

# Chapter 14

## Alabama Today

### Chapter Preview

#### TERMS

poultry, multimodal, tributary, service industry, labor force, strip mining, state-of-the-art, synthetic, wholesale, retail, therapy, mass communication

**Above:** The Mercedes plant in Vance was the first major automobile factory in Alabama. Since its completion, two more major carmakers, Honda and Hyundai, have built factories in the state.



# A

Alabama is home to people of many cultures. The first known residents of the state were American Indians. Over the years, immigrants from every populated continent on Earth have joined them. Modern Alabama is a mixture of the stories, traditions, and work of its citizens.

A century ago, farming, mining, and manufacturing were major activities in the state. They are still important parts of the economy today. But the human environments they created have changed much about the state. The growing population required more homes, more highways, and more parks. More people meant that extra electricity and natural gas were needed. And all of these people needed more places to work.

Building all of these things took a lot of land. Changes were made to the natural landscape. The land was cleared for factories, large shopping centers, or groups of homes. This removal of trees and other plants often caused water runoff. This washed the soil off the land and into creeks and rivers.

Development of land for new uses sometimes caused pollution. Some factories released smoke into the air or chemicals into the water. These things polluted the environment. Many people worked to improve Alabama's air and water. Today, all of Alabama enjoys a cleaner environment.

A new kind of mining left the land scarred with huge, water-filled holes and giant piles of rock. But mining companies now fill in the bare areas and replant trees.

The population of Alabama has changed in the last 20 years. Some areas have lost population and others have gained. The increase in population in some areas has been mainly in one cultural group. Other areas have gained new residents in all groups. As you read in Chapter 13, the state's population has grown overall. The 2010 U.S. Census lists Alabama's population as 4,779,736.

# Focus on Reading Skills

## Reading a Product Map
















### Learning

Reading a product map requires you to read special *symbols* or pictures. Instead of cities or roads, product maps may show special things about a place. The symbols of a product map show something that is found or grown in a certain place. They may illustrate crops, factories, or natural resources found in a place. For example, the map may have little pictures of cows. That could mean that there are dairy or beef cows in the area. To know exactly what the pictures mean, we look at the key. The *key* or *legend* will show the symbol and tell what it means. A key might look like this one from Map 27:

- Product maps are useful because you can see what a state produces at a glance.
- A symbol is placed where a large amount of something is grown, made, or mined. It does not mean that those are the only places in the state for those activities.

Sometimes, the *size* of the symbol has a meaning. For example, if the lake symbol is small like the one on the left, there is a little water. If the symbol is big, like the one on the right, there is a lot of water.



KEY:  Aquaculture	 Cattle	 Cotton	 Forest Products	 Grain & Vegetables
 Horses	 Oranges	 Ornamentals	 Peaches	 Peanuts
 Pecans	 Poultry	 Sod	 Soybeans	 Wildlife Management

- It is important to see *where* the symbol is placed on the map. Is it in the northeast part of the state? Is it in the southwest?
- Notice *how many* of the symbols are on the map. If there are a lot of pictures of trees on the map, that means there are many trees in that area.
- One tree symbol may stand for 10,000 real trees.

### Practicing

Study the agricultural products map in this chapter on page 390.

1. What livestock are raised most in area 5?
2. What plant grows in area 7 and bears its edible part under the soil?
3. Name a natural resource that is mined in area 2.

# Section I

## Agribusiness

### As you read, look for

- how agriculture is business;
- who are producers and consumers;
- crops grown in Alabama;
- meats produced in Alabama;
- products made from wood;
- what aquaculture means;
- term: **poultry**.

**Figure 27**  
**Timeline:**  
**1950 to 2010**



**1960**  
George C. Marshall  
Space Flight Center  
founded at Huntsville

**1955**  
Oil discovered  
at Citronelle

Alabama airports received over \$70 million from federal government  
Honda began production in Lincoln  
Toyota factory built in Huntsville

**1978**  
Oil and natural gas  
found in Mobile Bay area

**1997**  
Mercedes began  
production in Vance

**2001**  
Hyundai began  
production near  
Montgomery

**1950**

**1960**

**1970**

**1980**

**1990**

**2000**

**2010**

**1958**  
National Aeronautics and Space  
Administration (NASA) created

**1990**  
Iraq invaded Kuwait

**2001**  
9/11 terrorist  
attacks

**2002**  
Delta IV rocket's first lift-off

**2003**  
United States attacked Iraq

**2010**  
BP oil spill  
hit Gulf  
Coast

American  
combat  
troops left  
Iraq

**Alabama has a long growing season and very good soil. It has** always been an agricultural state. However, the way farmers work has changed very much in the last 50 years.

What was once called agriculture is now *agribusiness*. About 27 percent of Alabama's economy is based on agribusiness. There are around 48,000 farms in the state totaling over 9 million acres.

Farming changed after World War II because of new technology. New machines and chemicals changed farming methods. In the 1940s, a machine was invented that could pick 1,000 pounds of cotton in 1 hour. The most an average person could pick in 1 hour was just 20 pounds. This meant that a single farmer with the right machines could run a large farm.

The human environments created by farmers have changed too. Farms have become much larger because of modern equipment. A farmer can do more work with a machine than a man with a plow. Some farms water their crops with

**Figure 28**  
**Alabama's Rank among States for Crop Production**

<b>Agriproduct</b>	<b>Rank in U.S.</b>
Broilers	3rd
Catfish	2nd
Cotton and cottonseed	10th
Eggs	14th
Hogs and pigs	28th
Greenhouse, sod, and nursery (plants)	22nd
Peanuts	3rd

Source: USDA, NASS, Alabama Field Office, 2011





large sprinklers. There are now chemical fertilizers to make plants grow better. And farmers can use poisons to kill weeds and insects. These changes allow plants to grow closer together so the harvest is larger. Farmers use technology and modern science to produce the crops grown on today's farms.

Since the farmer supplies goods for other people to use, he or she is a producer. Because we use things that others produce, we are consumers. Farmers also become consumers when they use items that others make. For example, farmers help the state's economy by buying electricity, fuel, chemicals, and machines. The farmer's family also buys shoes, clothes, books, and other things that people need.

## **Agricultural Products**

Over 100 years ago, Alabama's chief crop was cotton. Cotton is still important, but Alabama farmers today grow many different things. The state's most valuable agricultural products are cattle, catfish, cotton, peanuts, poultry, eggs, and nursery (plants) and sod goods. (**Poultry** are birds raised to eat or lay eggs such as chickens, turkeys, and quail.) Other valuable agricultural products grown or produced in Alabama are milk, honey, pecans, fruit, pork, and greenhouse plants.

