and traditional celebrations are important.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

- 1.** What are some of the effects on the population patterns and cultures of southern European countries, now that immigration is outpacing emigration?

- 2.** What are three of the cultural elements that are shared by most of the people in southern Europe?

Expository Writing

Write a paragraph describing some of the ways that the culture of ancient Rome still influences southern Europe.

Eastern Europe

Big Idea

Eastern Europe has been shaped by centuries of power struggles and today has emerged with a rich culture and growing economic strength. As you read, complete a web diagram like the one below by listing and describing the three main groups of Slavs.



Notes

Read to Learn

Population Patterns *(page 313)*

Identifying the Main Idea

Did Slavic peoples populate all of eastern Europe?

Most eastern Europeans are ethnically Slavic. East Slavs include Ukrainians, Russians, and Belarussians; west Slavs include Poles, Czechs, and Slovaks; south Slavs include Serbs, Croats, Slovenes, and Macedonians.

Serbia, Montenegro, Bosnia and Herzegovina, Croatia, Slovenia, and Macedonia are at the center of eastern Europe. Southern Slavic peoples living here include Eastern Orthodox Serbs, Roman Catholic Croats, and Bosnian Muslims. To the north are western Slavic countries of the Czech Republic, Poland, Hungary, and Slovakia. Easternmost eastern Europe is home to Slavic peoples of Russian and Ukrainian origin. Russians are the largest ethnic group in Europe. The Baltic Sea countries of Estonia, Latvia, and Lithuania are also found here. The Roma people are a minority group found in many eastern European countries, including Bulgaria.

Population density and distribution in eastern Europe is influenced by geographic factors. Throughout its history, economic and political circumstances have prompted internal migration and emigration. Industrialization throughout the 1900s led to urbanization.

Most of the population of Eastern Europe lives in urban areas.

History and Government (page 314)**Drawing Conclusions**

Read the section, then agree or disagree with the following conclusion:

The people of eastern Europe think of themselves as Europeans as well as members of ethnic and/or national groups.

It is believed that Slavs migrated from Asia thousands of years ago, settling in what is now Ukraine and Poland, among Celtic and Germanic groups. In the A.D. 400s and A.D. 500s, Germanic groups and Slavs moved westward and southward. By the A.D. 700s, the Slavic Czech empire of Great Moravia covered much of central Europe.

Slavs settled northern-central Ukraine and southern Belarus. Romans conquered lands between the Carpathian Mountains and the Danube River, which was then called Romania.

The Byzantine Empire spread Christianity across eastern Europe and protected the region from invasions by Arabs and Turks. In 1453 the Empire fell to the Ottomans. Balkan Slavs overthrew the Ottoman Empire in the early 1900s. The term **Balkanization**, the division of a region into smaller regions that are often hostile with each other, arose from the Balkan wars.

Yugoslavia emerged from World War II as a Communist country, and the rest of eastern Europe fell under the Communist control of the Soviet Union. In the 1990s, Yugoslavia divided along ethnic lines. Ethnic hatreds sparked violence in Bosnia-Herzegovina and Kosovo. Under a policy called **ethnic cleansing**, Serb leaders expelled or killed rival ethnic groups.

In 1989 the Communist governments fell. Free elections installed democratic leaders who encouraged market economies. Some eastern European countries have joined the European Union.

Culture (page 316)**Making Inferences**

What are two Indo-European languages spoken in eastern Europe that are not of Slavic origin?

Most people in eastern Europe speak Indo-European languages including Polish and Czech. Baltic languages include Latvian and Lithuanian.

Roman Catholicism, Eastern Orthodoxy, and Islam are all common religions. Religious and ethnic differences were at the heart of the 1990s conflict on the Balkan Peninsula.

Literacy rates are high. Childhood education is mandatory and free. Some former Soviet-bloc countries have faced education and health-care system funding challenges.

Folk and classical music, and modern music from western Europe and the United States, are popular. Eastern Europe has produced great writers such as Czech-born Franz Kafka.

Families tend to be small, but some people still live in extended families. Many sports and physical education facilities remain from the Soviet past. Eastern Europeans spend time with family and prepare traditional meals.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What are some of the ethnic, political, economic, and religious challenges eastern European countries faced after the fall of the Soviet Union in 1989?

2. How did the Ottoman Empire influence the history and culture of eastern Europe?

Expository Writing

Many countries in eastern Europe are described as “Balkanized.” Write a paragraph about the physical geography of the area and how it might influence Balkanization.

The Economy

Big Idea

The countries of Europe face the challenge of developing distinct economic, social, and political identities while uniting for greater strength and prosperity in a global economy.

As you read, use a web diagram like the one below to list the goals of the European Union.



Read to Learn

Economic Activities (page 325)

Drawing Conclusions

After you read the section, number the following western European economic activities in order from 1 to 3, according to the percentage of workers in each activity:

- ___ agriculture
- ___ service industries
- ___ heavy industries

Europe's large deposits of coal and iron ore sparked the growth of **heavy industry**, the manufacturing of machinery and industrial equipment. Countries without industrial raw materials specialize in **light industry**, such as high-end electronics and specialty tools.

Most workers in western Europe work in service industries. High-technology industries are growing. Tourism is an important service industry.

In western Europe, farmers use advanced technology. **Mixed farming**—raising several kinds of crops and livestock on the same farm—is common, and most western European farmers own their own farms. In Denmark and other countries, **farm cooperatives**, organizations in which farmers share in growing and selling products, reduce costs and increase profits. In eastern Europe, private ownership of land and food production has risen. Yields and profits have increased through the use of modern equipment and fertilizers.

Many Europeans oppose **genetically modified foods**, foods with genes altered to make them grow bigger or faster or be more resistant to pests. Some farmers rely on **organic farming**, using natural substances instead of chemicals to increase crop yields.

Transportation and Communications (page 326)**Identifying the Main Idea**

As you read the section, answer the question:

In what ways are the economies of Europe supported by state-of-the-art transportation and communications systems?

Rail lines connect Europe's major cities and airports and link natural resources to industrial centers. France pioneered the use of high-speed trains, which cause less damage to the environment than other forms of transportation. A high-speed triangle links Paris, Brussels, and London, passing beneath the English Channel through the Chunnel, or Channel Tunnel. A well-developed highway system links Europe's major cities.

Europe handles more than half the world's international shipping. Rotterdam is the world's largest port. Europe has many navigable rivers and canals. The Rhine River and its tributaries carry more freight than any other river system in Europe.

The International Telecommunications Satellite Organization uses a series of satellites (INTELSATs) to broadcast and receive television programs in Europe. Before the fall of communism, the Eurovision network linked most of western Europe, and the Intervision network operated in eastern Europe. The two networks are now both operated by the European Broadcasting Union.

Television service and print media vary throughout Europe. Western European telephone systems include cable and microwave radio relay, fiber optics, and satellite systems. Most western Europeans use cell phones, e-mail, and the Internet. Cell phone use is increasing in eastern Europe.

Trade and Interdependence (page 327)**Drawing Conclusions**

Read the section, then answer the question:

What did European governments accomplish by signing the Maastricht Treaty?

In 1992 the **Maastricht Treaty** set up the **European Union (EU)**. The EU aimed to make Europe's economies competitive by eliminating restrictions on the movement of goods, services, and people across its members' borders. It paved the way for a single European currency, a central bank, and a common foreign policy. In 2004 members attempted to establish a new EU constitution. France and the Netherlands rejected the new constitution, and the EU is operating under the rules of the original structure.

Since the fall of communism in 1989, eastern European countries have been moving from command economies to market economies. Workers lost part of their social "safety net"—free health care, lifetime jobs, and other social benefits—provided by the communist system. Death rates have risen in some places, and life expectancy has declined. Eastern European countries seeking membership in the EU must examine and adjust their legal and financial systems and ways of doing business, and must compete with existing EU members.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What are three of the reasons major economic changes are taking place in Europe?

2. Identify changes in the economies, farming techniques, and communications in eastern Europe since the fall of communism in 1989.

Persuasive Writing

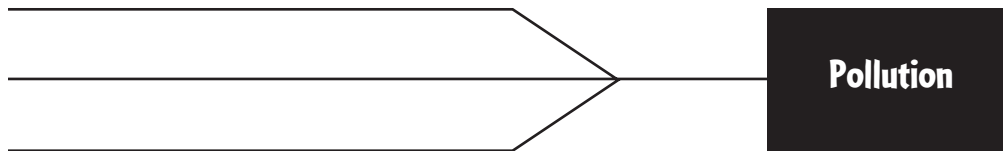
Write a paragraph agreeing or disagreeing with the statement: *As Europe develops a more unified, service-oriented economy, it is more important for nations to develop more efficient communications systems than to develop more efficient transportation systems.*

People and Their Environment

Big Idea

Europeans identify environmental challenges and find new ways of managing natural resources and reversing the effects of damage caused by industry and development.

Complete a graphic organizer like the one below by listing some of the reasons for eastern Europe’s pollution problems.



Notes

Read to Learn

Managing Resources *(page 331)*

Problems and Solutions

As you read the lesson, write down ways Europeans are working to solve environmental problems.

Frequent earthquakes in Italy, Greece, and Macedonia indicate that tectonic changes are continuing. Because of low rainfall in southern Europe, farmers in Spain’s arid Meseta use **dry farming**, a way of farming in dry areas that produces crops without any irrigation and relies on farming methods that conserve soil moisture. In recent years, heavy rains have caused widespread flooding and mudslides. Some scientists believe that the natural climate cycle accounts for the rains. Others believe that global warming is responsible. In northwestern Europe, violent Atlantic and North Sea storms strike countries that border the sea. In the Netherlands, engineers carried out the Delta Plan to prevent severe flooding.

Repeated misuse of the land has accelerated soil erosion in Europe. Soil erosion affects the sandy coastal areas of the Mediterranean counties. Forest destruction over time is one reason for the area’s problems with erosion. Most of Europe was once covered by forest, and most of this forestland has been removed over time. Many countries have taken steps toward reforestation, or the replanting of trees. Others have taken steps to manage the cutting of trees.

Human Impact (page 332)**Identifying the Main Idea**

1. *What problems has Europe experienced as a result of acid rain and other forms of acid pollution?*

2. *What is the effect of increased carbon dioxide in the Earth's atmosphere?*

Before 1989 eastern European countries had few laws to control pollution. Western Europe has environmental damage from industrial wastes. The European Union (EU) requires environmental protection and cleanup from its members.

Industrial pollution combines with moisture in the air and falls as **acid rain**. Clouds of acid rain have withered forests. Many western European countries have switched from coal to natural gas, but many eastern European countries still rely on coal. Snow carries industrial pollution to the ground, and **meltwater**, the result of melting snow and ice, carries acid into lakes and rivers. Automobile exhausts add acid-forming compounds to the atmosphere. **Acid deposition**, wet or dry acid pollution that falls to the ground, harms Europe's natural environment and historic buildings.

Countries bordering the Mediterranean Sea use the sea for waste disposal. Agricultural runoff, raw sewage, and industrial waste affect Europe's rivers and lakes.

Environmentalists—people concerned with the quality of the environment—are studying the effects of increased carbon dioxide in the Earth's atmosphere. The burning of fossil fuels has significantly raised the amounts of carbon dioxide in the atmosphere, increasing average global temperatures, a trend called **global warming**.

Scientists cannot agree on the causes of global warming, so the international community has done little to combat the problem. The EU has consistently supported the Kyoto Protocol.

Future Challenges (page 334)**Identifying the Main Idea**

How have European countries addressed the results of pollution?

Much of Europe has been altered by human activity, so Europeans want to preserve what little wilderness area is left.

EU member countries must respect environmental protection laws. Individual countries are also addressing the consequences of pollution. Pollution that crosses national borders presents a more complex situation. Pollution in the Danube River threatens wildlife in the Black Sea, but directing and financing the cleanup is difficult when the process involves many countries.

Many power plants now burn natural gas instead of lignite coal. By 2010 EU member countries must lower emissions levels to reduce greenhouse gases. Some countries are developing alternative fuels. To be admitted to the EU, eastern European countries must meet EU environmental standards.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What are three of the ways industry and farming practices have affected Europe's environment?

2. What steps have been taken by the European Union to protect Europe's environment?

Persuasive Writing

Write a paragraph to agree or disagree with the statement: *The pollution laws and controls put in place by members of the European Union are all that is necessary to protect the environment in Europe today and in the future.*

The Land

Big Idea

Russia's far northern location, interconnected plains and mountain ranges, and large river systems influence human settlement and activities in the region.

As you read about Russia's physical landscape, use the major headings of the section to create an outline similar to the one below.

- I. Landforms
 - A.
 - B.
- II. Water Systems
 - A.
 - B.



Notes

Read to Learn

Landforms (page 357)

Making Inferences

Where in Russia is the land most suitable for farming?

Russia is the world's largest country in land area. Much of its land is made up of mountains and plateaus.

The Ural Mountains divide European Russia from Asian Russia. The Urals are an old, worn-down range.

The Caucasus Mountains are located in southwestern Russia. The highest point in Russia is Mount Elbrus, an extinct volcano in the Caucasus range.

Mountains on the southeastern edge of the Central Siberian Plateau form the boundary between Russia and China. Swiftly flowing rivers have carved out canyons throughout the plateau.

Most of European Russia is part of the North European Plain. The northern part of the plain has many lakes and swamps. The southern part has navigable waterways and a rich black soil, known as **chernozem**, that supports farming. Most large Russian cities are located in the North European Plain.

The West Siberian Plain lies east of the Ural Mountains. It is one of the world's largest areas of flatland.

Water Systems (page 358)**Identifying
the Main Idea**

As you read the sub-section on rivers, write the main idea of the lesson.

Russia's water systems include coastlines, seas, lakes, and rivers. Russia has the longest continuous coastline in the world. The Russian coast touches both the Arctic and Pacific Oceans.

The Black Sea, in southwestern Russia, provides a warm-water outlet to the Mediterranean Sea. The Caspian Sea is actually a salt-water lake. It is the world's largest inland body of water. Lake Baikal, located in southern Siberia, is the world's deepest freshwater lake.

Russia's longest rivers are located in Siberia, where 25 percent of the population lives. The Volga River is vital to Russia. The river, its tributaries, and canals link the capital city of Moscow to the Baltic Sea, the Caspian Sea, and the Sea of Azov. The river also provides Russia with hydroelectric power and water for drinking and irrigation. In addition, two-thirds of Russia's water traffic travels along the Volga.

Most of the rivers in Siberia, such as the Ob', Irtysh, Yenisey, and Lena, flow north to the Arctic Ocean. The Amur River forms the border between Russia and China. The Amur River valley is warmer than the rest of Siberia and is its main food-producing area.

Natural Resources (page 359)**Making
Inferences**

Why do 75 percent of Russians live west of the Ural Mountains?

Russia has abundant natural resources. Many of the resources, however, lie in places that are difficult to reach. Russia has the greatest reserves of mineral resources in the world. It has large oil reserves and 16 percent of the world's coal reserves. It is also a leading producer of natural gas, hydroelectric power, nickel, aluminum, gemstones, and platinum-group metals.

Because of Russia's cold climate, only about 10 percent of the land is usable for agriculture. Because of **permafrost**, a layer of frozen soil that lies beneath the surface of the ground, little farming occurs in the north and east. Millions of acres of fertile farmland, called the Black Earth Belt, stretch from Ukraine to southwestern Siberia. About one-fifth of the world's forest lands are located in Russia—most in Siberia. These forests supply much of the world's timber. Commercial logging, however, is quickly depleting Russian forests.

Fishing is an important industry in Russia. Russia produces salmon from the Pacific Ocean and herring, cod, and halibut from the Arctic Ocean.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How large is the land area of Russia?

2. What are Russia's natural resources?

Persuasive Writing

Many people are not aware that so much of the world's forest land lies on Russian soil. Write a paragraph designed to persuade people of the importance of preserving Russian forests.

Climate and Vegetation

Big Idea

Russia’s climate regions and natural vegetation are affected by the country’s location in the northern latitudes, deep within the interior of the Eurasian landmass.

As you read about Russia’s physical geography, complete a graphic organizer similar to the one below by describing the climate and vegetation region of Russia.

Region	Description
Tundra	
Humid Continental	
Steppe	



Notes

Read to Learn

High-Latitude Regions (page 362)

Formulating Questions

As you read the lesson, write down questions you have about what you read. When you have finished reading the lesson, answer your questions.

Most of Russia has a harsh climate with long, cold winters and short, cool summers. Eastern Siberia experiences the coldest winter temperatures. Most of Russia lies far away from the ocean and the moderating influences it can have on climate. This causes much of the country’s interior to experience extreme variations in temperature and little precipitation. This effect within the interior of a landmass is called **continentality**.

A vast, treeless plain called a **tundra** covers much of Russia’s far northern landscape. Almost the entire tundra climate region is located north of the Arctic Circle. The tundra covers about 10 percent of Russia. Only mosses, lichen, and dwarf shrubs thrive in the tundra.

The subarctic climate region lies south of the tundra. Some of the world’s coldest temperatures occur in this climate region. The subarctic climate supports the **taiga**, a boreal forest belt that covers two-fifths of European Russia and much of Siberia. The taiga is the world’s largest coniferous forest.

Midlatitude Regions (page 363)**Synthesizing Information**

As you read, think about the main ideas of the lesson. What are the similarities and differences between the humid continental and steppe climate regions?

Most Russians live in Russia's midlatitude climates. These climates have milder winters and warmer summers than the high-latitude climates. A humid continental climate is found in most of Russia's North European Plain. Mixed coniferous-deciduous forests are found in this climate. Soils are generally more fertile than in the taiga. Farther south in the midlatitude climate region, the mixed forests merge into temperate grasslands. The fertile chernozem soil makes these grasslands ideal for growing crops such as wheat, sunflowers, and sugar beets.

Russia's cold climate played an important role in the defeat of invading armies in 1812 and in World War II.

A **steppe** climate region is located in a small area between the Black and Caspian Seas and in a thin band along Russia's border with Kazakhstan. The steppe climate region has dry summers and long, cold, dry winters. The steppe contains rich chernozem soil. Grasses, sunflowers, mint, and beans flourish in the steppe.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What are Russia's major climates?

2. What kinds of natural vegetation are found in each of Russia's climate regions?

Descriptive Writing

Imagine you are a member of Napoleon's army invading Russia in 1812. In the form of a journal entry, write a day in your life on the march through Russia's cold winter.

Population and Culture

Big Idea

Europeans, Asians, and other peoples have shaped the cultural geography of Russia.

As you read about the population and culture of Russia, complete a graphic organizer similar to the one below by filling in the different ethnic groups.



Notes

Read to Learn

Population Patterns (page 371)

Determining Cause and Effect

In recent times, what event preceded the trend of ethnic Russians returning to their homeland?

Russia today is home to one of the widest varieties of ethnic groups in the world. An **ethnic group** shares a common ancestry, language, religion, set of customs, or a combination of these things.

During the **Soviet era**—the period between 1922 and 1991 when Russia was part of the Union of Soviet Socialist Republics (USSR)—regional political boundaries often reflected the locations of major ethnic groups, or **nationalities**.

Ethnic Russians are Slavs and make up 80 percent of the population. Slavs also include Poles, Serbs, and Ukrainians. Other ethnic groups include the Caucasians (Chechens, Dagestanis, Ingushetans) and the Turkics (Tatars, Chuvash, Bashkirs, Sakha).

One-third of the Tatars live in a western republic called Tatarstan. Like other Russian republics, it does have a limited amount of **sovereignty**, or self-rule.

The major industrial city is Moscow, Russia's capitol. Since the breakup of the Soviet Union in 1991, more ethnic Russians have returned to their homeland. Most have settled in Moscow, St. Petersburg, and southwestern Russia. Because of this trend, the number of people moving into the country has been greater than the number of Russians leaving the country.

Culture (page 373)**Identifying
the Main Idea**

As you read about Russian education, write the main idea of the lesson. Review your statement when you have finished reading and revise as needed.

Although more than 100 languages are spoken in Russia today, Russian is the country's official language. The Soviet government strictly discouraged religious practices and discriminated against certain groups. It actively promoted **atheism**, or the belief that there is no God or other supreme being. In the late 1980s, the government began to relax its religious restrictions.

Religious groups in Russia today are mainly Russian Orthodox, with smaller numbers of Roman Catholics, Protestants, Muslims, and Buddhists. Judaism has long been persecuted. In czarist time, Jews could settle only in certain areas, could not own land, and were often the targets of organized persecution and massacres known as **pogroms**.

During the Soviet era, education emphasis was on math, science, and engineering. This produced generations of technology-focused government officials. They, along with educators, writers, and artists, made up the Soviet **intelligentsia**, or intellectual elite.

Russia's aging population, rising infertility, and increasing rates of infectious disease have put a strain on an already struggling health care system.

The Soviet government limited individual artistic expression and believed that it was the artists' duty to glorify the government's achievements in their works, an approach known as **socialist realism**. Artists who did not follow these guidelines were punished.

Due to a housing shortage, most families live in large apartment blocks and extended family members often live together. Attending concerts, the ballet, and the theater all provide popular entertainment. Sports such as tennis, track and field, ice hockey, figure skating, and gymnastics are popular with all age groups.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How has the role of religion changed in post-Soviet Russia?

2. What are Russia's major ethnic groups?

Persuasive Writing

Pretend you are a Russian teenager attending high school. Write a short essay designed to persuade your parents—who attended high school during the Soviet era—that post-Soviet education is of higher quality.

History and Government

Big Idea

Russia’s various ethnic groups and cultures influenced the country’s tumultuous history and changes in government over time.

As you read about Russia’s history, complete a time line similar to the one below by recording major events in the country’s history.



Notes

Read to Learn

Early History (page 379)

Formulating Questions

As you read, write two questions about the main ideas presented in the text.

After you have finished reading, write the answers to these questions.

During the 800s, Scandinavian warriors called the Varangians settled among the Slavs living near the Dnieper and Volga Rivers. Within a century the Varangians had adopted the Slav language and customs. In the early 1200s, Mongols invaded Kiev and many of the Slav territories from their foothold in Central Asia. They continued to control the area for more than 200 years.

Many Slavs fled the Mongol invasions and one of their settlements grew into the city of Moscow, the center of a territory called Muscovy. Ivan the Great brought many Mongol-controlled Slav territories under his control. In 1533 Ivan the Great’s grandson, Ivan IV, became Russia’s first crowned **czar**, or supreme ruler. He expanded his realm’s borders into non-Slav territories.

After Ivan’s reign, the country faced foreign invasion, economic decline, and social upheaval. By 1650 many peasants had become **serfs**, a virtually enslaved workforce bound to the land and under the control of nobility.

In the late 1600s, Czar Peter I, known as Peter the Great, came to power, determined to modernize Russia. Under Peter I, Russia enlarged its territory, built a strong military, and developed trade with western Europe. A new capital, St. Petersburg, was carved out of the wilderness along the Gulf of Finland, providing access to the Baltic Sea and giving Russia “a window to the West.”

Revolution and Change (page 380)**Evaluating Information**

When you evaluate something you read, you make a judgment or form an opinion. After you read this lesson, decide if you agree or disagree with the ideas of Karl Marx and explain why.

