GeoJournal

As you read this chapter, use your journal to summarize and reflect on the ways East Asians are working to meet economic and environmental challenges in the region today. Be sure to note specific examples.

Chapter Overview
Visit the Glencoe World Geography Web site at txgeography.glencoe.com and click on Chapter Overviews—Chapter 28 to preview information about East Asia today.
Guide to Reading

Consider What You Know
People in East Asia, like those in other world regions, are experiencing rapid economic changes. What impact do you think rapid economic change has on the lives of people today?

Read to Find Out

• What types of governments and economies do East Asian countries have?
• What economic activities play an important role in East Asia?
• How are other countries in the region challenging Japan’s economic dominance?
• How are the countries of East Asia economically interdependent?

Terms to Know

• command system
• commune
• cooperative
• Asia-Pacific Economic Cooperation Group (APEC)
• trade surplus
• trade deficit
• dissident
• economic sanctions
• World Trade Organization (WTO)
• merchant marine

Places to Locate

• Wuhan
• Tianjin
• Guangzhou

Beginning in the 1960s, East Asian countries such as Japan, South Korea, and Taiwan experienced tremendous economic growth. Then, in the 1990s, a severe economic downturn jolted much of East Asia, shaking public confidence and causing widespread hardships. By 2001 financial aid from Western countries and economic reforms at home had brought a slow recovery to the region. In this section you will learn how East Asians are adjusting to the challenges of living and working in the global economy.

Political and Economic Systems

As in other world regions, governments and economies are closely related in East Asia. East Asian economies include market systems based on private ownership; command systems, which are controlled by governments; and a mix of both systems. During the mid- to late 1900s, Japan, South Korea, and Taiwan developed democratic governments, prospered under market systems, and became global economic powers. Meanwhile, communist-ruled China and democratic Mongolia shifted from strict command systems to mixed economies with both command
and market features. By 2001 North Korea had one of the world’s few remaining command economies. Less economically developed than South Korea, North Korea is slowly reentering the global markets.

**Agriculture**

Since the mid-1900s most East Asian countries have shifted dramatically from rural-based agricultural economies to urban-based industrial ones. Agriculture, however, is still important in the region.

**China**

China has East Asia’s most rural economy. About 50 percent of China’s workers are farmers. Large numbers of people are needed to work the land because many farmers still use traditional tools. Still, China is a leading producer of rice, wheat, and tea. Chinese farmers also produce soybeans, cotton, jute, and silk and raise livestock.

Since 1949 China’s communist government has made many changes to the country’s agriculture. The Great Leap Forward campaign of the 1950s organized farmers into huge communes, large farming communities whose members shared work and products equally, but the government decided which farming methods to use. The results were disastrous. When crop production dropped, famines swept the country.

Then in the 1980s, Chinese leaders reversed their agricultural policies. They encouraged smaller farms, jointly run by households but with private garden plots. Farmers could sell and profit from any extra crops or animals. Chinese farmers now can grow enough food to feed the country.

Despite these agricultural reforms, large numbers of rural workers have begun moving to cities such as Shanghai, Hong Kong, and Beijing to take jobs in industry and commerce, where earnings are better.

**Mongolia**

Most of Mongolia is used for grazing herds of sheep, goats, camels, and cattle. Until the early 1990s, Mongolia modeled its command economy on the Soviet Union’s. Large government-owned farms set targets for producing milk and wool, and grew food for people and fodder for animals. Although Mongolia’s government still owns much of the country’s limited farmland, Mongolian farmers and herders are slowly adapting to a market economy.

**South and North Korea**

Largely urbanized, with many industries, South Korea’s agricultural workforce makes up only 12 percent of its population. Most South Korean farmers work on small family farms, but a farm labor shortage has developed as people continue to move to urban areas. To make up for this loss, South Korean agriculture increasingly uses modern machinery and more efficient farming practices.

In North Korea agriculture makes up 25 percent of the economy and employs about 40 percent of all workers. Farms in North Korea are organized into cooperatives, farms jointly operated by households. The communist government, however, controls crop production.

**Student Web Activity** Visit the *Glencoe World Geography* Web site at tx.geography.glencoe.com and click on Student Web Activities—Chapter 28 for an activity about China’s modern history.
production and distribution and rations agricultural products. Corn, wheat, and milk are in short supply, and North Korea cannot fully meet its own demand for rice, the country’s major crop.

In the 1990s severe flooding destroyed North Korea’s rice crop, causing food shortages. This disaster was heightened by government mismanagement of the economy and resulted in widespread famine. For the first time, North Korea accepted food aid from countries with market economies, such as the United States, Japan, and South Korea.