Alabama's climate makes it possible for farmers to grow almost any vegetable. Some leading vegetable crops in Alabama

**Above:** *Alabama ranks second in the nation in the production of poultry and poultry products. These chickens on a farm near Monroeville are egg layers.*

**Opposite page, below:** *Beef is Alabama's second-largest meat product after chicken. These cattle are on the Meadowbank Farm near Claiborne.*

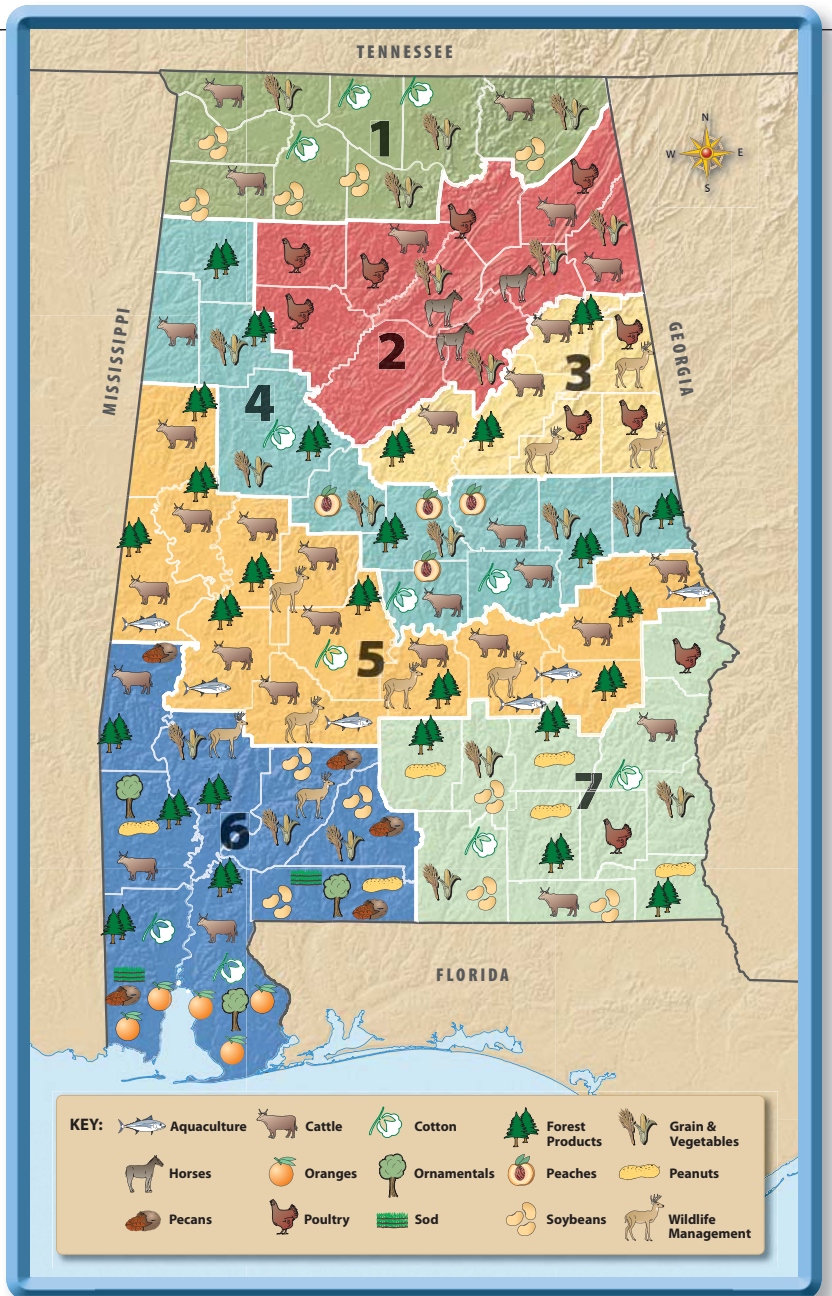
## Map 27 Alabama's Agricultural Products

**Map Skills:** What crops and/or animals are produced in your home county?



## About Alabama

Fruithurst began as a rural mining camp called Summit Cut. In the 1890s, it grew to a tourist destination with many vineyards. But sadly, in just 19 years, the town was sold for debts and the people left. Today, the area has Laminack Vineyards, which grows 3 kinds of muscadine grapes.



are potatoes, sweet potatoes, tomatoes, sweet corn, beans, and cucumbers. Wheat and other grains are also grown here.

Alabama-grown fruits include peaches, apples, oranges, strawberries, pears, watermelons, blueberries, and cantaloupes. Some farmers are beginning to grow kiwi fruit.

In north Alabama, many farmers raise chickens. One reason for this is that the land in that part of the state is hilly. Chicken houses take up less space than farm fields. In areas with many hills, it is easier to find flat places for chicken houses than for fields.

Poultry can be divided into types such as broilers (chickens 5 to 12 weeks old) or layers. Broilers are the most valuable

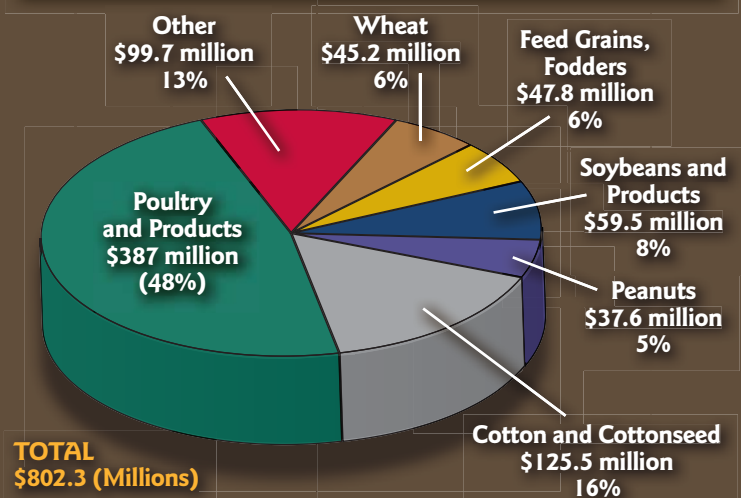


agricultural product in Alabama. Cullman is the leading broiler county. There are at least 20 plants in Alabama that prepare poultry and eggs for market. Alabama is one of the top states in the production of the nation's poultry. Broilers, layers, and eggs are all part of the important poultry industry. Alabama's flocks produce over 2 billion eggs each year.

Beef is the state's largest non-poultry meat product. Alabama is ranked 25th among the states in beef production. Alabama is a good area for raising cattle because our climate provides green pasture for most of the year. Another reason is that hay is easy to produce for winter feeding. Alabama farmers are raising more beef cattle than in the past. Many farm fields have been turned into pastures for cattle.

Do you like bacon, ham, or barbeque? Farmers in the state also raise hogs and pigs. Alabama hog production is ranked 28th in the United States.

**Figure 29**  
**Alabama Agricultural Exports**



Source: USDA Agricultural Exports FY 2010, Economic Research Service (Percentages rounded)

**Top:** This wheat field is in Escambia County in the lower Coastal Plain.



## Aquaculture

Aquaculture (growing fish or plant crops in water) is a newer part of the state's agribusiness. Since 1960, it has grown from small farm ponds to a multimillion-dollar industry.



**Above:** Years of growing cotton depleted the soil of the Black Belt. Because of this, many farmers turned to catfish farming. In this photo, mature catfish are being harvested from a pond.

The land in south Alabama is flatter than land farther north. Some farmers in the southern part of the state raise another kind of food—catfish. They dig out the soil and make ponds in the flat land. Then the fingerlings (young fish) are placed in the ponds. The fish are fed daily until they are large enough to harvest. Then they are carried, alive and in water, to a processing plant. There, the fish are cleaned and frozen within minutes. Alabama aquaculture also produces bass, bluegill, and crappie. Goldfish and other fish for aquariums are raised in the state too.

The Department of Fisheries at Auburn University studies many kinds of food fish. Researchers there are trying to find other fish that could be raised in Alabama. Many fish sold in your supermarket's seafood department are raised by aquaculture. Shrimp, tilapia, and crawfish are other favorites grown by this method. The state's aquaculture industry should become much larger in the next 10 to 20 years. Auburn University has one of the world's outstanding aquaculture research departments.

Shrimp, oysters, and other great seafood are caught and processed in Mobile and across the Gulf Coast. Delicious! You might eat these at home or try one of the great restaurants in the state.

## Forestry

The state's warm and humid climate helps trees grow rapidly. People in Alabama have used the area's forest resources since the first people settled here. More than two-thirds of the state is covered by forests of pine and hardwood trees. Alabama's forests are 40 percent pine and 44 percent hardwood. The other 16 percent is a mix of pine and hardwood trees.



Each year, Alabama forests produce about six percent of the nation's timber. There are many forest-related industries in Alabama. These include the mills that saw and plane wood. Other factories make paper, plywood, wood veneer, furniture, and wood chips. Every county in the state has some income from the timber industry.

