As you read this chapter, use your journal to describe what life is like in North Africa, Southwest Asia, and Central Asia today. Note specific details that show similarities or differences among the various countries of this diverse region.

Chapter Overview
Visit the Glencoe World Geography Web site at tx.geography.glencoe.com and click on Chapter Overviews—Chapter 19 to preview information about the region today.
Living in North Africa, Southwest Asia, and Central Asia

A Geographic View

Oil Boom

On a clear, warm Sunday . . . Jamshid Khalilov, a 22-year-old student at the Azerbaijan State Oil Academy, rose early to study. Jamshid lives on the third floor of a dormitory a mile from the Caspian Sea in the Azerbaijani capital of Baku. In Baku Bay oil derricks spike the horizon like dead trees, and water seems to carry a gray, viscous film. . . . “As a boy I wanted to be a doctor,” he said. “But then I decided there were better opportunities in oil.”

—Robert Cullen, “The Rise and Fall of the Caspian Sea,” National Geographic, May 1999

Jamshid wants a job in the oil industry. His future, however, depends on the Caspian Sea’s oil potential. Like other areas in North Africa, Southwest Asia, and Central Asia, the Caspian Sea has great oil reserves that encourage economic activities such as oil production. Improved transportation and communications also link the region and its global neighbors.

Meeting Food Needs

Producing food for a rapidly growing population is a challenge in many parts of the region. More developed countries, such as

Guide to Reading

Consider What You Know

Reflect on what you have learned about the physical geography of North Africa, Southwest Asia, and Central Asia. Which countries in the region do you think have experienced the greatest economic development? Why?

Read to Find Out

• How does physical geography affect farming and fishing in North Africa, Southwest Asia, and Central Asia?
• What kinds of industries are important in the region?
• How are improvements in transportation and communications changing life in the region?

Terms to Know

• arable
• commodity
• petrochemical
• gross domestic product (GDP)
• hajj
• embargo

Places to Locate

• Saudi Arabia
• Israel
• Kuwait
• Morocco
• Istanbul
• Gulf of Aqaba
• Strait of Hormuz
• Baku
Saudi Arabia, buy food with oil profits. Less developed countries, such as Afghanistan, often grow their own food, but yields are usually small because of unreliable rainfall or poor soil. Farmers in some countries, such as Israel, however, take advantage of better climate and soils or use effective irrigation to grow food for export.

Agriculture

Only a small part of the region’s land is arable, or suitable for farming, yet a large percentage of the population works in agriculture. In Afghanistan, for example, where only 12 percent of the land is arable, 67 percent of the people farm for a living. Agriculture plays a smaller role in many countries, such as Kuwait, that have economies based on oil.

Areas of North Africa and Southwest Asia that have a Mediterranean climate are best suited for cereal crops, citrus fruits, grapes, olives, and dates. When rainfall is below normal, however, harvests of major crops such as wheat, barley, and corn seldom meet people’s needs. Countries such as Tunisia, Morocco, and Egypt that grow these crops often import grains to feed their people. Other crops of North Africa and Southwest Asia, like citrus fruits, are important exports. For example, Georgia, located at the eastern end of the Black Sea, has a subtropical climate that is good for producing citrus fruits, grapes, tobacco, and cotton.

Farmers in Central Asia raise both crops and livestock. Uzbekistan is one of the world’s largest cotton producers. Both Uzbekistan and Turkmenistan are