**Japan and Taiwan**

Japan and Taiwan are largely industrialized, but agriculture does play a role in their economies. Physical geography challenges farmers in both countries. Four-fifths of Japan is mountainous, so farmers have used terracing, modern machinery, fertilizers, and irrigation to dramatically raise Japan’s crop yields since World War II. Japan’s government also provides farmers with financial support to equalize rural and urban incomes. Despite such improvements, Japan still must import about 35 percent of its food.

Like Japan, Taiwan is mountainous. Rice, sugarcane, tea, bananas, and pineapples grow on limited, often terraced, farmland. Once an exporter of these crops, Taiwan now focuses on industrial exports and imports some food products.

**Industry**

Since the 1960s, East Asian countries such as Japan, South Korea, and Taiwan have become important industrial and trading countries. Although rich in minerals, North Korea lags far behind these three countries in industrial development. China is primarily agricultural but has a rapidly developing industrial economy. Mongolia also is building its industries, but its factories mostly process livestock and farm products.

**Japan**

With the aid of the United States, Japan’s economy recovered quickly after World War II. A highly skilled workforce and the latest technology helped Japan dramatically develop its industries. Within a few decades, the Japanese were leading producers of ships, cars, cameras, computers, telecommunications products, and consumer goods. By the 1990s world demand for Japan’s high-quality goods had made it a global economic power.

Japan, like other countries, faces challenges from the fast-paced, constantly changing global economy. Despite its overall success record, Japan and other parts of Asia suffered from a global economic slump in the 1990s. Japanese banks had invested in risky businesses. When they could not collect on their loans, they failed. Meanwhile, industrial production at home dropped, and unemployment soared. By 2001, Japan was considering banking and other economic reforms to get its sluggish economy moving again.

**South and North Korea**

After the Korean War, South Korea rapidly moved from an agricultural to an industrial economy. By the 1980s South Korean industries had begun exporting...
ships, steel, electronic equipment, and motor vehicles. Like other Asian countries, South Korea suffered an economic downturn in the 1990s. With international financial aid, however, South Korea soon began rebuilding its economy.

In North Korea, government-owned heavy industries produce machinery, chemicals, and military equipment. Because so many resources go to North Korea’s military forces, production of consumer goods suffers. Before the early 1990s, North Korea had depended on the Soviet Union for economic aid. When the Soviet Union broke up, North Korea’s industrial output fell by half, forcing its communist leaders to trade with countries such as Japan and South Korea.

In 2000, relations improved between North Korea and South Korea. The leaders of the two countries agreed to trade with each other, and South Korea pledged economic aid to North Korea. Their governments also allowed a limited number of family visits across the border for the first time since the Korean War.

Taiwan

Taiwan has one of the world’s most successful export-based economies. Until the 1960s, the island had exported a surplus of agricultural products, and invested the profits, as well as American and Japanese financial aid, in manufacturing. Taiwan’s new industries specialized in textiles, plastics, and electronic goods for export. Their economic boom transformed Taiwan into a major trading country. Today about 60 percent of Taiwan’s people work in service industries, such as finance and communications. Technology-based products, such as computers and precision instruments, are replacing traditional manufactured goods as Taiwan’s major source of income.

China

When Chinese communist leaders came to power in 1949, they used government controls to boost industrial output. Today the Chinese government still controls major industries, such as textiles, clothing, footwear, toys, and plastics manufacturing. Many state-run factories, however, lack updated technology and incentives for improved performance.

To stimulate the economy, Chinese leaders since the 1970s have adopted some features of a market economy. For example, small, privately owned businesses are permitted to operate, and foreign companies and investments are welcomed. Many of China’s most prosperous industries now lie in special economic zones along the southeastern coast, where they can operate without government controls on prices, production, or distribution.

With market reforms, China’s economy is growing at a remarkably high annual rate of 8 percent. Standards of living have risen, especially in urban areas, but the country still faces economic challenges.
A large gap separates wealthier industrial areas on the coast from poorer agricultural regions in the interior. As unprofitable state-run industries close, unemployment increases. Industrial growth and few environmental safeguards have contributed to rising pollution.

**Government**

**Hong Kong and Macau**

The Chinese territories of Hong Kong and Macau are major industrial and trading centers. After more than 150 years of British rule, control of Hong Kong returned to China in 1997. Despite restricted political freedoms, Hong Kong is maintaining a market economy. Hong Kong’s economic success provides great wealth to China. In 1999 Macau became part of China after centuries of Portuguese rule. Like Hong Kong, Macau’s prosperous market economy benefits China.