Products manufactured from the forest industry are important to Alabama's economy. In 2010, Alabama produced \$12.78 billion of forest products. Because landowners replanted trees, Alabama has more trees today than 50 years ago. The leading counties for timber are Baldwin, Blount, Covington, Crenshaw, Cullman, DeKalb, Franklin, Geneva, Jackson, Lauderdale, Marshall, and Pike.



### Think It Through!

1. Name one product that Alabama farmers produce.
2. Are you a consumer of Alabama farm products? Name one.
3. How much of Alabama is covered by forests? What difference does this make in your life?
4. What are some forest products?

**Top and above:** The Alabama River Pulp Company reduces trees to tiny wood chips. The wood chips are turned into pulp to make paper. This is the Claiborne Mill Complex.

## Section 2

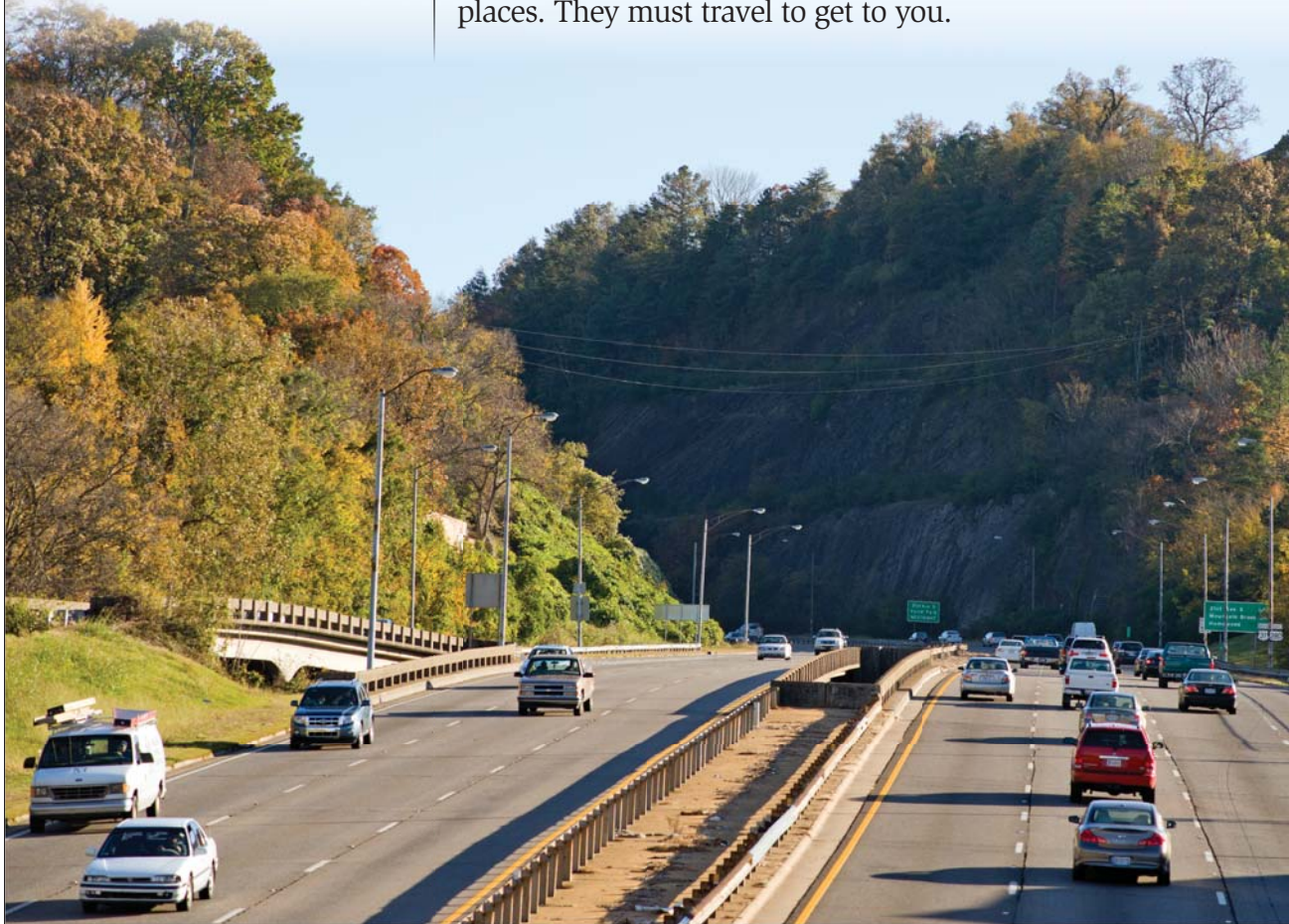
# Transportation

### As you read, look for

- transportation types and routes;
- the importance of river systems;
- terms: **multimodal**, **tributary**.

**Below:** *Highways like the Red Mountain Expressway in Birmingham allow people who live in the suburbs to commute to jobs in the city.*

**There are four main ways to travel in Alabama: road, rail, water,** and air. Travel is necessary for people and goods. Much of your food, clothes, toys, and many other products are made in other places. They must travel to get to you.





## Map 28

### Federal and Interstate Highways in Alabama

**Map Skills:** Find your location on the map. Does an interstate highway go through it? If not, what is the closest interstate(s) to you: I-65, I-20, I-59, I-10, I-85, or I-22?



### Roads and Highways

Alabama has about 100,000 miles of highways and roads. That makes it easy to reach most locations in the state.

The trucking industry is a major transportation business. Trucks travel both within Alabama and through it to other places in the nation. You see these trucks when you ride on the roads and interstate highways.

There are over 5 million vehicles registered in Alabama. Cars and trucks are used for both business and pleasure. As the number of vehicles increases, more roads are needed.

**Above:** U.S. Highway 82 goes across Alabama diagonally in a northwest to southeast direction. The highway passes through Tuscaloosa, Montgomery, and Eufaula.

# About Alabama

There are railroad museums in Calera and Huntsville. They have exhibits on the history of railroads in the state. You can see locomotives, cars, stations, and displays. You can even ride on a train.

Buses are another way people travel over Alabama's streets, roads, and highways. Some buses are used only within the city they serve. Others carry passengers from one town or city to another.

The Alabama Department of Transportation is called ALDOT. It plans, builds, and takes care of the state's bridges, roads, and tunnels. Most of the money for keeping roads in good condition comes from taxes on fuel and vehicles. Some funds for roads come from the federal government.

## Railroads

Do you hear the train whistle blow at railroad crossings? Trains are a very important way to carry freight. There are over 5,000 miles of railroad tracks in Alabama. Goods can be shipped by train from the state to almost all of the nation's major markets.

One important kind of rail shipment is called **multimodal** or intermodal. This means that goods are sent in containers. These containers are then moved directly from railroad cars to ships, planes, or trucks. This system is used for national and international shipments. Goods coming into the country can be transferred to railcars for further shipment. Mobile has the greatest number of multimodal terminals in the state. Birmingham, Dothan, and Huntsville also have these terminals.

Passenger travel on the railroads continues to decline. Only one passenger train now serves the state. The *Crescent* makes



one run from New York City to New Orleans and one from New Orleans to New York City each day. The *Crescent* stops in Anniston, Birmingham, and Tuscaloosa on each trip.

## Water Transportation

Alabama's water transportation routes are important to the state and the nation. The state has at least 1,500 miles of navigable waterways. Alabama's river systems are used to ship goods to and from the Port of Mobile. A river system is a major river and its tributaries. (A **tributary** is a stream that flows into a river.) Our waterways are an important part of the state's economy.