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**CHART STUDY**

### Land Use in Selected Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Land Area (sq. mi.)</th>
<th>Arable Land</th>
<th>Forests and Woodlands</th>
<th>Herding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>251,772</td>
<td>12</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>Algeria</td>
<td>919,591</td>
<td>3</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Egypt</td>
<td>386,660</td>
<td>2</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Iran</td>
<td>630,575</td>
<td>10</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>Israel</td>
<td>8,131</td>
<td>17</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Jordan</td>
<td>34,444</td>
<td>4</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Lebanon</td>
<td>4,015</td>
<td>18</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Morocco</td>
<td>279,757</td>
<td>21</td>
<td>20</td>
<td>47</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>829,996</td>
<td>2</td>
<td>1</td>
<td>56</td>
</tr>
<tr>
<td>Tunisia</td>
<td>63,170</td>
<td>19</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Turkey</td>
<td>299,158</td>
<td>32</td>
<td>26</td>
<td>16</td>
</tr>
</tbody>
</table>

* Less than 1 percent
† Data represent a percentage of the total land area of each country. Columns will not total 100 percent, as some land uses are omitted.

Sources: 2001 World Population Data Sheet; CIA World Fact Book, 2000

---

1. **Interpreting Charts** What percentage of Saudi Arabia’s land is forested? What percentage of Egypt’s land is suitable for farming?

2. **Applying Geography Skills** How might a country with relatively little arable land, forests and woodlands, or grasslands for herding make up for these deficiencies?
important centers for raising silkworms. Wheat, cotton, potatoes, and tea earn Azerbaijan substantial export income, even though less than one-eighth of its land is cultivated. Kazakhstan, which has fertile soil, is a major grain producer.

**Fishing**

Fish serve as an important food source in the region. Fishing boats ply the region’s waters. Moroccan fishing boats bring in sardines and mackerel from the Atlantic Ocean. The majority of Israel’s annual fish catch consists of freshwater fish raised in human-made ponds. Fishers from other countries harvest fish from the Persian Gulf, which is home to about 150 edible species. The size of fish catches has declined in the Caspian Sea because of overfishing and pollution. Still, Iran and several other countries have flourishing fishing industries.

**Industrial Growth**

Petroleum and oil products are the main export commodities, or economic goods, of North Africa, Southwest Asia, and Central Asia. The region holds about 67 percent of the world’s oil and is likely to continue to supply much of the world’s fossil fuels. In addition to significant oil reserves (the amount that can be recovered for use), the region also holds about 33 percent of the world’s natural gas reserves.

**Oil, Natural Gas, and Mining**

Wealth from oil has helped build industry in the region. Iran and Saudi Arabia operate large oil-refining and oil-shipping facilities, and most other oil-producing countries export crude oil to industrialized countries. Natural gas has also advanced the region, powering steel, textile, and electricity production in various countries. Some countries have developed industries using petrochemicals—products derived from petroleum or natural gas—to make fertilizers, medicines, plastics, and paints. The economic growth brought by industries provides thousands of jobs and helps improve the region’s standard of living. Mining also contributes to the region’s economic growth. Coal and copper mining and cement production are important in both Southwest Asia and Central Asia. In North Africa, Morocco is the world’s largest exporter of phosphate, an essential ingredient in agricultural fertilizers.

**Service Industries**

Service industries—banking, real estate, insurance, financial services, and tourism—play significant roles in the region’s economies. For example, the banking, real estate, and insurance industries amount to more than 60 percent of Bahrain’s gross domestic product (GDP). GDP is the value of goods and services produced in a country in a year.
The region of North Africa, Southwest Asia, and Central Asia is home to a wide variety of music that is divided into three general cultural categories: Arabic, Turkish, and Persian. Islam is an important unifying influence of the music of this region.

**Instrument Spotlight**
The oud is the most popular stringed instrument of North Africa, Southwest Asia, and Central Asia. The body of the oud is pear-shaped, with a thin neck that bends sharply backward toward the player. The oud is made of various kinds of wood and is usually decorated with ebony, ivory, and other materials. Often used in solos, the oud is also an important ensemble instrument and is used to accompany classical pieces. It is said that the instrument owes its special tone to the birdsongs absorbed by the wood from which the oud is crafted.