During Czar Alexander II's rule, many former serfs moved to cities. Non-Russian peoples also faced prejudice under **Russification**, which encouraged people to speak Russian and follow Eastern Orthodox Christianity.

This frustration and discontent led many Russian workers and thinkers to turn to **socialism**, a belief that calls for greater economic equality in society. One of its biggest proponents, the German philosopher Karl Marx, advocated public ownership of all land and a classless society with an equal sharing of wealth.

The weak representative government established in 1917 made it easy for the **Bolsheviks**, a revolutionary group led by Vladimir Ilyich Lenin, to seize control. The Bolsheviks believed in **communism**, a philosophy based on Karl Marx's ideas that called for the violent overthrow of government and a society led by workers.

Joseph Stalin became the leader of the Communist party in 1924. Stalin took control of farms and factories and eliminated those who disagreed with him. Millions were either killed or died from hunger, physical hardships, or brutal conditions in labor camps.

By 1949 most of the region's countries had become **satellites**, countries controlled by the Soviet Union. The next four decades saw the Soviet Union and the United States engaged in the **Cold War**.

Movements for Change (page 382)**Determining Cause and Effect**

What was the effect of the closing of outdated factories and the restructuring of agriculture after the fall of the Soviet Union?

In 1985 Mikhail Gorbachev, a reform-minded official, assumed power in the Soviet Union. He instituted a policy of economic restructuring called **perestroika** and a policy of greater political openness called **glasnost**. In 1991 the republics declared independence. Boris Yeltsin was Russia's first president.

The new Russia began moving from a command economy to a market economy. This caused the closing of outdated factories and the restructuring of agriculture, which resulted in massive unemployment. By 2000 the economy was on the mend.

Separatist movements and ethnic conflict also threatened the stability of Russia. Vladimir Putin, when he became president in 1999, helped stabilize the economy by instituting reforms in labor, banking, and private property. He also helped Russia get involved with NATO.

The Economy

Big Idea

Russia’s transition from a Soviet-controlled economy to a market economy continues as the country builds relationships within the global community. Complete a graphic organizer similar to the one below by listing changes in Russia’s economic system and the effect of each.

Economic System	Changes	Effect
Command Economy		
Market Economy		



Read to Learn

Changing Economies (page 391)

Determining Cause and Effect

As you read the lesson, identify and list cause-and-effect relationships.

During the Soviet era, Russia operated under a **command economy**, in which central authority makes all major economic decisions. While unemployment was almost non-existent, wages were low, and some people could not afford **consumer goods**, or goods people needed for everyday life. With enough money, many hard-to-find goods could be bought on the **black market**, an illegal trade in scarce goods. However, black market prices were often higher than government prices. In the 1970s and 1980s, while other countries focused on technology, the Soviet Union continued to focus on industrial production and its economy stagnated.

To fix the nation’s economy, Soviet leader Mikhail Gorbachev began to move toward a **market economy**, which has privately owned business. After the Soviet Union collapsed in 1991, Russian President Boris Yeltsin encouraged **privatization**, or a change to private ownership.

Boris Yeltsin resigned as president of Russia in 1999. Vladimir Putin, the new leader, faced many challenges in restoring the nation’s economy. The economy needed money and a stronger banking system to help keep more Russian money at home.

Economic Activities (page 392)**Formulating Questions**

Write down questions you have about what you read. When you finish, answer your questions.

Soviet farms were organized into state-controlled **kolkhozes** and **sovkhozes**. Kolkhozes were small farms worked by peasants who shared in some of the farm's production and profits. Sovkhozes were large farms that were run more like factories, and farm workers received wages. President Yeltsin tried to make state-run farms more productive in the market economy. However, farmers have resisted attempts to change the way they farm.

Russian industry has also changed since the early 1990s. Many factories have become privately owned. Manufacturing provides income from exports. Russia's petroleum industry continues to be one of the world's leaders in crude oil production.

Transportation and Communications (page 393)**Drawing Conclusions**

How are Russians overcoming transportation obstacles?

Transportation in Russia is difficult because of Russia's vast size and harsh climate. Russia depends on railroads and inland waterways for most of its transportation needs. Pipelines are used to transport petroleum.

Most of Russia's people live in cities. Because many do not own cars, public transportation is important. After the Soviet Union dissolved, the major airline split into many smaller airlines.

Under the Soviet Union, the government reviewed all printed materials to make sure they contained no criticism of the government. Since the breakup of the Soviet Union, Russians have been free to hear other opinions and views. Cellular phone and Internet use have increased dramatically in recent years.

Trade and Interdependence (page 394)**Making Inferences**

What can you infer about Russia's trade goals since the breakup of the Soviet Union?

Fuels such as oil and coal make up a large part of Russia's exports. Russia has become a member of the Asian-Pacific Economic Cooperation (APEC) and the World Trade Organization (WTO).

Russia is part of the United Nations Security Council and has joined European organizations that promote security and cooperation among nations. Economic problems have drained money from the military. Foreign nations have provided loans to Russian industry. With this aid, Russia hopes to continue making economic gains.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How have agriculture, industry, transportation, and communications in Russia changed since the breakup of the Soviet Union?

2. What is Russia's relationship to the global community?

Informative Writing

Write a paragraph that describes how Russia has made the transition to a market economy.

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People and Their Environment

Big Idea

Russia must repair serious damages from the Soviet era while protecting and making the best use of natural resources for economic growth.

As you read about Russia’s environment, complete a graphic organizer similar to the one below by describing the environmental issues and concerns for each location.

Location	Description	Concerns
Chernobyl		
Lake Baikal		
Kamchatka		



Notes

Read to Learn

Human Impact (page 396)

Formulating Questions

Why did Soviet leaders improve safety standards at nuclear power plants?

Between 1949 and 1987, the Soviet Union set off more than 600 nuclear explosions. **Nuclear wastes** are the by-products of producing nuclear power and weapons. The Soviets placed most nuclear wastes in storage facilities, but some **radioactive materials**—materials contaminated by residue from the generation of nuclear energy and weapons—has contributed to water contamination.

In 1986 a fire in a nuclear reactor in the town of Chernobyl released into the local environment 400 times more radioactivity than was released in Hiroshima. Soviet officials did not alert and evacuate people soon enough and thousands of people died as a direct result. Millions more continue to suffer from cancer, stomach diseases, cataracts, and immune system disorders.

Industrialization has polluted most of Russia’s lakes and rivers from fertilizer runoff, sewage, and radioactive material.

Russia’s soil has been poisoned due to many factors: toxic waste dumps, airborne pollution, cracked and aging storage containers, broken petroleum pipelines, and overuse of fertilizers and **pesticides**—chemicals used to kill crop-damaging insects, rodents, and other pests.

Managing Resources *(page 397)*

Identifying the Main Idea

As you read, write the main idea of the lesson. Review your statement when you have finished reading and revise as needed.

The World Bank's Sustainable Forestry Pilot Project is helping Russia manage its forests. Using land more wisely, protecting forests, planting new trees, and increasing private investment all help Russia's environment and economy.

Environmental groups have demanded that the mining company at Kamchatka meet strict environmental standards due to the area's salmon spawning ground and protected wildlife area. Even with growing economic awareness, economic pressures lead to the opening of other regions to development.

Challenges for the Future *(page 398)*

Formulating Questions

As you read the lesson, write down questions you have about what you read. When you have finished reading the lesson, answer your questions.

Fish populations are shrinking worldwide, and Russia's supertrawlers—floating fish factories—are largely to blame. Because supertrawlers only want certain kinds of fish, everything else hauled up gets discarded, and millions of fish and other marine animals die unnecessarily every year.

Pipelines built to transport oil and gas pass through wilderness areas and threaten the surrounding environment and wildlife.

The widespread trend of global warming is happening at a dramatic pace in western Siberia. An unprecedented thawing of the world's largest peat bog could release into the atmosphere billions of metric tons of methane, a powerful greenhouse gas. Where permafrost once covered the sub-Arctic region of western Siberia, shallow lakes now stand.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How does Russia manage its natural resources?

2. What are the environmental challenges in Russia's future?

Expository Writing

Write a paragraph that describes how pollution has affected the lives of Russia's people.

The Land

Big Idea

For thousands of years, people have depended on rivers for life-sustaining water in North Africa, Southwest Asia, and Central Asia, where deserts and mountains dominate the landscape.

As you read, use a chart like the one below to describe each body of water listed.

Body of Water	Description
Dead Sea	
Caspian Sea	
Aral Sea	



Read to Learn

Landforms (page 425)

Determining Cause and Effect

1. *Why are there frequent earthquakes in North Africa, Southwest Asia, and Central Asia?*

2. *Why has the Aral Sea become two separate bodies of water?*

Colliding tectonic plates in North Africa, Southwest Asia, and Central Asia have formed mountains, shifted landmasses, and caused earthquakes. Mountain ranges include the Atlas Mountains, the Hejaz and Asir mountain ranges, the Pontic and Taurus mountains, and the Caucasus Mountains. West of the Tian Shan range bordering China, the Turan Lowland provides some irrigated farmland, and to the south are *kums*, or deserts.

The Mediterranean Sea separates Africa and Europe, and the Red Sea and the Gulf of Aden separate the Arabian Peninsula from Africa. East of the Arabian Peninsula is the Persian Gulf, and the Arabian Sea borders it on the south. Northwest of the Arabian Peninsula, the Gulf of Suez and the Gulf of Aqaba flank the Sinai Peninsula. The Mediterranean Sea lies at the north of the Anatolian Peninsula and the Black Sea lies at the south. The Dardanelles, the Sea of Marmara, and the Bosphorus connect the Aegean and Black Seas, and separate Europe and Asia.

The Dead Sea forms part of the Israeli-Jordanian border. In Central Asia, the Caspian Sea is the largest inland body of water on Earth.

Water Systems (page 426)**Making Inferences**

As you read, look for clues to help you answer the question: Why were the Nile Delta and the Tigris-Euphrates river valley “cradles of civilization?”

Egypt’s Nile River is the world’s longest river. The Nile Delta and the land along the river’s banks gave birth to one of the world’s earliest civilizations. Today, 90 percent of Egypt’s population lives in the Nile Delta or along the river, on 3 percent of Egypt’s land. The Aswān High Dam and other modern dams now control the flow of the Nile, reducing flooding and deposits of **alluvial soil**, rich soil made up of sand and mud deposited by moving water. The Aswān High Dam provides water for agriculture and hydroelectric power for the country.

Early civilizations thrived in an area called Mesopotamia (the “land between two rivers”) between the Tigris and the Euphrates Rivers, which flow mostly through Iraq. A complex irrigation network has supported farming there for 7,000 years. Today, the rivers help irrigate Syria, Turkey, and Iraq. Dams on the rivers control the flow and provide hydroelectric power.

Many streams in North Africa and Southwest Asia flow intermittently. In the deserts, runoff from infrequent rainstorms creates **wadis**—streambeds that remain dry until a heavy rain. Flash floods can fill wadis with so much sediment that they become mud flows, or moving masses of wet soil.

Natural Resources (page 427)**Making Inferences**

As you read, try to answer the question: How are the economies of countries in the region linked to the economy of the United States?

Seventy percent of the world’s known oil reserves and 33 percent of the world’s known natural gas reserves lie beneath the region. Petroleum exports have enriched the region.

Minerals provide revenue for the region. The world’s largest deposits of sulfur and sulfate are found in Turkmenistan. Morocco is one of the leading producers of **phosphate**, a chemical used in fertilizers. There are also deposits of chromium, gold, lead, manganese, and zinc, as well as iron ore and copper. The region may contain 10 percent of the world’s iron ore reserves.

Countries in the region are diversifying their economies to decrease their reliance on oil and mineral exports. The United Arab Emirates is investing oil earnings in banking, information technology, and tourism. Libya is investing in infrastructure, agriculture, and fisheries.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What land and water features dominate North Africa, Southwest Asia, and Central Asia?

2. Why is much of the world economically dependent on North Africa, Southwest Asia, and Central Asia?

Persuasive Writing

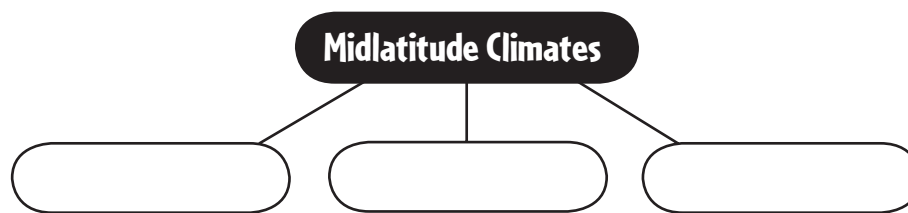
Agree or disagree with the statement: *The supply of water in North Africa, Southwest Asia, and Central Asia is more critical to the region's security than the supply of oil.*

Climate and Vegetation

Big Idea

In North Africa, Southwest Asia, and Central Asia, lack of precipitation affects the region's climates, vegetation, and human activities.

As you read about the climates of North Africa, Southwest Asia, and Central Asia, complete a graphic organizer like the one below by identifying the region's three midlatitude climates.



Notes

Read to Learn

Water and Climate (page 430)

Identifying the Main Idea

1. **What affects the vegetation and human activity of the region?**

2. **What vegetation grows in the region's arid climates?**

3. **How do people make their living in the region's climates?**

Almost 50 percent of North Africa, Southwest Asia, and Central Asia is desert, and averages 10 inches of precipitation annually. The Sahara, the largest desert in the world, covers most of North Africa and has been expanded by droughts in recent decades. Extreme desert weather patterns include cold winters with freezing temperatures and long, hot summers.

The desert has only a few *ergs*, or sandy, dune-covered areas. The rest is covered by *regs*, stony plains covered with desert pavement, and *hamadas*, flat sandstone plateaus. Less than 10 percent of the Sahara is covered by sand. The region's largest sand area, the Rub' al-Khali, or Empty Quarter, covers almost the entire southern quarter of the Arabian Peninsula.

Deserts support cacti and drought-resistant shrubs, and nomadic herders raise sheep, goats, and camels. Farming is possible in an **oasis**, a place in the desert where underground water surfaces.

The second-largest climate region in the region is steppe, which has little annual precipitation. Sheep, goats, and camels eat the short grasses. The climate supports shrubs and some trees, and **pastoralism**, the raising and grazing of livestock, is a way of life.

Midlatitude Regions (page 431)**Identifying
the Main Idea**

1. What climate areas in the region receive the most rainfall?

2. What causes variation in the highland climate?

3. Where are cereals grown in the region? Why?

Mediterranean climate is common in the Tigris-Euphrates river valley, in highland areas, and on the coastal plains of the Mediterranean, Black, and Caspian Seas in the region.

Countries with Mediterranean climates export citrus fruits, olives, and grapes. Tourists are drawn to the sun and warmth of countries like Morocco, and also visit cultural attractions.

Higher areas, like the Caucasus Mountains, have a highland climate, which is generally wetter and colder than other climates in the region. The climate varies with elevation and exposure to wind and sun.

Coastal and highland areas near mountain ranges receive the most rainfall in the region. The North African coast gets more than 30 inches of rain annually, enough for forests to flourish. More than 100 inches of rain falls annually in some parts of the Republic of Georgia. In areas where more than 14 inches of rain fall annually, farmers can raise **cereals**—food grains such as barley, oats, and wheat—without using irrigation.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How do the climates of North Africa, Southwest Asia, and Central Asia differ?

2. How are the agricultural activities of North Africa, Southwest Asia, and Central Asia affected by the climate regions?

Expository Writing

The steppe climate areas of North Africa, Southwest Asia, and Central Asia, and the steppe climate in the Great Plains of the United States and Canada are similar. Cereal crops and livestock are important commodities in each region. What are some similarities and differences between the agricultural economies of each region?

North Africa

Big Idea

The Sahara and access to water have profoundly affected the people of North Africa.

Complete a chart similar to the one below by listing information about each of the major ethnic groups in North Africa.

	Berber	Arab	European
Country			
Religion			
Language			



Read to Learn

Population Patterns (page 439)

Determining Cause and Effect

1. *What geographic features encouraged a nomadic lifestyle?*

2. *Why has the region had contact with Europe for so long?*

3. *Why is the Nile Delta so densely populated?*

European influences remain in the coastal regions of North Africa, but the primary influences on North Africa’s populations are a mix of indigenous and Arab cultures. Indigenous North Africans are called **Berbers**, found mostly in the Atlas Mountains and in the Sahara. Most Berbers are now farmers. Previously, Berbers were pastoral **nomads**, a group of people who move from place to place depending on the season and the availability of food and water. The Arab people, who first migrated from the Arabian Peninsula to North Africa in the A.D. 600s, are the other principal ethnic group in North Africa. Nomadic **bedouin** are Arabic-speaking people who migrated to North Africa from Southwest Asia. North African peoples have had continuous contact with Europe for hundreds of years.

Because of geographic factors such as the availability of water, many people have settled in the Nile Delta region in Egypt, which is one of the world’s most densely populated areas. In North Africa the major population centers are the urban areas of Casablanca, Morocco; Algiers, Algeria; Tunis, Tunisia; Tripoli, Libya; and Cairo, Egypt. Urban growth has occurred so quickly that there are not enough jobs, and **infrastructure** has not been improved.

History and Government (page 440)**Making Generalizations**

1. Arab culture has persisted in North Africa because Arabs

- a. invaded in 1500.*
- b. brought the Islamic religion.*
- c. came from Egypt.*
- d. ruled the Ottomans.*

2. Oil is shipped from Saudi Arabia to Europe through the

- a. Cape of Good Hope.*
- b. Caspian Sea.*
- c. Suez Canal.*
- d. Trans-Sahara pipeline.*

About 10,000 years ago, hunters and gatherers settled throughout North Africa. By 6000 B.C. farming communities had developed in the region. Farmers in the region were the first to **domesticate** plants and animals, or adapt them from the wild and cultivate them for food. Egyptian civilization developed in the Nile River valley about 6,000 years ago. Egyptians used sophisticated irrigation systems, made advances in agriculture, developed a calendar with a 365-day year, and invented a form of picture writing called **hieroglyphics**.

Berbers assimilated with Arab cultures in Algeria and Morocco. In Tunisia, Arab culture persisted through the end of Ottoman rule in 1922. In Morocco, Arab invasions in the A.D. 600s brought Islamic religion and culture, and fifteenth-century Muslim and Jewish exiles brought Spanish culture. In Algeria, early Arab-Berber dynasties were followed by the Ottoman Empire, and later French invasion brought French culture. European colonial powers drew **geometric boundaries**, generally straight lines that do not account for natural and cultural features, between Libya, Egypt, and Algeria, and caused conflict. In the 1800s, the idea of **nationalism** brought demands for self-rule.

The Suez Canal has made Egypt a key regional power since it gained independence in 1922. Algeria and Tunisia gained independence from France in the mid-1900s. Libya gained independence from Italy, and is now an authoritarian state. Morocco gained independence from France in 1956 and is now a constitutional monarchy.

Culture (page 442)**Identifying the Main Idea**

1. What religion is practiced by most people in North Africa?

2. Which North African country has the highest literacy rate?

Most people in North Africa belong to the Sunni branch of Islam. Some Berbers maintain indigenous religious practices.

The region's main language is Arabic, which non-Arab Muslims learned in order to read the Quran, Islam's holy book.

Literacy rates range from about 52 percent in Morocco to about 82 percent in Libya. People often go to government-owned hospitals for medical treatment, but doctor shortages require rural people to go to large towns for health care.

From the earliest times, when Egyptians built towering pyramids as royal tombs, the people of North Africa have expressed themselves through the arts. Weaving, embroidery, and metalworking in the region are highly influenced by Islam. Music and literature are also important.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. Have geographic factors helped Berbers in southern Morocco and Algeria maintain their language and religious practices even though they live within Arabic-speaking, mostly Muslim countries? Justify your answer.

2. Why do most people in the region read and write the Arabic language?

Persuasive Writing

Write a paragraph agreeing or disagreeing with the statement: The discovery of oil, the availability of water, and the concentration of the population in urban areas influenced the establishment of strong central governments as North African countries became independent.

The Eastern Mediterranean

Big Idea

Ancient civilizations and cultures continue to influence the subregion today.

As you read about the eastern Mediterranean, use a table like the one below to list the challenges faced by ethnic groups in the region.

Ethnic Group	Challenges



Notes

Read to Learn

Population Patterns (page 444)

Formulating Questions

As you read, write a question about the main idea presented in the text. After you have finished reading, write the answer to the question.

Millions of Arab and Jewish people live in the eastern Mediterranean. Arabs share customs and speak Arabic. Jewish people speak Hebrew, and if they are religious, practice Judaism.

About 7.1 million Israelis live in Israel. Of these, 80 percent are Jewish. Jewish identity has kept alive the link to the Jewish ancestral homeland. Modern Israel was founded in 1948 as a Jewish state. Half of the Jews living in Israel today were born in Israel, and half are immigrants.

Tension between Arabs and Jews has led to six wars, and resulted in hardship for all people in the area, including the Palestinians—Arabs living in the territory of Palestine. Because of war, many displaced Palestinians had to live in refugee settlements in neighboring Arab countries. Many settlements became permanent.

Lack of water, small land areas, and significant populations in the region have created some of the highest population densities in Southwest Asia, especially along the coastal plains and in the Euphrates River valley. The eastern Mediterranean is mostly urban, and many people live in cities along the Mediterranean coast.

Israel has experienced intense periods of immigration since its founding in 1948.

History and Government (page 445)**Identifying the Main Idea**

As you read, match the definitions with the correct terms.

- a. belief in one God
- b. messenger
- c. house of worship
- d. religion practiced by one-fifth of the world's population
- e. Controlled Syria and Jordan until the 1940s
- f. Jews who called for a return to Palestine

- ___ 1. Islam
- ___ 2. Zionists
- ___ 3. monotheism
- ___ 4. France
- ___ 5. mosque
- ___ 6. prophet

Three major religions began in the eastern Mediterranean—Judaism, Christianity, and Islam all share **monotheism**, or belief in one God, as well as other beliefs. Jews originated in the ancient kingdom of Israel along the eastern Mediterranean coast. Israel's capital and religious center was Jerusalem. Jews recorded their history and examined it for meaning in the Hebrew Bible, or Torah. Christianity is based on the life and teachings of Jesus, who preached around 30 A.D. Christian scriptures included the Hebrew Bible, called the Old Testament, and the New Testament, writings of the life and teachings of Jesus as well as the experiences of the earliest Christian communities. Islamic tradition states that in A.D. 610 revelations from God came to a merchant called Muhammad in Makkah. Muhammad's followers claimed he was the last in a line of **prophets**, or messengers. Muslims pray in a house of worship called a **mosque**.

Major conflicts and invasions, physical geography, and lack of natural resources have limited development of the region. Western European powers controlled large parts of the eastern Mediterranean by the late 1800s. Around the time of World War II, countries in the subregion gained independence.

The independent state of Israel was proclaimed in 1948. Wars following the birth of Israel forced many Palestinian Arabs to live as refugees in other lands. The status of Palestinian refugees is an ongoing issue in the Arab-Israeli dispute.