The Tenn-Tom Waterway opened in 1985. It allows goods to be shipped to and from the Port of Mobile. The waterway connects Mobile to ports along the Mississippi, Ohio, and Tennessee River systems.

Congress approved the Intracoastal Waterway in 1919 to provide a safer route than the open sea. It connects the Port of



**Above:** A modern locomotive goes over a railway crossing in Alabama. Almost all of the trains in Alabama carry freight. **Below:** Mobile is Alabama's only saltwater port. It is operated by the Alabama State Port Authority. Here, a tanker goes past a cruise ship.





**Above:** *Alabama's largest airport is the Birmingham-Shuttlesworth International Airport. It is named in honor of Reverend Fred Shuttlesworth, who was an important civil rights leader in Birmingham.*

Mobile with other Gulf and Atlantic ports. The Corps of Engineers maintains the waterway. It is used by tugboats, barges, and pleasure boats.

The Port of Mobile is Alabama's water link to trade with the rest of the world. Goods going outside the country are sent to the Alabama State Docks. They come there through river systems, by rail, or on trucks. Ships in Alabama's port travel between Mobile and every other major port in the world.

### **Air Transportation**

Alabama has at least 117 licensed airports. All state airports are important for business and tourist travel. The major airports in the state are at Anniston, Birmingham, Decatur, Dothan, Gadsden, Huntsville, Mobile, Montgomery, Muscle Shoals, and Tuscaloosa. Goods for international trade arrive and leave from the airports

at Birmingham, Huntsville, and Mobile. The airport in Montgomery supports travel to the state capital and nearby industries.

Air transportation changed after 9/11 when terrorists used planes to kill Americans. The federal government and the airlines wanted to prevent this kind of attack in the future. The nation's airports received special funds from the federal government. The money was to improve security so that all Americans would be safer. Airports had to provide written security plans. They also had to tighten the rules in terminals. The airlines and airports took special steps to increase everyone's safety.

### **Think It Through!**

- 1. What are four forms of transportation in Alabama?**
- 2. Whose money pays for the building and upkeep of roads? How does this help you?**
- 3. How can the Intracoastal Waterway be used for trade?**
- 4. What are some advantages of multimodal shipping?**

## Mining and Manufacturing Industries

### As you read, look for

- natural resources;
- the importance of road systems;
- terms: **service industry**, **labor force**, **strip mining**, **state-of-the-art**, **synthetic**.

**Industry in Alabama can be divided into mining, manufacturing, and service industries.** Mining industries take raw materials from the earth. These natural resources are then used to manufacture goods and produce energy. Manufacturing industries make goods, which are the things that people buy and use. The **service industry** provides work without producing goods. Service industry workers include waiters, doctors, attorneys, and teachers. The state's civilian **labor force** (group of available workers) in November 2010 was 2,134,807. That includes all kinds of workers. One day you will be in the labor force.

### Mining Industries

Alabama has a good supply of valuable natural resources. These include coal, natural gas, petroleum, and limestone.

#### Coal

The same thing happened to mining that happened to farming: machines were invented to do some of the work. That meant fewer miners were needed. The older coal mines were usually



**Above:** Lime plants are a common sight in Alabama. Lime is a mineral that is used in building, making iron and steel, fertilizer, and many other types of manufacturing.





**Above:** Coal is the number one mineral mined in Alabama. Much of it must be transported by rail to power plants where it is used to generate electricity. **Below:** A lot of Alabama's oil and natural gas reserves are under water in the Gulf of Mexico. When you go to the beach, you may see offshore drilling platforms like these. Can you imagine working on one?

underground. Miners would go down a mine shaft, then dig tunnels into the coal seams. Machines made it possible to mine coal a new way.

One of those new ways of mining is **strip mining** or surface mining. This works best in the Appalachian Plateau region where the layers of coal are near the earth's surface. This kind of mining uses a machine as big as a house. The machine digs

away the rock and soil mix that covers a layer of coal. Then other machines move in to scoop up the coal. Strip mining changed much of the land in the Black Warrior region near Jasper.

Most of the state's coal comes from Jefferson, Tuscaloosa, and Walker Counties. Nearly three-fourths of Alabama's electricity is generated by burning coal.

### **Oil and Natural Gas**

Alabama is one of the top producers of oil and natural gas in the United States. The first discovery of oil in Alabama was in Choctaw County in 1944. The biggest oil field east of the Mississippi River is at Citronelle in Mobile County.





Recent discoveries of natural gas may move Alabama higher in the rankings. New natural gas deposits were found in the Black Warrior Basin and in the Big Canoe Creek Field. The Lower Mobile Bay-Mary Ann Field is another natural gas source.

Alabama's coal beds have produced huge amounts of methane gas. The value of gas and oil drilled in the state is several billion dollars a year. Today, Alabama produces 200 times more natural gas than in 1970. Geologists expect to find even more natural gas in the state.

### **Stone Quarrying**

A quarry is a large pit that is formed when stone is cut or blasted from the earth. There are limestone quarries throughout the state. Limestone is mainly used to make cement or as a base for roads and highways. It is also used in the production of steel.

Marble has been quarried in the Sylacauga Marble Belt for 160 years. It is used in buildings, monuments, and art.

### **Manufacturing Industries**

Manufacturing industries in Alabama include paper, textiles, chemicals, and steel. Once the goods are manufactured, they must be transported for sale. Some manufactured goods are sold within the United States and some are exported. Alabama-made products were shipped to 188 countries in 2012.

***Above: There are many limestone quarries in Alabama. This one in Tuscumbia is owned by Vulcan Materials Company. It is one of the largest companies in the state.***



### Paper Mills

The leading manufactured goods in Alabama are paper products. There are a number of paper mills across the state. Paper products made in Alabama might be anything from cardboard to fine writing paper. The state's pulp and paper industries produce billions of dollars worth of products every year.

### Textiles

Alabama is a leading textile-producing state. Textiles are made in factories called mills. They are called mills because they were among the first industries to use waterpower. The state's textile mills make fabric, thread, and yarn. Garment factories across the state make clothing, including military uniforms. Many American textile companies have moved out of the country. They moved because labor costs were cheaper in other parts of the world.



**Top:** Paper is one of the most important products manufactured in Alabama. **Above:** Alabama is still one of the main producers of iron and steel. Scientists at UAB are doing research to improve the quality of metal casting.

### Chemicals

Many industries use chemical products. Most chemical producers in the state are in the Decatur, Anniston, and Mobile areas. Plants in Alabama also make glue, plastic, fertilizer, and chemical fibers. There were \$2.6 billion of chemical products exported from the state in 2012.

### Iron and Steel

Alabama produces more steel than any other metal. Some of the steel plants in the state are in Birmingham, Decatur, Tuscaloosa, Brewton, Marion, Columbiana, Anniston, Mobile, Millport, and Gadsden. Alabama industries use steel to make parts for cars and other vehicles. Steel is also used to make ships, missiles, rockets, bridges, buildings, and railcars.

Alabama is one of the greatest exporters of cast iron pipe in the world. The University of Alabama at Birmingham (UAB) is doing research on casting (molding). Their work will make casting of all materials easier by using X-rays. The X-rays show mistakes in the casting. Then corrections can be made before products are molded.

### **Manufacturing Today**

Many new kinds of manufacturing have come to Alabama during this century. The state's top export in 2012 was transportation equipment. Many Alabama cities now have factories. One thing about factory location is still the same: the need for good transportation links. Rivers and dirt roads were important links for early factories. Then railroads became important. Today, interstate highways are a major link for transporting manufactured goods.