**Trade**

In recent decades East Asian countries have become more interdependent with one another and the rest of the world. As in other world regions, East Asia has formed trading partnerships. For example, China, Japan, South Korea, and Taiwan are members of the Asia-Pacific Economic Cooperation Group (APEC), which ensures that trade among member countries is efficient and fair. Still, trade disputes and deeply rooted political differences continue to affect the region’s international relations.

**Japan: Trade Surpluses**

With few mineral resources, Japan depends on international trade for its economic well-being. To produce its vast range of products for foreign buyers, Japanese industries import raw materials such as iron ore and fuels. The Japanese government, however, places high taxes on many imported finished goods. These taxes protect many Japanese industries from foreign competition, but they restrict what other countries can sell to Japan.

The term *balance of trade* refers to the difference in value over time between a country’s imports and exports. High import taxes, along with the high global demand for Japanese goods, cause Japan to have trade surpluses with other countries. A trade surplus occurs when exports exceed imports.

Trade surpluses bring increased wealth to Japan, but the resulting trade imbalances mean lower profits for Japan’s trading partners. A trade deficit occurs when a country imports more goods from other countries than it exports to them. In recent years the United States and other countries have tried to persuade Japan to open its market. Results are mixed. Trade policy, therefore, continues to complicate Japan’s relations with other countries.

**China: Trade and Human Rights**

In an effort to modernize its economy, China has sought increased trade with the United States and other countries with market economies. The United States also favors increased trade because of China’s growing economy and more than a billion potential customers. A major stumbling block, however, is China’s harsh treatment of dissidents, or citizens who speak out against government policies. For example, in 1989, Chinese students wanting democratic reform held a massive demonstration in Beijing’s Tiananmen Square. The government sent in troops to brutally end the protest. This action brought China severe criticism.

The United States, Japan, and other important trading countries have tried to influence China to respect human rights. In response to the Tiananmen crackdown, these countries placed economic sanctions, or trade restrictions, on China. In response to economic losses, China released several dissidents from prison, and the United States lifted sanctions.
Many, however, remain dissatisfied with China’s human rights record. The United States government hopes that trade might open China to democratic change. In 2000 the United States Congress granted full trading privileges to China. In the near future, China expects to be admitted to the World Trade Organization (WTO), an international body that oversees trade agreements and settles trade disputes among countries. Western countries believe that China’s human rights record will improve as it has more frequent contact with other countries.

Transportation and Communications

Before air travel became common, rugged mountains isolated most of East Asia. Today every country in the region has modern air services. Overland travel in mainland East Asia, however, involves long journeys by railroad or highway. Transportation and communications networks are concentrated in heavily populated areas, and rural areas often have little access to communications networks.

Land Travel

Land transportation varies throughout East Asia. Japan, South Korea, and Taiwan have nationwide highway and railroad networks. Japan’s rail system includes high-speed trains, commuter trains, and subways. Elsewhere in the region, transportation links, especially highways, are not as developed. For example, Mongolia’s roads are mostly unpaved, and people rely on the Trans-Mongolian Railway. Lack of inland transport has slowed the development of western China, which remains poor despite large oil and coal deposits.

The Chinese, however, have made progress in building roads and rail lines. In 2001, work began on what is hailed as the world’s highest railway, linking Tibet to China’s national rail system. The Chinese claim the railway will lessen Tibet’s isolation and boost its economy. The railway’s critics, however, say that it will draw more Chinese to Tibet, further diluting Tibet’s culture.

Water Travel

China’s rivers provide important routes from inland areas to seaports. The Yangtze River is China’s most important waterway. The major port of Shanghai lies at its mouth:

“Today the port of Shanghai handles more than 160 million tons of cargo a year through loadings and unloadings along the 40 miles of wharves on the Yangtze River...”

Large oceangoing ships travel 680 miles (1,094 km) inland on the Yangtze to the transportation center of Wuhan in central China. Other major ports are at the mouths of rivers—Tianjin (TYEHN•JIHN) on a tributary of the Yellow River and Guangzhou (GWAHNG•JOH) on the Xi River. The Grand Canal, the world’s longest and oldest human-made waterway, runs from north to south, linking the Yangtze and Yellow Rivers.

Major seaports and merchant marine fleets used for commercial transport are vital to East Asia’s export trade. Japan has more than 7,000 merchant vessels, and China’s merchant marine fleet numbers about 2,400.