Culture (page 447)**Identifying the Main Idea**

As you read, underline the answers to the following questions:

- 1. Most Muslims are (Sunni/Shia).
- 2. People are (uneducated/educated).
- 3. Family life involves (religion/sports).

Most Muslims in the region follow the Sunni branch of Islam. Arabs in Syria and Lebanon follow the Shia branch. Most Jews in the area live in Israel. Large minority communities of Christians live in Lebanon and Syria. Family life includes the extended family and often involves religious worship. Some Muslim women in the region wear a veil and completely cover their hands and feet.

Except in Israel, where Hebrew is spoken, most people speak Arabic. Some English is spoken. Education in the region is compulsory and free. Health care has improved in recent decades, and hospitals are often government-owned.

Art in the region has been inspired by religion. Muslim scholars added to European knowledge of the ancient world, and Syrian works influenced Roman culture and thought.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How have religion and language both unified and divided the people of the Eastern Mediterranean?

2. What is one major result of British control of Palestine from the end of World War I until the 1940s?

Descriptive Writing

Imagine that you are an Arab Muslim living in Jordan, Lebanon, or the Palestinian territory in Israel, or a Jew living in Israel. Write a paragraph describing your daily activities.

The Northeast

Big Idea

Religious traditions have shaped the history of this subregion.

As you read about the Northeast subregion, complete a graphic organizer similar to the one below by filling in the major ethnic groups of each country.

Country	Ethnic Groups
Iran	
Iraq	
Turkey	



Read to Learn

Population Patterns (page 451)

Predicting

As you read, skim the lesson and read the paragraph headings. Then write a sentence predicting what you think you will learn.

The Asian part of Turkey is called Anatolia. Turkic peoples migrated to the peninsula from Central Asia. The Ottoman Turks later ruled much of the eastern Mediterranean world. Most Turks practice Islam and speak Turkish, and their culture blends Turkish, Islamic, and Western elements.

Iran was once known as Persia. Many Iranians believe they descended from Indo-Europeans called Aryans who migrated to the region from southern Russia. Iranians speak Farsi, also called Persian, and most are Shiite Muslims.

The majority of people in Iraq are Arabs and are Shiite Muslims. About 35 percent of Iraqis are Sunni Muslims. Arabic is Iraq's most common language.

Kurds live in the mountainous border areas of Turkey, Iraq, and Iran. Most Kurds are Sunni Muslims and speak Kurdish, which is related to Farsi. Their customs and dress differ from those of the Arabs in the region. Kurds have no country of their own, though they call their territory Kurdistan.

Turkey and Iran are the region's most populous countries. Large cities and towns are common in the region. Many cities are overcrowded, and governments are working to improve services.

History and Government (page 452)**Analyzing Information**

As you read, number the following events in the correct order:

___ a. Phoenician invention of a sound-based alphabet

___ b. OPEC oil embargo

___ c. Persians build underground canals

___ d. culture hearth develops in Mesopotamia

___ e. Ottoman Turks begin rule

Mesopotamia, the area between the Tigris and Euphrates Rivers, was one of the first **culture hearths**, or centers where cultures developed, and was part of a rich agricultural region known as the Fertile Crescent. Civilizations in Mesopotamia included the Sumerians, who grew crops year-round, made strides in mathematics and engineering, and created a code of law. They kept records using wedge-shaped symbols called **cuneiform**. The Phoenician civilization began around 3000 B.C. along the Mediterranean coast. They developed an alphabet in which letters stood for sounds that forms the basis of many alphabets used in the Western world today.

In the 500s B.C. the Persian Empire extended throughout the region. Persians delivered water to farmland from the mountains through **qanats**, or underground canals, which kept the water from evaporating. The Ottoman Empire, centered in present-day Turkey, lasted for 600 years.

Western Europe controlled the region by the late 1800s. Britain controlled Iraq until 1932. Since then, Iraq has experienced periods of political turmoil. The Ottoman Empire ended during World War I, and the nation of Turkey was established in 1923. Today's Iran is bordered on the east by the **natural boundary**, or physical boundary, of the Zagros Mountains. Clerics, or mullahs, dominate the country's politics.

Oil was discovered in the Persian Gulf in the early 1900s. In reaction to low oil prices in the 1950s, the Gulf States and Venezuela formed OPEC, the Organization of Petroleum Exporting Countries. In 1973 OPEC imposed an **embargo**, or ban on trade, on oil because of the Arab-Israeli War.

Culture (page 453)**Identifying the Main Idea**

What are some characteristics of everyday life that Iran, Iraq, and Turkey have in common?

Turkic peoples speak Turkish in Turkey, and Persian, or Farsi, is spoken in Iran, which was once called Persia.

Shia Muslims are the largest religious group in Iraq and Iran. In Turkey, the majority of those who practice Islam are Sunni.

Education is compulsory. The literacy rate is 80 percent in Iran and 86 percent in Turkey. Health care varies. There are doctor shortages throughout the region.

Architecture in the region includes **ziggurats**, pyramid-shaped temples built by ancient Sumerians. Literature in the region is based on oral tradition, epics, and poetry.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. Besides the Islamic religion, what other factors unify and divide the peoples of Iran, Iraq, and Turkey?

2. Since the end of the Ottoman Empire, and the end of European control, how have countries in the Northeast region been able to maintain some of their international influence?

Persuasive Writing

Write a paragraph explaining the factors you believe account for the low literacy rate among people over the age of 15 in Iraq (about 56 percent of men and about 24 percent of women) compared to Turkey (about 94 percent of men and 79 percent of women) and Iran (about 86 percent of men and 73 percent of women).

The Arabian Peninsula

Big Idea

The desert climate, coastal regions, and Islam have formed today’s Arabian Peninsula.

As you read about the Arabian Peninsula, use the major headings of the section to create an outline similar to the one below.

- I. **Population Patterns**
 - A.
 - B.
- II. **History and Government**



Read to Learn

Population Patterns (page 456)

Making Generalizations

Why is the fastest-growing population in the Arabian Peninsula today from South Asia?

Most people in Arabian Peninsula live along the coasts. Most people of the region are Arab Muslims, but a small percentage is Christian or follow other religions. Arabic-speaking peoples lived in the region before the spread of Islam, but many of the Arabic-speaking people today are descended from Egyptians, Phoenicians, Saharan Berbers, and peoples speaking other Semitic languages. Many people from South Asia live in the larger cities of the eastern Arabian Peninsula.

The harsh desert and lush coastal climates dictate where people live. For instance, Bedouin still roam the Arabian Desert and settle in oases, but many have migrated to cities. In Saudi Arabia, population densities in cities and some oases are as high as 2,600 people per square mile (1,000 per sq. km). Yet, because the country is so large, the density for all of Saudi Arabia is only 30 people per square mile (11 people per sq. km).

The discovery of oil in the 1900s led to increased wealth and modernization in many Arab countries. Oil wealth and the religion of Islam have drawn large numbers of Muslims to the Arabian Peninsula from South Asia. In many of these countries, immigrants make up a majority of the population.

History and Government (page 457)**Comparing and Contrasting**

As you read, match each of the countries below with its type of government:

- a. group of sheikhdoms*
- b. follows Shari'ah*
- c. constitutional emirate*
- d. controlled by the British until 1967*

- ___ 1. Saudi Arabia
- ___ 2. Yemen
- ___ 3. United Arab Emirates
- ___ 4. Qatar

A powerful family gained control of territory on the Arabian Peninsula around 1750, and fought invasions by the Ottoman Empire and others. The Unified Kingdom of Saudi Arabia was established in 1932. Kuwait, Bahrain, and Qatar signed treaties with Great Britain in the 1800s and early 1900s. Parts of Yemen were controlled by the British Empire from the 1800s until 1967. Oman was independent for most of its history.

Countries in the region became independent of Great Britain in mid-1900s. The United Arab Emirates was formed from a group of **sheikhdoms**, territories ruled by an Islamic religious leader, in 1971. Saudi Arabia, Bahrain, and Oman are monarchies. The conservative Saudi government follows **shari'ah**, or Islamic Law, based on the Quran. Kuwait and Qatar are constitutional emirates, ruled by **emirs**, or princes.

Urbanized countries with economies based on oil production, manufacturing, or trade have relatively high standards of living. Some countries have labor shortages and depend on foreign workers. Qatar's oil and gas reserves have given its people one of the highest per-capita incomes in the world.

Culture (page 458)**Identifying the Main Idea**

As you read, identify four areas of daily life that are influenced by the Islamic religion in the Arabian Peninsula.

Foreign workers are bringing their own cultures to the Arabian Peninsula. Sunni and Shia Muslims are the dominant sects of Islam in the region. Most Muslims make a **hajj**, or pilgrimage to Makkah, at least once in their life. In Oman, practitioners of the form of Islam called **Ibadhism** choose their ruler by communal consensus and consent. The Wahhabi sect of the Sunni branch advocates the literal teachings of the Quran.

Most people in the Arabian Peninsula speak Arabic. South Asian and Afro-Asian languages and English are also spoken.

Most children attend school, and countries have high rates of literacy. People often depend on private groups for health care.

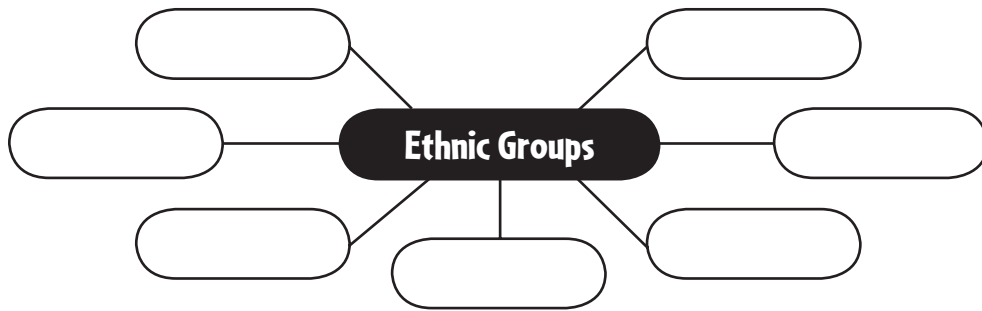
Mosques and palaces are examples of Islamic architecture. Islam discourages depicting living figures in religious art, so Muslim artists work in flora and geometric designs, and use calligraphy for decoration. Religious holidays and observances bring family and community together.

Central Asia

Big Idea

Central Asia’s geography and climate have created challenges for the sub-region.

As you read about Central Asia, complete a graphic organizer similar to the one below by filling in the different ethnic groups.



Read to Learn

Population Patterns (page 463)

Evaluating Information

As you read, look for clues to answer the following question:

Why has so much of the population of Central Asia left the country or been displaced?

Afghanistan is home to many ethnic groups because of centuries of migrations and invasions by outsiders. **Pashtun** is the dominant ethnic group.

Armenians and Georgians are among the largest of more than 50 ethnic groups in the Caucasus area. The largest group of Turkic peoples is the Uzbeks, who form the largest ethnic group in Uzbekistan, and the Kazakhs, who are a minority in their country, Kazakhstan.

Central Asia’s population is spread unevenly across mountainous terrain. Afghanistan is home to 29.9 million people and is the most populous country in the subregion.

The subregion’s population has been shaped by conflict. In 1915 about 1 million Armenians in Turkey were massacred, deported, or died of illness at the hands of the Ottoman Turks. Recently, about 20 percent of Armenia’s population has left the country, and in Georgia, about 300,000 of its people are displaced.

The majority of Tajikistan’s people live and work in river valleys. The two major rivers of Central Asia, the Amu Dar’ya and the Syr Dar’ya run through Tajikistan.

History and Government (page 464)**Making Generalizations**

After you read the section, answer the question:

What culture has had the greatest influence on Central Asia since the 1800s?

Beginning about 100 B.C., parts of Asia prospered from the Silk Road, a trade route connecting China with the Mediterranean Sea. Cities such as Samarqand thrived as trading stations. After invading in the A.D. 1200s, Mongols brought paper money and safer trade routes. Other empires unified the region at different times.

Christian Armenia is located next to the Muslim countries of Turkey and Azerbaijan, forming an **enclave**, a territory that is culturally or ethnically different from surrounding larger cultures. Azerbaijan, surrounded by the Christian region of the Caucasus, maintains an Islamic culture, forming an **exclave**, a distinct group of people isolated from the main or larger part of the country.

By 1936 Central Asia had become an extension of the Soviet Union. Many Central Asian countries declared independence when the Soviet Union dissolved in 1991, and Armenia experienced some stability and economic reform. Chaos after the breakdown of central authority led Tajikistan to maintain a Russian military presence. The Soviet invasion of Afghanistan in 1979 prompted a military reaction from Afghan freedom fighters known as the **mujahideen**. When the Soviets left, the fundamentalist Islamic Taliban took control of the country.

Poverty and unemployment are widespread in the region. Armenia, Kazakhstan, and Georgia have gas and oil resources.

Following the September 11, 2001, terrorist attacks, the United States overthrew the Taliban in Afghanistan. The new government held elections in 2004, but faces serious problems ruling its territory and providing services.

Culture (page 466)**Identifying the Main Idea**

As you read, write a statement of the main idea.

Most people in Central Asia speak a form of the Turkic languages. The Armenian, Tajik, and Afghan Persian and Pashto languages are Indo-European. Georgia has a unique language and alphabet. Russian is the official language in Kazakhstan and is widely spoken in Turkmenistan and Uzbekistan.

Islam is the predominant religion, and most Muslims practice the Sunni branch. Most Azerbaijani Muslims follow the Shia branch. Christianity is the majority religion in Armenia and Georgia.

Education is universal but health care resources are lacking in Central Asia since the breakup of the Soviet Union.

The peoples of Central Asia have a rich literary tradition. The arts suffered under the control of the Soviet Union.

The Economy

Big Idea

Large oil and natural gas reserves have brought tremendous economic growth to some of the region’s countries and have affected its relations with other world regions.

As you read about the region’s economy, create an outline like the one below by using the major headings of the section.

- I. **Economic Activities**
 - A.
 - B.
- II. **Transportation and Communications**
 - A.
 - B.



Notes

Read to Learn

Economic Activities (page 475)

Identifying the Main Idea

Read the section and complete the statements:

Many people are farmers, but most land is not

Petroleum and oil products are the main export

Religious sites and beaches attract

Only a small part of the region’s land is **arable**, yet a large part of the population works in agriculture. Citrus fruits, cereal crops, grapes, olives, and dates are grown in Mediterranean climates. Cotton is produced in Uzbekistan, silkworms are raised in Uzbekistan and Turkmenistan, and Azerbaijan exports wheat, cotton, potatoes, and tea.

Moroccan vessels bring in Atlantic sardines and mackerel. Israel raises freshwater fish in artificial ponds. Fish are harvested in the Persian Gulf, and Iran and other countries bordering the Caspian Sea have flourishing fishing industries.

Petroleum products are the main export **commodities** of the region. Iran and Saudi Arabia operate oil-refining and shipping facilities, and other countries export **crude oil**. Some countries have developed industries using **petrochemicals**. Morocco is the largest exporter of phosphate. Service industries and tourism are also important to the region’s economies. After the Islamic revolution in 1979 Iran restricted tourists from non-Muslim countries.

Transportation and Communications (page 477)

Identifying the Main Idea

As you read, look for clues to help answer the following question:

Why are transportation and communication difficult in the region?

Road systems in Iran, Turkey, and Egypt connect major cities with oil fields and seaports. In Central Asia, **landlocked** countries surrounded by mountain ranges do not have access to the sea for transportation and trade. Rapid transit systems and railroads have been built in urban areas. The air travel industry has benefited North Africa, Southwest Asia, and Central Asia. Ports on the Mediterranean and Black Seas allow ships to load and unload cargo. The Strait of Tiran and the Strait of Hormuz are used by oil tankers, and pipelines transport oil over land and under sea.

Radio and television broadcasting is expanding, although governments control the media in many places, and communication is difficult in some areas. Satellite technology is helping countries improve communications. Wireless service and solar-powered radiophones are bringing telephone service to more people, and cellular phones are common in major cities. Many people in the region have computer and Internet access.

The world's longest telecommunications highway is a cable that follows the ancient Silk Road, providing 20 countries with communication services. A planned network of road, rail, and air transportation systems called the Transport Corridor Europe-Caucasus-Asia (TRACECA) would also follow the Silk Road, and would help more than 30 countries gain access to world markets.

Trade and Interdependence (page 478)

Synthesizing Information

As you read, look for clues to help answer the following question:

Why does OPEC have influence with industrialized countries of the world?

Good transportation and communications networks are increasing interaction between the region and the rest of the world. In 2004 the United States signed an agreement with Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan to establish a U.S.-Central Asia trade council. Interdependence with the region has increased as more developed countries provide aid, trade deals, and development loans to less developed countries.

Algeria, Libya, Iran, Iraq, Kuwait, Qatar, Saudi Arabia and United Arab Emirates have become a majority in the 11-member Organization of the Petroleum Exporting Countries (OPEC). OPEC has considerable influence in global affairs because it can place limits on oil production and can place an **embargo**, or restriction, on oil shipments.

The region's heavy dependence on oil income has led to wide disparities between the oil-rich and the oil-poor countries.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How does physical geography affect farming and fishing in North Africa, Southwest Asia, and Central Asia?

2. How are improvements in transportation and communications changing life in the region?

Expository Writing

Write a paragraph comparing some of the similarities and differences in the ways people earn a living, communicate with each other, and travel in Southwest Asia, North Africa, and Central Asia and in the United States and Canada.

People and Their Environment

Big Idea

Throughout the region, new technologies and destructive wars have created many environmental problems.

As you read about the environmental concerns of the region, complete a graphic organizer like the one below by describing the environmental challenges of the Caspian Sea, the Dead Sea, and the Aral Sea.

Body of Water	Challenges
Caspian Sea	
Dead Sea	
Aral Sea	



Read to Learn

Managing Resources (page 481)

Drawing Conclusions

As you read the section, answer the following question:

Why are so many desalination plants being built in the region?

More than 1 billion of the world's people cannot obtain clean drinking water, and about two-thirds of the world's households do not have a nearby source of freshwater.

Much of the freshwater in North Africa, Southwest Asia, and Central Asia comes from rivers, oases, and from underground layers of porous rock, gravel, or sand that contain water called **aquifers**.

A process called **desalination** removes salt from seawater. Many countries in the region, especially those near the Persian Gulf, depend on desalination for their freshwater supplies.

Libya's Great Man-Made River is a multi-billion-dollar project that uses two pipelines to carry water from aquifers beneath the Sahara to farms near the Mediterranean. Scientists fear that the pipelines could drain aquifers in Libya and neighboring countries. They also fear that pumping aquifers near the Mediterranean could draw in salt water from the sea, contaminating the freshwater.

Human Impact (page 482)**Drawing Conclusions**

As you read the section, look for information to help you answer the following question:

Has the building of the Aswan High Dam mostly helped or hurt the region? Explain your answer.

Environmental concerns have grown in the region in recent decades because of new technologies and destructive wars.

Egypt's Aswan High Dam was completed in 1970. The dam controls the Nile's floods, irrigates around 3 million acres (1.2 million ha) of land, and supplies some of Egypt's electricity. The dam also created Lake Nasser, the world's largest human-made lake, which has helped the fishing industry.

Because of the dam, the Nile River no longer deposits fertile alluvial soil along the floodplain. Egyptian farmers must use expensive fertilizers, and the land retains salt because floodwaters no longer cleanse the soil. Parasite-related diseases and deaths around the dam also increased.

During the Persian Gulf War (1990–1991), Iraqi troops set fire to oil wells, causing smoke to pollute the area. Thousands of fish and other marine life died when the oil spill spread along the Persian Gulf coastline, and smoke threatened millions of birds. Oil pollution from routine shipping also adversely affects the Persian Gulf environment.

Currently, coalition forces remain in Iraq following the March 2003 invasion by the United States.

In 2006, Israel launched air strikes at Hezbollah targets in southern Lebanon. In one Israeli air strike, bombs hit a power station and caused an oil slick that damaged the Lebanese coast and spread into the Eastern Mediterranean Sea.

Severe pollution at the southern end of the Caspian Sea and overfishing threaten fish. Water from feeder rivers to the Aral Sea has been diverted for irrigation. The sea's fishing industries have been destroyed, and dust storms have spread polluted soil.

The water level of the Dead Sea has dropped more than 262 feet (80 m) over the past 40 years because ninety percent of the water from the sea's feeder rivers has been diverted for irrigation and hydroelectric plants.

Central Asia has inherited environmental problems from the Soviet era. In Kazakhstan, nuclear weapons testing has caused radiation leaks, and heavy industry has polluted the air with toxic chemicals. An increase in infant mortality has been directly linked to industrial pollution. The people of Kyrgyzstan have suffered similar effects.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How have people in the region dealt with scarce water resources?

2. What are the causes and effects of three of the major environmental problems in the region?

Persuasive Writing

Write a paragraph agreeing or disagreeing with the following statement: *It is necessary for all of the countries in North Africa, Southwest Asia, and Central Asia to cooperate to develop plans and technologies to bring more freshwater to the region.*

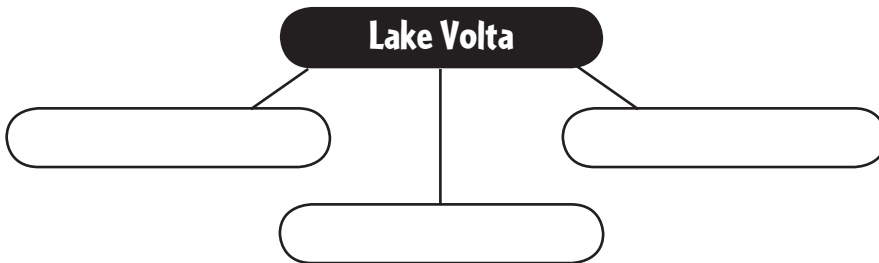
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The Land

Big Idea

Africa south of the Sahara was formed millions of years ago by various physical processes that continue to influence and shape the region today.

As you read about this region’s physical landscape, use a web diagram like the one below to note the many uses of Lake Volta.



Notes

Read to Learn

Landforms *(page 511)*

Identifying the Main Idea

As you read the section, answer the question:

What are the principal landforms found in Africa south of the Sahara?

Africa south of the Sahara is bounded on the north by the Sahara and extends to the sea in all other directions.

The Great Rift Valley stretches from Syria to Mozambique. A **rift valley** is a large depression in Earth’s surface formed by shifting tectonic plates. Plate movement created the system of **faults**, or fractures, in Earth’s crust, within which the Great Rift Valley lies. Volcanic eruptions and earthquakes continue to shape the valley’s landscape today. Volcanic cones are along the eastern branch, Lake Tanganyika on the western branch, and Lake Malawi to the south. A series of plateaus rise in elevation from the coast inland, and from west to east. Steep, often jagged cliffs called **escarpments** mark the edges of the plateaus. Rivers plunge down the escarpments in **cataracts**, or waterfalls. The Eastern Highlands stretch from Ethiopia almost to the Cape of Good Hope and include the Ethiopian Highlands as well as such volcanic summits as Kilimanjaro and Mount Kenya. West of the Eastern Highlands, the Ruwenzori Mountains divide Uganda and the Democratic Republic of the Congo. The Drakensberg Range in South Africa and Lesotho form part of the escarpment along the southern edge of the continent.