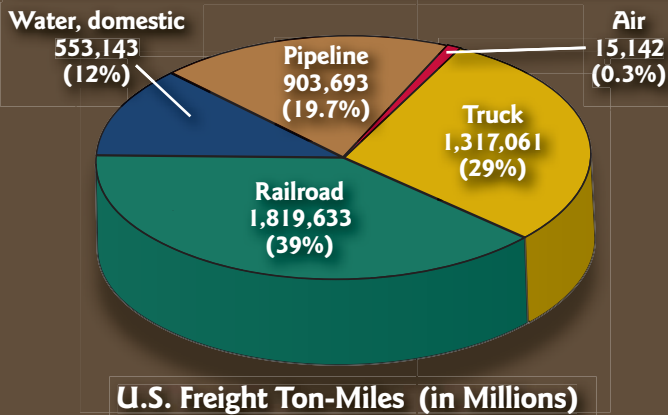
A Boeing rocket factory operates in Decatur. It is the world's newest and most **state-of-the-art** (modern) rocket plant. Decatur's location on the Tennessee River was one reason it was selected for the factory. The plant builds Delta rockets for military and commercial customers.

Lockheed Martin's plant in Troy produces many weapons for the U.S. Army. It manufactures several missiles including the Javelin, Hellfire, and Predator.

**Below: With three major factories, Alabama now ranks fourth in the United States in automobile production. This is the Hyundai plant, just south of Montgomery.**



**Figure 30**  
**How Products Are Transported**



Source: U.S. Department of Transportation, RITA, BTS 1-46B (2007)

Mercedes-Benz is based in Germany. The company built a large automobile-making plant in Vance near Tuscaloosa. This plant is not on a river or a railroad, but it is near an interstate highway. Mercedes-Benz makes three models there.

Honda built a large automobile-manufacturing plant in Lincoln in Talladega County. The company doubled the size of its plant by 2004. Alabama Honda now makes SUVs, pickup trucks, sedans, and engines. Honda is a Japanese-based automaker.

Hyundai is based in South Korea. It built a \$1 billion factory on the southern edge of Montgomery. This facility builds sedans and SUVs. It is the most advanced assembly plant in North America. Several other factories that make parts for the cars were built around Hyundai. These plants provide jobs for many people.

Toyota Motor Manufacturing, Alabama, is located near an interstate highway in Huntsville. The plant makes engines for pickup trucks and SUVs. The \$543.6 million plant produces 400,000 motors a year. Toyota is based in Japan.

**Synthetic** (man-made) diamonds are a product developed by the physics department at UAB. These new diamonds are put on metals to make a smooth surface. This type of research creates jobs for Alabamians. UAB is the largest employer in Alabama.

ThyssenKrupp Steel and Stainless USA is based in Germany. The company built a very large steel-rolling plant near Mobile. This state-of-the-art facility manufactures carbon and stainless steel.

### Think It Through!

1. What car companies have plants in Alabama?
2. Why do products have to be moved after they are made?
3. Name two natural resources that are good for the economy and help Alabama.

# Section 4

## Service Industries

### As you read, look for

- types of service industries;
- health care in Alabama;
- new research in medicine;
- the communications industry;
- terms: **wholesale, retail, therapy, mass communication.**

**Service industries do not provide goods. Instead,** they provide services to help people. Of course, it takes workers to supply the services. That is how service industries create jobs. These jobs include government and trade—both wholesale and retail. **Wholesale** is the sale of products to stores like a shoe store. **Retail** is the sale of products to customers like you. Since the mid-1900s, service industries have grown quickly. Today, more people work in service-related jobs than in manufacturing.

The fastest growing service industries are sales, restaurants, health care, and recreation. Other service jobs are in communications and computers.

### Health Care

Providing medical care for Alabama's citizens is a major job. Alabama has one doctor for about every 500 people. There are hospitals and clinics for people with physical or mental problems. There are nursing homes for the elderly and special hospitals for veterans.

**Below:** Many of the jobs in the service industries are in retail sales, people who work in shops. This is The Summit shopping center in Birmingham.



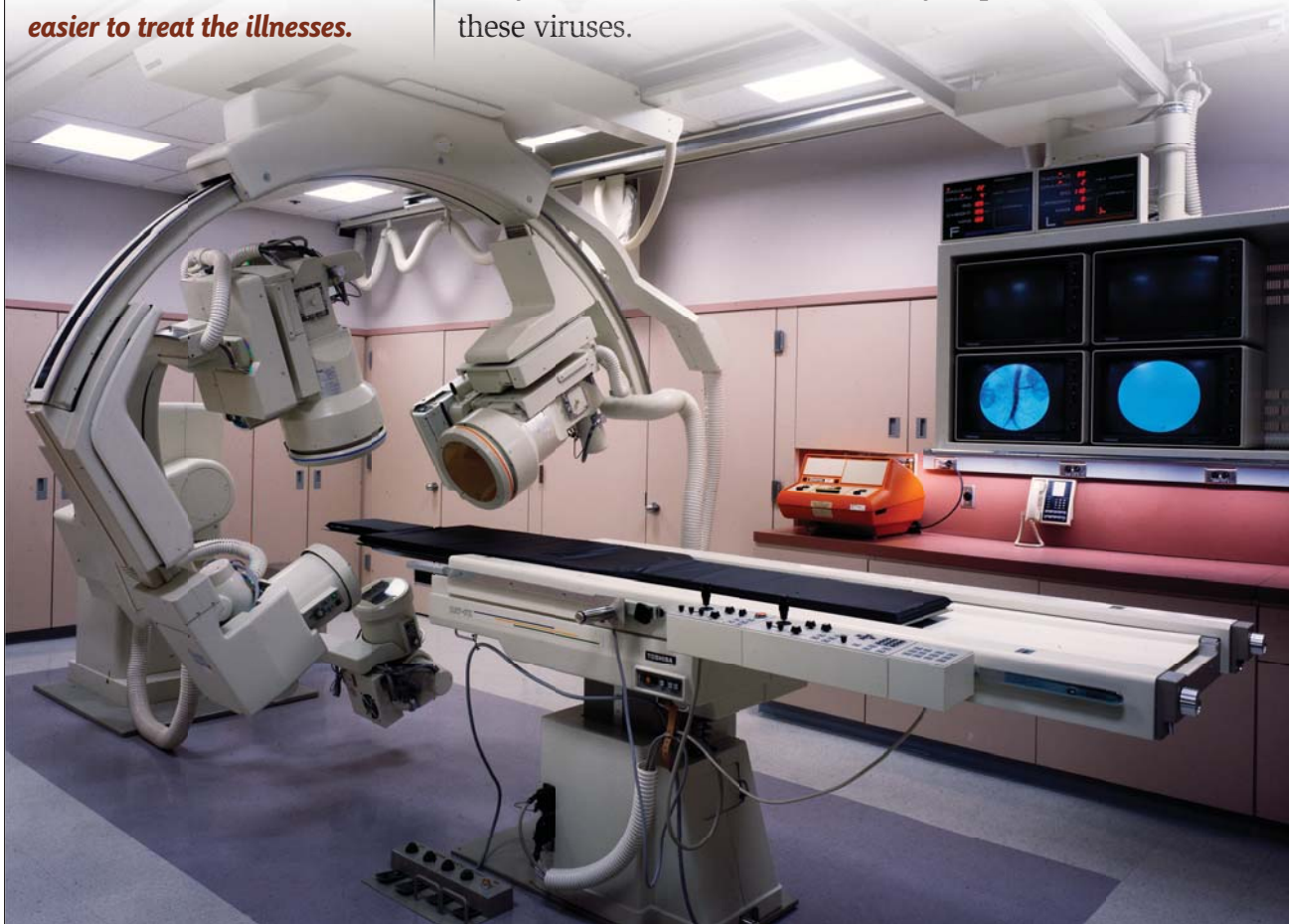
Two teaching hospitals in Alabama train doctors. They are the UAB Hospital in Birmingham and the University of South Alabama Hospital in Mobile.

