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Chapter Preview

Before reading, ask students if they have ever visited any of the places mentioned in the Chapter Preview. Allow students to share their personal stories and experiences.

Academic Vocabulary
Development

Have students review the vocabulary list and identify any words they already know. In addition, have students skim the chapter to determine the meanings of the vocabulary words they do not know.

Using Photographs
and Illustrations

Have students examine the picture of Cloudland Canyon and describe the physical features they observe. How might those features relate to the idea of "region," as defined on page 2?

Chapter 1

Georgia's Land and Location

CHAPTER PREVIEW

TERMS: region, hemisphere, Equator, Prime Meridian, continent, nation, relative location, landforms, fault, elevation, Fall Line, barrier island, peat

PLACES: Appalachian Plateau region, Appalachian Mountains, Valley and Ridge region, Blue Ridge region, Piedmont region, Coastal Plain region, Chattahoochee River, Savannah River, Okefenokee Swamp

Georgia has a rich diversity of land, with mountains and plateaus, plains and islands, swamps, lakes, and rivers. The land is divided into five geographic areas, called **regions**, which share common characteristics such as soil, vegetation, climate, landforms, and recreational or economic opportunities. These regions have affected the state's settlement, culture, and economy. This chapter explores our state's geography and location and examines their importance in how Georgia's history has unfolded.

Background: Cloudland Canyon State Park in Dade County is situated on the western edge of Lookout Mountain. The park features thousand-foot-deep canyons, caves, waterfalls, creeks, woodlands, and wildlife.

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Notes

Figure 1.1 Georgia's Facts and Figures**Location**

Latitude and longitude: Between 30°31' and 35° north latitude
Between 81° and 85°53' west longitude

Location within United States: Southeast

Bordering states: Tennessee, Alabama, Florida, South Carolina, North Carolina

East-West divider: Fall Line

Geographic center of state: Twiggs County, 18 miles southeast of Macon

Vital Statistics

Land area: 58,910 square miles (21st)

Coast: 100 miles (16th)

Shoreline: 2,344 miles (12th)

Distances: 315 miles long, 250 miles wide

Number of geographic regions: 5

Number of counties: 159

Highest point: Brasstown Bald (4,784 feet, 25th)

Lowest point: Atlantic coastline (sea level, 3rd)

Average elevation: 600 feet (16th)

Introduction

To introduce the chapter, ask students if they know where Georgia is located. Give students time to describe Georgia's location in as many different ways as possible to a partner. Allow students to engage in Think-Pair-Share. (See Smart Reading on the Teacher Tech website.)

Getting Started

On a blank outline map of North America, have students label the United States, the Southeast region, Georgia, the bordering states, and the Atlantic Ocean. You may also ask students to include other nations, states, or bodies of water on the map.

Notes

Section 1

Georgia's Location

Outline

- A. Locating Georgia in the World
- B. Locating Georgia in the United States

Materials

Student Textbook, pages 4-5

Student Audiobook

Student Activity Sheets

Teacher Tech Website

- » Guided Reading
- » Internet Activity
- » Lesson Planner
- » PowerPoint
- » Quick Notes
- » Smart Reading Handbook
- » State Standards and Correlation
- » Visual Aids
- » Wrap-Up Game

Introduction

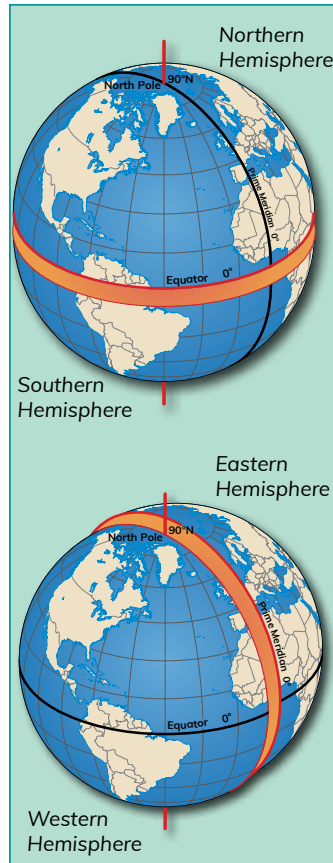
As students enter the classroom, have the following prompt posted on your screen: "Describe the location of your school in three sentences." Once students have completed this short writing assignment, explain the concept of location. Allow some of the students to share their sentences.

Map Skill Answer

Northern and Western Hemispheres

SECTION 1

Georgia's Location



MAP 1.1 HEMISPHERES

Map Skill: In which two hemispheres is the United States located?

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AS YOU READ, LOOK FOR...