Tourism also benefits some of the region’s economies. North Africa and Southwest Asia are popular travel destinations because of their historical importance. Ancient monuments and religious sites have attracted millions of visitors, especially followers of the three major religions that began in the region. Christians and Jews tour Israel, Jordan, and other countries with deep roots in the heritage of the Bible. Muslims make a hajj, or pilgrimage, to Makkah in Saudi Arabia. Other visitors come to enjoy sunny Mediterranean beaches or the vibrant music and other cultural traditions of the region. Tourism is especially vital to Morocco:

> "Tourism is Morocco’s third largest industry. . . . Europeans come for hiking and skiing in the Atlas Mountains, or to the beaches around Agadir. . . . Americans come for the culture, . . . the medieval medina [quarter] of Fez, where they comb the market. . . ."

Erla Zwingle, “Morocco,” *National Geographic*, October 1996

Some countries, however, discourage visitors in order to limit unwanted foreign influences. After the Islamic revolution in 1979, the Iranian government placed restrictions on tourists from non-Muslim countries. Regional conflicts and political instability in places such as Algeria, Syria, and Lebanon have also affected tourism.

**Transportation and Communications**
Advances in transportation and communications systems in the region are bringing the peoples closer together. Countries in the eastern Mediterranean area have experienced the region’s greatest expansion in transportation and communications.

**Roads, Railroads, and Airlines**
Extensive road systems cross Iran, Turkey, and Egypt, connecting their major cities with oil fields and seaports. More than 200,000 miles (321,869 km) of roads span Turkey alone. In some countries of the region, mountains and deserts...
make road building difficult and costly. However, the growing number of vehicles and the need to link cities fosters highway development. In parts of the Caucasus area, roads provide the only access to the outside world. To ease traffic congestion in crowded urban areas and to improve urban-rural connections, some governments have built rapid transit systems and railroads. A new subway in Istanbul, Turkey, a city of some 9.5 million people, carries commuters to and from the city’s center. National rail lines also connect urban areas and seaports. In 1998 Tajikistan unveiled part of a major railway system, which is designed to make trade and travel easier throughout Central Asia.

Since World War II, the growth in the air travel industry has benefited North Africa and Southwest Asia. In recent years Central Asia also has benefited from increased air traffic. Before the breakup of the Soviet Union, Central Asian countries relied on the Soviet airline Aeroflot, but now some Central Asian countries have their own airlines.

**Economics**

**Two New Silk Roads**

The year 1998 marked the opening of the world’s longest telecommunications highway. The “highway” is actually a 16,767-mile (26,984-km) cable
that follows the route of the Silk Road, the ancient trade route that linked Europe, Central Asia, and China. The cable provides the 20 countries along its path with digital circuits for voice, data, fax, and video transmissions.

Plans are also under way to build a network of road, rail, and air transportation systems tracing the Silk Road’s path. The Transport Corridor Europe-Caucasus-Asia (TRACECA) will extend from Moldova in Europe eastward to Mongolia in East Asia. The more than 30 countries involved hope the project will promote peace in this vast area and provide access to newly discovered oil and gas deposits in the Caspian region.

**Interdependence**

Good transportation and communications networks go a long way toward increasing interaction between North Africa, Southwest Asia, and Central Asia and the rest of the world. Interdependence is also growing within the region, as developed countries provide foreign aid, trade deals, and development loans to less developed countries. Following the breakup of the Soviet Union, for example, Turkey, Iran, and Saudi Arabia helped smooth the new Central Asian republics’ transition to independence.

Eight of the region’s oil-producing countries—Algeria, Libya, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates—have become a majority in the 11-member Organization of Petroleum Exporting Countries (OPEC). Founded in 1960, OPEC has given member countries more control over oil production and prices. Because other countries depend heavily on the region’s oil, OPEC has considerable influence in global affairs. It exercised political muscle by restricting oil shipments to the United States because of its aid to Israel during the 1973 Arab-Israeli war. OPEC raised oil prices during the 1970s. It also placed and later canceled an embargo, or restriction, on oil shipments to the United States and other industrialized countries. In 1999 and again in 2000, OPEC cut back oil production, forcing up oil prices around the world.