Water Systems (page 512)**Drawing Conclusions**

As you read the lesson, look for clues in the descriptions that might help you draw a conclusion to the question:

What are the obstacles to transportation on the Niger, Zambezi, and Congo River systems?

Most of the region's lakes, including Lakes Tanganyika and Malawi, are near the Great Rift Valley. Lake Victoria, the largest lake in Africa, is the world's second-largest freshwater lake and is the source of the White Nile River. Lake Chad, in west-central Africa, is shrinking because of droughts since the 1970s. The lake's water evaporates and seeps into the ground. Other factors contributing to the shrinkage of Lake Chad include global warming, irrigation, and **desertification**, which occurs when long periods of drought and land use destroy the vegetation.

Lake Volta, created in the 1960s by the damming of the Volta River south of Ajena, Ghana, is one of the world's largest human-made lakes. The dam was built to provide hydroelectric power and now generates electricity used throughout Ghana. It also supplies irrigation for farming and is stocked with fish.

The Niger River, western Africa's main artery, is important to agriculture and is a major means of transportation. At Aboh, in southern Nigeria, the river splits into a vast inland **delta**, a triangular section of land formed by sand and silt carried downriver.

The Zambezi River of south-central Africa also meets the ocean in a delta. The Zambezi's course is interrupted by waterfalls, including Victoria Falls, on the border of Zambia and Zimbabwe.

The Congo River reaches the sea through a deep **estuary**, or passage where freshwater meets seawater. Ships can navigate the deep water. The remaining miles of the Congo form a network of navigable waterways for smaller boats, although some parts of the rivers have rapids and waterfalls that present serious obstacles.

Natural Resources (page 514)**Making Inferences**

Why does Africa south of the Sahara have little industry, even though the region has abundant mineral resources?

The wealth of natural resources is not distributed evenly among the region's countries. Mineral resources are abundant throughout the region. Nigeria, Angola, Gabon, Congo, and Cameroon have oil reserves.

Copper, iron ore, manganese, and zinc are mined in the region. South Africa has about half the world's gold. Uranium, usually found with gold, is abundant there. South Africa, Botswana, and the Congo River basin have major diamond deposits.

Water is abundant in parts of the region, however, controlling water for practical use, such as irrigation and hydroelectric power, is difficult because rainfall is irregular and unpredictable.

Solar power is another renewable energy source harnessed in the region. The use of solar power systems continues to expand.

Climate and Vegetation

Big Idea

Location near the Equator, elevation, rainfall, and ocean air masses influence the region's climates and natural vegetation.

As you read about the landscape of Africa south of the Sahara, complete a graphic organizer like the one below by describing each geographical area.

Area	Description
Serengeti Plain	
Sahel	
Namib Desert	
Kalahari Desert	



Read to Learn

Tropical Climates (page 516)

Identifying the Main Idea

Read the section and fill in the blanks:

1. *number of levels of vegetation in the tropical rain forest*

2. *a tropical grassland with scattered trees*

3. *one of the world's largest savannas*

The tropical wet climate zone, near the Equator, has warm temperatures, daily rain, and no dry season. Shrubs, ferns, and mosses grow at the lowest level of the rain forest. Next is a layer of trees and palms. Over these is a canopy of leafy trees linked by woody vines, with orchids, ferns, and mosses growing among the branches. Soils in the tropical rain forest biome are not fertile because heavy rains **leach**, or dissolve and carry away, nutrients from the soil. Cash crops, such as bananas, pineapples, cocoa, tea, coffee, and cotton, are grown on large plantations. The rain forest is threatened by farmers clearing land and by commercial loggers.

Savanna, tropical grassland with scattered trees, covers almost half of Africa and is in the tropical dry climate zone. Wet and dry seasons alternate. In summer, hot, dry air streams in from the Sahara on a northeast trade wind called a **harmattan**, and cool, humid air flows in from the southwest. Tornadoes sometimes form when the winds collide. Trees are the main features of the landscape in some parts of the savanna, while other parts have tall grasses. Soils are not fertile. Zebras, gazelles, hyenas, lions, and cheetahs roam the Serengeti Plain, one of the world's largest savanna plains.

Dry Climates (page 517)**Identifying
the Main Idea**

*Read the section,
then answer the
question:*

*Where can each of
these climates be
found in Africa
south of the Sahara?*

Steppe

Desert

Mediterranean

Vertical

Semiarid steppe separates tropical dry savanna from the deserts of Africa. This transition zone extends to the southern tip of the continent in the south. The northern steppe is called the Sahel—literally, “shore” or “edge” in Arabic—and extends from Senegal to Sudan. The Sahel has pastures of low-growing grasses, shrubs, and acacia trees. On average, 4 to 8 inches (10 to 20 cm) of rain falls in summer, and the rest of the year is very dry.

The Sahel has undergone desertification over the past 50 years. Some scientists believe this is caused by climate change that brings long periods of extreme dryness and water shortages. Well-managed lands can usually recover once the rains return. Other scientists believe that human land use and animal activities contribute to desertification. People strip trees for firewood and clear land for farming, and livestock overgraze the short grasses. The land is depleted, and topsoil is further eroded.

There is a desert climate in isolated parts of southern Africa. Hot, dry weather prevails in much of Kenya and Somalia to the east. Rocks and dunes, along with sparse desert plants, characterize the Namibia Desert, along the Atlantic coast of Namibia. The Kalahari Desert lies in eastern Namibia, most of Botswana, and part of South Africa. The Kalahari is mostly sand, but parts support plants, including grasses and trees, and some animals. Very little rain falls, and daily temperatures can vary from 120°F (49°C) during the day to 50°F (10°C) at night, with colder temperatures in winter.

Midlatitude climates include marine and humid subtropical climates in the southern coastal areas, and a Mediterranean climate around Cape Town.

The highland areas in East Africa have moderate climates with comfortable temperatures and adequate rainfall for farming. Temperatures are lower, snow may fall at high elevations, and vegetation can seem almost lush.

Vertical climate zones exist in the highland areas. Temperatures decrease as elevation increases. Rainfall varies. Lower elevations support woodlands and agriculture, while only grasses and some shrubs grow in higher elevations.

The Sahel

Big Idea

The Sahel, at the edge of the Sahara, influences the ways of life in this subregion.

Complete a web diagram similar to the one below by listing the major ethnic groups in the Sahel.



Read to Learn

Population Patterns *(page 525)*

Synthesizing Information

As you read, use the main idea to answer the following question:

How can the Sahel have rapid population growth but have relatively few people in relation to its vast land area?

The Sahel includes the countries of Chad, Niger, Mali, and Mauritania. Hundreds of ethnic groups coexist in an area influenced by Arab, European, and **indigenous** African cultures which originated in the region. Major ethnic groups include the Mandé peoples of Senegal and Mali, the Wolof of Senegal, and the Hausa of Niger. The Fulani and Berber peoples live throughout the Sahel.

The Hausa were traders who have adapted to settled agriculture. The Fulani raise dairy cattle and are the world's largest ethnic group of nomadic herders. The Fulani were one of the first indigenous African cultures to adopt Islam. The Berbers were able to maintain their distinct culture after Arab invasions.

Arab influence is strong in the Sahel. Arabic is not the main language in many Sahel countries, but the majority of people have adopted Islam. Many populations follow traditional African religious practices.

The population of the Sahel is growing rapidly, but population throughout the region is not evenly distributed. Areas of the Sudan, Mali, and Mauritania are uninhabited.

Increasing desertification and deforestation have caused people to migrate to cities. A large number of Europeans live in Dakar. Senegal is the most urbanized country.

History and Government (page 526)**Identifying the Main Idea**

Mark each statement “T” (true) or “F” (false).

- ___ 1. The Egyptians moved south around A.D. 2000.
- ___ 2. Europeans engaged in the slave trade by the 1600s.
- ___ 3. Postcolonial governments had good models for democracy.
- ___ 4. Tens of thousands of people have died during the conflict in Darfur.

North of the Sahel, people developed agriculture and **domesticated**, or tamed, animals. Around 2000 B.C. a dramatic shift in climate caused people to migrate south. The Egyptian civilization in the Nile Valley faded and the kingdom of Kush flourished until around the A.D. 300s, when its trade routes were attacked by Axum. The gold-for-salt trade enriched the Mali and Songhai empires. Songhai took over Mali and expanded east, and was overrun by the Moroccans around 1600. Europeans were trading extensively for gold, other goods, and enslaved people by the 1600s and 1700s. By 1914 all of the Sahel was under European control.

African colonies became independent in the second half of the twentieth century. Because colonial governments had not involved Africans in government the new countries had no models for democracy. Many countries adopted colonial political boundaries, causing ethnic struggles and civil wars.

Today, in Darfur, the western region of Sudan, a conflict between agrarian non-Arab black African Muslims and government-backed militias has caused the deaths of tens of thousands of people, overcrowding in refugee camps, and has threatened the survival of about 250,000 nomads.

Culture (page 527)**Identifying the Main Idea**

Mark each statement “T” (true) or “F” (false).

- ___ 1. Women have no role in patriarchal families.
- ___ 2. Arabic is spoken throughout the region.
- ___ 3. Most rural Africans do not have clean water or adequate sanitation.

African art often expresses traditional religious beliefs. Musical traditions include percussion and the five-string guitar. **Oral tradition**, the practice of passing down stories from generation to generation by word of mouth, is strong.

Most families are **patriarchal**, or headed by a male family member, and are organized into **clans**, large groups of people descended from an early common ancestor. In the cities, the **nuclear family**, made up of husband, wife, and children, is replacing the extended family.

The hundreds of ethnic groups of the Sahel speak languages from several African language groups. French is widely spoken. Islam is the predominant religion. Christianity is also practiced, as are indigenous religious practices.

Literacy rates are generally low. Major health concerns include high mortality rates and infectious diseases. Only a small number of rural Africans have access to clean water and adequate **sanitation**, or disposal of waste products.

East Africa

Big Idea

East Africa’s peoples, history, and cultures have been influenced by its location on the Atlantic coast.

Complete a graphic organizer similar to the one below by describing the possible differences between rural and urban lifestyles in East Africa today.

Rural Living	Urban Living



Read to Learn

Population Patterns *(page 530)*

Making Inferences

As you read, look for clues to answer the following questions:

1. Why do most people in Tanzania live in the highlands?

2. Why are farmers in East Africa producing less food?

The inland cultures of East Africa were unknown to Europeans until trade was established with the region in the 1800s. Many languages, belief systems, and ways of life often intersected. In many East African countries today, one ethnic group is in the majority. The region also has European and Arabic influences.

Population distribution in East Africa is uneven. Desert, steppe, or highlands cover large areas. In Tanzania, distribution varies from 3 persons per square mile (1 per sq. km) in arid regions, to 133 per square mile (51 per sq. km) in the highlands.

Most urban centers lie along the coast or along major rivers, but some inland cities have grown from trade. Almost 60 percent of the population in Somalia is nomadic or seminomadic.

Soaring population growth combined with economic challenges has made it difficult for East Africans to feed themselves. Agriculture is the main economic activity, yet farmers are producing less.

Governments have pushed the export of cash crops to boost national incomes, but enough food has not been produced for domestic needs. Farmland has been exhausted through poor farming practices, and droughts have made matters worse.

History and Government (page 531)**Identifying the Main Idea**

Read the section, then circle each statement that describes a result of European colonial rule:

- a. creation of more than 40 countries*
- b. destruction of locally centered agriculture in favor of plantation economies*
- c. resentment of the Tutsi by the Hutu in Rwanda*
- d. access to education and medical care*

The kingdom of Axum emerged in Ethiopia around the A.D. 100s. Djibouti's people were the first on the continent to adopt Islam. Arab traders settled along the coast of East Africa in the A.D. 700s, and Persians settled there from about the A.D. 700s until the Portuguese established control over the Indian Ocean in the late 1400s. The Portuguese brought Catholicism to Ethiopia leading to the decline of Arab dominance.

In the early 1800s, Europeans made their way inland, carving the African continent into more than 40 countries, and replacing locally centered agriculture with huge plantation economies.

In the mid-1900s some independence movements were successful in calling for self-government. European powers granted colonies independence in the 1960s. In Uganda, a dictatorship in the 1970s caused social disintegration, human rights violations, and economic decline. In Rwanda and Burundi, colonial powers had favored the Tutsi people over the Hutu, creating resentment. Violence between the two groups began in 1959 and lasted for decades, culminating in 1994 in the Rwanda genocide in which hundreds of thousands of Tutsi were killed by Hutu. Border disputes lasted for years between Somalia and Ethiopia. International efforts to help create peace have often failed.

Culture (page 527)**Making Inferences**

Why would many people in urban areas of East Africa speak more than one language?

Languages spoken in East Africa fit into the Congo-Kordofanian, Nilo-Saharan, and Afro-Asiatic language groups. English and French often serve as a **lingua franca**, or common language. Arab settlers brought their language and the religion of Islam to the northern areas of East Africa. Farther south, more indigenous languages and religions are the norm.

Most East Africans are Christian or Muslim, but traditional African religions are common. Literacy rates are usually higher in urban areas. Poor nutrition, famine, overpopulation, and the inability to cure common diseases persist in East Africa, and AIDS has reached epidemic proportions.

Visual arts, music, dance, and oral traditions are all expressions of East African cultures. In Tanzania, Taarab is a uniquely East African type of music.

Ways of life in East Africa are varied. In urban areas, many families live in modern high-rise buildings, while rural farmers might live in thatched-roof dwellings without modern conveniences.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How did European colonization influence ways of life, language, and religion in East Africa?

2. Agree or disagree with the statement: In East Africa, ethnic identity is more important than national identity. Justify your answer.

Expository Writing

Imagine that European powers had never colonized East Africa. Write a paragraph describing, in general, the languages, ways of life, population patterns, and religions in the region.

West Africa

Big Idea

West Africa’s religion and social structures play a major role in people’s daily lives.

As you read about West Africa, create an outline like the one below using the major headings of the section.

- I. **Population Patterns**
 - A.
 - B.
- II. **History and Government**



Notes

Read to Learn

Population Patterns (page 535)

Making Generalizations

Read the section, then answer the question:

Do most people in West Africa live in urban areas or in rural areas?

Populations of diverse ethnic groups have lived in West Africa for centuries. Some groups settled in areas after periods of migration. Certain ethnic groups exist within adjoining countries, divided by political boundaries set by colonial powers.

Nigeria’s population has grown rapidly. Nigeria’s population was about 137 million in 2005 and is projected to exceed 190 million by 2025. In Niger, rapid population growth is contributing to competition between herders and farmers for natural resources.

Population distribution in West Africa is uneven. The range of climates includes desert, steppe, tropical rain forest, and tropical savanna. Most of the region’s people are crowded along the coast and river plains because of access to water, fertile soil, and mild climates, so agriculture, industry, and commerce are concentrated in these areas.

Africa’s rate of **urbanization**, or movement of people from rural areas to cities, is the world’s fastest. As population growth depletes natural resources, West Africans are moving to urban areas for jobs, health care, and public services. Areas once made up of villages and towns have become **service centers**, convenient business locations for rural dwellers who travel there by foot, bus, or boat. Most West Africans live in rural areas.

History and Government (page 536)**Making Inferences**

Read the section, then answer the questions:

1. Why were the people of Ghana willing to trade gold for salt?

2. How is Nigeria affected by its colonial legacy today?

The trading empire of Ghana, which flourished for almost 500 years beginning around the A.D. 700s, grew rich by trading gold for salt, which was valued as a food preservative.

By the 1400s, the Portuguese set up trading posts along the African coast. By the time Europeans were actively trading with Africans in the 1600s and 1700s, African chiefs and kings had enslaved and traded prisoners of war for centuries. Arab traders had brought enslaved Africans to the Islamic world since the A.D. 800s. The slave trade greatly increased when Europeans began shipping Africans to the Americas to work on plantations.

While Europeans and Americans were shipping enslaved Africans to colonies in America, some French colonizers tried to end slavery and inter-ethnic strife within Africa.

In 1914 the British formed the colony of Nigeria from several smaller ethnic territories, so many different ethnic and religious groups lived within Nigeria. Differences between northern cultures, based on Islam, and southern cultures, based on African religions or Christianity, erupted into civil war after Nigeria gained independence. Ethnic and religious differences continue to plague Nigeria today.

Culture (page 537)**Making Generalizations**

Read the section, then answer the question:

Do you believe that access to education or access to health care is a greater priority for the people of West Africa? Justify your answer.

Hundreds of languages are spoken in West Africa. English and French are widespread, and Arabic is common in the northern areas. **Yoruba**, part of the Congo-Kordofanian language group, is widely spoken, and is also printed in books, newspapers, and pamphlets. It is also taught in schools.

The most common religions are Islam, Christianity, and traditional African religions. Conflict sometimes occurs between competing religious groups.

Free, universal education in West Africa is inconsistent throughout the subregion.

Health care in West Africa is uneven and limited. Poor health conditions and inadequate nutrition have contributed to high death rates.

Much of the art expresses religious beliefs. Music and dance are part of everyday life. West African music is popular around the world and has influenced Western contemporary music. The blues and jazz tradition of the United States has its roots in the music enslaved Africans brought with them.

The **Ashante** of Ghana are expert weavers, known for *kente* cloth. Nigeria's heritage includes wooden masks used in religious ceremonies and sculptures used as objects of worship.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How do West Africa's climate regions contribute to its rapid rate of urbanization?

2. In what ways does the language of the Yoruba help unite people of West Africa today?

Expository Writing

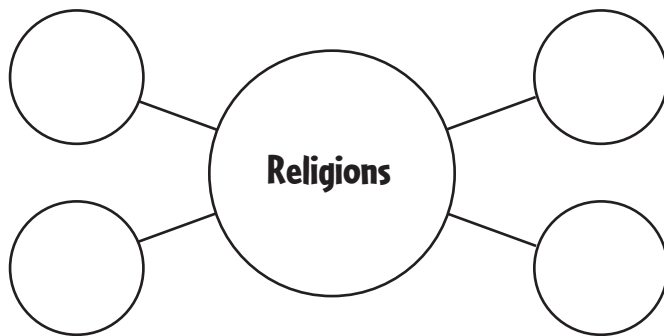
Agree or disagree with the statement: *If European and American traders had not brought enslaved people from Africa to the American colonies, the slave trade in West Africa would have disappeared by the 1600s. Write a paragraph explaining your answer.*

Central Africa

Big Idea

While indigenous peoples built societies in response to the natural environment, European powers exploited the region.

As you read about Central Africa, fill in the web diagram with descriptions of religions in the region.



Notes

Read to Learn

Population Patterns (page 540)

Making Inferences

As you read the section, look for clues to help you answer the question:

How does the tropical rain forest affect population density in Central Africa?

Central Africa is mostly rural, dotted with urban areas. Dense natural vegetation makes large-scale intensive agriculture difficult. Most people exist by subsistence agriculture or raising cattle. Coffee and cacao are grown for export.

At least 250 ethnic groups exist in the Democratic Republic of the Congo and in Cameroon. The people of Gabon and Equatorial Guinea are mostly of Bantu origin. The indigenous Mbuti of Central Africa live in the forest and are relatively unchanged by outside influences. The many ethnic groups of the people of the islands of São Tomé and Príncipe include Portuguese settlers and freed enslaved people.

Central Africa is one of the least densely populated regions in Africa. Gabon has so few people that it has a labor shortage and has been receiving an increasing number of immigrants. The Republic of the Congo, Cameroon, and the Democratic Republic of the Congo are more densely populated. The northern part of the Democratic Republic of the Congo is tropical forest uninhabitable by large populations. The rest of the country has millions of people, and Kinshasa, the capital city, is a political, cultural, and economic hub of the region. The fertile western highlands of Cameroon are the most densely populated part of the country.

History and Government (page 541)**Predicting**

Before you read, predict the types of government the countries of Central Africa would choose after they achieved independence.

What types of governments did the countries experience after independence?

Bantu-speaking peoples established settlements in Central Africa by A.D. 800. They established key Central African kingdoms and established states in what are today Tanzania, Malawi, Zambia, and Zimbabwe. European explorers landed along Central Africa's coasts in the late 1400s and built relationships based on the slave trade. Huge numbers of people from the African interior were sold into slavery, and the passage from Africa claimed millions of lives.

By the 1800s, European powers held colonies throughout the region. Europeans promoted their culture, weakened traditional African culture, and often treated Africans harshly. Locally centered agriculture was replaced with plantations. Resistance to colonial rule was common in the mid-1900s. By 1960 all French colonies had become independent. Spain and Portugal were slower to grant independence to colonies. After independence, Central African countries experienced ethnic strife, harsh rule, one-party rule, and human rights abuses.

Abundant natural resources in the region have helped some countries achieve relative stability. Oil revenues have helped countries such as the Republic of the Congo ease its debt burden. Many countries are vulnerable to instability and unrest.

Culture (page 542)**Drawing Conclusions**

Why do the countries of Central Africa lack the means to halt preventable diseases?

Hundreds of languages are spoken in Central Africa. French is widely spoken, and people from different sub-language groups may communicate in **pidgin**, a simplified speech used among people who speak different languages.

The numerous, diverse traditional religions in Central Africa have many common elements. In many areas people practice forms of Christianity. Roman Catholicism is common.

Some ethnic groups in the Democratic Republic of the Congo live according to a mix of indigenous and Christian beliefs. Many observe strict divisions of labor between men and women. Multiple generations, and even people from different families, might live in the same dwelling.

Central Africa's conflicts and economic problems have strained its education systems. Under Spanish rule, Equatorial Guinea achieved high literacy and a decent health care system. The primary health concerns for Central Africa's people are a lack of safe drinking water, a shortage of vaccines, and the rising number of AIDS victims.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

- 1.** Why is Central Africa one of the least densely populated regions on the continent?

- 2.** In Central Africa, hundreds of languages may be spoken within a single country. How do people who do not share the same language group communicate with each other in Central Africa?

Expository Writing

For the most part, Portuguese traders who engaged in the slave trade used manufactured goods to purchase enslaved people, who might be prisoners of war or people out of favor with their rulers. Write a paragraph discussing the effect that trade in enslaved people would have on a small Central African community that had been defeated in a local conflict.

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Southern Africa

Big Idea

Knowledge of southern Africa’s natural resources and colonial past helps one fully know the region.

As you read, complete a graphic organizer similar to the one below by filling in the different challenges the peoples of southern Africa face today.



Notes

Read to Learn

Population Patterns *(page 545)*

Identifying the Main Idea

After you read the section, answer the question:

Why are people in southern Africa moving to urban centers?

Throughout southern Africa, members of ethnic groups speak the same language and share cultural features and ways of organizing community and family activities. Some ethnic groups of southern Africa span current political boundaries.

In South Africa, colonial law separated the population into white, black, mixed, and Asian. The minority white population enacted strict codes that separated blacks and denied them voting rights.