- » the hemispheres in which Georgia is located;
- » Georgia's location in the world;
- » Georgia's location in the United States;
- » terms: **hemisphere**, **Equator**, **Prime Meridian**, **continent**, **nation**, **relative location**.

The state of Georgia covers nearly 60,000 square miles. Though Georgia may seem large, it is only a tiny part of our world. It is located in the Northern and Western Hemispheres, on the continent of North America, and it is one of the fifty states that make up the United States of America. Georgia is in the southeastern part of the United States. Each of these statements helps to describe the *location* of a place.

Locating Georgia in the World

A globe is a model, or representation, of Earth—a sphere-shaped map. Globes are divided into two halves called hemispheres. A **hemisphere** is half of a sphere. A globe, like Earth, turns on an axis, an imaginary line through the center of Earth with one end at the North Pole and the other at the South Pole. An imaginary line of latitude called the **Equator** divides the Northern Hemisphere from the Southern Hemisphere. The Western Hemisphere is separated from the Eastern Hemisphere by an imaginary line of longitude called the **Prime Meridian**. The Prime Meridian runs across Earth's surface from the North Pole through England and Africa to the South Pole. It has the designation of 0° (zero degrees) longitude. The Antimeridian forms a line of longitude on the opposite side of the globe from the Prime Meridian. It is the +180°/-180° line of longitude.

The location of **continents**, large continuous masses of land located on Earth, can be described by the hemispheres in which they are found. There are seven continents on the globe: Africa, Antarctica, Asia, Australia, Europe, North America, and South America. The **nation** (a country with a common government and territory) of the United States of America is located on the North American Continent, which is in the Northern and Western Hemispheres.

FEATURED STRATEGY

Compare and Contrast

Have students compare and contrast the Prime Meridian and the Equator. Remind students to look at the two maps as they compare and contrast. Provide students with sentence starters. Possible sentence starters include:

- » The Prime Meridian and the Equator are similar because...
- » The Prime Meridian and the Equator are different because...
- » One difference between the Prime Meridian and the Equator is...

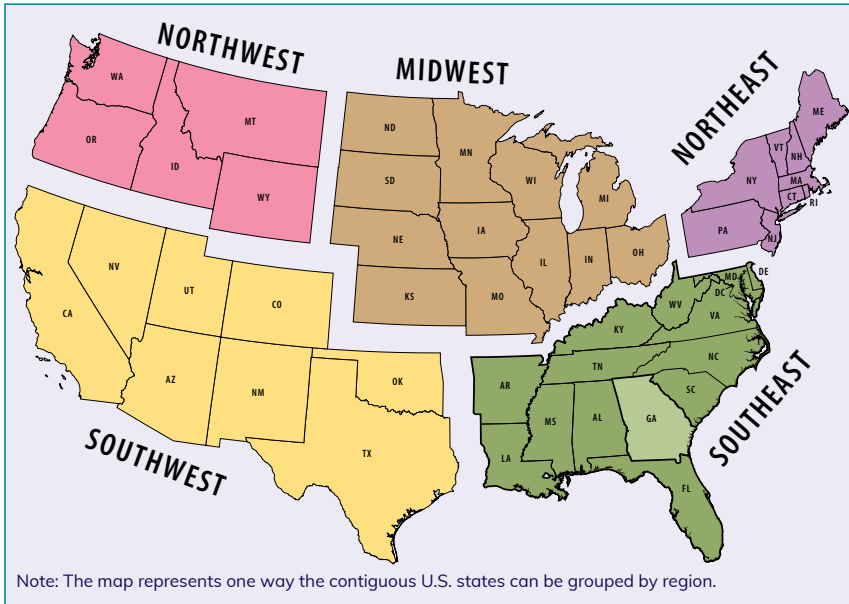
(Note: For graphic organizers to compare and contrast, see *Smart Reading* on the Teacher Tech website.)

Locating Georgia in the United States

When describing Georgia's location, it is important to consider where the state lies in relation to another location. This is called **relative location**. Georgia is in the United States, which is divided into regions. The contiguous states can be grouped into regions as shown: Northwest, Southwest, Midwest, Northeast, and Southeast. Georgia is in the Southeast region, which includes states in the southern and eastern parts of the United States. This region has borders on the Atlantic Ocean and the Gulf of Mexico.

Did You Know?

Georgia is the largest state east of the Mississippi River.



REVIEW AND SUMMARIZE

1. In which two hemispheres is Georgia located?
2. What is Georgia's location relative to the Equator?
3. What is Georgia's location relative to the Prime Meridian?
4. Describe Georgia's location relative to other states.