The countries of North Africa, Southwest Asia, and Central Asia and the rest of the world depend on one another. Industrialized countries, such as the United States, need oil from the region, and the region needs industrial products for its markets. For these reasons, both sides recognize that, despite political and economic disagreements, they must work together to ensure the well-being of all.

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**Student Web Activity** Visit the Glencoe World Geography Web site at tx.geography.glencoe.com and click on Student Web Activities—Chapter 19 for an activity about OPEC.
People and Their Environment

Guide to Reading

Consider What You Know
North Africa, Southwest Asia, and Central Asia produce much of the world’s oil. Because of this commodity, what particular environmental problems do you think people in this region face?

Read to Find Out
• How have peoples in the region dealt with scarce water resources?
• What are the causes and effects of environmental problems in the region?

Terms to Know
• aquifer
• desalination

Places to Locate
• Tripoli
• Aswan High Dam
• Elburz Mountains
• Dead Sea
• Aral Sea

Resources in Danger

An ocean of yellow sand covers Egypt, divided by the dark green vein of the Nile River. The river injects life into the bright green fan at its mouth, while the gray, man-made mass of Cairo eats away at the fan’s delicate stem. . . . Cairo’s commercial and residential sprawl has locked priceless soil beneath miles of concrete; the discharge of chemicals into delta lakes threatens the fishing industry and the supply of clean drinking water.


Human actions in North Africa, Southwest Asia, and Central Asia, like human actions in many places, often threaten the environment. These actions take many forms—oil spills, urban sprawl, and overuse of water supplies. The dilemma faced by people in the region is how to meet human needs while protecting the environment.

The Need for Water

Because more than 70 percent of the earth is covered by water, we often think of it as an abundant natural resource. However, about 2 percent of the earth’s water is frozen, and 97 percent is salt water. According to the United Nations, about 1.2 billion people worldwide cannot obtain clean drinking water. About two-thirds of the world’s households do not have a nearby source of freshwater. Some experts predict that by the year 2050 about 10 billion people will be living on the earth, producing an even greater strain on water resources.
Water Resources

Much of the freshwater in North Africa, Southwest Asia, and Central Asia comes from rivers, oases, and **aquifers**—underground layers of porous rock, gravel, or sand that contain water. As the population grows, demand for water taxes these aquifers and other water resources.

The Nile, Tigris, Euphrates, Jordan, Amu Darya, and Syr Darya are the area’s only major rivers, so only a few of the region’s countries have enough freshwater for irrigation. Israel, for instance, uses an elaborate system of human-made canals to funnel the freshwater of the Jordan River from north to south. In the rest of the region, people turn to smaller rivers and other sources for water.

Desalination

Limited water resources have prompted scientists to develop ways to remove salt from seawater, a process called **desalination**. As the world’s population increases and becomes more highly concentrated in urban areas, desalination helps meet the need for more freshwater. Within the region, Israel was the first country to attempt desalination. Other countries soon followed. The region now has about 60 percent of the world’s freshwater-producing capacity, producing more than 2.4 billion gallons (9.1 billion l) a day. Many countries, particularly those near the Persian Gulf, depend on desalination plants. At the new Middle East Desalination Research Center, freshwater needs have brought Israeli and Arab scientists together.
History

An Ancient Solution

Creative solutions to the scarce water supply in North Africa, Southwest Asia, and Central Asia are an ongoing need. Scientists are now looking to the region’s past for insights into possible solutions for the future. The ancient Nabataeans built the city of Petra, located in present-day Jordan, in a desert canyon that receives only about six inches of rain each year. To supply the 30,000 residents of Petra with the water they needed, the Nabataeans harvested rainwater, collecting and storing it in an amazingly intricate system of pipes, dams, terraces, and cisterns, or other artificial reservoirs.

