As you read this chapter, use your journal to log information about life in Africa south of the Sahara today. Include interesting and descriptive details that reflect the region’s unique characteristics.

Chapter Overview Visit the Glencoe World Geography Web site at tx.geography.glencoe.com and click on Chapter Overviews—Chapter 22 to preview information about the region today.
Guide to Reading

Consider What You Know
Think about the resources and products that come from Africa south of the Sahara and how people make their livings from them. If you wanted to create a mural showing what life in the region is like today, what images would you include?

Read to Find Out
• What are the most common farming methods in Africa south of the Sahara?
• How do mineral resources benefit the peoples of the region?
• Why has industrial development been slow in Africa south of the Sahara?
• How are transportation and communications in the region changing?

Terms to Know
• subsistence farming
• shifting farming
• sedentary farming
• commercial farming
• cash crop
• conservation farming
• infrastructure
• e-commerce

Places to Locate
• Zimbabwe
• Zambia
• South Africa
• Guinea
• Nigeria
• Kampala

Living in Africa
South of the Sahara

A Geographic View
Leap into the Future
With seven children, [Kawab Bulyar Lago] sold his animals and saddled himself with debt to send his son Paul to school outside Marsabit [Kenya]. Now awaiting the results of the national exams that will determine his fate, Paul hopes to attend university and become either a doctor, a civil engineer, a teacher, or even a tour guide. “I’d prefer to be a doctor,” he tells me one morning, “but anything would be all right.”

In the old days [Paul] would have inherited his father’s herd. Today he inherits his hopes and dreams.

—Wade Davis, “Vanishing Cultures,” National Geographic, August 1999

Whichever career he pursues, Paul Lago’s life will be different from his father’s life. Like many other rural Africans, Paul’s father herded camels and goats for a living. Today the lives of people throughout Africa south of the Sahara are changing as the region becomes more closely involved in the global economy. In this section you will learn about the region’s changing economic activities—changes that offer new opportunities and challenges for the region’s people.

Agriculture
Farming is the main economic activity in Africa south of the Sahara. More than two-thirds of the working population is involved in some form of agriculture. Some countries in the region still depend...
on single-crop economies created during the colonial era. Others, however, produce a variety of agricultural goods.

**Farming Methods and Export Crops**

Most Africans south of the Sahara engage in subsistence farming, or small-scale agriculture that provides primarily for the needs of just a family or village. After they have met their own needs, farmers often sell any extra harvest or animals at a local market for cash or trade for other items they need or want.

African farmers use various methods to work the land. The Masai in Kenya and Tanzania and the Fulani in Nigeria and other parts of West Africa are nomadic herders. In the forest areas, farmers support themselves by shifting farming, a method in which farmers move every one to three years to find better soil. People practicing this method—also known as slash-and-burn farming—use basic tools, often just an ax and a hoe, to clear and cultivate land. They burn the trees and brush they have cut and then plant seeds in the ash-enriched soil. When the soil is no longer fertile, they move on, sometimes returning to a location after the soil has had time to renew itself. This method has been used to clear land for a variety of plantation crops, such as rubber in Liberia, cacao in Ghana, and coffee in Burundi.

Other farmers depend on sedentary farming, or agriculture conducted at permanent settlements. Sedentary farming is most common in areas with good soil. The Kikuyu in Kenya and the Hausa in Nigeria, for instance, farm permanent plots. Many people of European descent who have made their homes in South Africa, Kenya, and Zimbabwe also practice sedentary farming.

A small percentage of the population works at commercial farming, in which farms produce crops on a large scale. These cash crops are grown to be sold for profit instead of used by the farmer. Most commercial farms, such as those in Zimbabwe and South Africa, are large, foreign-owned plantations. They supply much of the world’s palm oil, peanuts, cacao, and sisal, a vegetable fiber used for making rope.

The colonial economic systems played an important role in the growth of commercial farms in the region. Today the same commercial crops are the region’s main agricultural exports. Côte d’Ivoire (KOHT dee•VWAHR), Nigeria, Ghana, and Cameroon, for instance, depend heavily on the sale of cacao, which is used to make cocoa and chocolate. Kenya, Tanzania, and Madagascar are large producers of coffee. Most of today’s cash crops leave Africa to be processed elsewhere, just as they did during the colonial period.

The continued practice of cash-crop production has created problems for African economies. Reliance on one or two export crops is extremely risky. An unfavorable growing season or a drop in prices on the world market can have a disastrous effect on a country’s entire economy.