Population densities vary widely across the region. Major population shifts are occurring in southern Africa. Some peoples still practice subsistence farming and herding, but many are moving to urban areas.

Many cities in southern Africa have towering skyscrapers and trendy shopping areas, but most cities have inadequate public services, overcrowded neighborhoods, and pollution. White-minority land-reform measures in Zimbabwe during the 1960s forced many black Africans off their farms and into crowded areas surrounding cities.

The disease AIDS has spread rapidly in southern Africa and is expected to reduce the population of many of the region’s countries significantly. Consequently, workers will be in short supply, adults in the prime of life will be lost to the disease, and children will lack caregivers.

History and Government (page 546)**Identifying the Main Idea**

As you read the section, number the following events in the correct order:

___ Portuguese control Angola

___ South Africa ends apartheid

___ Angola achieves independence through a coup d'état

___ South Africa achieves independence

___ Zulu arrive in southern Africa

The Zulu culture is one of southern Africa's earliest. The Zulu are descendents of the Bantu peoples. Massive Bantu migrations shaped southern Africa's history and still influence the subregion.

Madagascar was trading with outsiders by the A.D. 600s. Arabs and Europeans set up trading posts and colonies. The Portuguese controlled Angola throughout the 1500s, maintaining a trade in slavery. Angola achieved independence through a **coup d'état**, an overthrow of the government, in 1975.

Botswana has been relatively stable and economically successful since independence, and Mauritius has attained an open economy and political system. Zambia has vast resources, but after independence, few trained people were available to run the government and the economy depended on foreign oversight. Civil wars in neighboring countries caused refugees to seek help in Zambia.

South Africa became independent from Britain in the early 1900s. Under white minority rule, the government imposed a policy known as **apartheid**, or separation of the races, on South Africa's black majority and racially mixed peoples. Nonwhite South Africans were denied political rights and equality with whites in education, jobs, and housing, and were segregated into communities with substandard housing and few government services. Because of internal unrest and international pressure, apartheid ended in the early 1990s. In 1994 South Africa held its first election based on **universal suffrage**, or voting rights for all adult citizens.

Culture (page 548)**Drawing Conclusions**

As you read the section, look for clues to answer the following question:

What is the greatest threat to southern Africa's economies?

Non-African languages spoken in southern Africa include English, French, and Afrikaans. Christianity is the most common religion, but traditional religions are also practiced. Since independence, higher education has expanded in southern Africa. Rural areas lack qualified teachers and resources.

AIDS has reached epidemic proportions in southern Africa. Drug treatments that help control the disease cost too much for most Africans. Lack of knowledge of how AIDS is spread and the stigma associated with the disease speed its spread and hinder its treatment.

Art produced in southern Africa includes indigenous crafts, music, and dancing, as well as novels and film.

In rural areas, people spend leisure time playing games and spending time with family. Local culture is embraced. In urban areas, people enjoy Western music and movies.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. Identify three examples of the major population changes that have occurred in southern Africa over its history.

2. South Africa has a good economy, excellent infrastructure, and abundant natural resources. Why has it been difficult for black South Africans to become prosperous, even though the black African majority now controls the country?

Expository Writing

According to 2003 estimates, the prevalence of HIV/AIDS in South Africa is 21.50 percent among adults, while in the United States the prevalence of the disease among adults is .60 percent. Write a paragraph discussing the factors that might account for the difference in the rate of infection between the two countries.

The Economy

Big Idea

Africa south of the Sahara is making the slow transition from an economy based on subsistence farming to one that is part of the global economy.

As you read about this region’s economic activities, use a web diagram like the one below to identify the obstacles farmers face in Africa south of the Sahara.



Notes

Read to Learn

Economic Activities *(page 557)*

Identifying the Main Idea

Write the letter of the correct definition next to the correct term.

- a. crop grown to be sold
 - b. resources such as trained workers
 - c. farming at permanent settlements
 - d. large-scale farm
- ___ 1. sedentary
- ___ 2. commercial
- ___ 3. cash
- ___ 4. infrastructure

Most of the people in Africa south of the Sahara engage in **subsistence farming**, or small-scale agriculture that provides primarily for the needs of a family or village. In forest areas, farmers use **shifting cultivation**, moving every one to three years to find better soil. Other farmers depend on **sedentary farming**, conducted at permanent settlements.

Some people work at **commercial farming**, in which farms produce **cash crops**, grown and sold for profit. In Zimbabwe, efforts to redistribute land belonging to large-scale farms more evenly caused the collapse of the country’s agriculture-based economy. Farmers have started to practice **conservation farming**, a land-management technique that helps protect farmland.

Commercial fishing represents only a small portion of the region’s economic activity. Mining is important in the region. Nigeria has immense oil reserves. Most countries never developed manufacturing industries, and lack the **infrastructure**, resources such as trained workers, facilities, and equipment, to process natural resources.

Transportation and Communications (page 560)**Drawing Conclusions**

As you read the section, look for clues to answer the question:

What are three of the ways that the countries of Africa south of the Sahara have overcome physical barriers to transportation and communication?

Creating and maintaining well-developed transportation and communications systems in Africa south of the Sahara is difficult because roads and railways must cross vast distances and changing terrain. Some rivers cannot be navigated from source to mouth, and the region has few natural harbors.

Several countries consider roads and railroads a top priority. Nigeria plans to link all parts of its railroad system. Uganda is scheduling repairs on the Trans-African Highway. Mauritania, Senegal, and Morocco are completing construction of a highway between Tangier, Morocco, and Dakar, Senegal. The Trans-Sahara Highway links people and ideas in different parts of Africa. A new highway stretches from Dakar, Senegal to N'Djamena, Chad.

State-run radio stations provide global programming. Land-relay systems for transmitting TV signals are very costly outside urban areas, but satellite technology will improve the reach of television. Low literacy rates and government regulations limit traditional media such as newspapers and magazines.

Telephone service is limited. Satellite and wireless technology are helping to improve access to phone service and the Internet. Some parts of Africa now have cell-phone service where they never before had access to a telephone.

Trade and Interdependence (page 561)**Identifying the Main Idea**

Why do the countries in the region trade mostly with Western Europe?

Why does carrying debt make economic development difficult for countries in the region?

Some countries in the region trade with Japan and the United States, but most rely on trading ties established with Western European countries before independence. China is expanding its economic involvement in Africa. Trade within the region is increasing, and various countries have formed regional trading associations, such as the Economic Community of West African States (ECOWAS).

Africa south of the Sahara is the poorest region in the world and owes billions of dollars in debt to foreign countries. Carrying such enormous debt makes economic development difficult. In 2005 the leaders of G8 member nations agreed to cancel the debt of Africa's poorest nations.

Some Africans run small businesses selling locally made products such as baskets, art, and jewelry. Using **e-commerce**, or selling and buying on the Internet, people sell their products around the world. Cybercafés provide Internet access to people who lack such technology at home.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. What are three of the problems cash-crop production has created for the economies of the countries of the region?

2. What are three ways that transportation and communications in the region are changing?

Expository Writing

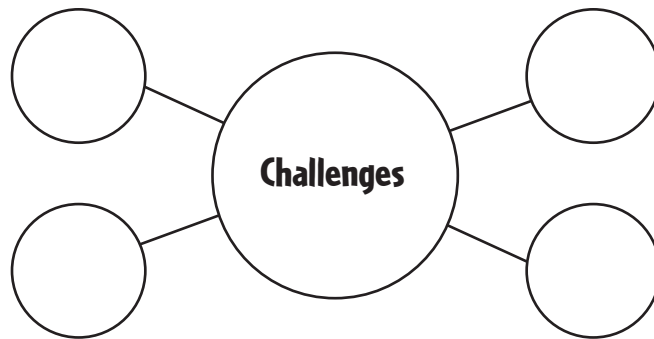
Write a paragraph about the possible reasons that countries in the region have taken on enormous debt that they have been unable to repay. Consider the economic activities, transportation and communications, and trade relationships of the countries of Africa south of the Sahara.

People and Their Environment

Big Idea

Throughout the region, human activities—such as war and deforestation—have had a tremendous impact on the environment and have contributed to famine and the starvation of millions of people.

As you read, complete a graphic organizer like the one below by identifying the environmental challenges facing the people of Africa south of the Sahara.



Notes

Read to Learn

Managing Resources *(page 565)*

Identifying the Main Idea

Draw a circle around the letters of the reasons that famine is threatening the region.

- a. desertification*
- b. unpredictable weather patterns*
- c. too many relief workers*
- d. refugee populations*

As the climate has become drier, and as people and animals have stripped the Sahel of its vegetation, the desert has crept further south. The **carrying capacity**—the number of people an area of land can support on a sustained basis—has been greatly exceeded. Severe droughts have helped turn farmland into wasteland and have killed crops and livestock across East Africa.

Conflicts in many countries have halted economic growth, caused widespread starvation, and cost the lives of countless Africans. Refugees strain food resources. Looting and fighting severely hamper food distribution.

Eritrea gained its independence from Ethiopia in 1993. When Eritrea and Ethiopia went to war over their shared border, people lost their homes or lives. Then one of the worst droughts in years struck the region. A shaky peace is allowing farmers to restore the land. Humanitarian organizations have helped by sending medical teams and relief workers.

Human Impact (page 567)**Identifying the Main Idea**

Read the section and write the meaning of the following words:

1. *habitat*

2. *extinction*

3. *poaching*

4. *stockpile*

Millions of acres of tropical forests have disappeared, due mostly to the clearing of land by loggers and farmers. Various countries have created forest reserves to protect tropical forests. Logging companies are using scientific tree farming and replanting projects to protect and renew forests.

Deforestation destroys animal **habitats**, or living areas. In Madagascar hundreds of animal species are in danger of **extinction**, or disappearance from the Earth. Farmers are moving into forested areas, and some savannas, home to huge herds of animals, are being plowed for farming. Brush fires also threaten wildlife.

Hunting also threatens the region's wildlife. European hunters significantly reduced animal populations during colonial times and in recent years hunters have continued to pursue African game. **Poaching**, or illegal hunting, threatens populations of elephants, the Cape Mountain zebra, the mountain gorilla, and the rhinoceros, as well as other animals.

During the last century elephants were slaughtered for meat, for sport, and for their ivory. In 1989 African elephants were placed on the endangered species list and trade in ivory was banned worldwide. In 1997 Botswana, Namibia, and Zimbabwe were given approval to sell their government stockpiles of ivory to Japan. Supporters said that only government stockpiles were sold and no elephants were killed, but opponents feared that even a partial lifting of the ban would lead to more poaching.

Challenges for the Future (page 568)**Formulating Questions**

As you read the section, write down a question you have about what you have read. Then answer your question.

Democratic reforms are taking root in countries such as Ghana, Nigeria, and Liberia. Efforts to encourage private enterprise include new ranching laws that have allowed people to engage in crocodile farming—a profitable business that has brought this species back from low numbers due to trapping and hunting. Rhinoceroses and elephant habitats are protected, and stricter laws discourage poaching.

Some countries have created huge game reserves to save endangered species. **Ecotourism**, or tourism based on concern for the environment, brings millions of dollars into African economies. Governments give rural peoples an economic stake in the reserves. Some train to work in the reserves or become involved in development training.

Protection of tropical forests is a priority in the region. In 1999 leaders from six central African countries signed an agreement to preserve the forests.

The Land

Big Idea

In South Asia’s varied landscapes, large numbers of people depend on the region’s physical environment, river systems, and natural resources for their livelihoods.

As you read about the physical geography of South Asia, complete a graphic organizer similar to the one below by describing the region’s three major river systems.

River System	Description
Indus River	
Brahmaputra River	
Ganges River	



Read to Learn

Landforms (page 591)

Synthesizing Information

As you read the lesson, answer the following question:

How does the landscape of the Himalaya differ from that of the Deccan Plateau?

How do these differences affect people?

The seven countries that make up South Asia are separated from the rest of Asia by mountains. For this reason, South Asia is called a **subcontinent**—a large distinct landmass that is joined to a continent.

About 200 million years ago, South Asia was connected to eastern Africa, but broke away from Africa and collided with the southern edge of Asia. The force of this collision created the Himalaya mountain ranges. Mount Everest is the world’s highest peak and part of the Himalaya. In the northernmost part of the region, the Himalaya meet the Karakoram Mountains. Further west, the Hindu Kush complete the wall of mountains that demarcates South Asia.

The collision of the Indian subcontinent and Asia also created the Vindhya Range in central India. These mountains divide India into northern and southern regions. The southern region of South Asia has the Eastern Ghats and the Western Ghats. Between the two chains lies the the Deccan Plateau. Because the Ghats prevent rainy winds from reaching the plateau, this area is very dry. The Karnataka Plateau south of the Deccan gets the rain instead.

The island country of Sri Lanka broke away from the original Indian landmass. Maldives is a chain of tiny coral atolls and volcanic outcroppings.

Water Systems (page 592)**Making Inferences**

How does the Ganges river help to make the Gangetic Plain India's most productive agricultural area?

Three major river systems fan out across the northern part of the Indian subcontinent and carry fertile soil from mountain slopes onto their floodplains.

The Ganges River flows east from the Himalaya. It is South Asia's most important river. The land area through which the Ganges flows is the Ganges Plain, the world's longest **alluvial plain**. An alluvial plain is an area of fertile soil deposited by river floodwaters. The Ganges Plain is India's most agriculturally productive area.

The Brahmaputra River flows east from the Himalaya, then west through India and into Bangladesh. There it joins the Ganges River to form a delta before emptying into the Bay of Bengal. This river provides power to Bangladesh through hydroelectricity.

The Indus River flows mainly through Pakistan and empties into the Arabian Sea. Peach and apple orchards lie along the river. The Indus River Valley is the site of one of the world's earliest civilizations.

Natural Resources (page 593)**Predicting**

Preview the lesson to get an idea of what is ahead. First, skim the lesson. Then write a sentence or two explaining what you think you will be learning. After you have finished reading, revise your statements as necessary.

The rivers of South Asia provide the region with alluvial soil, drinking water, transportation, fish, and hydroelectric power. Countries in the region have worked together to build dams that provide hydroelectric power. Dam projects present problems, however, because some people do not want their region flooded. Also, dams can become clogged by a buildup of silt.

India is a leading exporter of iron ore and mica. Deposits of manganese, chromite, and gypsum have yet to be developed. Nepal produces mica and copper. Sri Lanka's major mineral resources include graphite and precious and semi-precious stones.

India's northwest coast has some petroleum reserves. Natural gas fields are in southern Pakistan, India's Ganges Delta, and in Bangladesh.

India's timber resources include sandalwood, sal, and teak woods. Nepal and Bhutan have fir trees and other conifers, as well as hardwoods such as oak, magnolia, birch, and beech. Severe overcutting threatens Nepal's timber and has caused massive soil erosion. Nepal has started a conservation plan. To protect its rain forests, Sri Lanka bans the export of timber.

Climate and Vegetation

Big Idea

Seasonal winds in South Asia strongly influence temperature and rainfall, which affect what crops people grow and how people and the environment are affected by too much or too little rain.

As you read about the climate of South Asia, complete a web diagram like the one below by identifying the three seasons that occur in the region.



Notes

Read to Learn

Climate Regions *(page 597)*

Predicting

Read the title and main headings of the lesson. Write a statement predicting what the lesson is about and what will be included in the text. As you read, adjust or change your prediction as necessary.

South Asia south of the Tropic of Cancer has a tropical climate. In the north and west, the climate varies from highlands in the Himalaya to deserts around the Indus River.

Tropical wet climates with diverse vegetation cover the western coast of India, the Ganges Delta in Bangladesh, and southern Sri Lanka. Evergreen and deciduous trees grow near the Western Ghats. Forests of bamboo, mango, and palm trees grow in Bangladesh. A tropical dry climate surrounds the central Indian steppe and eastern Sri Lanka. Sri Lanka has evergreen and deciduous forests and grasslands at higher elevations.

A humid subtropical climate extends across Nepal, Bhutan, Bangladesh, and the northeastern part of India. This climate supports a temperature-mixed forest. In the Himalayan highlands and Karakoram peaks, there is always snow and little vegetation. Further down these slopes, the climate becomes more temperate with coniferous and hardwood trees and meadows. The lower Himalayan foothills support grasslands and bamboo.

A desert climate extends along the lower Indus River, and a steppe climate surrounds the desert.

Seasonal Weather Patterns (page 598)**Drawing Conclusions**

Based on the information in the text, which type of natural disaster do you believe is most dangerous?

Much of South Asia has three seasons: hot (from late February to June), wet (from June or July to September), and cool (from October to late February). These seasons depend on seasonal winds called **monsoons**. During the cool season, dry monsoon winds blow from the north and northeast. When warm temperatures cause heated air to rise, the wind changes direction. Moist ocean air then moves in from the south and southwest, bringing monsoon rains.

Monsoon rains are heaviest in eastern South Asia. When the rains come over the Ganges-Brahmaputra delta, the Himalaya block them from moving farther north. This causes the rains to move west across the Ganges Plain, bringing needed rainfall for crops.

High temperatures in the region let farmers produce crops year-round. However, extreme heat can dry out the soil in areas outside the path of monsoons.

Too much rain from monsoons may cause flooding. Floods sometimes kill people and livestock or ruin homes and crops. **Cyclones**—storms with high winds and heavy rains—occasionally strike South Asia, killing people and damaging the region economically.

Tectonic activity in the region also affects the countries. Earthquakes and **tsunamis**, huge waves caused by underwater earthquakes, are also natural hazards that can kill thousands of people and devastate whole regions.

India

Big Idea

India is a mix of ancient influence and modern cities in a country that claims the world's largest democracy.

Complete a chart similar to the one below by describing India's major cities.

City	Description
Mumbai	
Kolkata	
Delhi	



Notes

Read to Learn

Population Patterns (page 607)

Predicting

Preview the lesson to get an idea of what is ahead. Then write a sentence or two explaining what you think you will be learning. After you have finished reading, revise your statements as necessary.

More than 15 percent of the world's population, more than 1.1 billion people, live in India. The largest number of Indians are descended from Dravidians and Aryans. Many Indians identify themselves by their religion. Hindus also identify themselves by a **jati**, a group that defines one's occupation and social position.

India's average population density is seven times the world's average. Factors such as climate, vegetation, and physical features affect the number of people the land can support. The highest population densities are on the fertile Gangetic Plain and along the monsoon-watered coasts of southern India.

Nearly 70 percent of Indians live in rural villages. In recent years, Indians have increasingly migrated to urban areas in hopes of better jobs and higher wages. But as these populations grow, they strain public resources and facilities. India's third-largest city, Delhi, is part of a **megalopolis**, or chain of closely linked metropolitan areas.

History and Government (page 608)**Evaluating Information**

After you read this lesson, decide whether or not you agree with Gandhi's philosophy of using nonviolent methods to seek self-rule and explain why.

India's history dates back more than 4,500 years. The original Indus Valley civilization was followed by the Aryan people in the 2000s B.C. The Aryans created the caste system.

In Hinduism, people must carry out their **dharma**, or moral duties. Hindus believe in **reincarnation**, or rebirth as another living being until overcoming personal weaknesses and earthly desires. In the law of **karma**, good deeds move one toward this point. In Buddhism, the Buddha taught that people suffer because they are too attached to material things.

Other groups with new cultures entered India through the Khyber Pass in the Hindu Kush mountains. The British employed a policy of **mercantilism**, an economic system of using colonies for supplying materials and markets to the colonizing country. The British also practiced **imperialism**, or political and economic domination, calling its Indian empire the British **raj**—the Hindi word for “empire.” India's fight for independence was led by Mohandas K. Gandhi. Using non-violent methods, Indians won independence in 1947.

Culture (page 609)**Making Inferences**

What improvements in health and education might enrich the quality of life in India?

India's literacy rate is 65 percent and children are required to attend school until 14. The government is committed to extending education to women and members of lower social classes. The state-run hospital system has improved recently, bringing many diseases under control. However, HIV infection and AIDS are still a problem.

Hindi is the most widely spoken language, but India has 18 official languages and hundreds of dialects. English is spoken in some parts of India. Most Indians are Hindus. Other religions include Buddhism, Christianity, and Sikhism—which was founded by a **guru**, or teacher, in the A.D. 1500s.

Indian art combines Hindu social and religious beliefs. Movies have been a popular form of entertainment since 1896. India's film industry is the world's largest. It is centered in Mumbai and is nicknamed “Bollywood.”

Family is the most important social unit in India. Arranged marriages have been the traditional path to marriage, but this is changing slowly. Leisure time for the middle class is spent going to the movies and watching television. In rural areas, breaks in the agricultural season allow families to attend celebrations.

Pakistan and Bangladesh

Big Idea

Pakistan and Bangladesh have worked together to achieve goals, though they have also experienced conflict.

As you read about the history of Pakistan and Bangladesh, use the major headings of the section to create an outline similar to the one below.

- I. The Indus Valley Civilization
 - A.
 - B.
- II. Islam's Impact
 - A.
 - B.
 - C.



Notes

Read to Learn

Population Patterns (page 612)

Previewing

First, skim the lesson. Then write a sentence or two explaining what you think you will be learning. After you have finished reading, revise your statements as necessary.

Most people in Bangladesh and Pakistan are rural Muslims. Five main ethnic groups live in Pakistan and ethnic identity can be based on a combination of ethnicity, language, and religion. Most people in Bangladesh are Bengali and Muslim.

Bangladesh is the most densely populated country in South Asia, with 2,596 people per square mile. Dhaka is the third most populated city in the world. Bangladesh has difficulty feeding its population. The **total fertility rate**, the average number of children a woman has in her lifetime, has decreased since 1991. Bengali women are encouraged by the government to have fewer children through small business loans for women.

Pakistan is South Asia's most urbanized country. Many people are moving to urban areas and straining resources.

History and Government (page 613)**Drawing Conclusions**

As you read the lesson, look for clues to help you answer the following question:

What environmental changes led to the decline of the Indus Valley civilization?

The Indus Valley civilization arose in what is now Pakistan in 2500 B.C. It developed a writing system, a strong central government, and overseas trade, as well as perhaps the world's first cities with plumbing and other technologies. This civilization may have been ended by environmental changes. Then the Aryans moved into the area.

Muslim invaders and traders moved into southeast Pakistan in the A.D. 700s. Islamic teachers converted many people in what is now Bangladesh. In the nineteenth century, **Sikhs**, a religious group that incorporates elements of Hinduism and Islam, conquered parts of Pakistan and India. The British eventually retook the land. After disagreements about a constitution over a desire for a separate Muslim state, two states were formed—India and Pakistan.

India and Pakistan have fought for decades over the Kashmir region. Both Pakistan and India confirmed building nuclear weapons in 1998 and tensions between the countries continue to this day.

Bengali nationalists declared independence from Pakistan after wins in the 1970–1971 elections. Bangladesh was born after a civil war. Both Pakistan and Bangladesh are parliamentary republics.

Culture (page 614)**Distinguishing Fact from Opinion**

Which of the following statements is a fact and which is an opinion?