“Hundreds of cisterns kept Petra from dying of thirst in times of drought, while masonry dams in the surrounding hills protected the city from flash floods after bursts of rain.... That kind of planning is called for again today.”


**GRAPH AND MAP STUDY**

The Importance of Freshwater in Southwest Asia

The graph above shows the countries through which the Tigris and Euphrates Rivers flow, and their contribution and consumption of water from the two rivers, which often is not equivalent. As shown on the map above, countries throughout Southwest Asia rely on various methods to acquire freshwater.

1. **Interpreting Graphics** Where are most of the larger aquifers in Southwest Asia located?

2. **Applying Geography Skills** Why do you think controlling freshwater is such a difficult issue in Southwest Asia?

Find NGS online map resources @ www.nationalgeographic.com/maps
The “Great Man-Made River”

Libya’s “great man-made river” is an ambitious effort to supply freshwater. This multibillion-dollar project uses two pipelines to carry water from large aquifers beneath the Sahara to farms near the Mediterranean. The first pipeline, completed in 1991, brings freshwater across eastern Libya to the coast, and plans are under way to extend the pipeline to other areas. A second pipeline, completed in 1996, carries water to areas near Tripoli (TRIH•puh•lee), the country’s capital, from an aquifer in the west. Yet pipelines may create environmental challenges. Scientists fear that the pipelines could drain aquifers in Libya and neighboring countries and that pumping aquifers near the Mediterranean could draw in salt water from the sea, contaminating the freshwater.

Environmental Concerns

In recent decades both new technologies and destructive wars have heightened environmental concerns in the region. Today countries must balance accessing their natural resources with preserving the environment. Egypt’s Aswan High Dam provides an example of this struggle.

The Aswan High Dam

In 1970 Egypt completed the Aswan High Dam, located about 600 miles (966 km) south of Cairo. Started in the 1950s, the 364-foot (111-m) dam controls the Nile’s floods, irrigates around 3 million acres (1.2 million ha) of land, and supplies nearly 50 percent of Egypt’s electrical power. To boost the fishing industry, the dam also created the world’s largest artificial lake.

In spite of these successes, the project also had a negative impact on the environment. Before the dam’s construction, the annual Nile floods deposited fertile alluvial soil along the floodplain and washed away salt from the soil. Now the dam traps the soil, and Egyptian farmers must use expensive fertilizers. The land also retains salt because floodwaters no longer cleanse the soil.

The health of people and their livestock also suffers. After the dam was completed, parasite-related diseases and deaths around the dam and downriver increased. With aid from other countries and international organizations, however, Egypt is overcoming many of the difficulties created by the dam.

History

The Persian Gulf War

War in the region has also had a negative effect on the environment. During the Persian Gulf War, Iraqi troops retreating from Kuwait set fire to more than 700 oil wells. Huge black clouds of smoke polluted the area. Iraqi troops also dumped about 250 million gallons (947 million l) of oil into the Persian Gulf.

Scientists do not yet know what long-term effects these events will have. Thousands of fish and other marine life died when the oil spill spread 350 miles (563 km) along the Persian Gulf coastline. Smoke from oil-well fires threatened millions of birds. Oil pollution from routine shipping also adversely affects the Persian Gulf environment.

Nuclear and Chemical Dangers

Central Asia also inherited the Soviet era’s environmental problems. Kazakhstan was once home to Soviet nuclear bases. During the Cold War, the Soviets tested nuclear, chemical, and biological weapons there. In 1989 it was found that this weapons testing had caused radiation leaks. Scientists think many years will pass before all the resulting contamination disappears.
Soviet planners also chose Kazakhstan as a site for heavy industry, which polluted the air with toxic chemicals. Scientists have linked increased infant mortality in Kazakhstan directly to industrial pollution. The people of Kyrgyzstan, another site of Soviet heavy industry, have suffered similar effects.