MAP 1.2 REGIONS OF THE UNITED STATES

Map Skill: Which southeastern states border Georgia?

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Critical Thinking

Tell students that Map 1.2 is one way to think about regions of the United States. Share some maps of the United States that organize the regions in different ways. Ask students why all maps are not exactly the same. Have students write down their thoughts and then share them with a partner. Consider allowing some students to share with the class. (See Think-Pair-Share in Smart Reading on the Teacher Tech website.)

Extension

Have students describe the location of Georgia by zooming out and zooming in. Tell students to describe Georgia's location to a partner, starting by zooming out. It should sound like, "Georgia is in the southeastern United States. The United States is on the North American continent. The North American continent is in the Northern and Western Hemispheres." Then, have the partner describe Georgia's location by zooming in. It should sound like, "The continent of North America is in the Northern and Western Hemispheres. Within the United States, Georgia is located in the Southeast."

Map Skill Answer

Alabama, Florida, North Carolina, South Carolina, and Tennessee

Answers to "Review and Summarize"

1. Northern and Western Hemispheres
2. It is north of the Equator.
3. It is west of the Prime Meridian.
4. Student answers may vary. Some possible answers include:
Georgia is located north of Florida, east of Alabama, west of South Carolina, southeast of Tennessee, and southwest of North Carolina.

Notes

Section 2

Georgia's Geographic Regions

Outline

- A. Appalachian Plateau Region
- B. Valley and Ridge Region
- C. Blue Ridge Region
- D. Piedmont Region
- E. Coastal Plain Region

Materials

- Student Textbook, pages 6-11
- Student Audiobook
- Student Activity Sheets
- Teacher Tech Website
- » Guided Reading
- » Internet Activity
- » Lesson Planner
- » PowerPoint
- » Quick Notes
- » Smart Reading Handbook
- » State Standards and Correlation
- » Visual Aids
- » Wrap-Up Game

Introduction

Have students look at the pictures in the section. Tell students to write what differences they notice in the images. Have students share what they wrote with a partner. Allow some students to share their responses with the class.

Map Skill Answer

Appalachian Plateau

Map Skill

Provide students with colored pencils and blank outline maps of Georgia. Then, have students recreate the map found on page 6 to reference as they read the chapter.

SECTION 2

Georgia's Geographic Regions

AS YOU READ, LOOK FOR...

- » the five geographic regions of Georgia;
- » the climate, agriculture, and economic contributions of each region;
- » terms: **landforms**, **fault**, **elevation**, **Fall Line**.

Based on its **landforms** (the natural features of a land surface), Georgia is divided into five distinct regions: the Appalachian Plateau, the Valley and Ridge, the Blue Ridge, the Piedmont, and the Coastal Plain. Each region has soil, physical features, and climate that influence its history and impact where and how people live and earn their living.

Opposite Page, Top: Lover's Leap on Lookout Mountain offers spectacular views of the Appalachian Plateau region. Opposite Page, Middle: Ellison's Cave, located in Walker County in the Appalachian Plateau region, is the twelfth-deepest cave in the United States. Opposite Page, Bottom: The fertile valleys between the ridges are good for farming.

MAP 1.3

GEORGIA'S GEOGRAPHIC REGIONS

Map Skill: What is the smallest geographic region?



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FEATURED STRATEGY

Acrostic Poem

Have students read this section and create an acrostic for the word region using information from this section and/or prior knowledge. Possible sample:

Resources
Economy
Geography
Industries
Oppportunity
Nature



Appalachian Plateau Region

The Appalachian Plateau is in the northwest corner of the state and is the smallest of Georgia's five geographic regions. It is on the western edge of the Appalachian Mountains (an eastern mountain chain that extends from Georgia to Maine). The Appalachian Plateau region is where the borders of Tennessee, Alabama, and Georgia come together, sometimes called the "TAG" corner. The land of the Appalachian Plateau consists mainly of limestone, a rock of calcium in various forms. Erosion, or wearing away, of the limestone has resulted in the formation of many caves in this region. Underneath the Appalachian Plateau is a large coalfield and a thinner layer of iron ore. As a result, mining was a major occupation for the people living in this region for almost 150 years.

The climate of the Appalachian Plateau region consists of hot, humid summers and mild winters. Due to poor soil, few crops grow in the region. Some crops that can be found are wheat, corn, soybeans, and apples. The Appalachian Plateau contributes to Georgia's economy through tourism and forestry.