Communications

In North Korea and China, communist governments control communications, the news media, and citizens’ access to the Internet. By contrast, people in democratic Japan, South Korea, and Taiwan enjoy a free press, and most own radios, televisions, and telephones (including pagers and cellular phones). In these countries, a wide variety of books, magazines, and newspapers is available, as is access to the Internet.

East Asian countries have overcome many obstacles in order to develop their economies. In the next section, you will learn of the environmental challenges that economic growth has brought to East Asia.

TAKS Practice

Checking for Understanding

1. Define command system, commune, cooperative, Asia-Pacific Economic Cooperation Group (APEC), trade surplus, trade deficit, dissident, economic sanctions, World Trade Organization (WTO), merchant marine.

2. Main Ideas On a chart like the one below, describe the economy of each East Asian country.

<table>
<thead>
<tr>
<th>Country</th>
<th>Type of Economy</th>
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Critical Thinking

3. Identifying Cause and Effect
   How did the Asian financial crisis of the 1990s affect the economies of China, Japan, and South Korea?

4. Problem Solving
   How might various East Asian countries provide food for their populations, despite their limited farmlands?

5. Drawing Conclusions
   What conclusions can you draw about the economic differences between North and South Korea? Explain your answer.

Analyzing Graphs

6. Place
   Study the graph on page 688. How does the U.S. balance of trade compare to that of Japan? China?

Applying Geography

7. Economic Reform
   Write a paragraph that compares China’s economy before and after the economic reforms of the 1980s. Explain how the reforms have affected the lives of China’s people.
Guide to Reading

Consider What You Know
Given East Asia’s crowded cities and rapid industrial growth, what environmental challenges do you think the region might face?

Read to Find Out
- How have industrialization and urbanization in East Asia affected the environment?
- What steps are East Asians taking to solve environmental problems?
- What naturally occurring destructive forces does East Asia regularly face?

Terms to Know
- desertification
- chlorofluorocarbons
- aquaculture

Places to Locate
- Three Gorges Dam
- Inland Sea
- Kobe

People and Their Environment

A Geographic View

The Price of Modernization

The most tangible cost of modernization is environmental. . . . Today greater Taipei’s population has swollen to almost six million—nearly 30 percent of the island’s total. . . . The city chokes on the fumes of 460,000 cars, 7,300 buses, 38,000 taxis, and 869,000 motorcycles, whose drivers park all over the sidewalks and often drive down them too.

— Arthur Zich, “Taiwan: The Other China Changes Course,” National Geographic, November 1993

Modernization has brought higher standards of living and increasing global influence to the peoples of East Asia. Yet the benefits have come with serious costs, especially to the region’s environment. For example, industrial expansion and urban development have heightened pollution of the air, land, and water throughout the region. In addition to environmental hazards, East Asians also regularly face both the dangers and the challenges of devastating natural disasters, such as floods, earthquakes, and typhoons.

The Power Dilemma

Throughout East Asia, economic growth has increased the demand for electric power to operate businesses and industries. In addition, rising standards of living mean that people tend to buy and use more appliances and electronic devices. Thus, finding adequate sources of electric power has become a vital issue for the countries of the region.
Fossil Fuels

Some of East Asia’s power comes from hydroelectric plants, but most is produced from the burning of fossil fuels such as coal, oil, or natural gas. China, North Korea, and Mongolia produce most of their power using coal from large reserves. Japan, South Korea, and Taiwan, however, have few coal, natural gas, or oil deposits, so they must import these resources to produce energy. About 65 percent of Japan’s electricity comes from plants burning coal, natural gas, or petroleum, as does roughly 60 percent of South Korea’s power. Coal reserves have dwindled in Taiwan, so the country relies on imported petroleum as its primary source of energy.

Burning fossil fuels, however, leads to acid rain, air pollution, and possibly global warming. East Asian governments have begun to search for cleaner power sources. China’s massive Three Gorges Dam project on the Yangtze River, for example, aims to supply a huge amount of hydroelectric power to China’s interior regions. The project should be completed by 2009.

Nuclear Energy

Japan, South Korea, and Taiwan rely on nuclear energy for 30 to 40 percent of their electrical power. Japan has more than 50 nuclear power generators, South Korea has 12, and Taiwan has 8. North Korea is not known to have any nuclear power facilities. China’s few reactors currently produce just 1 percent of the country’s electricity, but China’s plans for the future include 100 more nuclear plants.

During the late 1990s, a series of accidents in Japan and South Korea exposed hundreds of people to radiation and raised public fears about the safety of nuclear power. People also worried that the earthquakes and volcanic activity common in the region could cause reactors to crack and release radiation.