A growing part of health care is **therapy** (treatment to help or cure someone). There are different kinds of therapy for different needs. People with injuries or other health problems may need different treatments than the elderly.

### **Medical Research**

Research in the field of medicine is a growing service industry in Alabama. One project was to find out more about the problem of virus-carrying mosquitoes. Mosquitoes can carry viruses that cause West Nile and Eastern equine encephalitis infections. These infections can kill animals and people. Scientists from the Tennessee Valley Authority and Auburn University collected samples of mosquitoes and dead birds. The samples were sent to UAB to find out if a virus killed the birds. Researchers also wanted to know if the mosquitoes were virus carriers. The scientists found infected birds in most Alabama counties. At UAB, many researchers work to find a way to prevent infection from these viruses.

**Below: Growth in medical research and technology has led to imaging machines. These can detect serious illnesses such as cancer much earlier than in the past. Early detection makes it easier to treat the illnesses.**



## Communication

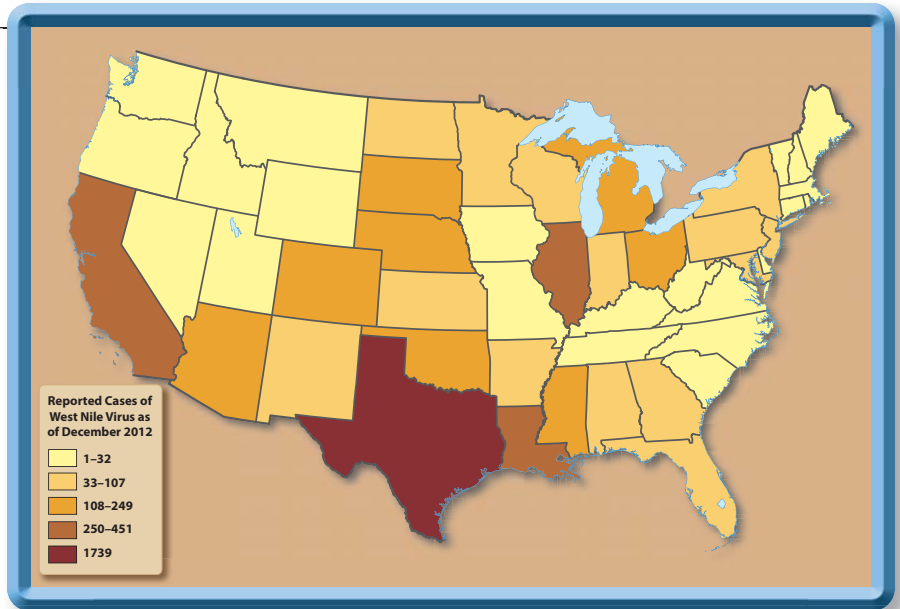
Communicating to large numbers of people is called **mass communication**. Several methods are used for this purpose including television, radio, the Internet, and newspapers. Newspapers are the oldest form of mass communication. Many newspapers are published in the state. Some of these are for special groups of people such as those of a certain faith. There are also newspapers for universities, businesses, and the armed forces. The Internet has changed the news business, however. Some major newspapers no longer print daily editions.

Alabama's oldest commercial radio station is WAPI of Birmingham. It began broadcasting in Auburn in 1922. The state's first television station was established in Birmingham in 1949. Alabama Public Television is over 50 years old and still active and successful today.

Alabama has about 130 radio stations and about 28 television stations. Broadcast methods have changed in the past few years. For most of radio's long history, the signals were sent over the air by radio waves. Now, the signals can also be sent by satellite or over the Internet.

Television signals are now digital and can be received by cable, satellite, or antenna. New technologies have changed TV viewing too. These advances include high-definition signals, 3-D (three-dimensional), and flat screens. Today's TVs have much sharper images than older sets. There are many stations to choose from for news, sports, and entertainment programs. Television also helps alert people to emergency conditions.

It seems that everyone has a cell or mobile phone. These phones may be hands-free and have fea-



## Map 29 West Nile Virus

**Map Skills:** Which state had the most cases of human disease? Name three states that had only avian (bird), animal, or mosquito infections.

## About Alabama

In 1955, Alabama became the first state in the nation with an educational television network.





## About Alabama

**The first use in the nation of the 911 emergency call system was in Haleyville. On February 16, 1968, the Alabama Telephone Company installed the service. The first test call was made from the mayor's office.**

tures such as virtual keyboards, organizers, games, alarm clocks, and music. Cell phones can send e-mails, take messages, and take pictures and videos. Smartphones are cell phones that have more computer functions. There are special apps (application software) for smartphones for many purposes. There is an app that lets you scan an item's price and see the price at other stores. Another can tell you the name of a song by "hearing" just a few words of it.

FAX machines send images of a printed page or picture by telephone lines. (FAX stands for facsimile, which means an exact copy.) Technology keeps changing, though, and scanners have replaced FAX machines in many cases. Now, you can just scan a paper or picture into the computer. You can then send the image by e-mail.

The computer and the Internet are rapidly replacing other forms of communication. Now, instead of mailing a letter, we can send an e-mail. We go online to research topics, shop, and chat with others. We even look up phone numbers, read the newspaper, and find maps online.

The State of Alabama has a supercomputer. It can provide up-to-date information to businesses and schools all over the state. Businesses use computers to communicate inside their companies. Using the Internet, they can also communicate with customers and suppliers.

*The Global Positioning System (GPS) is a modern marvel of technology. Satellites in space can find the location of your smartphone or GPS. It then sends directions to your phone for where you wish to go.*

## Technology

Technology can be defined as the way we use science to solve problems. Alabama and California are the nation's leaders in technology "research and development" (R&D). Huntsville is among the top ten cities in the country for this type of work.

An example of technology is the computer and its many tiny parts. Laptop and notebook computers are very small. It is easy to carry one from home to class or office. But now there are even smaller tablet computers. Wi-Fi is wireless access to the Internet. This technology frees computer users from cords and



*Tourism is an important part of Alabama's economy. Tourists come to Alabama to play golf at Ross Bridge on the Robert Trent Jones Golf Trail (left). They can visit the Berman Museum in Anniston (below), or learn about history from a reenactor at Fort Jackson (bottom).*

phone lines. It lets people sit in coffee shops or airports and use their computers to send e-mails and surf the web.

Computers might “watch” a sick person’s heartbeat or make a robot work. Kids and adults like to play computer games. Some games even play sports with you.

## **Tourism**

Another service industry is tourism. When people travel, they buy gas and food. They pay for camping sites or hotel rooms. They pay fees to play golf and to enter amusement parks and museums. Taking care of tourists creates many jobs in Alabama. Visitors pour millions of dollars into the state’s economy each year. Tourism is a big business for the state. However, being a tourist is not just for people who live outside Alabama. It is also for the state’s citizens who want to enjoy their home.