Valley and Ridge Region

The area just east of the Appalachian Plateau is the Valley and Ridge region (also called the Ridge and Valley region), named for its landforms. The long ridges of mountains have equally long valleys in between. These valleys and ridges parallel each other: They look like a series of parallel straight lines running on a slant. The whole formation runs diagonally across the northwest part of the state, from the southwest toward the northeast. A portion of the Appalachian Mountains is located in this region.

Harder rocks formed the ridges, while softer rocks in between eroded due to rain and wind to create the valleys. These valleys, which are 700 to 800 feet above sea level, contain fertile land for farming. The streams and roads in this region run along the valleys. In some places, roads cut across the ridges to link the valley roads. A fault system divides this region from the mountains in the state's northeast portion. A **fault** is a break in Earth's crust that occurs when one part of Earth's surface folds or is thrust up over the surface next to it.

The climate of the Valley and Ridge region is similar to the Appalachian Plateau region, with hot, humid summers and not-too-cold winters. Fertile valleys support the growing of corn, soybeans, wheat, cotton, and apples. The main industries in the region include farming, timber, and the production of textiles and carpets.



Cause and Effect

Provide a diagram that will help students explain the cause-and-effect relationship between geography and economic contributions. Have students add information about the relationship between geography and economics as they read each section. (For graphic organizers that show cause and effect, see *Smart Reading* on the Teacher Tech website.)

Compare and Contrast

Have students reread the last paragraph in the sections for the Appalachian Plateau region and the Valley and Ridge region. Point out to students that the climate in both regions is similar. Ask students why these regions might have similar climates. Allow students some time to think and then turn to a partner to share their reasoning. (For graphic organizers to compare and contrast, see *Smart Reading* on the Teacher Tech website.)

Notes

Critical Thinking

After reading the section, have your students write a response to the following question: How does elevation affect climate? Consider supporting student writing by providing the following guide:

Sentence 1: Define elevation.

Sentence 2: Define climate.

Sentence 3: Elevation affects climate because...

Map Skills

Display a color-coded elevation map of Georgia. Ask students to complete the following statements based on the map:

» I see...

» I think...

» I wonder...

Have students circulate the room and share their statements with two other students. Then, allow a few students to share what they saw, thought, and wondered.



Blue Ridge Region

The Blue Ridge region is in the northeast corner of Georgia and has the highest **elevation** (height above sea level) in the state. This region looks different from the Valley and Ridge region. The Blue Ridge region does not have the Valley and Ridge's straight lines. The valleys in this region have a pattern that is more like the branches of a tree. In this region is Georgia's highest mountain, the 4,784-foot-high Brasstown Bald. The part of the Appalachian Mountain chain that runs through the region is called the Blue Ridge Mountains because of the bluish haze around the mountain peaks. The popular hiking path known as the Appalachian Trail begins in this region. Many of the roads of the region wind around valleys and streams, where road building is easier than it is higher on the mountains.

Rapid streams and beautiful waterfalls flow throughout the mountains as water travels down the mountains and over rocks. The mountains' elevation ranges from about 1,600 feet to over 4,700 feet. This means the weather is usually cooler here, making Georgia's mountains an attractive summer retreat.

The climate in the Blue Ridge Mountains has warm summers, mild winters, and consistent rainfall. The steep slopes, climate, and soil conditions limit agriculture; however, some crops can grow here including apples, peaches, grapes, corn, and vegetables.

This region receives the highest precipitation in Georgia, with over 80 inches of rain per year. Rainfall increases with elevation because mountains force air to rise faster and higher than it would over flat land. This cools the air and causes moisture to condense into rain. Due to the rainfall, major rivers, including the Chattahoochee and Savannah Rivers, begin here.

In the 1800s, Georgians found gold that could be mined in these mountains, leading to the country's first gold rush near Dahlonega. As settlers streamed into the mountains, the Cherokee people, who had been there for generations, were forced out. Marble is also found in the mountains and eventually became an important part of the region's economy.

In the 20th and 21st centuries, tourism has become an important source of income. Today, tourists come to the mountains to hike the trails; raft and canoe in the lakes, rivers, and streams; observe the wildlife; and enjoy the beautiful changing colors of the hardwood trees in autumn.

Bottom: Lakes of the Blue Ridge region, such as Lake Burton, are popular sites for vacation homes.

Opposite Page, Top: Stone Mountain, near Atlanta, rises 825 feet above the surrounding countryside, and 1,686 feet above sea level. **Opposite Page, Bottom:** The Fall Line defines the southern edge of the Piedmont region. The city of Columbus is located on the Chattahoochee River at the Fall Line.