After a 1999 nuclear accident, Japan began searching for alternatives to both nuclear and hydroelectric power. Since then, Japan has opened several plants that generate electricity from wind and solar energy.

Environmental Concerns

In many parts of East Asia, industrial and economic growth have been given more consideration than other issues. The effects of this growth on the region’s environment have been largely ignored. Environmental challenges range from air pollution to the depletion of natural resources. East Asians are just beginning to take seriously issues dealing with health, environment, and quality of life.

China

In China’s urban areas, the use of outdated technology in transportation and industry has caused major air pollution. In fact, 9 of the 10 cities worldwide with the worst air pollution are located in China. One major cause is China’s heavy reliance on its huge reserves of relatively inexpensive coal. In northern industrial areas, windblown dust adds to the air pollution. As a result, large numbers of people living in the area suffer from lung disease.
Acid rain from burning coal also is a serious problem in the industrial region of southeast China. Neighboring countries are affected by China’s acid rain as well. Forests in Japan, for example, suffer not only from Japan’s own coal-burning power plants but also from China’s coal-generated pollution.

China and other rapidly urbanizing countries like Taiwan and South Korea also have trouble disposing of waste products. For example, 80 percent of the cities in China have no sewage treatment facilities. Industrial waste from factories poses health risks to urban populations in parts of China. For many years an important metal company in the Chinese city of Shenyang spewed huge amounts of sulfur dioxide and other harmful chemicals into the atmosphere. In 2000 China responded to pleas from city residents who had long complained of health problems caused by the plant’s toxic emissions. For the first time, China closed down a state-run factory for environmental reasons.

Without trees to slow runoff from rain, large-scale soil erosion and flooding occur. As heavy rains wash away large amounts of unprotected soil in deforested areas, soil deposits build up in rivers. The buildup causes waters to rise even higher than they otherwise might have, and flooding becomes more severe. In the late 1990s, a series of unusually heavy rains caused the Yangtze and Yellow Rivers to flood. Floodwaters destroyed property, altered the landscape of vast areas, and killed thousands of people.

In response to these disasters, China has begun planting trees on millions of acres along the deforested riverbanks. To help control flooding, the government ordered a major dam construction project along the Yellow River. Other steps in China’s conservation and restoration plan include the creation of nature and wetland reserves and wildlife protection zones.

A related concern is desertification, the process in which grasslands became drier and desert areas expand. Along China’s eastern borders with Mongolia, grasslands and desert meet. The grasses there are drought-resistant, but overgrazing and soil erosion have depleted much of the vegetation. The resulting desertification has contributed to dust and sand storms in northern and western areas of China.

**North Korea, South Korea, and Taiwan**

Urban areas of North Korea, South Korea, and Taiwan are plagued with air and water pollution due to lax industrial controls. Untreated sewage contaminates water supplies and threatens the health of humans and wildlife. For example, North Korea’s safe drinking water supplies are inadequate. Although nuclear energy provides inexpensive power for South Korea, the waste from such plants remains radioactive for tens of thousands of years and is difficult to dispose of safely. Nonetheless, South Korea continues to build nuclear power plants to meet its energy needs. Because North Korea has no nuclear power facilities, it is spared the task of managing nuclear waste, but the country still must confront the hazardous effects of using fossil fuels.
Mongolia

Environmental challenges in Mongolia resemble those of western China. Deforestation caused by logging and desertification caused by overgrazing have contributed to soil erosion. Burning coal pollutes the air, and safe drinking water supplies are limited.

Government

Japan Leads the Cleanup

Japan’s highly industrialized, crowded society was criticized for years for ignoring the environmental problems created by rapid technological growth. Since the 1970s, however, the Japanese government has encouraged industries to curb pollution. Japan today has emerged as a world leader in addressing environmental issues. By 2000 two Japanese automakers had introduced a hybrid car powered by a battery and a supplemental gasoline engine. The car uses less fuel, so it emits fewer pollutants. It may be years, however, before use of this new technology becomes widespread.

Pollution control has taken on a national urgency in Japan, where environmental laws are among the world’s strictest. The government has urged other countries to reduce emissions of carbon dioxide and chlorofluorocarbons (CFCs), gaseous substances found in liquid coolants. Once CFCs enter the atmosphere, they significantly contribute to the destruction of the earth’s protective ozone layer.