1. Current Pakistani artwork that depicts the human form is beautiful.

2. Muslim restrictions, at one time, did not allow depictions of the human form.

Education in Pakistan and Bangladesh has lagged behind the rest of the region with literacy rates of 48 and 43 percent respectively. Social and cultural barriers in rural areas make education difficult. The education of girls is prohibited in some areas of Pakistan based on religion. Only 47 percent of students in Bangladesh go on to secondary school. Health care is also very poor in both countries.

Bangla is the main language in Bangladesh. Only 8 percent of people in Pakistan speak its official language of Urdu. Most Pakistanis speak Punjabi. Some students and government officials also speak English. Islam is the main religion in both countries. To a lesser extent, Hinduism, Christianity, Buddhism, and Sikhism are also practiced.

The arts in both countries are influenced by religion. Literature and dance are important in Bangladesh. Music and literature are the richest of all Pakistani art forms.

Family life is the center of social life in the two countries. Often, more than one household in an extended family lives in a single home. Arranged marriages are still common but are declining.

Nepal, Bhutan, Maldives, and Sri Lanka

Big Idea

The locations of Nepal, Bhutan, Maldives, and Sri Lanka influenced their cultural histories.

As you read about this subregion, fill in a chart like the one below with information about each of the countries.

Country	Early History	Modern History	Government
Nepal			
Bhutan			
Maldives			
Sri Lanka			



Notes

Read to Learn

Population Patterns (page 617)

Synthesizing Information

Rank the countries in this section from most ethnically diverse to least.

Centuries of influence from surrounding regions are revealed through the ethnic and religious differences in the countries on the northeast edge of India and the islands to the south.

The Indo-Nepalese and Tibeto-Nepalese are the two main groups in Nepal. The Sherpas of Nepal are known for their mountaineering skills. The Bhote people, descended from Tibetan people, are the majority in Bhutan. Nepalese descendents make up about 35 percent of the people of Bhutan. The island country of the Maldives includes people and cultures from India, Sri Lanka, East Africa, and Arab countries. Sri Lanka has two main ethnic groups: the Buddhist Sinhalese who control the government and the minority Hindu Tamils who have been fighting for an independent Tamil state since the early 1980s.

Population densities in southern Bhutan and Nepal vary between 55 and 447 people per square mile. To the north, population decreases with elevation. In Nepal, the most densely populated region is the Kathmandu Valley. Sri Lanka has 778 people per square mile, and the Maldives has 2,586 people per square mile.

History and Government (page 618)**Determining Cause and Effect**

Why wasn't Nepal colonized by Europeans?

In A.D. 400, the Licchavi dynasty, whose leaders came from India, was established in Nepal. Other dynasties followed and were later overthrown by the Shah dynasty, which began to expand the country in the 1700s. After a war with the British, Nepal was reduced to its current size. Bhutan's politics and religion have been tied to Buddhist monasteries and schools. The Sinhalese most likely arrived in Sri Lanka from India during the 500s B.C. The Maldives were first settled by Buddhists from southern Asia, and Islam came in the twelfth century.

After the death of a ruling Tibetan **lama**, or Buddhist monk, civil war enveloped Bhutan until the late 1800s, when ties were established with India and Britain. Today's Nepal was formed in the latter half of the 1700s. Because of its isolation, Nepal was not colonized by Europeans. Today, the country's ruling party and rebel groups are discussing peace. Sri Lanka is now a parliamentary republic. A civil war between the Buddhist Sinhalese and Hindu Tamils has been in a cease fire since 2003. Arab and Muslim influence has been strong in the Maldives since the 1100s. Maldives became an independent republic in 1968.

Culture (page 619)**Determining Cause and Effect**

What is the primary cause of the low literacy rates in Bhutan?

Most people in Nepal, and a smaller number in Bhutan and Sri Lanka, are Hindu. Buddhism is dominant in Bhutan and Sri Lanka and is also practiced in Nepal. In Bhutan and Nepal, monks chant **mantras**, or repetitive prayers. The Maldives is an Islamic state. The majority in Nepal speak Nepali, Sri Lankans speak Sinhalese and Tamil, the people of the Maldives speak Dhivehi and English, and the Bhutanese speak Dzongka.

The literacy rate in the Maldives is 97 percent. Traditional schools teach the Quran and English-language schools teach through the secondary level. Sri Lanka has free education through university levels. However, only 20 percent of Bhutanese children are enrolled in school, leading to a literacy rate of 47 percent. Literacy in Nepal is similar. The quality and availability of health care in the region is low, and the scarcity of clean water leads to waterborne diseases.

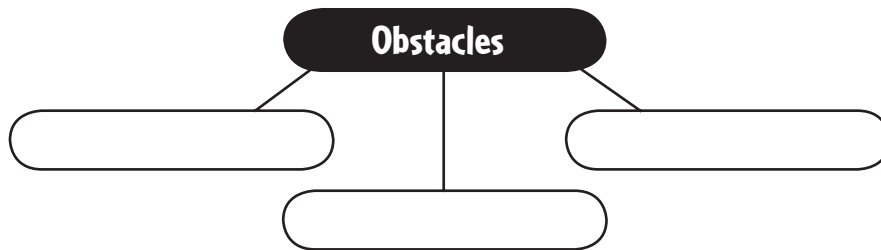
The artistic spirit of the region is illustrated by the Buddhist **stupas**, or domed shrines, of Nepal and Sri Lanka, as well as the fortified monasteries, or **dzong**, of Bhutan.

The Economy

Big Idea

Economic growth has occurred in different ways and at different rates in the countries of South Asia, but increased trade has helped the region's countries become more economically interdependent.

Complete a web diagram like the one below by identifying obstacles new farming methods create for the people of South Asia.



Notes

Read to Learn

Economic Activities *(page 629)*

Drawing Conclusions

Think about tourism in South Asia. Ask yourself, how might increased tourism affect life in the region?

Agriculture is South Asia's most common occupation. Many people practice subsistence farming and often rely on labor intensive methods. The availability of water is a constant concern. South Asian farms vary widely in size and appearance.

Cash crops are grown for sale or export. **Jute**, a fiber used to make string, rope, and cloth, is a cash crop of Bangladesh. Rice is the major food crop of South Asia.

Since the 1960s, the **green revolution** has sought to increase crop yields in developing countries by using carefully managed irrigation, fertilizers, and high-yielding crops. When enough petroleum is not available, people burn **biomass**—plant materials and animal dung—for energy.

Mining and fishing are profitable in the region, with a potential for growth. India has industrialized much more quickly than Bhutan due to its connections with the West. The region's light industry grows out of its history of **cottage industries**, businesses that employ workers in their homes. Other industries include heavy industries, service industries, high technology, and tourism. **Ecotourism** that encourages responsible interaction with the environment contributes to South Asian economies.

Transportation and Communications (page 632)

Making Inferences

Based on their physical geography and locations, why might Bhutan and Nepal do less trade with outside trading partners such as Europe?

Transportation and communications in South Asia are varied and vital to the region's economies.

Nepal has the least-developed transportation network in the region. Its mountain trails serve as its main trade routes. India has an extensive highway network and vast railway system. Bangladesh also has a railway system, and cars, buses, buffalo carts, and cycle rickshaws share its roads. Finally, in recent years, Pakistan and Bhutan have invested in the construction of highways.

Except for Bhutan and Nepal, countries in the region have many seaports. Inland waterways in Bangladesh are used to transport domestic and foreign goods.

Newspapers in India, Bangladesh, and Pakistan are lively and outspoken, but the government of Bhutan restricts its media. Freedom of the press is limited in Nepal as well. India is the region's leader in Internet use, with more than 38 million subscribers in 2006.

Trade and Interdependence (page 633)

Drawing Conclusions

Why is India so important to the trade and economies of the other countries in the region?

South Asian countries are struggling to become more **interdependent**, or reliant on one another, but political disputes have affected economic ties between the countries. Rapid economic growth in some countries may lessen political tensions.

India is South Asia's largest economy and other countries in the region depend on India for the majority of their import and export trade. After overcoming distrust between Pakistan and India, the South Asia Free Trade Agreement (SAFTA) was agreed upon in 2004 and went into effect in 2006.

India has made its own free trade agreements with other countries in the region and is pursuing treaties with the European Union and Japan. Nepal is trying to reduce its reliance on India through trade agreements with numerous other countries.

People and Their Environment

Big Idea

South Asia’s countries are seeking ways to manage natural resources, which are in danger of becoming depleted because of exploding population growth, high population densities, and a growing middle class.

As you read about the challenges South Asia faces in managing its water resources, complete a chart similar to the one below by listing the pros and cons of building a dam.

Building a Dam	
Pros <ul style="list-style-type: none">•••	Cons <ul style="list-style-type: none">•••



Read to Learn

Human Impact on Resources (page 637)

Making Inferences

Why might governments have to provide economic incentives to stop poaching in the region?

Successful resource management in South Asia depends on **sustainable development**, using resources at a rate that does not deplete them for future generations.

Lack of clean water access is a problem in South Asia. Even in India, fewer than 60 percent of urban and 20 percent of rural populations have access to sanitation facilities. Dams are built to control flooding and for irrigation, but dams have drawbacks as well.

Much of South Asia was once covered in forests, but now is in environmental crisis due to accelerated deforestation for logging, mining, settlement, and agriculture. Wood from trees is also burned for fuel. India’s **Chipko**, or “tree-hugger,” movement provides seedlings for reforestation.

Many of the region’s animals have become endangered through contact with the growing human population. Governments and other groups are trying to provide economic incentives to eliminate **poaching**, or the illegal killing of protected animals.

Air pollution is increasing with industrialization in the region, and scientists are working to try to solve this problem.

Future Challenges (page 639)**Making Inferences**

In what ways does nuclear proliferation further complicate the already intense conflicts in South Asia?

India and Pakistan continue to dispute ownership of the largely Muslim area of Kashmir. Today, Pakistan controls one-third, while India controls the rest. Both nations patrol the line of control, and India wants this line to become an international border. However, this area continues to be a source of armed conflicts between the two nations. Many hope that economic ties between the two countries will lead to an improved political relationship. Danger from this conflict escalated in 1998 when both countries tested nuclear warheads. This new example of **nuclear proliferation**—the spreading development of nuclear arms—resulted in international alarm.

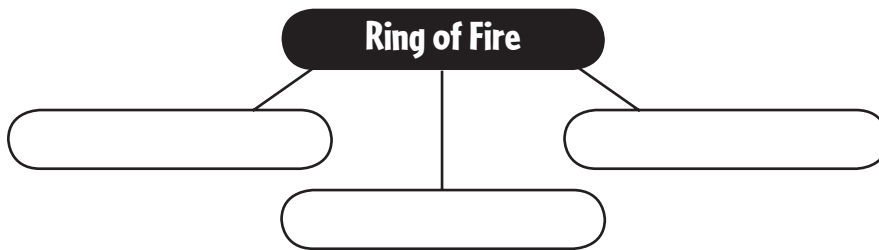
Minority Tamils in Sri Lanka accuse the majority Sinhalese government of discrimination, and some have taken up arms to fight for a separate Tamil state. In Nepal, communist rebels have been fighting to overthrow the democratic government. In Pakistan, President Musharraf faces opposition and has survived numerous assassination attempts. Islamic radicals dislike his cooperation with the United States since the terrorist attacks on September 11, 2001. In India, disagreements between Hindu, Muslim, and Sikh militants often lead to violence. Those people in the country traditionally assigned to the lowest social classes—called the **Dalits**, or “oppressed”—continue to experience discrimination and violent attacks.

The Land

Big Idea

East Asia’s location at the meeting point of multiple tectonic plates leaves the region vulnerable to earthquakes, volcanic eruptions, and ocean flooding.

As you read about East Asia’s physical landscape, use a web diagram like the one below to identify the region’s three tectonic plates that are part of the Ring of Fire.



Notes

Read to Learn

Landforms (page 663)

Determining Cause and Effect

How has the Ring of Fire helped shape East Asia and what effects does it continue to have?

The People’s Republic of China makes up about 80 percent of the land area of East Asia. The other countries of East Asia are Mongolia, Japan, Taiwan, North Korea, and South Korea.

The coast of East Asia includes many peninsulas and islands. Tectonic activity created many of the region’s islands and seas. Four mountainous islands and thousands of smaller islands form the **archipelago**, or island chain, of Japan.

An arc of islands east of China marks the meeting place of three tectonic plates. These islands form part of the Ring of Fire. Japan has more than 1,000 small earthquakes every year. An undersea earthquake in the region can result in a **tsunami**, a huge tidal wave that gets higher and higher as it approaches the coast.

In the western part of the region lie the Kunlun Shan and Tian Shan mountain ranges. In the southern and western part of the region are the Himalaya. The Changbai Mountains of Manchuria extend into the Korean Peninsula. The Plateau of Tibet, in southwestern China, is East Asia’s highest plateau. In the far north lies the Mongolian Plateau. Between these high plains are the desert and marshes of the Tarim Basin. Further south is the fertile Sichuan Basin.

Water Systems (page 665)

Determining Cause and Effect

What makes the North China Plain a good wheat farming area?

The major rivers in China have their source in the Plateau of Tibet. The Huang He crosses the North China Plain. It receives its name from the windblown yellowish soil called **loess**, which covers the western deserts. The fertile soil makes the plain an important wheat-farming region. The Xi River in southern China forms a huge fertile delta where it meets the sea. The Chang Jiang flows through central China. It is China's longest river and a major transportation route.

The rivers in Japan and Korea flow down the mountains to the sea, often forming waterfalls. They provide hydroelectric power.

Natural Resources (page 666)

Predicting

Read the title and main headings of the lesson. Write a statement predicting what the lesson is about and what will be included in the text. As you read, adjust or change your prediction if it does not match what you learn.

East Asia's mineral resources are unevenly distributed throughout the region. China has the greatest share, including iron ore, tin, tungsten, gold, coal, and oil. North Korea also has rich deposits of iron ore and tungsten. South Korea, Taiwan, and Japan have very few mineral reserves.

Farmland and forests are also unevenly distributed. China is the world's leading rice producer. South Korea produces two crops per year in its fertile soil. Other countries of the region have very limited farmland. The island countries and coastal areas of East Asia depend on the sea for food. These countries have developed seafood farming and deep-sea fishing industries.

Climate and Vegetation

Big Idea

Latitude, physical features, and seasonal wind patterns shape East Asia’s climates and affect how people live in diverse landscapes.

As you read about the climate and vegetation of East Asia, use the major headings of the section to create an outline like the one below.

- I. **Climate Regions**
 - A.
 - B.
 - C.



Notes

Read to Learn

Climate Regions (page 668)

Drawing Conclusions

What accounts for East Asia’s wide variety of climates?

Latitude and physical features shape the climate regions of East Asia.

The northeastern quarter of East Asia has a humid continental climate. A humid subtropical climate covers the southeastern quarter of East Asia. Vegetation in midlatitude climates consists of evergreens and deciduous trees. Some vegetation in the humid subtropical region, such as bamboo and the mulberry tree, plays a major role in the culture and economy of East Asia.

A desert and steppe climate is found in Mongolia and northern China. The deserts in this part of East Asia are often cold and windy. Grasses and sparse trees make up the vegetation in this climate region.

The highland climates of East Asia are usually cool or cold. The climate in mountainous areas changes with the elevation—the higher the elevation, the cooler it is. Grasses, flowers, and trees are found on the lower slopes of mountains. Mosses and lichens are found above the timberline, where no trees grow.

A tropical wet climate is found in southern Taiwan and on the island of Hainan off China’s southern coast. Temperatures are hot year-round with very rainy summer monsoons. Vegetation includes palms, hardwoods, evergreens, and tropical fruit trees.

Seasonal Weather Patterns (page 670)**Synthesizing Information**

As you read, think about the main ideas of the lesson.

Ask yourself, how do ocean currents affect East Asia's climate?

In East Asia, the air mass above the continent meets the air mass above the ocean. The movement of these air masses results in prevailing winds, called **monsoons**, which bring seasonal weather patterns. These winds blow in one direction for about six months of the year and then they switch direction for the other six months. In summer, the monsoons bring most of the region's annual rainfall. The winter monsoons bring cold air and snow to parts of the region.

The monsoons are important to the economy of East Asia. Too little rainfall from the summer monsoons can result in crop failure. Too much rain can bring flooding.

Ocean currents also affect climate in East Asia. The **Japan Current** is a warm-water current that flows northward along the southern and southeastern coasts of the Japanese islands. The current provides moisture to the winter monsoons and warms the land. The Kuril Current is a cold-water current that flows southwest along the Pacific coasts of Japan's islands. Violent storms called **typhoons** develop as a result of the interaction of ocean currents and monsoons.

Chapter 27, Section 1 (Pages 676–680)

China

Big Idea

China's economy and culture are undergoing changes as people migrate from rural areas to urban areas.

Complete a graphic organizer similar to the one below by describing each of China's dynasties.

Shang	Zhou	Han



Notes

Read to Learn

Population Patterns (page 677)

Making Inferences

How might population growth and the continued migration of people from rural to urban areas affect China's agricultural future?

China has a blend of traditional and modern life. About 92 percent of China's 1.3 billion people belong to the Han, named after an ancient ruling family. The remaining population belongs to about 55 different ethnic groups. Although ruled by China, non-Chinese have their own separate histories and cultures.

Taiwan and China share a long history, with most of Taiwan's people descended from the Chinese. Taiwan's original inhabitants, the **aborigines**, are related to peoples in Southeast Asia and the Pacific area.

The people of Mongolia are mostly ethnic Mongolians. Mongolians are separated into separate linguistic groups, but about 90 percent speak the Khalkha Mongolian language.

More than 90 percent of Chinese live on only one-sixth of the land, mostly in the fertile valleys and plains of China's three great rivers: the Huang He, Chang Jiang, and Xi River.

Many people in China have moved from rural, desert, or mountainous areas to cities. Most Chinese still live and work on farms, but millions of people continue to migrate to high-growth urban areas.

The strain from China's growing population has caused the government to enact policies to limit population growth, such as its one-child policy.

History and Government (page 678)**Determining Cause and Effect**

What caused China to open its markets to trade from western countries?

China is the region's **culture hearth**, a center from which ideas and practices spread to surrounding areas. China's culture began more than 5,000 years ago, but historical records were first kept under the Shang **dynasty**, or ruling family, which took power in 1600 B.C. The Shang dynasty was followed by the Zhou, ruling for 800 years from 1045 B.C. After the Zhou, several powerful dynasties expanded China's territory. The Qing were the last dynasty and ruled until the early 1900s.

Western powers fought to force China to open its markets to trade in the 1600s, but the country was not open until 1899. A revolution in 1911 ended the rule of emperors in China. After years of civil war, the Communists won power in China in 1949, setting up the People's Republic of China.

In the 1970s, China's government began to allow some free enterprise to counteract economic and political setbacks. By the 1990s, democratic reforms and economic prosperity had transformed Taiwan into an economic powerhouse. Mongolia became independent from China after the 1911 revolution. It was a communist state under the Soviets until 1991, and then adopted a democratic system.

Culture (page 680)**Evaluating Information**

After you read this lesson, evaluate the effectiveness of the Cultural Revolution on Chinese literacy.

The people of China have cultural influences from Confucianism, Buddhism, Communism, and Western culture.

The literacy rate is 91 percent in China and 98 percent in Mongolia. Literacy suffered a setback during the Cultural Revolution. Better health care has increased life expectancy to about 74 for women and 70 for men. But, the gap in quality between rural and urban health care is widening.

Han Chinese is the most widely spoken language in China. Mandarin is China's official language. Chinese languages use **ideograms**, pictures or symbols that stand for ideas. The spoken language depends on tone, or pitch. Because the government discourages religion, many people identify themselves as **atheists** or non-religious.

Chinese traditional opera uses elaborate costumes, music, and acrobatics or martial arts displays. Chinese pottery developed into a fine art over thousands of years.

Extended family is important to Chinese culture. Small houses in urban areas make it difficult for Chinese extended families to live together, so extended families usually live close to each other.

Japan

Big Idea

Japan’s mix of Asian and Western cultures has been a contributing factor to the country’s influence in the world.

As you read about the history of Japan, fill in details about Japan’s people, history, and culture in a chart like the one below.

People	History	Culture



Read to Learn

Population Patterns *(page 682)*

Previewing

Preview the lesson to get an idea of what is ahead. Then write a sentence or two explaining what you think you will be learning. After you have finished reading, revise your statements as necessary.

Most of Japan’s population and urban areas are in the small lowland areas on seacoasts, and in valleys and plains. The population is ethnically **homogenous**—a population belonging to the same ethnic group.

Japan’s average population density is about 875 people per square mile. Tokyo is the world’s most populous urban area, while Japan’s northernmost large island, Hokkaidō, remains rural with few people.

Urbanization is shaping the physical surroundings and lifestyles of Japan. Because of Japan’s high population density and costly land, suburban homes are small compared to those in other developed countries.

The Japanese have adapted to their crowded conditions with a system of expressways and trains. A trip that takes more than 11 hours by car takes only about 5 hours by high-speed train.

History and Government (page 683)**Synthesizing Information**

As you read, think about the main ideas of the lesson. Combine the ideas in this lesson to answer the following question:

What events led to the modernization of Japan?

Japan's history includes transformation and tradition.

China and Korea had a significant impact on Japan's civilization. Once ruled by many **clans**, or family groups, Japan united under the Yamato dynasty in the A.D. 400s. Yoritomo Minamoto became Japan's first **shogun**, or military ruler, in 1192. Professional warriors, called **samurai**, supported the shogun. Shoguns governed the country until the late 1800s.

Japan's first contact with the West was with a Portuguese ship in 1542. Traders and Catholic missionaries followed. The shoguns soon barred outside peoples and Japan remained isolated for the next 200 years. During the 1800s, the United States worked to open Japan to trade. Shortly thereafter, rebel samurai forced the shoguns to return rule of the country to the emperor, and the emperor's government quickly modernized the country.

Japan was transformed from a feudal to modern country in the early 1900s. It experienced a **cultural convergence**, or the mixing of cultures, as interaction with other countries increased. Japan experienced a period of territorial expansion through diplomacy and military force until World War II. It surrendered to the Allies in 1945 and soon became a democracy. By the late 1900s, it had become a global economic power.

Culture (page 685)**Determining Cause and Effect**

What positive development is causing a strain on Japanese health care and social services?

Education is encouraged and respected in Japan. Students focus on getting into good schools. Education is compulsory until the age of 15. High schools prepare students to enter universities with competitive entrance exams.

Health care has increased life expectancy to 82 years, which has put a strain on health care costs and other social services.

Experts believe the Japanese language may be distantly related to Korean and Mongolian. Japan's first writing system was based on Chinese characters.

Many Japanese people practice both Buddhism and Shintoism. Other religions that influence Japanese culture include Daoism, Confucianism, and Christianity.

The Japanese have developed unique art forms. For example, the Japanese developed **haiku**, a form of poetry. Japanese people experience **acculturation**, the absorption of popular culture from another country.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How is the population of Japan distributed?

2. How did Japan build an empire in the 1900s and how did it come to an end?

Expository Writing

Although Japan's population is ethnically homogenous, its culture has been influenced by many other cultures. Write a paragraph that describes at least two ways that Japan's culture has been influenced by other cultures.