**Three Troubled Seas**

The Caspian Sea, the Dead Sea, and the Aral Sea also face severe environmental challenges. Pollution at the Caspian Sea’s southern end, near the Elburz Mountains of Iran, is especially severe. Pollution and overfishing threaten fish, like sturgeon, whose products are important exports.

The water level of the Dead Sea has dropped more than 262 feet (80 m) over the past 40 years. Ninety percent of the water from the sea’s feeder rivers is diverted for irrigation and to hydroelectric plants. Scientists have suggested pumping water into the Dead Sea from the Gulf of Aqaba, but the $5 billion price is too high. To reduce the amount of water diverted from the Dead Sea, planners recommend building a desalination plant on Israel’s Mediterranean coast.

Like the Dead Sea, the Aral Sea has had water diverted from feeder rivers to irrigate cropland. Once the world’s fourth-largest body of inland water, by the year 2000 it had become separate, smaller lakes. These changes destroyed the sea’s fishing industries, and dust storms have spread disease. People living by the Aral Sea are now working to revive their sea as a chain of lakes that can support fish.

**Meeting Freshwater Needs**

1. **Interpreting Maps** How has the Aral Sea changed since 1960?
2. **Applying Geography Skills** What factors have affected the size of the Aral Sea?

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**Analyzing Maps**

6. **Region** Study the precipitation map on page 470. What kind of vegetation would you expect to find in most of Kazakhstan? Why?

**Applying Geography**

7. **Planning for the Future** Think about the needs of this region. Write a plan to address its water needs in the future.
Turkey’s Atatürk Dam:

Rivers are the lifeblood of arid regions. As rivers wind through parched landscapes, they supply precious water to millions of people. Anything that disrupts a river’s flow can be a threat to life itself. So it is with Turkey’s Atatürk Dam on the Euphrates River. The Atatürk restrains the Euphrates and diverts some of its water for irrigation. For the Turks, the dam is turning barren plains into lush croplands. Downstream, however, Syria and Iraq worry that the Atatürk project will rob their countries of a vital lifeline.
Like a silver ribbon, the Euphrates River (left) winds down through Turkey’s Anti-Taurus Mountains. It skirts the western edge of the Harran Plain, then crosses the border into Syria. From Syria, the Euphrates flows into Iraq, where it eventually joins the Tigris River and empties into the Persian Gulf.

In the early 1980s, Turkey embarked on the Southeastern Anatolia Project, a plan to bring water from both the Euphrates and Tigris Rivers to Turkey’s arid southeast region. The Atatürk Dam is the centerpiece of this massive irrigation project. Completed in 1990, the Atatürk is one of the world’s largest dams. Water held in the dam’s reservoir is channeled into two huge irrigation tunnels that lead to the Harran Plain 40 miles (64 km) away.

Eventually 21 other dams will be constructed along the Euphrates and Tigris Rivers. Nineteen hydroelectric power plants associated with the dams will generate about 27 billion kilowatt-hours of electricity each year—about twice Turkey’s current output.

Yet the project is creating tension downstream. People in Syria and Iraq worry that Turkey’s dams will reduce the precious flow of water through their lands. They were outraged when Turkey stopped the flow of the Euphrates for a month in 1990 while filling the Atatürk reservoir. Despite Turkey’s assurances that its southern neighbors will receive a fair share of river water, Syria and Iraq remain unconvinced.

Supporters of the Atatürk Dam claim that the Southeastern Anatolia Project will help Turkey expand its agricultural base and raise its standard of living. They note that every country has the right to control river water within its borders. Before the dam’s reservoir was filled, Turkey increased water flow from the Euphrates for two months to prevent adverse effects to Syria and Iraq. Supporters say that while Syria and Iraq rely on petroleum deposits for energy, oil-poor Turkey needs hydroelectric power.