Notes



Piedmont Region

Many of Georgia's people live in the Piedmont region of the state, which lies between Georgia's mountains and its Coastal Plain. *Piedmont* means "foot of hills," and rolling hills characterize this region. Underlying some areas of the Piedmont is granite, which can be mined for tombstones, buildings, statues, countertops, and more. Occasionally, the granite extends above the ground, as it does at Stone Mountain, located east of Atlanta.

The soil in some parts of the Piedmont is clay. Iron oxide gives some of that clay a red color, for which the area is well known.

Rivers flow through all areas of the Piedmont. Most begin in the north and flow southeasterly toward the Atlantic Ocean. However, the Chattahoochee flows southwesterly and then south to the Gulf of Mexico.

The Piedmont region has hot, humid summers and mild to cool winters. This makes the region suitable for growing corn, soybeans, wheat, and cotton. Fertile topsoil in many areas made farming important in the region for over three hundred years. The many poultry industries based in this region serve as a large revenue source for the state.

At the southern edge of the Piedmont is the **Fall Line**, a natural boundary that separates the Piedmont and Coastal Plain regions. Here, the narrower rivers that have headwaters in the north flow over the last hard rock of the Piedmont, creating waterfalls and rapids. As they pour onto the softer and sandier soils of the Coastal Plain, the rivers spread out and become wider and slower. They sometimes have large curves or may flow east-west for a distance as they cut through the land. Long ago, the Fall Line marked the shore of the Atlantic Ocean. The ground north of the Fall Line has clays and sometimes granite. South of the Fall Line, the ground is more porous, often sandy.

Rivers flow to the Atlantic Ocean from the Fall Line without further obstacles. That meant goods could be easily shipped downriver. Many of Georgia's important cities are located along the Fall Line: Augusta on the Savannah River, Milledgeville on the Oconee River, Macon on the Ocmulgee River, and Columbus on the Chattahoochee River. Fur traders, farmers, craftsmen, and factory owners carried their products to the docks of these cities for shipment down the rivers to port cities. From there, the products made their way to markets far away.



Making Connections

Before reading the section, tell students that "Piedmont" means "foot of the hills." Ask students what the meaning of Piedmont might tell us about the region. (Note: You may need to clarify that "foot" in this instance means "at the lowest point.")

Critical Thinking

The section states that some of Georgia's first cities developed along the Fall Line because of the ease of shipping. Ask students the following question: What other role might rapids and waterfalls have contributed to the development of cities along the Fall Line? (Possible answer: hydroelectric power)

Notes

Research

The Coastal Plain region was once covered by a vast ocean. Have students research to answer the following questions: How do we know the Coastal Plain was once underwater? What evidence is there to prove this?

Compare and Contrast

Have students create a Venn diagram to compare and contrast the Upper and Lower Coastal Plains. Ask students why they think the Coastal Plain is divided into an Upper and Lower Plain. Create a class Venn diagram by recording student responses in a Venn diagram drawn on the board or on chart paper. Encourage students to add to their own Venn diagram. (For graphic organizers to compare and contrast, see *Smart Reading* on the Teacher Tech website.)

Answers to “Review and Summarize”

1. Student answers will vary. Sample student answers should compare and contrast the geography, climate, agriculture, and/or economic contributions of the two regions they chose.
2. Student answers will vary. Sample student answers may include: The geography of Georgia's regions affects the state's economy by influencing what kinds of jobs, businesses, and resources are found in each region. Students may also cite specific economic contributions for the regions.
3. It is the point at which the hills of the Piedmont meet the Coastal Plain, where the narrower rivers create waterfalls and rapids.



Coastal Plain Region

Georgia's largest and southernmost geographic region is the Coastal Plain, which is further divided into the Inner Coastal Plain and Outer Coastal Plain. Once under water until the Atlantic Ocean receded, the Coastal Plain region now covers the state's southern half. The Upper Coastal Plain has the Fall Line's sand hills as its northern border. The soil underneath the region is porous limestone, which holds rainwater for drinking, agriculture, and industry. This formation is one of the largest sources of fresh water east of the Mississippi River.

The Coastal Plain's climate consists of hot, humid summers and cool winters. The fertile soil in the Upper Coastal Plain produces peanuts, peaches, Vidalia onions, corn, and cotton.

The Lower Coastal Plain is flat and low, with marshy areas near the coast. These marshes are low-lying wet areas that often have grasses growing in them. The Lower Coastal Plain includes Georgia's coast, the islands between the coast and the open Atlantic Ocean, and the Okefenokee Swamp. The deepwater ports of Savannah and Brunswick lie in this geographic region.