North and South Korea

Big Idea

North Korea and South Korea share similar histories but are moving in very different directions.

As you read about North and South Korea, fill in a chart like the one below with information about each of the countries.

Country	People	History	Culture
North Korea			
South Korea			



Notes

Read to Learn

Population Patterns (page 687)

Determining Cause and Effect

What is one major cause of the much lower population of North Korea compared to South Korea?

North and South Korea share similar ethnic backgrounds, but each country's politics and economies have diverged greatly.

Koreans trace their origins to early peoples from northern China and central Asia. No indigenous minorities live in communist North Korea, but South Korea has people of Chinese descent and foreign nationals working in government and business activities.

Most people in the region inhabit coastal plains that wrap around the peninsula's mountainous interior. About two-thirds of the Korean population lives in rapidly growing cities. North Korea has a much lower population density than South Korea. North Korea's population is about 60 percent urban and South Korea's is 80 percent.

Many people fled from North Korea in the mid-1900s to escape communism. South Korea's population is double that of North Korea, which has a much lower standard of living.

History and Government (page 688)**Comparing and Contrasting**

Compare and contrast the current governments and economies of North and South Korea.

Chinese settlers brought their culture to the Koreans in 1200 B.C. Buddhism later became Korea's main religion.

Neighboring countries have fought over Korea's land throughout its history. By the 1800s, colonial powers desired control of Korea. Korea responded to European "gunboat diplomacy" by adopting an isolationist policy and became known as the "Hermit Kingdom." Japan annexed Korea in 1910 and maintained control until the end of World War II.

After World War II, Korea was divided into U.S.-backed South Korea and communist-ruled North Korea. North Korea's attempt to forcefully reunite the country resulted in the Korean war that ended in a truce in 1953. The two Koreas are still separated along the same cease-fire line. Since that time, North and South Korea have experienced some **cultural divergence**, meaning they are culturally separate because of their different political systems. Both countries experienced autocratic rule after the war, but a successful pro-democracy movement has led to South Korea becoming a democracy with a prosperous market economy. Strict government rule in North Korea has led to many hardships.

Culture (page 685)**Determining Cause and Effect**

1. Why do North Koreans have little time for leisure activities?

2. Why is South Korea's life expectancy longer than in North Korea?

After the Korean War, different choices North and South Korea made have impacted their culture today. Education opportunities have grown in South Korea since World War II. Higher education is stressed and university examinations are highly competitive. North Korean education serves to teach communist ideology. Higher education is focused on teaching students technical skills.

South Korea's health care system has improved since the Korean War, increasing life expectancy to 77 years. All people get free medical care in North Korea, and life expectancy is 71 years. Physicians and medicine, however, are in short supply, and people lack adequate water and heating supplies.

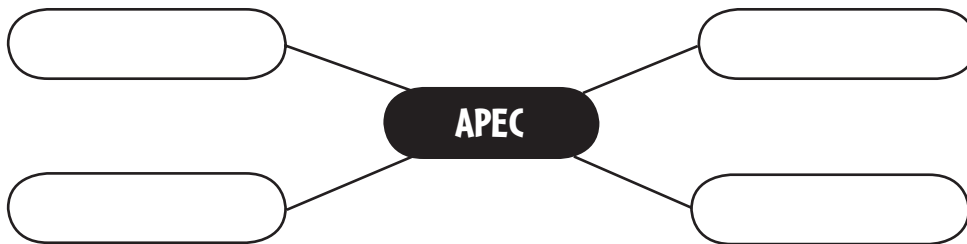
The language of North and South Korea is Korean. Over the centuries, Korean has been influenced by Chinese. Korean life is based on Confucianism. People also practice Buddhism, Christianity, and Cheondogyo. Traditional Korean buildings show Chinese influence. Arts today are influenced by the political systems in the two nations. Artwork in North Korea is focused on glorifying Kim Il Sung and Kim Jong Il.

The Economy

Big Idea

The countries of East Asia are experiencing rapid economic changes as they emerge from the Asian financial crisis of the 1990s and adjust to a global economy.

Complete a web diagram similar to the one below by identifying the East Asian members of the Asia Pacific Economic Cooperation Group (APEC).



Read to Learn

Economic Activities (page 699)

Analyzing Information

As you read the lesson, think about the agriculture section's organization and main ideas. Then write a sentence explaining the organization, and list the main ideas.

Governments and economies are closely related in East Asia. Economies include market systems in Japan and South Korea, a command system in North Korea, and a mixed economy in China.

Most East Asian countries have shifted from agricultural to industrial economies. South Korea and Taiwan became **newly industrialized countries** in the 1970s. China's Great Leap Forward campaign organized farmers into huge **communes**, or large farming communities, to disastrous results. Most of Mongolia is used for grazing and is moving towards privatization of farmland. South Korea is experiencing a farm labor shortage on its small family farms due to urbanization. North Korea's jointly operated farm **cooperatives** cannot meet the country's own demand for rice. With limited farmland, both Japan and Taiwan must import food.

Since the 1960s, Japan, South Korea, and Taiwan have become important industrial trading countries. North Korea is lagging behind, while China is still primarily agricultural but has a rapidly growing industrial economy.

Transportation and Communications (page 701)**Drawing Conclusions**

Why are transportation systems in Japan, South Korea, and Taiwan more developed than in the other countries in the region?

Transportation and communication networks in East Asia are concentrated in urban areas. Japan, South Korea, and Taiwan have nationwide railroad and highway networks. Land transportation is not as well developed in other parts of East Asia. In China, rivers are important routes from inland cities to seaports. The Grand Canal of China is the world's longest and oldest human-made waterway. **Merchant marine** fleets—ships that transport goods—are vital to the region's export trade.

Communist governments control communications and the news media in North Korea and China. People in Japan, South Korea, and Taiwan, however, enjoy a free press and can access high-tech communications without government intervention.

Trade and Interdependence (page 702)**Previewing**

Read the title and quickly preview the lesson to get a general idea of the lesson's content. Then write a sentence or two explaining what you believe the lesson will be about.

China, Japan, South Korea, and Taiwan are members of **Asia-Pacific Economic Cooperation Group (APEC)**. This organization ensures that trade among its members is fair and efficient.

Japan depends on trade with other countries for its economic well-being. The government, however, places high taxes on imports of finished goods, thereby limiting what other countries can sell to Japan. These high taxes, combined with demand for Japanese products abroad, mean Japan exports more than it imports, creating a **trade surplus**. Some of Japan's trading partners have experienced **trade deficits**, because they import more goods from Japan than they export to Japan.

China has modernized its economy. It also has increased trade with market economies such as the United States. The United States, however, opposes China's treatment of **dissidents**, or citizens who speak out against government policies. To influence China to change its policies, several countries have placed **economic sanctions**, or trade restrictions, on China. The United States lifted some sanctions when China released some of its dissidents from prison. In 2000 it granted China full trading privileges. China was admitted to the **World Trade Organization (WTO)**, an international body that oversees trade agreements and settles trade disputes between countries.

People and Their Environment

Big Idea

Throughout East Asia, rapid industrialization and the burning of fossil fuels has led to severe pollution.

As you read about sources of electric power in East Asia, complete a graphic organizer like the one below by describing the power sources of each country.

Country	Power Sources
China	
Japan	
Mongolia	
North Korea	
South Korea	
Taiwan	



Notes

Read to Learn

Managing Resources *(page 707)*

Drawing Conclusions

What are some possible positive and negative aspects of using nuclear power in East Asia?

East Asia's economic growth has increased the region's demand for power. Some power comes from hydroelectric plants, but most comes from the burning of fossil fuels. Burning these fuels has resulted in acid rain, pollution, and global warming. Several nations have begun to search for cleaner sources of power. Japan, South Korea, and Taiwan use nuclear power for 30 to 40 percent of their power needs. However, accidents in nuclear power plants have raised concerns about the safety of nuclear power. Japan has developed alternatives to nuclear and hydroelectric power and opened plants that generate power from wind and solar energy.

Human Impact (page 708)**Making Inferences**

As you read the lesson, look for clues in the descriptions and events that might help you draw a conclusion to the following question: How can countries in overfished areas obtain seafood?

East Asia faces serious environmental concerns. China's reliance on coal to run its industries has contributed to major air pollution and acid rain. China has had trouble disposing of waste products from sewers and factories. Each year China has cleared thousands of acres of forests to meet the country's need for lumber. This deforestation has caused soil erosion and flooding. Overgrazing has resulted in desertification.

North Korea, South Korea, and Taiwan also experience air and water pollution from industrial emissions. Nuclear power provides some of South Korea's power needs. North Korea faces pollution from the burning of fossil fuels.

Through strict environmental laws, Japan has encouraged industries to control pollution. It has urged other countries to reduce emission of carbon dioxide and **chlorofluorocarbons (CFCs)** found in liquid coolants. When CFCs enter the atmosphere, they contribute to the destruction of the earth's ozone layer.

Recently many of the region's coastal waters have become overfished. As a result, many commercial fishing companies have begun fishing international waters, using large factory ships. One solution to overfishing is **aquaculture**, or the cultivation of fish and other seafood. Several countries in the region raise seafood in ponds for export.

Future Challenges (page 710)**Synthesizing Information**

What natural disasters does East Asia face and how are they caused?

East Asia has faced natural disasters throughout its history. Flooding of China's rivers has led China to build channels and irrigation canals to redirect water quickly. China has also built dams to help control flooding.

East Asian countries experience earthquakes. Undersea earthquakes or volcanoes sometimes trigger tsunami waves that cause massive destruction and loss of life when they crash onto shore. Typhoons cause destruction from high winds and flooding along East Asia's coasts.

The Land

Big Idea

Southeast Asia’s landmasses were formed millions of years ago by tectonic plate collisions and related volcanic eruptions and earthquakes.

As you read about the region’s physical landscape, use the major headings of the section to create an outline like the one below.

Physical Geography of Southeast Asia	
I. Landforms	
A.	
B.	
II. Water Systems	
A.	
B.	



Read to Learn

Landforms (page 735)

Analyzing Information

As you read, think about the peninsulas and islands of Southeast Asia. Ask yourself: What geologic activities created Southeast Asia?

Millions of years ago, the collision of the Indo-Australian, Philippine, and Eurasian tectonic plates formed the landmasses of Southeast Asia. The collision also formed **cordilleras**—parallel mountain ranges and plateaus. Volcanoes and earthquakes created a series of **archipelagos**, or groups of islands, in the South Pacific.

Southeast Asia stretches from mainland Asia almost to Australia. About half of the region’s countries lie on the Indochina Peninsula. Malaysia is both a mainland and an island country.

The **insular**, or island, countries of Southeast Asia include Brunei, East Timor, Indonesia, Singapore, and the Philippines. Indonesia is Southeast Asia’s largest island country. More than 7,000 islands make up the Philippines, 900 of which are settled. The 11 largest islands make up over 95 percent of the country’s area.

About 327 volcanoes stretch across Indonesia. In 2006, Gunung Merapi spewed toxic gas, volcanic ash, and molten lava. Some scientists believe the 1991 eruption of Mount Pinatubo in the Philippines was the twentieth century’s most powerful eruption.

Water Systems (page 737)**Making Inferences**

Why do you think island rivers in the region flow in all directions?

Southeast Asia's rivers are used for transportation, communication, and food. They also create fertile farming areas. Mainland rivers originate in the northern highlands. Major rivers include the Irrawaddy in Myanmar, the Chao Phraya in Thailand, and the Red in Vietnam. The Mekong River forms a border between Thailand and Laos and then flows through Cambodia and Vietnam. Generally shorter than their mainland counterparts, island rivers flow in various directions.

Natural Resources (page 737)**Predicting**

Read the title and quickly preview the lesson to get a general idea of the lesson's content. Then write a sentence or two explaining what you believe the lesson will be about.

Southeast Asia has many rich natural resources. It has a large supply of fossil fuels. Malaysia, Vietnam, Brunei, and Indonesia have rich petroleum reserves. Vietnam and the Philippines mine coal. Indonesia is a member of OPEC and a leading producer of oil in the region.

Southeast Asia has many minerals. Indonesia mines nickel and iron. The Philippines mines copper. Thailand, Laos, Indonesia, and Malaysia mine tin. Malaysia and Indonesia are among the top six exporters of tin to the United States. Many countries also mine sapphires and rubies. The Philippines harvests pearls. Although most countries in the region take advantage of their natural resources, some countries' resources remain undeveloped.

The **flora** and **fauna** of the region are diverse. The flora, or plants, include the *Rafflesia arnoldii*—the world's largest flower. Thailand has over 1,000 species of orchids. Malaysia has rubber trees. Mahogany is found in the Philippines. Myanmar exports teak wood. The fauna, or animals, include elephants, rhinoceroses, tigers, and orangutans. Some animals native to Southeast Asia are not found anywhere else in the world.

Climate and Vegetation

Big Idea

The climates of Southeast Asia support diverse ecosystems and natural habitats, some of which have already disappeared or are endangered because of logging and urbanization.

As you read about the vegetation of Southeast Asia, complete a web diagram like the one below by filling in the three types of vegetation found in the region.



Notes

Read to Learn

Tropical Regions (page 740)

Predicting

Preview the lesson and write a sentence or two that predicts what you think the lesson will be about. After you have finished reading, revise your statements as necessary.

Tropical climates dominate Southeast Asia. The temperature is mostly the same year-round—about 79° F (26° C)—with high humidity.

This tropical rain forest climate supports a diverse ecosystem. In the Malaysian rain forest, 14,500 species of flowering plants grow. There are several layers of vegetation between river valleys and higher elevations. Peat swamp forests exist in the river valleys. Sandy soil supports coastal shrubs. The tidal mudflats support mangrove swamp forests. Lowland areas support forests of tall trees with leathery, evergreen leaves.

Singapore was once covered by dense rain forest. As Singapore grew, urban areas replaced much of the natural habitat. Many **endemic** species—those native to an area—are now gone.

A tropical dry climate is located in the Indochina Peninsula and along the southeastern parts of Indonesia. On the mainland, from May through September, summer monsoon winds bring rain. The dry season is from October to April. In southern Indonesia, these seasons are reversed. There, the dry season is from May to September, and the rains come from October to April.

Midlatitude Regions (page 742)**Comparing
and Contrasting**

How is the highland climate different from the humid subtropical climate in Southeast Asia?

Northern areas of Southeast Asia's mainland have a humid subtropical climate. From November to April, the cool, dry temperatures there average around 61° F. The Shan Plateau in Myanmar has lower temperatures than the rest of the country.

Highland climates are located in mountainous areas of Myanmar and on the Indonesian islands of New Guinea and Borneo. These regions are much cooler than the other climate regions in Southeast Asia. The lower slopes have deciduous forests. Higher elevations have evergreen trees. In Myanmar, forests of rhododendrons grow.

Mainland Southeast Asia

Big Idea

Settlement patterns and regional conflicts have influenced the cultures of mainland Southeast Asia.

Complete a graphic organizer like the one below by describing current challenges for each country of mainland Southeast Asia.

Country	Current Challenges
Cambodia	
Laos	
Myanmar	
Thailand	
Vietnam	



Read to Learn

Population Patterns (page 749)

Synthesizing Information

What cultures helped to shape the culture of mainland Southeast Asia?

Many different ethnic groups have lived in mainland Southeast Asia for centuries, each adding to the culture.

About 2,500 years ago, migrants from China and Tibet arrived in the region. Many of the people in the region today are descended from these early peoples. On the mainland, the Khmers settled Cambodia, Vietnam, and Thailand—making up about 90 percent of Vietnam’s population. Mons and Burmans live in Thailand and Myanmar.

Population densities vary widely among the countries of the region. Laos has the lowest population density, while Vietnam has the highest. Population in the region is generally concentrated in fertile river valleys or on coastal plains. Increasing numbers of people are moving from rural areas to urban centers.

In some countries, a single city—called a **primate city**—attracts more people than any other. Bangkok in Thailand is an example. Between 1975 and 1990, mainland Southeast Asia experienced a large amount of external migration that led to the loss of skilled and educated workers.

History and Government (page 750)**Drawing Conclusions**

Why did political conflicts and wars rage through Southeast Asia after independence?

Early peoples in mainland Southeast Asia were skilled farmers, and rice was the staple grain of these agricultural societies. They were also skilled metalworkers and they worshipped their ancestors, as well as animal and nature spirits.

Many early civilizations in Southeast Asia developed on waterways. **Maritime**, or seafaring, empires became powerful by controlling shipping and trade. The kingdom of Funan was established along the present-day Gulf of Thailand. The Khmer Empire is best known for its architecture. The Vietnamese people controlled most of the Indochina Peninsula until 111 B.C., when the Chinese conquered the territory.

Europeans arrived in Southeast Asia around the 1500s, at first setting up **spheres of influence**—agreed-upon areas of control. The kingdom of Siam was a neutral territory, or **buffer state**, between rival powers.

By 1965 the countries of Southeast Asia had gained their independence. In the late 1980s, Myanmar's military instituted strict military rule, or **martial law**, over the country.

After a long war, Vietnam was unified under a Communist government and the communist Khmer Rouge took over Cambodia in 1975.

Culture (page 752)**Making Generalizations**

What do the languages spoken in Southeast Asian countries generally reflect?

Cultures in mainland Southeast Asia reflect the region's ethnic diversity.

Since 1945 literacy has increased dramatically in some parts of the region while educational opportunities are still limited in many areas. Health-care, in general, is inadequate and unevenly distributed in mainland Southeast Asia.

Hundreds of languages and dialects are spoken in the region. Most stem from two major language families—Sino-Tibetan and Mon-Khmer. Nearly all of the world's major religions are represented in the region. Buddhism is the predominant religion.

Over the centuries, local artists and writers adapted Indian and Chinese styles to their own needs. Elaborate Chinese-style pagodas and Indian-style **wats**, or temples, dot the landscape.

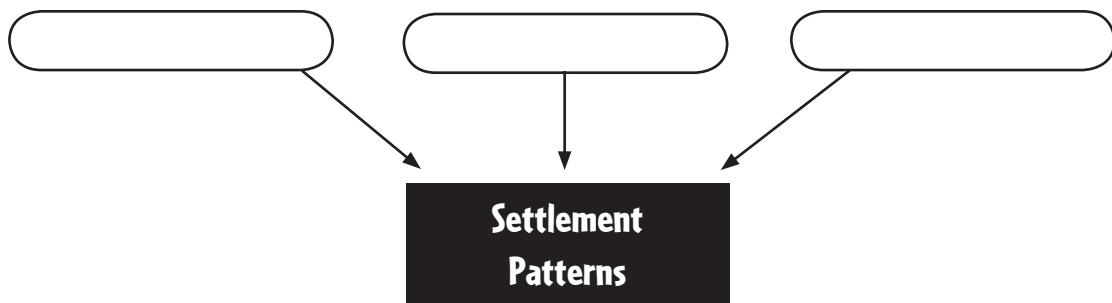
People in mainland Southeast Asia enjoy a variety of leisure activities, such as visiting museums, theaters, parks, restaurants, and nightclubs in the cities. Rural people visit their neighbors and celebrate family occasions such as weddings and birthdays.

Island Southeast Asia

Big Idea

Indigenous and outside cultures have had enormous influence on island Southeast Asia.

Create a web diagram like the one below for two countries in island Southeast Asia. List the factors that have influenced rural and urban settlement in the country.



Notes

Read to Learn

Population Patterns *(page 755)*

Problems and Solutions

Based on what you have read, what might countries in Southeast Asia do to reduce overcrowding?

Island Southeast Asia extends across two oceans and numerous seas. Many of the islands' 360 million people are descendants of early peoples from the mainland. The Malays settled the Malay Peninsula and the islands that today form Indonesia.

In the A.D. 100s, merchants from India introduced Hindu and Buddhist traditions. Chinese traders and soldiers influenced the area as well. During the 1400s and 1500s, European traders also influenced Southeast Asia.

People live mostly on coastal plains where there is a ready supply of food, transportation, and jobs. Singapore, the region's smallest country, has the greatest population density in the region.

People in Southeast Asia are migrating to cities for greater educational and economic opportunities in a trend toward **urbanization**, or the shift from rural to urban life. To reduce overcrowding in cities, Indonesia's government has relocated millions of people to less densely populated islands.

History and Government (page 756)**Drawing Conclusions**

How did colonization by Western countries affect island Southeast Asia?

The histories of Southeast Asia's islands and the importance of trade both then and now continue to influence the subregion today.

The Srivijaya Empire was based on the island of Sumatra. This empire was located where waterways link the Indian Ocean, the Java Sea, and the South China Sea. The empire became wealthy by taxing traders whose ships passed through its waterways. Today, Singapore owes its economic prosperity to these same trade routes.

Indian and Muslim Arab merchants and missionaries significantly shaped the region as well. After 1400, Islam quickly spread from coastal to interior areas in the Malay Peninsula and neighboring islands.

In the early 1900s, the Netherlands claimed most of the islands that make up Indonesia, the United Kingdom controlled what is now Singapore and Brunei, and the United States gained control of the Philippines in a war with Spain in 1898. Europeans brought improved infrastructure and brought on economic changes through large commercial plantations.

Japanese occupation of the region followed colonization. After World War II, control of the islands reverted back to Europeans. In some countries, ethnic groups have waged struggles for independence.

Culture (page 757)**Comparing and Contrasting**

How does health care in island Southeast Asia compare to health care on mainland Southeast Asia?

Since independence, education and quality of life has increased throughout island Southeast Asia. In general, health care is better in island Southeast Asia than on the mainland. Singapore's health care services compare with those in other developed countries.

Indonesia has the region's largest number of ethnic and linguistic groups. Many regional languages, however, are the result of colonization. Islam is widespread in island Southeast Asia. Indonesia is the largest Islamic country in the world.

Early Indian and Chinese civilizations influenced Southeast Asian arts, especially architecture. Traditional dances in Southeast Asia often make use of religious themes. Puppet plays are also popular in many parts of Southeast Asia.

People in the region spend their leisure time in diverse ways. In Singapore, popular culture is based on modern mass media.

Celebrations throughout island Southeast Asia range from religious festivals to national and state holidays.

Section Wrap-up

Answer these questions to check your understanding of the entire section.

1. How have outside influences affected the arts in island Southeast Asia?

2. What events led to the independence of island Southeast Asian countries?

Persuasive Writing

Think about the effects that Western colonization has had on island Southeast Asia. Take a position either for or against Western colonization and write a paragraph supporting your position.

The Economy

Big Idea

Southeast Asia’s physical environment—which includes fertile soil, warm climate, and rich mineral deposits—affects the economic activities of the region. Complete a graphic organizer like the one below by filling in the reasons why Singapore has Southeast Asia’s most developed economy.

Singapore’s Economy

-
-
-
-



Read to Learn

Economic Activities (page 767)

Synthesizing Information

What cultures helped to shape the culture of mainland Southeast Asia?

Southeast Asia’s fertile river valleys are a major source of livelihood for its people. Farmers use more than half of the region’s arable land to grow rice. Seasonal flooding of rivers in parts of the region irrigates **rice paddies**, or flooded fields where rice is grown. Many rice farmers use sharp, curved knives called **sickles** to harvest their crops by hand. Southeast Asian farmers grow other crops, such as yams and corn, in areas too dry for a second planting of rice. Some grow an edible root called cassava as a subsistence crop.