Opponents of the dam claim that once the Anatolia Project is complete, Syria’s share of Euphrates waters could be reduced by 40 percent and Iraq’s by 60 percent. Reduced flow will make it harder for Syria’s hydroelectric plants to maintain current levels of production. Irrigation-based agriculture in both Syria and Iraq could also be jeopardized. Opponents believe that because the Turks stopped the flow of the Euphrates once, they may do it again—whenever it suits their needs. Archaeologists in the region also oppose the project because the dams are destroying unexplored ancient cities.
Learning the Skill

Think about how you get from place to place each day. In your mind you have mentally mapped your route. You could probably draw sketch maps of many familiar places. Making mental maps and sketching them are also useful skills in the study of geography. They can help you remember and organize information about the regions you study.

To create a sketch map, follow these steps:

• When a country or city name is mentioned, find it on a map to get an idea of where it is and what it is near. Look for important features, such as highways, mountains, buildings, or bodies of water.
• Draw a sketch map of the area. Include a compass rose to show direction. Include these important features and political boundaries on your map.
• As you read or hear information about the place, picture where on your sketch map you would fill in this information. Add the information to your sketch map. Use colors and symbols to show different kinds of information, and add a legend, or key.
• Compare your sketch to an actual map of the place. Change your sketch if you need to by adjusting the locations of places or including additional information.

Practicing the Skill

Study the map above. Use it to answer the following questions.

1. If you are at the post office, what is the quickest route to Tim’s house?
2. How many blocks apart are the bike shop and Carol’s house?
3. Suppose your classroom is in the southeast corner of this high school. Could you have a view of the school’s parking lot from the classroom?
4. Suppose you deliver pizzas for the pizza shop on Garfield Avenue. You have deliveries to the post office, Connie’s house, the high school gym, and the bike shop. What is the best route?

Creating Sketch Maps

While traveling, it is often much easier to follow visual images on a map than directions given in words. A simple sketch map can display a wide range of useful information.
SECTION 1

Living in North Africa, Southwest Asia, and Central Asia (pp. 463–468)

Key Points

• Although North Africa, Southwest Asia, and Central Asia have limited arable land, a relatively large percentage of the region’s people work in agriculture.

• The oil-producing countries in North Africa, Southwest Asia, and Central Asia have experienced greater economic growth than other countries in the region.

• Expanded and more advanced transportation and communications systems are helping connect the region’s urban and economic centers with one another and with the world.

• Interdependence is increasing among the countries of the region, especially in controlling oil production and prices.

Terms to Know

• arable
• commodity
• petrochemical
• gross domestic product (GDP)
• hajj
• embargo

Organizing Your Notes

Use a chart like the one below to help you organize the notes you took as you read this section. Under each head, fill in the important supporting details.

<table>
<thead>
<tr>
<th>Food Production</th>
<th>Industrial Growth</th>
<th>Transportation and Communications</th>
<th>Interdependence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2

People and Their Environment (pp. 469–473)

Key Points

• Countries in the region have modified their environments to meet people’s needs for water for drinking and irrigation.

• New technologies and destructive wars have subjected the region’s environment to stress.

• People are working to revive areas damaged by past events.

Terms to Know

• aquifer
• desalination

Organizing Your Notes

Create an outline using the format below to list ways in which the people of North Africa, Southwest Asia, and Central Asia use their environment.

<table>
<thead>
<tr>
<th>People and Their Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Need for Water</td>
</tr>
<tr>
<td>A. Water Resources</td>
</tr>
<tr>
<td>1. Population</td>
</tr>
</tbody>
</table>
Reviewing Key Terms

Write the key term that best completes each of the following sentences. Refer to the Terms to Know in the Summary & Study Guide on page 477.

1. Underground layers of porous rock, gravel, or sand that contain water are called __________.
2. __________ is the value of goods and services produced in a country in a year.
3. __________ is the process that removes salt from seawater.
4. Government restrictions on buying or selling certain goods are called __________.
5. __________ are products derived from petroleum or natural gas.
6. The __________ is the pilgrimage to Makkah made by many Muslims.
7. Land that is suitable for farming is __________.
8. Petroleum is one of the main economic goods, or __________, exported by the region.