Japan also offered “clean” technology and financial help for environmental projects to neighboring East Asian countries and other developing countries. Japan’s 1990 Action Program to Arrest Global Warming required that 10 percent of its country’s cars be replaced with less-polluting vehicles and that overall waste be reduced by 25 percent by the year 2000. Despite this resolve, Japan’s total carbon dioxide emissions had increased in 1994 by more than 7 percent from 1990 levels.

Managing Ocean Resources

Another environmental issue in East Asia is the management of ocean resources. In most East Asian countries, oceans and seas provide an important source of food for local consumption and for export. Commercial fishing is a major industry in China, Japan, and South Korea. Fleets from these countries catch tons of snapper, tuna, squid, shrimp, and other seafood. Now, however, Japan imports large quantities of seafood because of decreasing quantities of fish in the region. The Japanese must find other ways to obtain seafood because they consume more seafood than any other people in the world.

In recent years East Asia’s coastal waters, such as Japan’s Inland Sea, have become overfished or polluted. As a result, commercial fishing companies from several countries have begun fishing farther from shore, in international waters. Many of these companies have giant factory ships that follow fishing fleets to quickly clean and freeze large catches of fish. The use of factory ships is discouraged internationally because the practice allows fishing fleets to harvest huge catches, leading to overfishing. One solution to overfishing is aquaculture, or the cultivation of fish and other seafood. Several countries in the region raise seafood, such as prawns, in ponds for export.

Japan, East Asia’s largest consumer of whale meat, remains the target of global criticism for its
whaling practices. According to international conservation groups, overhunting has caused a serious decline in the whale population. Despite a 1986 international treaty limiting whaling, Japanese fleets continue to hunt whales, including endangered species, in large numbers to satisfy the high demand for the expensive delicacy.

**Natural Disasters**

Because of its location and physical geography, East Asia has faced catastrophic natural disasters. China’s Yellow and Yangtze Rivers can produce disastrous flooding. Attempts to control flooding have included building networks of drainage channels and irrigation canals to transport or redirect water quickly. Dams, dikes, and levees also have been built. Despite these measures, severe floods continue. More than 30,000 of China’s dams, hastily built during the 1950s and 1960s, are now defective and at risk of failing.

To address these problems, China is dredging rivers and creating more flood-control projects. The world’s largest public works project, and one of the most controversial, is the Three Gorges Dam, under construction upriver from Wuhan on the Yangtze River in central China. When finished, it will create a huge reservoir nearly 400 miles (644 km) long. The dam’s critics argue that the project will force the relocation of almost 2 million people, put countless farms, villages, scenic canyons, and ancient temples underwater, and destroy the natural habitats for Siberian cranes and snub-nosed dolphins.
Most East Asian countries experience destructive earthquakes. A series of major earthquakes struck Taiwan in late 1999 and China’s Yunnan Province in early 2000. Each year, about 1,500 small earthquakes shake Japan, which is located at plate boundaries (see the map on page 696) and is part of the Pacific Ocean’s Ring of Fire. In 1995 a severe earthquake caused widespread damage around Kobe (koh•bay), a major Japanese port:

“In the aftermath of Kobe, the government has tried to improve prediction of quakes, but scientists still cannot provide crucial details of imminent jolts, such as when and where [they] will occur.”

“Japan Recalls Quake Disaster,” BBC News (online), January 17, 2000

Japan also has about 50 active volcanoes. Undersea volcanoes or earthquakes can trigger huge tsunamis—waves that grow larger as they approach land and often cause massive destruction and loss of life when they hit land. Typhoons, violent tropical storms with circular winds of at least 74 miles per hour (119 km per hour), cause periodic devastation from high winds and flooding along East Asia’s coasts.

East Asia has begun to address environmental issues. However, other challenges, such as flooding, erosion, desertification, and famine, continue to loom on East Asia’s horizon.
The Chinese call it Chang Jiang—“Long River.” Elsewhere, most people know it as the Yangtze River. Nearly 4,000 miles (6,400 km) long, the Yangtze is the longest river in China. For thousands of years, the Yangtze has been both a positive and a negative force in the lives of many Chinese. The river provides water for 380 million people, and half of China’s food is grown along its banks. Yet when the Yangtze overflows, its floodwaters can kill thousands of people and leave millions homeless. Now the Chinese government is trying to tame the Yangtze with a huge—and hugely controversial—dam.
Boatman Ma Linyou (left) deftly steers his wooden craft along the Yangtze, as it winds among the limestone cliffs of the scenic Three Gorges region. In less than a decade, these canyons will vanish forever under a huge volume of water when the Three Gorges Dam blocks the Yangtze’s vigorous flow. The dam will create a deep reservoir nearly 400 miles (640 km) long.