The state's pulp and paper industry is located in the Coastal Plain. Pulp, made from breaking down the fibrous parts of plants, is the main ingredient in papermaking. Areas around the coast have commercial fishing and seafood processing. Tourism and recreation also contribute to the state's economy.

These five geographic regions make Georgia an interesting state. There are many different kinds of plants, animals, and landscapes to view and study. With such varied geographic regions, Georgians have had many ways of earning a living, depending on which region of the state they call home. Nature has also provided great beauty in the land, from the mountains to the ocean. Georgians have many opportunities for learning, recreation, and retreating to the natural world.

Top: “The Marshes of Glynn” were immortalized by Georgia's most famous poet, Sidney Lanier. **Opposite Page, from Top to Bottom:** Warm Springs, Okefenokee Swamp, Radium Springs, Amicalola Falls, Providence Canyon, Tallulah Gorge, and Stone Mountain.

REVIEW AND SUMMARIZE

1. Choose two regions of Georgia. Write a short paragraph to contrast the two regions.
2. How does the geography of a region affect its economic contribution to the state?
3. What is special about the Fall Line in Georgia?

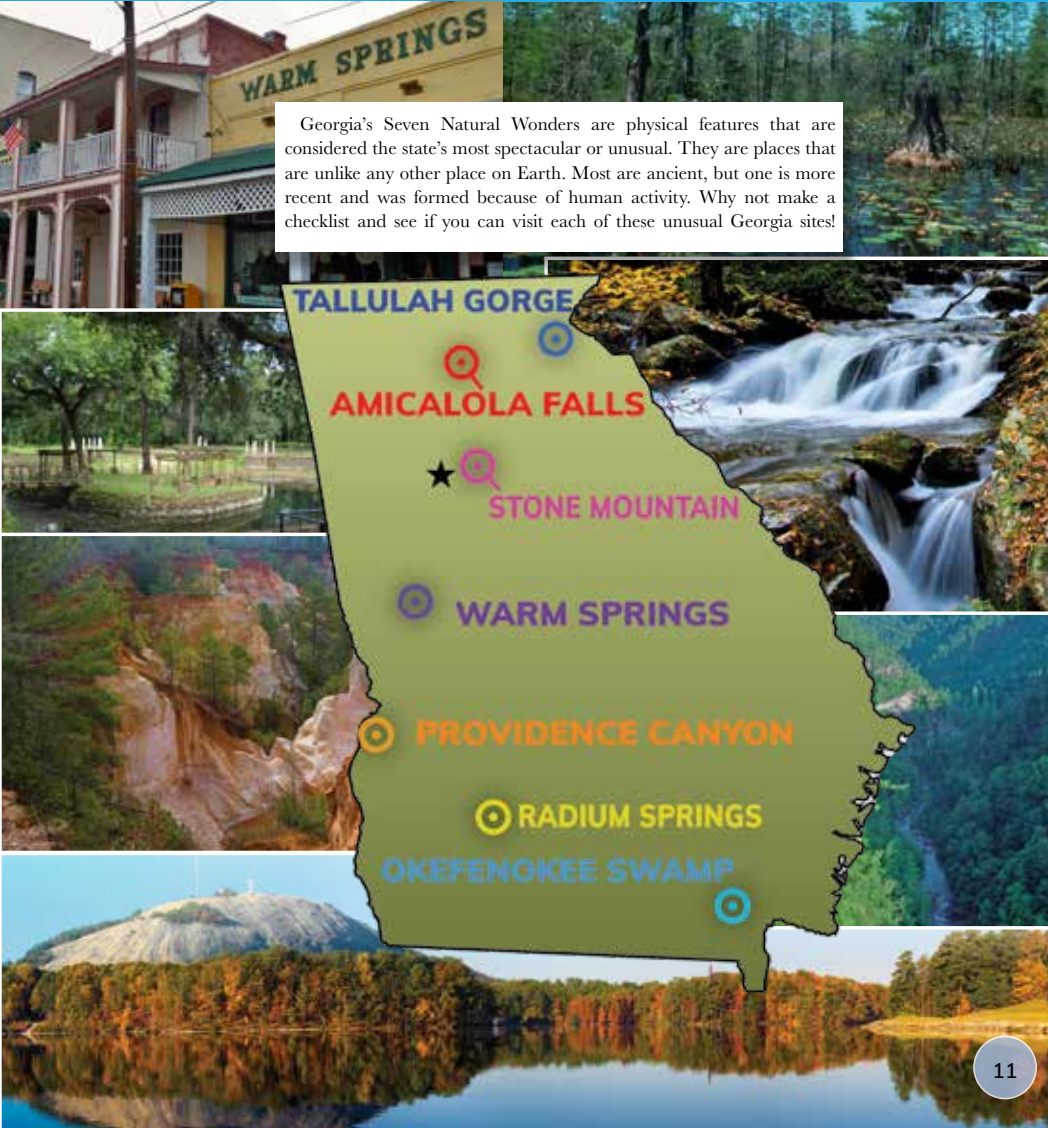
Notes

Special Feature The Seven Natural Wonders of Georgia

Writing across the Curriculum

Have students research one of the Seven Natural Wonders of Georgia and write a short description of its features.