Reviewing Facts

SECTION 1

1. How has natural gas helped advance the region’s industrial growth?
2. Why do some countries in North Africa, Southwest Asia, and Central Asia discourage tourism?
3. Why is most freight carried by road in Armenia?

SECTION 2

4. What, and where, is the “great man-made river” project?
5. How did the Persian Gulf War affect the environment of the region?
6. What has caused the water levels of the Dead and Aral Seas to drop?

Critical Thinking

1. Making Inferences Why is industrial growth limited in some parts of the region?
2. Analyzing Information How does the region of North Africa, Southwest Asia, and Central Asia compare with other world regions in terms of economic opportunities for women?
3. Identifying Cause and Effect List examples of economic growth in the region and the effects of each on the environment. Then write a paragraph that explains the impact of one of them.

Locating Places

NATIONAL GEOGRAPHIC

North Africa, Southwest Asia, and Central Asia: Physical-Political Geography

Match the letters on the map with the places and physical features of North Africa, Southwest Asia, and Central Asia. Write your answers on a sheet of paper.

2. Turkey 7. Persian Gulf 8. Ural River
4. Shatt al Arab 10. Sinai Peninsula
5. Jordan 11. Turkmenistan
Using the Regional Atlas
Refer to the Regional Atlas on pages 410–413.

1. **Location** For which densely populated areas in North Africa, Southwest Asia, and Central Asia are desalination plants practical?

2. **Human-Environment Interaction** What is the relationship between the locations of commercial farms and water resources in North Africa and Southwest Asia?

Thinking Like a Geographer
Consider human-environment interaction in the region. How have people’s views about the environment there changed since ancient times? How have these changing viewpoints led to changes in lifestyles? Give examples.

Problem-Solving Activity

**Contemporary Issues Case Study** Research an OPEC member country. Find statistics that illustrate how important petroleum and natural gas are to the country’s economy. Share a written summary of your findings with the class.

GeoJournal

**Cause and Effect** Using your GeoJournal data and other resources, write an essay that compares an environmental trouble spot in North Africa, Southwest Asia, and Central Asia with that in another region. Focus on the relationship between technology and environmental change.

**Technology Activity**

**Using the Internet for Research** On the Internet, search for an online news source with articles about North Africa, Southwest Asia, and Central Asia. Find a recent article about an environmental issue, and summarize the article. Be sure to cite source information on which the summary is based. Identify any biases, if present, in the article, and make sure the source is reliable. Then evaluate the impact of the issue on the region.

TAKS Test Practice
Choose the best answer for each of the following multiple-choice questions. If you have trouble answering the questions, use the process of elimination to narrow your choices.

1. Imagine that you are hired to create a sketch map of Egypt to show the importance of the Nile River to Egypt’s people. What combination of information would be the most useful to show?

   A Coastal areas, mountains, and oil and phosphate resources
   B Population density, commercial farming, and deserts
   C Population density, subsistence farming, and city locations
   D Deserts, plateaus, and mountains

2. What set of latitude lines would be best to use on your sketch map of Egypt and the Nile River?

   F 40°N, 50°N, 60°N
   H 30°S, 0°N, 30°N
   G 20°S, 25°S, 30°S
   J 20°N, 35°N, 70°N

   **Test-Taking Tip** Use the Process of Elimination (POE) to answer this question. First, consider the physical features, land use, resources, and population patterns near the Nile River. Then, eliminate answer choices that contain even one feature or resource that is not likely to be found along the river. Choose your answer from those that remain.

   **Test-Taking Tip** Use POE to answer this question. First, visualize where Egypt lies in relation to the Equator on a map. Then, eliminate coordinates that are likely to be too far from Egypt.