**Zimbabwe: Conflict Over Land**

Cash-crop production also creates problems for farmers trying to meet their own food needs, because plantations and other large-scale farms take...
all the best land. For example, in Zimbabwe, a country with more than 11 million people, 40 percent of the farmland is controlled by only 4,000 commercial farmers and ranchers, descendants of Europeans who controlled the land in colonial times. Although the government has proposed land reform to distribute land more evenly, violence has broken out as small-scale farmers have tried to take over large-scale farms. The resulting conflict has slowed or completely halted production on commercial farms. These developments threaten Zimbabwe’s economy, which currently depends heavily on commercial agriculture.

**Meeting Challenges**

Whether involved in large-scale or small-scale agriculture, farmers in the region face many challenges. Overgrazing, overworked soils, and a lack of technology have made farming difficult in many places. The use of heavy farm machinery, frequent tilling, and the clearing of forests for timber have caused soil erosion and desertification. Most subsistence farming in the region depends largely on human labor alone. Although men work primarily in cash-crop production, women often work at traditional subsistence farming, using basic tools and techniques. Food production has fallen far short of the needs of the region’s booming population.

Gradually, however, farmers are beginning to employ new methods and tools. Farmers in Zambia have started to practice conservation farming, a land-management technique that helps protect farmland. By planting different crops where they will grow best, Zambian farmers actually conserve, or save, land for farming. In addition, better fertilizers and seeds have increased yields of maize and other crops. In Nigeria and other countries, farmers who depended solely on rain to water their fields now use irrigation to increase production.

**Logging and Fishing**

Although forests cover almost 25 percent of Africa south of the Sahara, human activities are destroying the region’s forests at an alarming rate, upsetting unique ecosystems. The demand for farmland has led agricultural settlements to open up some of this land, using the slash-and-burn method of shifting farming. People in the region also cut wood from the rain forest and savanna woodlands to use as fuel. Logging companies also harvest and export valuable hardwoods, such as Rhodesian teak, ebony, African walnut, and rosewood.

Although logging creates serious consequences for Africa’s forests, the lumber industry has a relatively small output. Logging in the region accounts for less than 10 percent of the world’s lumber supply. Coastal countries with rain forests, such as Gabon, Equatorial Guinea, and South Africa, do export significant amounts of lumber and pulp.

Commercial fishing also represents only a small portion of the region’s economic activity. Few countries build and support fleets of commercial fishing vessels. Africa also has a very narrow continental shelf, the shallow ocean area near a

**Fresh Sardines** Fishing is a major activity along Zimbabwe’s Lake Kariba, one of the world’s largest human-made lakes.

**Human-Environment Interaction** What inland countries in Africa south of the Sahara profit from fisheries on lakes and rivers?
continent’s coast that usually contains abundant fish. Along the southwestern coast, commercial fishing vessels do catch large quantities of herring, sardines, and tuna for export. The richest fishing grounds in the region lie off the region’s west coast. Countries bordering oceans—South Africa, Namibia, Angola, Nigeria, Ghana, and Senegal—haul in the largest catches. The economies of island countries in the region depend on the export of fish and fish products. In addition, the inland countries of Malawi, Uganda, Chad, and Mali profit from fisheries on lakes and rivers.

**Mining Resources**

Difficult and risky, mining is an important economic activity in the region. Gold mining is particularly dangerous. The extremely narrow seams of the valuable mineral are located deep in the earth. Such depths greatly increase the risk of rock bursts, or breaks in the earth’s crust, under the stress of explosives and power tools, but mine workers need the wages to help support their families.

**Mineral Wealth**

The Witwatersrand, a gold deposit 300 miles (483 km) long, makes South Africa the world’s largest producer of gold. The country also is a world leader in the production of gems and industrial diamonds mined from beneath the grassy plateau of Gauteng Province. South African miners also extract large quantities of coal, platinum, chromium, vanadium, and manganese for export.

Although South Africa’s mineral wealth makes it one of the region’s richest countries, foreign investors or companies owned by white South Africans reap the most benefits. Little money reaches black South African mine workers. Since the steady decline in gold prices that began in the 1980s, however, gold has also contributed less to South Africa’s economy.