### **Think It Through!**

- 1. Name three kinds of service workers.**
- 2. Describe one new technology for communication.**
- 3. What advantages do cell phones have over other forms of communication?**
- 4. How do computers serve you?**

# Focus on the Economy

## Jobs in Alabama

**Economists group jobs in Alabama into two categories. One group produces goods and the other produces services.**

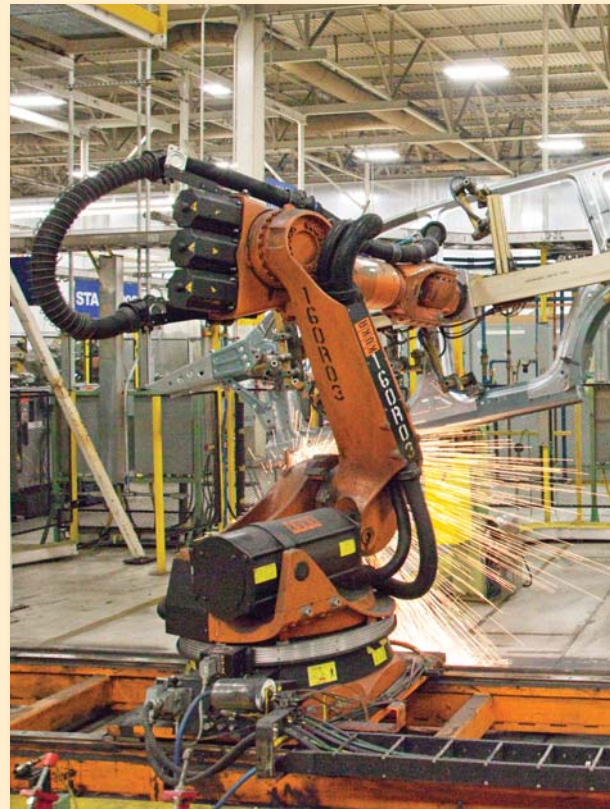
Some goods come directly from the environment—farming, mining, fishing, and logging. Years ago, most people in Alabama made their living working in jobs in these areas. Farmers grew crops such as corn, cotton, wheat, and peanuts. Iron ore, coal, limestone, and marble were taken from the earth. Forests were cut down. Fish were taken from Alabama’s waterways and the Gulf of Mexico.

Today, fewer people work at these jobs. Machines make it possible for one person to do much more work now than in the past. This means that many jobs now need fewer people.

Raw materials taken from the environment are converted (changed) into products. Logs become furniture, paper bags, or pieces of lumber. Fish become filets on your table or cans of cat food. A bushel of corn becomes boxes of cereal. A bale of cotton becomes sheets or T-shirts. This conversion takes place in factories or mills.

Alabama’s early factories made iron, steel, and textiles. Today, Alabama’s factories make a wide variety of products and employ large numbers of workers.

As the demand for these products grew, it changed where people lived in Alabama. Most factories and mills were built in cities. Many



**Above:** Automation in factories has reduced the number of manufacturing jobs.

people left farms and moved to cities to work in factories. This shift in population caused some cities to grow rapidly.

Because factories required lots of energy, more coal was mined. Hydroelectric dams were built. The mines and the dams changed Alabama’s natural environment.

Many people do work that provides a service to others. For example, a banker does not grow money in a field or manufacture it in a factory. A banker helps you by providing a place to keep your money safe. Bankers can also help you borrow money. A real estate agent does not build houses. Instead, the agent helps you sell or buy a house.

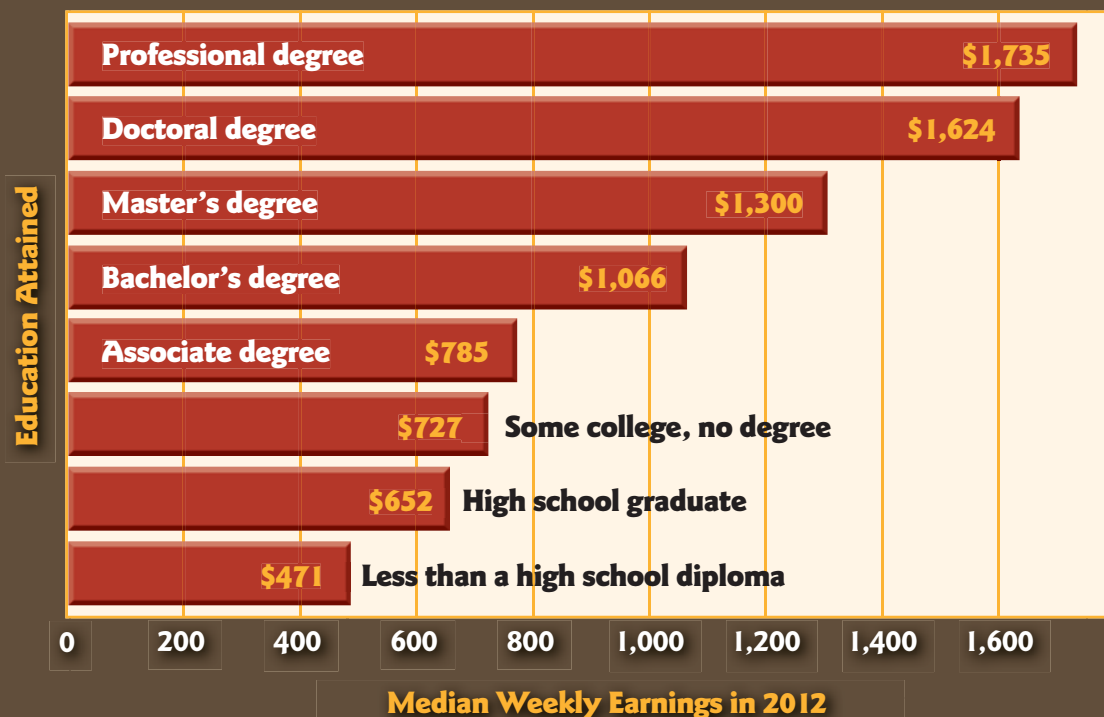
The service industry is very large and important today. Here is a sampling of jobs that provide services instead of goods.

Banker	Bus driver
Cook	Doctor
Firefighter	Hairdresser
Maintenance worker	Military member

Pilot	Police officer
Repairperson	Salesperson
Teacher	Truck driver

Different jobs require different amounts of education and training. Long ago, you could make a good living farming, fishing, logging, or mining. You could do these jobs with just a little education. That was possible because those jobs depended mostly on the worker being strong and healthy. When factories first started, they hired people who had little education. In fact, even children your age worked in some factories. As factories modernized, workers needed more education. Most factories now only hire high school graduates.

**Figure 3 I**  
**Weekly Earnings Based on Education**



Source: Bureau of Labor Statistics, Current Population Survey

## Military Presence

### About Alabama

The Air University Library at Maxwell-Gunter Air Force Base is the largest military library in the country. It has more than one million books.

#### As you read, look for

- different branches of the military;
- military bases in Alabama.

**Alabama has an important role in the defense of the United States.**

The Air Force, Coast Guard, and Army have bases in the state.

#### United States Air Force

Maxwell-Gunter Air Force Base in Montgomery is the educational center of the Air Force. The Air Force's three main schools and others are located here. They provide officers and enlisted people with a professional military education.

Maxwell-Gunter also manages the Air Force's worldwide computer network. There are over 12,000 military and civilian people working for the armed services in Montgomery.

#### United States Army

Fort Rucker, near Dothan, is the national home of Army Aviation. The base provides training for both helicopter and airplane pilots.

One of the largest bases in Alabama is Redstone Arsenal in Huntsville. It was here that Dr. Werner von Braun's scientists developed America's missile and rocket technology.



**Left:** A young pilot poses in front of his helicopter following his graduation from Army Aviation School at Fort Rucker.



The Anniston Army Depot sends parts for weapons and munitions wherever they are needed. The Depot also rebuilds and repairs tanks.

### **United States Coast Guard**

The Coast Guard has an Aviation Training Center (ATC) at the regional airport in Mobile. The ATC is also home to the Gulf Strike Team and Law Enforcement Detachment.

### **National Guard and Reserve**

Many Alabama men and women serve in the National Guard and Reserve units of all branches of the armed forces. These citizen-soldiers work at full-time civilian jobs most of the time. They train for their military jobs on weekends and during vacations. Alabama's National Guard and Reserve had a large role in the war in Afghanistan and Operation Iraqi Freedom.



**Top:** Soldiers of the Alabama National Guard build barriers on Dauphin Island after the BP Gulf oil spill. **Above:** Tanks are overhauled and repaired at the Anniston Army Depot.



**Above:** Lieutenant General Harold Moore's book about Vietnam was made into the movie, *We Were Soldiers*. General Moore was played by Mel Gibson in the movie.