Forestry is important to many countries in Southeast Asia, and rich mineral deposits are found in mountains. Papua has timber resources and rich **lodes**, or deposits, of minerals.

Industry is growing quickly in Southeast Asia. Many workers in the region are leaving farms to work in urban industries. Singapore’s location makes it a major port, world trade center, and manufacturing center. It has established free-trade zones that attract foreign businesses. Malaysia manufactures many goods, such as steel, automobiles, and microchips.

Transportation and Communications (page 769)**Drawing Conclusions**

Think about transportation networks in Southeast Asia. Why is Singapore a major port?

Water transportation is the most common way to move people and goods in the region. Southeast Asia is the crossroads of major ocean trade routes. Most shipping between Europe and East Asia passes through the Strait of Malacca near Singapore, one of the world's busiest ports. Singapore is a **free port**, a place where goods can be unloaded, stored, and reshipped without paying import duties. There are many other ports in the region, including Jakarta, Manila, Haiphong, and Bangkok.

The quality of land transportation in the region varies partly because of the differences in economic development. The industrializing countries generally have better land transportation. People travel on bicycles, motor scooters, and oxcarts. In urban areas, they also use trucks, automobiles, and buses. Travel is difficult in rural areas because of dense forests, unpaved roads, and rugged land.

Industrializing countries in the region have better communication services than countries that are less industrialized. Singapore has a well-developed communications system. Rural areas of the region tend to have little access to telecommunications.

Trade and Interdependence (page 770)**Predicting**

Read the title and quickly look over the lesson. Then write a sentence or two that predicts what the lesson will cover.

Recently, Southeast Asian countries have become more **interdependent**, or reliant on one another. Two organizations have increased this interdependence. The Asian Development Bank (ADB) provides international loans to aid the region's economies. The **Association of Southeast Asian Nations (ASEAN)** was formed to promote regional development, trade, and greater economic stability.

ASEAN was formed by Indonesia, Malaysia, the Philippines, Singapore, and Thailand in 1967, and several other countries have since joined. ASEAN's founding members have generally had greater economic success than other countries in Southeast Asia. To better compete against the growing economies of China and India, ASEAN countries are now working to form a single trading market—like that of the European Union—by 2015.

People and Their Environment

Big Idea

Industrialization and economic development in Southeast Asia have resulted in the pollution of air, land, and water and the destruction of valuable natural resources.

As you read, create an outline like the one below by using the major headings of the section.

- I. **Managing Resources**
 - A.
 - B.
- II. **Human Impact**
 - A.
 - B.
- III. **Future Challenges**
 - A.
 - B.



Notes

Read to Learn

Managing Resources (page 775)

Making Inferences

How has logging harmed the environment of Southeast Asia?

Minerals, metals, and rain forest timber are among the region's most valuable resources. A key for successful resource management is **sustainable development**—technological and economic growth that does not deplete the human and natural resources in the area.

Several countries have introduced reforestation programs, though they have been difficult to enforce due to illegal logging operations.

Planned migration has helped balance environmental protection with economic development. Laos has tried to limit **shifting cultivation**, a method in which farmers clear forests, cultivate the land for a few years, and then abandon it. Governments in the region are also starting to deal with the impact of urban growth on the environment. These approaches are helping Southeast Asians realize they must protect the environment while developing their economies.

Human Impact (page 776)**Synthesizing Information**

1. To prevent further loss of rain forests, several countries have limited _____ exports.
2. Scientists predict that South Asia will lose many unique _____ because of logging.
3. Laos has tried to limit _____ by resettling highlands peoples on more fertile arable plains.

Economic growth in Southeast Asia's cities has raised standards of living but has also created environmental concerns. Growing populations in the cities create shortages of housing, water supplies, sanitation, and traffic control. In Bangkok, great population increases and industrialization have caused the city to overheat. Singapore does not have as many pollution problems because it has strict laws against polluting.

In some parts of Southeast Asia, pollution extends into rural areas, including national parks. Volcanic eruptions and forest fires also cause pollution in rural areas. In 2005, Indonesian forest fires created pollution and respiratory problems for people as far away as mainland Malaysia.

Industrialization is transforming once largely agricultural countries, with both positive and negative consequences. In Malaysia, effluents discharged from industrial plants contaminate rivers and coastal waters.

Timber is a vital resource and many countries in the region rely on it as an important source of income. But many countries are facing problems with uncontrolled deforestation.

Future Challenges (page 777)**Predicting**

Preview the lesson to get an idea of what is ahead. First, skim the lesson. Then write a sentence or two explaining what you think you will be learning. After you have finished reading, revise your statements as necessary.

Much of Southeast Asia is part of the Ring of Fire, the area of earthquake and volcanic activity that rims the Pacific Ocean. Volcanoes have erupted in parts of Southeast Asia in recent years. Most of the larger islands in the Philippines have volcanic mountains. People have been killed and homes destroyed. Clouds of ash and dust blow into the atmosphere and affect weather patterns worldwide. The people of Bali in Indonesia think of the volcano there as the sacred centerpiece of their Hindu beliefs.

Floods kill hundreds of people in the region each year and ruin millions of acres of crops. In areas where forests have been cleared, the floods cause water runoff and mudslides. Rivers undergo seasonal flooding every year.

Tropical storms also often strike parts of Southeast Asia. **Cyclones** are storms with heavy rains and high winds that blow in a circular pattern around an area of low atmosphere. **Typhoons** are tropical cyclones that form in the Pacific Ocean. Typhoons form south of the Equator, usually between July and November. Southeast Asians are taking steps to control the damage from tropical storms.

The Land

Big Idea

Australians have adapted to life in a country with large expanses of dry, flat land. People in Oceania take advantage of the volcanic soil of many of the islands.

As you read, list features and resources for each subregion in a graphic organizer like the one below.

Australia	Oceania



Read to Learn

Australia (page 803)

Predicting

Read the title and main headings of the lesson. Write a statement predicting what the lesson is about and what will be included in the text. As you read, adjust or change your prediction if it does not match what you learn.

Australia is unique because it is a continent and a country. It is in the Southern Hemisphere, and it has several landforms.

The Great Dividing Range stretches along Australia’s eastern coast from Cape York Peninsula to the island of Tasmania. Most of Australia’s rivers begin in these mountains.

The Western Plateau covers almost two-thirds of Australia. It is located in central and western Australia. Few people live in this “outback.” Three deserts—the Great Sandy, Great Victoria, and Gibson Desert—cover much of the plateau. South of the Great Victoria Desert lies the Nullarbor Plain. This plain is dry and treeless.

The Central Lowlands separate the Great Dividing Range and “outback.” Dry most of the year, pressurized underground water lies underneath these lowlands in the Great Artesian Basin, though the water from these **artesian wells** that gushes to the surface is too salty for humans or crops.

A famous World Heritage Site, the Great Barrier Reef, lies along Australia’s northeastern coast. It is made up of a string of reefs made from **coral**, the limestone skeletons of tiny sea animals.

Australian farmers grow wheat, barley, fruit, and sugarcane; ranchers raise livestock; and the country has rich mining resources.

Oceania (page 804)**Comparing and Contrasting**

As you read, list the characteristics of each island type in Oceania. Then underline unique characteristics for each island type.

High Islands:

Low Islands:

Continental Islands:

Oceania is made up of thousands of islands. It stretches for millions of square miles in the Pacific Ocean. Many of the islands were formed by colliding tectonic plates millions of years ago. The islands are part of the Ring of Fire.

Geographers classify the islands of Oceania into three groups based on location, how the islands formed, and the culture of the people who live there: Melanesia (black islands), Micronesia (little islands), and Polynesia (many islands).

There are three island types in Oceania. High islands were shaped by volcanoes. The landscapes of high islands feature mountain ranges split by valleys that fan out into coastal plains. Bodies of freshwater lie inland. Volcanic soil supports farming. Low islands were also shaped by volcanoes. These are ring-shaped islands known as **atolls**, formed by the buildup of coral reefs on the edge of underwater volcanoes. Atolls surround **lagoons**—shallow pools of clear water. Low islands rise only a few feet above sea level. They have few natural resources and little soil. Continental islands were formed by the rising and folding of ancient rock from the ocean floor. Most of Oceania's large islands are continental islands. Many have active volcanoes. They have plains, mountains, plateaus, and valleys. They have most of Oceania's mineral deposits such as oil, gold, nickel, and copper.

New Zealand (page 805)**Drawing Conclusions**

How does New Zealand's physical geography contribute to its available energy sources?

Most of New Zealand's landmass is made up of its two largest islands: North Island and South Island.

North Island has beaches, ancient forests, and rich soil that supports citrus orchards. It has a wide central plateau with active volcanoes and freshwater lakes. Ranchers graze sheep and dairy cattle on the hills east of the plateau.

The Southern Alps run along South Island's western edge. The island also has lakes and rivers. The lowlands on the eastern coast have fertile soil. The western coast has cliffs with narrow inlets and caves.

About half of New Zealand's land supports crops and livestock. The country has a large supply of hydroelectric power. Geothermal power is generated by the water heated underground by volcanoes. The waters off New Zealand provide the country with a wide variety of fish.

Climate and Vegetation

Big Idea

Australia is characterized by several different climates, while most of Oceania has a tropical wet climate and New Zealand has a marine west coast climate. Each type of climate affects human activities.

As you read, use an outline like the one below to take notes about the climate and vegetation of Australia, Oceania, and New Zealand.

Climate and Vegetation
I. Australia
A. Mountains and Plateaus
B. Central Lowlands
II. Oceania and New Zealand



Notes

Read to Learn

Australia (page 811)

Predicting

Quickly look over the lesson and write a statement predicting what you think it will be about. After reading the lesson, revise your prediction as necessary.

Australian climate and vegetation varies greatly from area to area. Regions include tropical climates in the northeast, deserts in the interior, and midlatitude temperate areas of grasslands, scrub, and mixed forests along the eastern, southern, and southwestern coasts.

The Western Plateau, Australia's large interior desert area, is sun-scorched during the day but temperatures drop dramatically at night.

A milder steppe climate encircles Australia's desert region. More regular rainfall brings a variety of vegetation to this region. Settlers to this region used acacia saplings to make **wattle** frameworks to build homes. Rains in this region only fall during the wet season and can vary from year to year.

Australia's coastal areas have a variety of moister climates. The humid subtropical northeastern coast averages more than 20 inches of rain a year. The less rainy Mediterranean climates of the southern coasts and the marine west coast climate along the southeastern coast support most of Australia's agriculture.

Oceania and New Zealand (page 812–813)**Making Inferences**

What impact does New Zealand's geographic isolation have on its plant life? Explain your answer.

Most of Oceania lies between the Equator and the Tropic of Capricorn, so most islands have a tropical wet climate. Oceania has a wet season and a dry season. Low islands get little rainfall. High islands get as much as 150 inches a year. Shrubs and grasses grow on dry, low islands.

Coconut palms and other trees grow on islands with more rainfall. A generally windless area called the **doldrums** is found along the Equator. The doldrums sometimes change to violent wind and rain storms called **typhoons**.

Most of New Zealand has a marine west coast climate. Ocean winds warm the land in winter and cool it in summer. Geographic differences in the country cause climate variations. North Island's central plateau is warm during summer, but its mountaintops may have snow year-round. Mountaintops with western winds get the most rainfall. The Southern Alps on the South Island have an average annual rainfall of 315 inches. Humidity in inland areas is about 10 percent lower than in coastal areas.

About 90 percent of the country's plants are native only to New Zealand. A shrub called **manuka** grows where prehistoric volcanic eruptions destroyed ancient forests. Other vegetation includes kauri trees, evergreen trees, willows, and poplars imported from Europe.

Australia and New Zealand

Big Idea

Migration and settlement patterns have influenced the cultures and landscape of Australia and New Zealand.

As you read about the population patterns, histories, and cultures of Australia and New Zealand, use the major headings of the section to create an outline similar to the one below.

<p>I. The People</p> <p>A.</p> <p>B.</p> <p>C.</p> <p>D.</p> <p>II. Population Distribution</p>



Read to Learn

Population Patterns (page 819)

Synthesizing Information

Think about the main ideas of the lesson. Combine them to answer the following question: How did the early peoples of Australia and New Zealand support themselves?

Aborigines probably arrived in Australia from Southeast Asia over 40,000 years ago, living as nomadic hunters and gatherers. Today, the numerous groups of Australia’s aborigines—including the Arrernte and Palawa—make up about 2 percent of Australia’s population. The Maori, New Zealand’s indigenous peoples, came from the islands of Polynesia, and maintain ancient traditions that are still important today.

People of British descent began colonizing the region in the 1500s and make up most of today’s population. Furthermore, Australia has actively recruited immigrants in recent decades, which has led to an increase in the numbers of East Asians and Southeast Asians.

Australia’s physical geography results in the uneven distribution of its people. Population density varies throughout the region. Most people in both Australia and New Zealand live along the coasts in cities or towns. Rapid expansion of industry after World War II drew many immigrants to Australia.

History and Government (page 820)**Interpreting**

As you read, think about the ways in which European settlement influenced the region. Then write a short paragraph that describes the influences.

Various groups of people from Asia settled Australia and New Zealand more than 40,000 years ago. Aborigines in Australia's dry interior led a nomadic life, traveling together in **clans**, or family groups. Men used **boomerangs**, heavy sticks that curve when thrown, to hunt. The Maori left eastern Polynesia and settled in New Zealand to hunt, fish and farm.

Sailor James Cook claimed eastern Australia for Great Britain in the 1700s. It first used the colony to house British convicts from overcrowded prisons. Eventually, free settlers from Britain started farms and settlements on the coast. At the same time, the British and other Europeans established settlements in New Zealand. The settlement of both areas had a disastrous impact on the indigenous peoples, forcibly removing Aborigines from their lands and denying them rights, and leading to armed conflict with the Maori.

Australia and New Zealand gained independence from Britain in the early 1900s. Both countries became **dominions**, or largely self-governing countries within the British Empire. As British influence in the world waned after World War II, the two countries looked to the United States for trade and protection.

Culture (page 822)**Drawing Conclusions**

As you read, compare the daily life in Australia and New Zealand. Choose the country in which you would most like to live. Explain your answer.

Australia and New Zealand blend European and indigenous elements, as well as some Asian influences, in their cultures. English is the major language. Australian English, called **Strine**, includes Aboriginal words, terms used by early settlers, and slang created by modern Australians.

The religious traditions of the indigenous peoples of the region focus on the relationship between humans and nature. Europeans brought Christianity to the region, which is now the most widely practiced religion.

Education in both countries is free and mandatory until age 15 and literacy rates are over 99 percent.

Quality health care is widely available, especially in urban areas. Indigenous peoples in these countries, however, have suffered from malnutrition and poverty. The Australian government and private organizations have been trying to improve the living standards of Aborigines.

The peoples of the region traditionally used art, music, dance, and storytelling to pass on knowledge from generation to generation, while sports and leisure activities reflect the region's colonial heritage.

Oceania

Big Idea

Indigenous and Western cultures have shaped the societies of Oceania.

On a web diagram like the one below, list the different ways of life of the peoples of Oceania.

Ways of Life	
Government	Culture



Read to Learn

Population Patterns (page 825)

Synthesizing Information

What are the three major groups of Oceania and where are they located?

1. _____

2. _____

3. _____

The islands of Oceania were probably first settled by peoples from Asia more than 30,000 years ago. The three major indigenous groups include the Melanesians, Micronesians, and Polynesians. Each group lives on island clusters of the same name.

Melanesia is an island cluster in the southwestern Pacific Ocean. A variety of cultures live on this group of islands, including the large islands of Papua New Guinea and New Caledonia.

Micronesia is an island cluster in the western Pacific east of the Philippines. Several different cultures live in Micronesia.

Polynesia is an island cluster located in the central Pacific. The largest population of Polynesians lives in the Samoan Islands. In the past, they practiced **horticulture**, or the raising of plants and fruit on small plots of land.

Asian communities also exist in the south Pacific area. Chinese traders and South Asian workers settled parts of Oceania during the 1800s.

A high percentage of the islands are unsuited for human habitation. Papua New Guinea is the most populous country, while Nauru is the world's smallest republic with only 10,000 people. Overall, Oceania's population is growing at 2.3 percent per year.

History and Government (page 826)**Drawing Conclusions**

As you read the lesson, look for clues to help you answer the following question:

What events changed the course of Oceania's history?

Migrations over many generations and European colonization have shaped the societies of Oceania.

Peoples from Asia settled in family groups along island coasts. They survived on fish, turtles, and shrimp, as well as breadfruit and coconuts. Well-built canoes made lengthy voyages possible, developing trade. People on some islands used strings of shell pieces as money.

Europeans settled Oceania in the 1800s and started plantations to sell products all over the world. During the late 1800s and early 1900s, Britain, France, Germany, Spain, and the United States struggled for control of various islands. After World War I, many of Germany's Pacific colonies came under Japanese control. During World War II, some islands were sites of fierce battles. After Japan's loss in World War II, many of the islands under its control were turned over to the United States as **trust territories**—dependent areas placed under temporary control of a foreign country.

Most South Pacific islands achieved independence by the end of the 1900s. Some islands have been torn by ethnic conflict. People in the Solomon islands are once again valuing **subsistence farming**—growing only enough for their own needs.

Culture (page 827)**Drawing Conclusions**

Why do you think so many different languages have developed in Oceania?

South Pacific countries practice a blend of European, Asian, and indigenous traditions.

Sports and leisure activities reflect the region's diversity. Traditional sports, such as outrigger canoe racing or spearfishing, are popular, as are Western sports.

Before modern transportation and communications, the South Pacific was separated from the rest of the world. Twelve hundred of the world's 3,000 languages are spoken in Oceania alone. In many areas of the region, varieties of **pidgin English**, a blend of English and indigenous language, is spoken. Christianity is the most widely practiced religion in Oceania today.

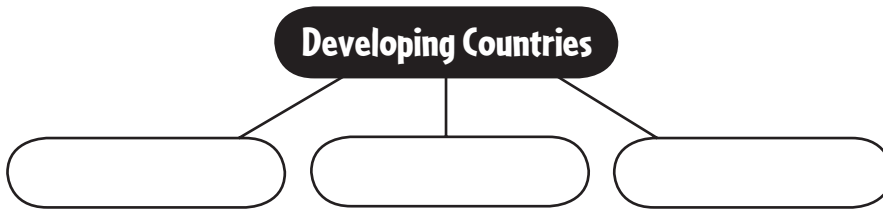
The quality of education varies throughout Oceania and is reflected in differing rates of literacy. Health-care is uneven in the islands as well. On remote islands, the availability of fresh food, electricity, schools, and hospitals is often inadequate. Recently, island countries have begun to improve their quality of life with international assistance.

The Economy

Big Idea

In Australia and Oceania, extreme differences in physical environments affect the economic activities of the region, from the flat, dry landscapes of central Australia to the pastures of New Zealand, to the tropical rain forests of the Pacific Islands.

Complete a web diagram like the one shown below by identifying the developing South Pacific countries that receive much-needed income from tourism.



Read to Learn

Economic Activities (page 837)

Synthesizing Information

As you read the lesson, identify and list the major agricultural products in the region.

Australia: _____

New Zealand: _____

Oceania: _____

The most important activity in the South Pacific area is agriculture. Australia and New Zealand export large amounts of farm products. Australia is the world's leading producer of wool.

Five percent of Australians work in agriculture. Most of the land is used to raise livestock. Some Australian ranches, called **stations**, are as large as 6,000 square miles. Because of the dry climate, only 10 percent of the land can support crops.

New Zealand uses about half of its land for agriculture. New Zealand ranchers, or **graziers**, raise sheep for meat and wool, beef, and dairy cattle. New Zealand's fertile soil supports wheat, barley, potatoes, and fruits.

Much of Oceania lacks soil suitable for farming. Most island farmers practice subsistence farming. Some islands grow a variety of crops for export. **Copra**, or dried coconut meat, is a major South Pacific cash crop.

The most industrialized countries in the South Pacific region are Australia and New Zealand, in which food processing is the most important manufacturing activity. Most people in Australia and New Zealand work in service industries. In Oceania, the major service industry is tourism.

Transportation and Communications (page 838)**Determining Cause and Effect**

What similar effect do the region's geographic features have on transportation and communication?

Physical barriers and long distances challenge the movement of people and goods in the region.

Many island countries in Oceania are too small, poor, or rugged to have well-developed rail and road systems. Therefore, air and water travel are important to the region. Cargo ships and planes move imports and exports to and from Pacific territories, and commercial airlines and cruise ships bring travelers. Personal travel is also often accomplished by boat in Oceania, including by outrigger canoe, sailboat, and motorized boat. Ferries link New Zealand's two main islands. Planes also provide transportation between islands in the South Pacific.

The same obstacles that make transportation difficult in the region make communication difficult. Modern technology has increased contacts between Australia, New Zealand, and Oceania with the rest of the world. New technologies such as cellular, digital, and satellite communications and the Internet are common in developed areas.

Trade and Interdependence (page 839)**Predicting**

Read the title and quickly look over the lesson to get a general idea of the lesson content. Then write a sentence or two explaining what the lesson will cover.

Transportation and communication improvements have increased trade between the South Pacific region and other parts of the world. Most export income is from agricultural and mining products. Spices are a major export of Oceania. Many South Pacific countries import food to supplement their subsistence crops.

In 1971 various island countries of Oceania set up the South Pacific Forum to promote trade and economic growth. Because of few natural resources, some South Pacific islands depend on outside investment or foreign aid.

During most of the 1900s, Australia and New Zealand traded only with the United Kingdom and the United States. Recently, these countries have expanded their trade with Asian countries.

People and Their Environment

Big Idea

Australia and Oceania contain some of Earth’s most diverse natural resources and wildlife, but human activities threaten the environment with pollution.

Use the major headings of the section to create an outline like the one shown below.

- I. Human Impact on Natural Resources
 - A.
 - B.
 - C.
- II. Challenges for the Future



Notes

Read to Learn

Human Impact on Resources (page 843)

Formulating Questions

As you read this lesson, think about issues presented that you would be interested in learning more about. Write down two questions about the issues that you would like to have answered.

1. _____

2. _____

Australia and Oceania have some of the Earth’s richest and most diverse natural resources.

Australia has many unique animal species, including 144 kinds of **marsupials**. These are mammals, such as kangaroos or koalas, whose babies live in a pouch until they mature. Native animals have been threatened by **introduced species**, or nonnative animals that have been brought to the continent by humans. The protection of forests, soil, and freshwater resources is another environmental concern in the region. In Australia, woodlands have been cleared for farms and grazing lands. This deforestation causes soil erosion.

Human activities endanger sea life in the great barrier reef and other coral reefs. Algae and plankton are key parts of the **food web**, an interlinking chain of predators and their food sources in the ecosystem.

In the late 1940s and early 1950s, the United States and other countries tested nuclear weapons in the South Pacific region. This testing has caused radiation exposure and environmental damage to the region. The U.S. gave money to help clean up this environment.