**An Imbalance of Riches**

The uneven distribution of mineral resources causes economic imbalances in Africa south of the Sahara. Most known mineral deposits lie along the Atlantic coast and south of the Equator. For example, Guinea (GIH•nee) has about one-third of the world’s known reserves of bauxite, the main ore used in making aluminum. Immense oil reserves make Nigeria the region’s only member of the Organization of Petroleum Exporting Countries (OPEC). In spite of rich mineral resources, many people in these two countries do not benefit directly from local resources, and they remain poor. Governments have badly managed the income from mineral wealth, and foreign mine owners often send their profits abroad.

**Industrialization**

Despite its large reserves of bauxite, Guinea cannot manufacture aluminum because it lacks the cheap energy, capital, and infrastructure—resources such as trained workers, facilities, and equipment—to build a refinery. Guinea is not unique. Most of the region’s countries never developed manufacturing industries to process their natural resources. Today many countries in Africa south of the Sahara receive foreign loans to industrialize, but progress has been slow. Few countries have industrial centers for processing raw materials. As a result, most countries in the region continue to act as suppliers of raw materials for the industrialized countries of the world.

**Development of Manufacturing**

Since the 1960s the governments of newly independent African countries have encouraged industrial expansion. Demand for manufactured goods has increased, and locally produced goods have replaced some imported items. Today the region’s industrial workers process food or produce textiles, paper goods, leather products, and cement. Some assemble electric motors, tractors, airplanes, and automobiles. Yet compared to manufacturing in other developing areas, such as Latin America, the economic role of manufacturing is small. By the late 1990s, only 15 percent of the region’s GDP came from manufacturing.

**Overcoming Obstacles**

Africa south of the Sahara faces many obstacles to industrialization, including the lack of skilled workers. Educational systems are relatively new, and training programs are limited. Hydroelectric resources are plentiful but untapped, and power shortages often occur. Political conflicts interrupt economic planning and divert resources from
development projects. In addition, countries must import food to feed their growing populations.

Although African products still do not reach many parts of the world, exports have been growing since World War II. 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. Some countries are breaking old trading patterns to trade within the region. Various countries, for example, have formed regional trading associations, such as the Economic Community of West African States (ECOWAS), to exchange ideas and to protect their interests.

**Transportation and Communications**

Good transportation and communications systems are essential to industry and trade as well as to everyday life in the region. New transportation networks and technology are beginning to change lifestyles, but much remains to be done.

Creating and maintaining transportation systems in the region is difficult. Roads and railways must cross vast distances and changing terrain. Water transportation is limited because most rivers cannot be navigated from source to mouth, and the region has few natural harbors. In addition, there are few experts and skilled managers to plan and supervise transportation systems. In recent years wars and lack of money have kept many roads and rail lines from being repaired.

**Roads and Railroads**

Several countries, however, consider roads and railroads a top priority. Nigeria plans to link all parts of its railroad system, and Uganda is scheduling repairs on the heavily traveled Trans-African Highway, which runs from Mombasa, Kenya, to Lagos, Nigeria. Mauritania, Senegal, and the North African country of Morocco are discussing plans for a highway between Tangiers in Morocco and Dakar in Senegal that would eventually reach Lagos. This important project would link people and ideas in different parts of Africa.

**Communications**

In the area of communications, the region has long relied on radio, with state-run stations providing global programming. Television reaches fewer people because the land-relay systems for transmitting TV signals become very costly outside urban areas. Satellite technology should improve television’s reach, however. Low literacy rates limit traditional media like newspapers and magazines, and in many countries, governments restrict the number of issues that can be published.

Telephone service is also limited, especially in rural areas. Across the region, only 14 main telephone lines serve each 1,000 people. However, satellite and wireless technology is expected to improve access to phone service and the Internet in Africa south of the Sahara.
**Economics**

**Internet Commerce**

Helen Mutono runs a small business selling baskets made by Ugandan women. Using e-commerce, or selling and buying on the Internet, Helen Mutono set up a Web site at a cybercafe in the Ugandan capital, Kampala, to sell baskets to customers around the world. Cybercafes provide Internet access for people who lack their own computers. For a fee, cybercafes allow customers to use Internet technology. The Internet broadens the market for locally made products, allowing customers from around the world to purchase unique products. As Helen Mutono notes:

“...You can imagine trying to sell a basket that everybody can make locally. [The weavers] probably wouldn’t be able to sell very many baskets, but to be able to market [the baskets] worldwide is... the greatest thing that could have happened for them.”

quoted in “E-commerce: Uganda’s Entrepreneurs Go Global,” BBC World Service (online)

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**Checking for Understanding**

1. **Define** subsistence farming, shifting farming, sedentary farming, commercial farming, cash crop, conservation farming, infrastructure, e-commerce.