Georgia's Seven Natural Wonders are physical features that are considered the state's most spectacular or unusual. They are places that are unlike any other place on Earth. Most are ancient, but one is more recent and was formed because of human activity. Why not make a checklist and see if you can visit each of these unusual Georgia sites!



Notes

Section 3

Georgia's Physical Features

Outline

- A. Chattahoochee River
- B. Savannah River
- C. Barrier Islands
- D. Okefenokee Swamp

Materials

Student Textbook, pages 12-17

Student Audiobook

Student Activity Sheets

Teacher Tech Website

- » Guided Reading
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- » Quick Notes
- » Smart Reading Handbook
- » State Standards and Correlation
- » Visual Aids
- » Wrap-Up Game

Introduction

Tell students that Georgia's unique features contribute to the unique physical characteristics of the state. Tell students that this section focuses on four of those features. They are the Chattahoochee River, the Savannah River, the barrier islands, and the Okefenokee Swamp.

Map Skill Answer

Student answers will vary.

Map Skills

How many of Georgia's rivers appear to cross the Fall Line? What do you think you would find at such locations?

SECTION 3

Georgia's Physical Features

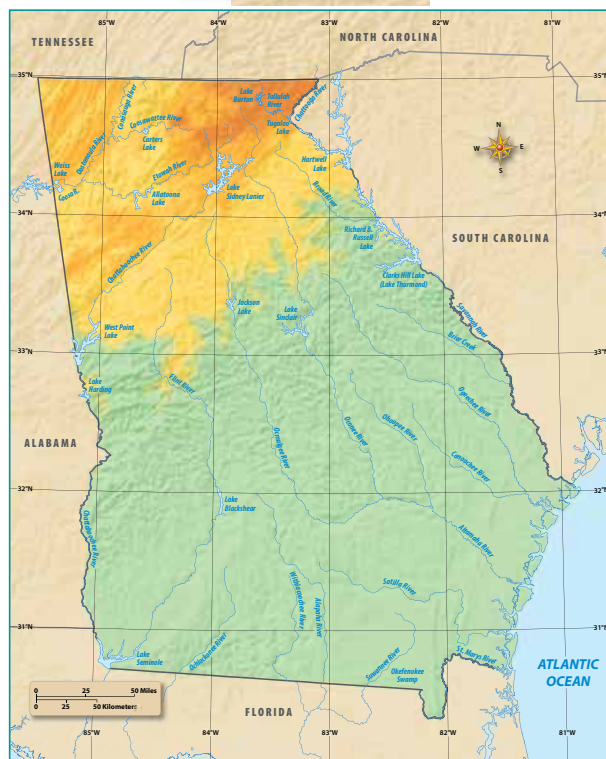
MAP 1.4

GEORGIA'S RIVERS

Map Skill: Which Georgia river is closest to your home?

AS YOU READ, LOOK FOR...

- » the importance of the Chattahoochee River and Savannah River;
- » the barrier islands and their uses;
- » the importance of the Okefenokee Swamp;
- » terms: **barrier island**, **peat**.



Georgia's diverse environment has many physical features. In most years, Georgia receives a lot of rainfall, and all that water runs into the state's waterways. Georgia's rivers and streams provide water for drinking, recreation, irrigation, and industry. Some of those waterways flow southwest across Georgia and empty into the Gulf of Mexico, but most flow southeast to empty into the Atlantic Ocean.

The state's 14 major barrier islands protect the roughly 110-mile-long coast of the mainland from wind and waves from the Atlantic Ocean. **Barrier islands** are sandy islands that run parallel to the coast and are separated from the mainland by a lagoon or salt marsh. Four islands (Jekyll, St. Simons, Sea, and Tybee) are accessible by car and have become popular tourist destinations. The rest of Georgia's barrier islands require transportation by boat and are virtually unspoiled by humans.

Georgia also has many swamps. One of the most interesting areas in the state is the large Okefenokee Swamp in southeast Georgia. In this section, we will learn about the important features of Georgia's land.