## Military People to Remember

Alabama has a rich history of outstanding military personnel. These brilliant and brave people have made their mark on the world. We can thank their service in the past for our freedom today. While many armed forces members were covered earlier in your textbook, here are a few more worth remembering.

### Lieutenant General Harold G. Moore

Harold G. Moore was born in 1922. He graduated from West Point and fought in the Vietnam War with distinction. Moore was awarded the Distinguished Service Cross, the Bronze Star, and the Distinguished Service Medal.

In 1992, General Moore wrote a book called, *We Were Soldiers Once...and Young: Ia Drang—the Battle that Changed the War in Vietnam*. Many people think his book is the best one on the Vietnam War. He lives in Auburn.

### Admiral Thomas H. Moorer

Thomas H. Moorer was born in Mount Willing in 1912. He graduated from the U.S. Naval Academy and made his way up to chief of naval operations. Then, in 1970, President Nixon appointed him chairman of the Joint Chiefs of Staff. That is the highest-ranking officer in the military. Admiral Moorer had a brilliant career in the Navy where he served for 41 years.



## Pacific Rescue

In 1941, Thomas H. Moorer was a navy pilot. He was at Pearl Harbor when the Japanese attacked the U.S. fleet. His plane was one of the first in the air to fight. But he had another memorable aviation experience. While Moorer was flying over the South Pacific, the Japanese shot down his plane. It was going 100 miles an hour and hit the ocean hard. Moorer led his crew, in lifeboats, to a freighter (a ship carrying freight). Then the Japanese sank the ship! He led his crew to lifeboats again and found an uninhabited (no people) island. Moorer made a giant S.O.S. (Help!) in the sand. Australian pilots rescued him and his crew.

## Major General William L. Sibert

William L. Sibert was born in 1860 in Gadsden. He commanded the First Infantry Division during World War I. The Army considers him the “father of the chemical corps” since he was its first commander. After his retirement from the military, he served as the first chairman of the Alabama State Docks Commission.

### Figure 32 Alabama Population Changes

The population of Alabama has changed in a number of ways. The mix of cultures shifted as new immigrants moved into the state. There have been more Hispanic immigrants than from other cultures.

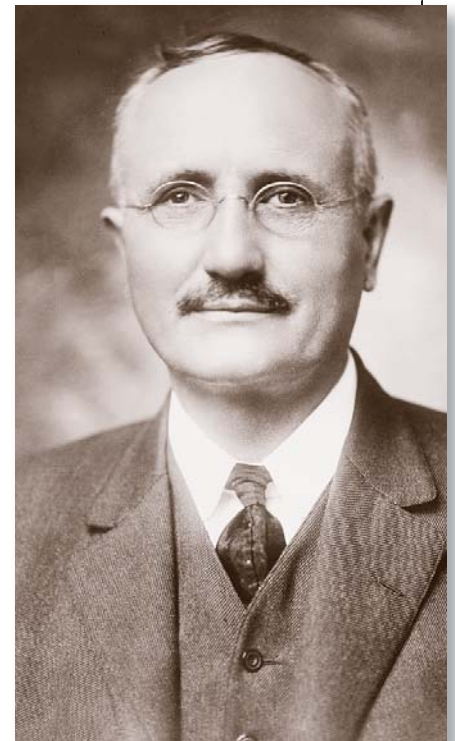
Cities and counties have lost or gained residents. Changes in population are most often caused by a change in the number of available jobs. When a factory opens, the area’s population normally grows. When a factory closes, the county usually loses residents.

#### Cities with Population Changes 1990-2010

Cities	1990	2000	2010
Auburn	33,830	42,987	53,380
Decatur	48,761	53,929	55,683
Dothan	53,589	57,737	65,496
Hoover	39,788	62,742	81,619
Huntsville	159,789	156,216	180,105
Montgomery	187,106	201,568	205,764
Oxford	9,362	14,592	21,348
Tuscaloosa	77,759	77,906	90,468

### Think It Through!

1. Name the branches of military service with bases in Alabama.
2. How do citizens manage to serve in the military while living as civilians?
3. Which Alabama native became chairman of the Joint Chiefs of Staff?



**Above:** Major General William L. Sibert was a graduate of the University of Alabama. In World War I, he commanded the 1st Infantry, known as the “Big Red One.”



# Chapter Review

## Chapter Summary

Alabama is a mixture of the stories, traditions, and work of its people. Alabamians work in many fields including health care, industry, agriculture, transportation, education, and the military.

Agriculture is still important to Alabama's changing economy. Among the most important crops are cotton, peanuts, and soybeans. Alabama ranks third among the states in the nation in broiler production. It ranks second among the states in catfish sales.

The state's natural resources are important to its industrial growth. Alabama's vast forests supply its lumber and paper industries. Mineral resources continue to support the steel industry. Textile mills make use of the state's cotton crop.

Health care is one of Alabama's growing industries. The medical center at the University of Alabama at Birmingham is recognized as one of the best in the nation. The state has many fine hospitals and clinics. They all work to keep our citizens healthy. Tourism is an important part of the economy and the fun of Alabama.

The military presence in Alabama is important to the state's economy. Military bases in the state are Maxwell-Gunter Air Force Base, Anniston Army Depot, Fort Rucker, and the Coast Guard's Aviation Training Center.

The space industry got its start after World War II in Huntsville. It continues to be a major factor in Alabama's economy. The Marshall Space Flight Center plays a key role in the nation's space program.



## Remember

Number from 1 to 7 on a separate sheet of paper. Find the word in the list below that matches each of the definitions that follow. Be careful! You will not use all of the words.

Labor force	Synthetic
Multimodal	Therapy
Poultry	Tributary
Retail	Wholesale

1. All types of edible birds
2. Goods in containers are moved from ships to trains, then to trucks
3. A stream flowing into a river
4. Made by humans, not natural
5. People who work in a nation or state
6. The price paid by consumers in a store
7. Treatment to help or cure someone



## Reviewing the Facts

1. What is the state's most valuable agricultural product?
2. What are four ways Alabamians can travel?
3. What state department takes care of the state roads and highways?
4. What kind of vehicle carries goods on the state's waterways?
5. Name a new Alabama industry.
6. What kind of mining digs coal from the surface of the earth?

7. Which town is the home of the Marble Belt?
8. Name three ways we communicate in Alabama.
9. Why do factories need an educated labor force?



### Using Critical Thinking Skills

1. How would your life be different if there were no mass communication, such as newspapers, radio, Internet, and TV?
2. Explain how the military adds to the economy of Alabama.
3. How does Alabama differ in transportation from noncoastal states?
4. Millions of dollars are spent on space technology each year. What are some of the benefits of the space program?



### Making Decisions

1. If you could choose one job in this chapter to try, which would you choose? Why?
2. What are some factors that industry must keep in mind in regards to pollution?



### Project

Visit a local spot that is popular with tourists. Interview a worker there. Give a report to your class.



### Writing

Write a letter to Marshall Space Flight Center telling them why you want to go to space camp.



### Preparing for Tests

**Multiple Choice**—These questions are like those you may see on tests. Write your answers on a separate sheet of paper.

1. Every county in the state has some income from which industry?

- A. Textiles
- B. Tourism
- C. Steel
- D. Forestry/Timber

2. Look at the product map on page 390. After analyzing the map, which of the products below appears to be grown in the most places?

- A. Soybeans
- B. Grains and vegetables
- C. Oranges
- D. Cotton



### Using Technology

You are going to see pictures of some structures and places related to Alabama's journey in transportation methods.

Using the Internet, go to [dot.state.al.us/](http://dot.state.al.us/) and look under Explore ALDOT. Look at the Hidden Transportation Treasures of Alabama. View the treasures and select your favorite, then write a paragraph describing it.