2. **Main Ideas** Copy the web diagram below. List details about each of the five major economic activities in the region. Then choose one type, and write a paragraph about it.

   - Logging and Fishing
   - Transportation and Communications
   - Agriculture
   - Mining
   - Industry

**Critical Thinking**

3. **Making Generalizations** What economic features do many countries in Africa south of the Sahara share? How have these shared features affected their economies?

4. **Making Predictions** What role might the Internet play in the region’s economic development? Explain.

5. **Comparing and Contrasting** Compare and contrast the roles agriculture and industry each play in the region. Consider changes in the region’s economies before and after independence as part of your analysis.

**Analyzing Graphs**

6. **Human-Environment Interaction** Study the graph on page 538. What can you conclude about the importance of agriculture in the economies of the countries represented in the graph?

**Applying Geography**

7. **Obstacles to Development** Think about the challenges to economic development in Africa south of the Sahara. Write a speech in which you define one of the most critical challenges, propose a way to overcome it, and explain why your proposal is a good idea.
People and Their Environment

A Geographic View

Saving Forestlands

Traditional farmers use[d] slash-and-burn methods (in Madagascar), and a growing population . . . led to the clearing of more land. In the worst cases nearly a hundred tons of topsoil an acre were being lost each year. And while that flow has yet to be fully stopped, some progress has been made. Still, . . . unless these farming methods change, virtually all the island’s forests will be gone within 25 years.


Africans south of the Sahara, like their neighbors around the globe, look to the future with hope. Yet the people in this region face tremendous difficulties in achieving a better life. Many environmental challenges threaten the region’s supply of food, its health care, and its plant and animal life. In this section you will learn about these problems and the solutions proposed to deal with them.

Shadow of Hunger

Today millions of people in the region must focus on survival. Hunger is one of their bitterest enemies. In the 1990s, for example, many thousands of people died of starvation in the Horn of Africa—the bulge of land that juts into the Indian Ocean and includes the countries of Somalia, Ethiopia, and Djibouti (jih•BOO•tee). Drought and human activities, such as wars, contributed to the famine, or extreme
scarcity of food. Today famine threatens many parts of Africa, which must look to the international community for food. Food donations often can help relieve famine if there are no barriers to distribution. However, they cannot end hunger caused by years of conflicts and natural disasters.

### Desertification

Although never as fertile as land to the south and east, the Sahel region of West Africa once supported life. The Sahel is a band of semiarid land extending across the northern part of the region and bordering the Sahara. Not so long ago, nomadic peoples grazed livestock in the Sahel. Their animals helped fertilize the soil, and farming was possible. Today, however, a wide area of the Sahel has become desert. As the climate has become drier and as people and animals have stripped the Sahel of its vegetation, the desert has crept farther south, spreading in the countries of Mauritania, Mali, Niger, Chad, and Sudan.

Droughts, which have always occurred in the semiarid Sahel, have recently become severe there and in other parts of Africa south of the Sahara. Beginning in the 1960s, severe droughts in these areas helped turn farmland into wasteland. For example, in the early 1990s, drought in the Horn of Africa caused widespread famine. Since 1998 drought has killed crops and livestock across East Africa, threatening the lives of hundreds of thousands of people.

In 2000 the United Nations Food and Agriculture Organization (FAO) warned that famine could become a problem in central Africa because of unpredictable weather patterns and large numbers of refugees. In West Africa good harvests have boosted food supplies in most countries. Civil war, however, threatens to disrupt the distribution of food in Sierra Leone, Liberia, and Guinea.

### Conflict and Hunger

War continues to be a major cause of hunger and malnutrition in Africa south of the Sahara. Since 1990, conflicts in countries such as Liberia, Sudan, Somalia, and Rwanda have halted economic growth, caused widespread starvation, and cost the lives of countless Africans. Huge refugee populations fleeing war-torn areas have strained already meager food resources. Today civil conflict in Somalia endangers more than one million people, including relief workers. Looting and fighting severely hamper food distribution.