Construction of the Three Gorges Dam began in 1994. Scheduled for completion in 2009, it will be the largest dam in the world. The dam is China’s most ambitious construction project since building the Great Wall. The Chinese government claims that the dam’s positive impact on the region will justify its staggering $25 billion price tag. The Three Gorges Dam could put an end to the devastating floods along the lower portions of the river. For centuries the floods have claimed lives, destroyed settlements, and damaged agricultural lands.

The city of Fengdu today (below, left) and as it will look when the dam is complete (below, right).

The dam will also be the world’s largest hydroelectric plant, designed to generate more than 18 million kilowatts of electricity—an output equal to 18 nuclear power plants. China needs clean, renewable energy to replace the enormous amounts of coal the country burns, a practice that has led to severe air pollution and acid rain.

**Supporters of the Three Gorges Dam** emphasize its energy and commercial benefits. As China moves toward the future, it faces crippling power shortages. The dam will help solve the problem, generating 20 percent of China’s electrical power. In addition, say supporters, the reservoir behind the dam will make more water available for irrigation. The reservoir also will allow large ships and tourist vessels to reach cities far upstream, thus sparking economic growth.

**Opponents of the Three Gorges Dam** object to its huge environmental and human costs. Environmentalists fear that as the water rises, pollutants in soil and chemicals in abandoned factories will leach into the river, threatening aquatic life and drinking water. Critics point out that the reservoir will submerge hundreds of farms, villages, and some 13 major cities. Nearly two million people will have to abandon their homes. In addition, archaeologists estimate that 8,000 unexcavated sites will be lost forever in a tomb of water.

Despite the opposition, China’s government seems determined to finish the Three Gorges Dam. As the controversy rages, work continues on the great concrete barrier that will tame the Yangtze’s flow.

**What’s Your Point of View?**
Do you think the Three Gorges Dam is a good idea? Why or why not?
Learning the Skill

Decisions involve making a choice between alternatives. Each alternative has a likely consequence, or result. To make good decisions, consider as many of the likely consequences as possible before you take action. You can learn to improve your decision-making skills by following these basic steps:

- **State the situation or define the problem.** Ask: Why do I have to make a decision in this matter?
- **Gather all of the facts.** Ask: What information should influence my decision?
- **Identify and evaluate alternatives.** Ask: What are all of my options?
- **Predict future consequences.** Weigh the likely outcomes of each alternative.
- **Consider your personal values.** Use your values as guidelines for making the right decision.
- **Make your decision and act on it.** You should now feel confident that you have thought about the issue carefully.
- **Evaluate your decision.** Analyze whether you made the right choice. Ask: Would I make the same decision again?

Practicing the Skill

Answer the following questions about decision making.

1. Why is it important to consider more than one alternative when making a decision?
2. What are two reasons for predicting the possible consequences of each alternative you consider?
3. What might be the result of making a decision that conflicts with your values?
4. What can you learn from evaluating a decision you have made?

Decision Making

From deciding what to eat for lunch to choosing a career goal, young people must make decisions every day. Some decisions are easier to make than others because they are less complex and have minor consequences. Thinking logically and carefully about more important decisions will help you choose wisely.
SECTION 1
Living in East Asia (pp. 685–691)

Key Points
- East Asian economies include market and command systems, as well as a mix of both.
- East Asia was once mainly agricultural, but trade and industry have brought prosperity and economic growth to most of its countries.
- Most Chinese work in agriculture, although industry and commerce are thriving in certain areas as a result of government-sponsored economic reforms.
- Japan is East Asia’s leading industrial country, followed by Taiwan and South Korea.
- Trade and business investments bring together capitalist and communist countries in East Asia.

Terms to Know
- command system
- commune
- cooperative
- Asia-Pacific Economic Cooperation Group (APEC)
- trade surplus
- trade deficit
dissent
economic sanctions
World Trade Organization (WTO)
merchant marine

SECTION 2
People and Their Environment (pp. 692–697)

Key Points
- Rapid industrial growth in East Asia has caused environmental challenges that were ignored for decades.
- Japan, with its strict anti-pollution laws, has become a leader in protecting and cleaning up the environment.
- China’s economic development and the needs of its large population have a decisive impact on the environment.
- East Asia is subject to natural disasters such as flooding, earthquakes, tsunamis, and typhoons.
- Human activities in East Asia—such as clear-cutting forests, farming, and mining—have caused environmental disasters such as erosion, desertification, and flooding.