In Sudan about 2 million people are on the verge of starvation, according to UN estimates. Most of Sudan’s people depend on subsistence farming, making them vulnerable to the country’s periodic droughts. In addition, more than a decade of civil war between the Muslim Arab government and non-Muslim rebels in the south has torn Sudan...
apart and created the world’s largest refugee population. Although international aid workers have tried to meet the enormous food needs of the refugees, warring factions continue to raise obstacles. In 2000, for example, rebel groups began to impose taxes on relief work, forcing many aid agencies to leave the country.

If the problem of hunger is to be solved, peace within the region is critical. Some countries and groups are moving toward peace. Ethiopia and Eritrea, for instance, finally signed a peace agreement in 2000 after two years of conflict. Tensions between the two countries remain high, and maintaining peace will be a great challenge. However, the Eritreans and Ethiopians have been working to undo the damage caused by drought and civil war.

History
Farming in Peace
After Eritrea gained its independence from Ethiopia in 1993, farmers in both countries worked to improve the land. Farmers in the northern Ethiopian province of Tigray terraced more than 250,000 acres (about 101,172 ha) of land and planted 42 million young trees to hold soil in place. They also built earthen dams to store precious rainwater. Grain crops thrived in their fields. In Eritrea, crops were so abundant that the government was able to reduce its request for relief from other countries by 50 percent.

When Ethiopia and Eritrea went to war over their shared border, however, many people lost their homes or lives. Then one of the worst droughts in years struck the region. Although drought continues, a shaky peace is allowing farmers to restore the land, bringing hope to the area’s people.

Medical teams and relief workers with humanitarian organizations like Doctors Without Borders (Médecins Sans Frontières) and the International Red Cross have helped. Feeding centers, for example, have nursed many malnourished children and adults back to health in war-torn countries.

Land Use
People in the region are also struggling with problems of land use. At the start of the 2000s, tropical rain forests in the region were disappearing at a rate of more than 12 million acres (4.8 million ha) per year. The environmental impact of hunting and tourism has also raised difficult questions about the region’s land use.

Destruction of the Rain Forest
In 1990 rain forests covered almost 1.5 billion acres (607 million ha) in this region. By 2000 126 million acres (51 million ha) of that forest had disappeared. Côte d’Ivoire has lost more than

Student Web Activity Visit the Glencoe World Geography Web site at tx.geography.glencoe.com and click on Student Web Activities—Chapter 22 for an activity about life today in Africa south of the Sahara.
90 percent of its rain forest, and Madagascar, at one time a heavily wooded island, has also seen more than 90 percent of its rain forest disappear. On the continent as a whole, about half of the original rain forests are gone. Nearly 15,000 square miles (38,850 sq. km), an area almost the size of Switzerland, is being cleared every year.

Such statistics have alerted people in the region to the severity of the problem. Today various countries have created forest preserves to help save the rain forests. Many logging companies are also getting involved, using scientific tree farming and replanting projects to protect and renew forests.

Endangered Animals

As the rain forests disappear, many plant and animal species are put at risk. Deforestation destroys animal habitats, or living areas. Today hundreds of animal species in Madagascar that exist nowhere else are in danger of extinction, or disappearance from the earth.

The threat to wildlife exists elsewhere too. As the region’s population grows, farmers have moved into some forested areas to find land for planting and grazing. Some grassy savannas, home to huge herds of animals such as elephants, giraffes, antelopes, and lions, are being plowed for farming. As a result, many species have greatly decreased in number.

Hunting also threatens the region’s wildlife. During the colonial period, European hunters reduced animal populations significantly. For instance, during the 1900s the numbers of Zambian black lechwe, a kind of antelope, dwindled from 1 million to fewer than 8,000. In recent years hunters have continued to pursue African game for sport and profit. Two million elephants roam the region in the early 1970s. Today fewer than 600,000 remain, largely because of poaching, or illegal hunting. Ivory from elephant tusks brings high prices despite international bans on its trade. Other animals at risk include the Cape Mountain zebra and the mountain gorilla.

Economics

Conservation and Tourism

To save endangered species, some countries have created huge game preserves. These preserves—which include Tanzania’s Serengeti National Park, Kenya’s Masai Mara, and Rwanda’s Parc National des Volcans—have helped some animals make a comeback. The parks also attract millions of tourists each year. Ecotourism, or tourism based on concern for the environment, has become a big business in parts of the region, bringing millions of dollars into African economies. Despite the profits earned from such preserves, many people in the region, like V.N. Mthembu, object to them:

“My family lived in Ndumu [Game Reserve] until around 1960. They were moved outside when the park brought in rhinos. There is not enough land for everyone outside now and not enough water, especially in droughts. But the park has plenty of water and game. Why can’t we come back inside to build homes and live?”

Governments have tried to respond to such concerns by giving rural peoples an economic stake in the preserves. Some train to work in the preserves as trail guides or become involved in development planning.

**Toward the Future**

In Africa south of the Sahara, people are working to overcome some of the region’s serious challenges, many of them inherited from the colonial period. The region has already taken important steps, however, toward preserving the environment and its precious natural resources. Efforts to encourage private enterprise have also had positive results. New ranching laws, for example, have allowed people to engage in crocodile farming, a highly profitable business that has also brought this species back from near extinction. Rhinoceroses and elephants are also beginning to thrive again as their habitats are protected and poaching is discouraged by stricter laws.

Increasingly, the protection of rain forests is a priority in the region. In 1999 leaders from six central African countries signed an agreement to preserve the forests. The effects of this and similar efforts have yet to be seen, but they are a strong signal that Africans today are moving toward a more positive future.

**TAKS Practice**

**Checking for Understanding**

1. **Define** habitat, extinction, poaching, ecotourism.

2. **Main Ideas** Use a diagram like the one below for each challenge facing the people of Africa south of the Sahara. Then write a paragraph about one of the challenges, and write a proposal for meeting the challenge.

**Critical Thinking**

3. **Decision Making** List actions that governments in Africa south of the Sahara take to help eliminate hunger. Then arrange the items by order of importance and explain your reasoning.

4. **Finding and Summarizing the Main Idea** What is the central issue in the debate over the creation of game preserves?

5. **Problem Solving** How would you encourage logging companies and governments to help prevent deforestation? Consider the advantages and disadvantages.

**Analyzing Maps**

6. **Region** Study the map of hunger in Africa on page 544. What countries in Africa south of the Sahara generally have the least problem with hunger?

**Applying Geography**

7. **Global Issues** Think about the challenges Africa south of the Sahara faces today. Choose one problem in the region that might have an impact on the rest of the world. Make a chart or diagram that explains why the problem is a global issue.
African elephants—the biggest and strongest of all living land animals—once roamed in great numbers across the continent. During the last century, however, elephants were slaughtered by the tens of thousands for meat, for sport, and especially for their ivory tusks. In 1989 African elephants were placed on the endangered species list. Trade in elephant ivory was banned worldwide. Recently, however, three southern African nations were given approval to sell their stockpiles of ivory. Critics worry that these legalized sales will renew the demand for ivory and increase the killing of elephants for their tusks.

Southern Africa’s Dilemma: Renew the Ivory Trade?
Standing more than 10 feet (3 m) tall and weighing nearly 10,000 pounds (4,500 kg), an African elephant (left) wades into the waters of the Okavango Delta in Botswana. Both male and female African elephants grow tusks—the world’s main source of ivory. A lustrous, creamy-white material, ivory was once carved into everything from figurines and jewelry to billiard balls and piano keys.

Biologists estimate that in 1930, Africa was home to 5 to 10 million elephants. When the price of ivory soared in the 1970s, elephants became very valuable. Gun-carrying ivory poachers began illegally killing elephants for their tusks. By 1979 the elephant population had dropped to 1.3 million. As many as 80,000 elephants a year were shot for their ivory. By the late 1980s, only about 600,000 elephants were left in Africa.

In 1989 the nations that make up CITES—the Convention on International Trade in Endangered Species—placed the African elephant on the endangered species list. The sale of ivory was banned worldwide. During the 1990s, the ban was successful in protecting elephants.

Demand for ivory dwindled, prices fell, and poaching declined. Many elephant populations began to increase, particularly in southern Africa.

In fact, elephants grew so plentiful in Botswana, Namibia, and Zimbabwe that in 1997, CITES changed the elephant’s status in these countries from endangered to threatened. This change allowed the three nations to sell government stockpiles of ivory to Japan, as long as each country adopted strict anti-poaching measures. The sales went forward in 1999, but not without controversy.

Supporters of the sale of ivory stress that only government stockpiles are being sold and that no elephants will be killed for ivory. Supporters argue that money from the sales can be spent on elephant conservation and on national parks. Further, a strict monitoring program will track poaching. If poaching increases, ivory sales will end.