Terms to Know
- desertification
- chlorofluorocarbons
- aquaculture

Organizing Your Notes
Create an outline using the format below to help you organize your notes for this section.

### Governments and Economies
I. Political and Economic Systems
A. 
B. 
C.
II. Agriculture
A. China
B. 
C.

Create a chart like the one below to help you organize important details from this section.

<table>
<thead>
<tr>
<th>Locations</th>
<th>Problems/Causes</th>
<th>Effects/Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>air pollution</td>
<td>deforestation</td>
<td>desertification</td>
</tr>
<tr>
<td>nuclear hazards</td>
<td>earthquakes</td>
<td>floods</td>
</tr>
</tbody>
</table>
Critical Thinking

1. **Predicting Consequences**  Study the map on page 639. What impact might a railroad between Tibet and the rest of China have on Tibet’s economy?

2. **Comparing and Contrasting**  Examine Japan’s environmental record since 1990. In what ways has this record improved? What areas still need improvement?

3. **Identifying Cause and Effect**  Complete the diagram below to show how China’s state-run industries affect economic growth. Which effect do you think is most important?

### Reviewing Key Terms
Examine the pairs of words below. Then explain what each of the pairs has in common.

1. commune/cooperative
2. trade surplus/trade deficit
3. dissident/economic sanctions
4. desertification/chlorofluorocarbons
5. APEC/WTO

### Reviewing Facts

**SECTION 1**
1. Explain how economies operate in each of the following East Asian countries: Japan, China, Taiwan, and North Korea.
2. What economic reforms have Chinese leaders introduced?
3. What contributes to Japan’s trade surplus with other countries?
4. Which East Asian countries are members of APEC?
5. How have the United States and other countries tried to influence China’s stance on human rights?

**SECTION 2**
6. Describe six serious environmental challenges facing East Asia.
7. Japan is looking for alternative electric power sources. What event helped cause Japanese interest in these alternatives?
8. Which three East Asian countries rely on nuclear power to meet at least 30 percent of their electricity needs?
9. How does China’s heavy reliance on coal contribute to air pollution in the region?
10. How have commercial fishing companies and factory ships intensified overfishing in the region?

### Locating Places
East Asia: Physical-Political Geography
Match the letters on the map with the places and physical features of East Asia listed below. Write your answers on a sheet of paper.

1. Mongolia  
2. Yangtze River  
3. Macau  
4. Inland Sea  
5. Kobe  
6. Wuhan  
7. Tianjin  
8. Taiwan  
9. South Korea  
10. Yellow River
Using the Regional Atlas

Refer to the Regional Atlas on pages 636–639.

1. **Place** By giving the names of areas or countries, identify where each of the following natural resources in East Asia is found: tungsten, iron ore, copper, petroleum, tin, bauxite.

2. **Location** List the capitals of the East Asian countries and their absolute locations.

**Thinking Like a Geographer**

How might more and improved roads and railroads affect patterns of settlement, population distribution, and resource use in China’s interior areas?

**Problem-Solving Activity**

**Group Research Project** In June 2000, North and South Korea entered into peaceful negotiations for the first time in 50 years. Work with a group to research the agreement the two countries reached. Evaluate whether unifying Korea is a realistic prospect for the future. Then write an editorial explaining your position.

**GeoJournal**

**Evaluating Information** Review the information you logged in your GeoJournal as you read this chapter. Choose one of the economic or environmental challenges. Then write an essay evaluating East Asia’s success in using technology to meet and solve the challenge.

**Technology Activity**

**Creating a Web Site** Collect information, graphics, and photos for each country in East Asia, including examples of modern and traditional architecture, art, flags, clothing, and scenes from both rural and urban areas. Compose a fact sheet about each country that includes statistics on population, major cities, economic GNP or GDP, literacy rate, and other interesting information. Place your images and facts on your own Web site. Be sure to cite all your sources.

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**TAKS Test Practice**

Read the excerpt below about Chinese writer Gao Xingjian, who won the Nobel Prize for literature in 2000. Then choose the best answer for the following multiple-choice question. If you have trouble answering the question, use the process of elimination to narrow your choices.

―New York Times On the Web (online), October 12, 2000

1. Xingjian’s relationship with the Chinese government can best be described as
   A subservient.
   B manipulative.
   C passive.
   D turbulent.

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**Test-Taking Tip** Return to the passage, and underline the parts that represent decisions Xingjian had to make or actions Xingjian had to take. Based on what you underline, try to summarize the government’s role in Xingjian’s life. Then read the answer choices, eliminating those that you know are incorrect. Last, determine an answer from the answer choices that remain.