Opponents of the ivory sales fear that even a partial lifting of the ban will lead to more poaching of elephants. Opponents argue that there are better ways to raise money, such as increasing park entrance fees. Moreover, opponents claim that programs to monitor and to report increased poaching of elephant populations could take years—too long to save the elephants.

What’s Your Point of View?

Do you agree with the decision to allow limited ivory trade in southern Africa? Will resumption of trade give the green light to poachers?
Reading Tables and Interpreting Statistics

Reading lists of facts and figures can be confusing. For this reason, statistics are often organized in tables, which display numerical information in rows and columns.

Learning the Skill

In a table, similar kinds of information are organized into columns and rows. Labels across the top and left-hand side give information about the figures in the table. Identifying patterns and relationships among the figures can reveal a great deal about a topic. In this table, several kinds of statistical data for different countries are compared. The left row of labels shows what specific information is included in the comparison, such as population density or infant mortality rate. The top row identifies the countries being compared.

To read tables and interpret statistics, follow these steps:

1. **Read headings and labels to determine the kinds of information included in the table.**
2. **Look up any unfamiliar terms in the table.**
3. **Identify similarities, differences, and other relationships among the data.**
4. **Use the data to draw conclusions.**

Practicing the Skill

Study the table, and answer the following questions.

1. **What countries are being compared in the table?**
2. **How do the countries rank according to total population?** According to population density?
3. **Which country has the highest GDP per capita?**
4. **Which country has the lowest annual population growth?**
5. **What is the relationship between infant mortality rate and life expectancy? Explain.**
6. **What is the relationship between infant mortality rate and GDP per capita? Explain.**
7. **What is the relationship between urbanization and the number of automobiles?**

Population Information for Selected African Countries

<table>
<thead>
<tr>
<th></th>
<th>South Africa</th>
<th>Chad</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>43,600,000</td>
<td>8,700,000</td>
<td>9,700,000</td>
</tr>
<tr>
<td>Population density</td>
<td>92/sq. mi.</td>
<td>18/sq. mi.</td>
<td>127/sq. mi.</td>
</tr>
<tr>
<td>Annual population growth</td>
<td>1.2%</td>
<td>3.3%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Percent urban</td>
<td>54%</td>
<td>21%</td>
<td>43%</td>
</tr>
<tr>
<td>GDP (US dollars)</td>
<td>$290.6 billion</td>
<td>$7.5 billion</td>
<td>$15.6 billion</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>$6,800</td>
<td>$1,000</td>
<td>$1,600</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>53 years</td>
<td>50 years</td>
<td>52 years</td>
</tr>
<tr>
<td>Infant mortality rate (per 1,000 births)</td>
<td>57</td>
<td>103</td>
<td>59</td>
</tr>
<tr>
<td>Population per physician</td>
<td>1,529</td>
<td>27,765</td>
<td>14,825</td>
</tr>
<tr>
<td>Literacy rate</td>
<td>82%</td>
<td>48%</td>
<td>33%</td>
</tr>
<tr>
<td>Number of automobiles</td>
<td>4,350,000</td>
<td>9,630</td>
<td>11,000</td>
</tr>
</tbody>
</table>

Sources: 2001 World Population Data Sheet; World Almanac, 2001

Choose three countries in Africa south of the Sahara. Using an almanac, identify three statistics about the countries. Then use these statistics to make a table that allows you to compare and contrast the countries. Discuss with a partner the relationships among data that your table reveals.

The Glencoe Skillbuilder Interactive Workbook, Level 2 provides instruction and practice in key social studies skills.
SECTION 1

Living in Africa South of the Sahara (pp. 537–542)

Terms to Know

- subsistence farming
- shifting farming
- sedentary farming
- commercial farming
- cash crop
- conservation farming
- infrastructure
- e-commerce

Key Points

- Most people in Africa south of the Sahara engage in subsistence farming, and most countries in the region depend on the export of one or two cash crops.
- Mineral resources are not evenly distributed across Africa south of the Sahara, causing economic imbalances among the region’s countries.
- Africa south of the Sahara has taken actions to break its dependence on old trading patterns, and manufacturing is gaining strength in the economies of some countries in the region.
- New transportation networks and new forms of communication are changing the lives of Africans south of the Sahara.

Organizing Your Notes

Use an outline like the one below to organize the notes you took as you read about living in Africa south of the Sahara.

<table>
<thead>
<tr>
<th>Living in Africa South of the Sahara</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Agriculture</td>
</tr>
<tr>
<td>A. Farming Methods and Export Crops</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
</tbody>
</table>

SECTION 2

People and Their Environment (pp. 543–547)

Terms to Know

- habitat
- extinction
- poaching
- ecotourism

Key Points

- Desertification, drought, and conflict have contributed to hunger in Africa south of the Sahara.
- Deforestation, hunting, tourism, and meeting the basic needs of people are all issues in the debate over land use in the region.
- Africans south of the Sahara are working toward political stability and economic independence in the twenty-first century.

Organizing Your Notes

Use a diagram like the one below to organize your notes about each of the issues described in this section.

<table>
<thead>
<tr>
<th>People and Their Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes</td>
</tr>
<tr>
<td>Problem</td>
</tr>
<tr>
<td>Effects</td>
</tr>
</tbody>
</table>

Children in a refugee camp, Democratic Republic of the Congo
Critical Thinking

1. Categorizing Information  What are the key elements shared by the region’s economies? How important is each one?
2. Making Inferences  How does conflict affect the region’s overall quality of life?
3. Predicting Consequences  Create a web diagram that lists the region’s main challenges. Then list consequences for each one if no action is taken.

Reviewing Key Terms

Write the key term that best matches each description. Refer to the Terms to Know in the Summary & Study Guide on page 551.

1. agriculture that provides for the needs of only a family or village
2. tourism based on concern for the environment
3. a method in which farmers move every one to three years to find better soil
4. crops grown for sale, not for use by the farmer
5. resources such as facilities and equipment
6. illegal hunting of animals
7. areas with conditions suitable for certain animals or plants
8. agriculture conducted at permanent settlements
9. the disappearance of a species from the earth
10. doing business on the Internet
11. a land-management technique that helps protect farmland

Reviewing Facts

SECTION 1

1. Why do Africans south of the Sahara share unequally in mineral wealth?
2. Why has Africa south of the Sahara been slow to industrialize?
3. Why have many people in the region relied primarily on radio for news and information?

SECTION 2

4. What factors have contributed to desertification in the Sahel?
5. What is the relationship between deforestation and endangered animals?
6. How does ecotourism affect the region’s wildlife?
Using the Regional Atlas
Refer to the Regional Atlas on pages 486–489.

1. Human-Environment Interaction Describe the relationship between nomadic herding and the location of deserts.

2. Region Which two resources are concentrated in western and southern Africa?

Thinking Like a Geographer
As a geographer, would you favor setting aside more or less land for game preserves in Africa? Consider both the human and environmental concerns associated with the game preserves. What arguments would you present in support of your position?

Problem-Solving Activity
Problem-Solution Proposal The coastal zones of Africa south of the Sahara have great potential as sources of food, energy, and minerals. However, rapid, uncontrolled development of resources has led to environmental damage. Research to find out the specific causes of this damage and the ways in which it threatens the future of the region’s ocean resources. Then write a proposal suggesting possible steps to prevent future harm to this environment.

GeoJournal
Public Service Announcement Use the information you logged in your GeoJournal to write a public service announcement explaining one of the efforts to address an environmental challenge in Africa south of the Sahara.

Technology Activity
Developing Multimedia Presentations Identify and research an endangered African animal. Collect information about the animal’s habitat. Use mapping software, photographs, and other visual aids you download from Web sites to create a multimedia presentation. Show how the animal’s location and habitat have been influenced by humans.

Use the table below to 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.

<table>
<thead>
<tr>
<th>Population Change in Selected African Countries</th>
<th>Deaths per 1,000 people</th>
<th>Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>Namibia</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>South Africa</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Uganda</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>18</td>
<td>22</td>
</tr>
</tbody>
</table>

Sources: World Almanac, 1997; World Almanac, 2001

1. What is the relationship between the change in the death rate (number of deaths per 1,000 people) and the change in life expectancy in the countries listed in the table?

A An increase in the death rate causes a decrease in life expectancy.
B There is not a consistent relationship between changes in the death rate and changes in life expectancy.
C In countries where the life expectancy decreased, the death rate increased.
D Both the death rate and life expectancy are decreasing in these countries.

Before you read the answer choices, study the relationship between the death rate and the life expectancy of the African countries. Once you have drawn a conclusion about the relationship, read through the answer choices. Choose the one that most accurately supports the data in the chart.