12

FEATURED STRATEGY

Quick Write

Tell students that a famous poet named Sydney Lanier wrote a poem about the beauty of the Chattahoochee River in the northeast and its uses in the southern plain. Tell students that his 1877 poem was written as though the river itself were speaking. Display and read this excerpt from the poem: "Out of the hills of Habersham, Down the valleys of Hall, I hurry amain to reach the plain, Run the rapid, and leap the fall... I am fain for to water the plain... The dry fields burn, and the mills are to turn..." Have students rewrite the excerpt in their own words. Allow some students to share their writing. (Note: You may need to explain that Habersham and Hall are counties located along the Chattahoochee River. You may need to define *amain* as "fast" or "with great speed" and *fain* as "I really wish" or "I want to go.")



Chattahoochee River

The Chattahoochee, Georgia's longest river, begins in the Blue Ridge Mountains, runs southwest through Atlanta, and then flows over the Fall Line at Columbus. From there, it crosses into Florida and down to the Gulf of Mexico. It forms part of Georgia's western boundary with Alabama. The word "Chattahoochee" is from the Muskogee (Creek) word meaning "painted rock."

The river is a major source of drinking water, agricultural irrigation, and industrial use in Georgia, Florida, and Alabama. Having enough clean water from the Chattahoochee is crucial for these states' economies and populations. This has led to a long-lasting disagreement over how much water each state should get.

The Chattahoochee River offers many activities such as boating, rafting, kayaking, and fishing. Chattahoochee Bend, one of Georgia's largest state parks, has many hiking and biking trails alongside the river.

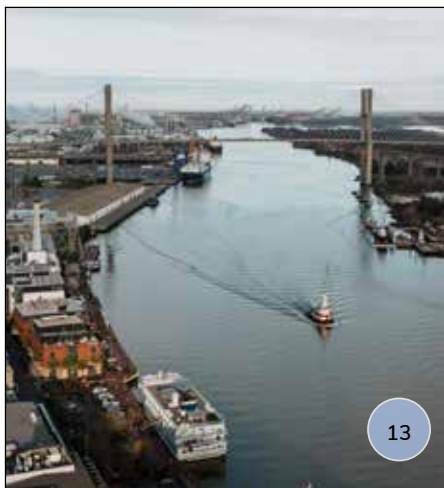
Above, from Left to Right: The Chattahoochee River in the Blue Ridge region. Canoeing near Lake Lanier, which is north of the Atlanta Metro area. Egrets near West Point Lake. **Below:** The Savannah River in Savannah.

Savannah River

The Savannah River crosses the Fall Line at Augusta. Along its path to the ocean, it is joined by several other important waterways. The river is a major source of drinking water for the large cities of Augusta and Savannah. It is also beneficial to Georgia and South Carolina as it is used to generate hydroelectric power and cool nuclear power plants.

The Savannah River forms Georgia's eastern boundary with South Carolina. Unlike the Chattahoochee, the Savannah River flows to the southeast and empties into the Atlantic Ocean about thirteen miles after it passes the city of Savannah. Due to its position near the mouth of the river, Savannah is one of the busiest ports in the United States. Huge ships enter the port from all over the world.

The Savannah River is important to our state. It has significantly influenced Georgia's history and progress including settlement patterns and the development of industries and transportation routes.



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Critical Thinking

Ask students to explain how rivers that begin from groundwater are different from rivers that form from mountain streams.

Research

Have students look up the meaning of Chattahoochee. Ask students what they think the meaning tells about the Chattahoochee River. (Answer: The name comes from the Muskogee (Creek) language and is believed to mean "painted rock" or "marked rock." Most likely, this refers to the colorful, layered rock formations found along the riverbanks.)

Cause and Effect

Provide a diagram that will allow students to explain the cause-and-effect relationship between having a coast and a deepwater port like Savannah to help Georgia's economy. Allow students to share their thinking with a partner. Invite some students to share their thoughts with the class. (For graphic organizers that show cause and effect, see Smart Reading on the Teacher Tech website.)

Notes

Making Connections

James Oglethorpe, the founder of Georgia, built Fort Frederica on one of its barrier islands. Have students research where this fort was built and why.

Map Skills

Provide students with a blank map of Georgia's coast and have students label Georgia's barrier islands.

Research

Have students research the natural features and historical significance of Cumberland Island.



Barrier Islands

Georgia's barrier islands are located along its eastern coast, bordering the Atlantic Ocean. These islands are sometimes referred to as the Golden Isles or Sea Islands. This chain of fourteen islands forms a natural barrier that shelters the mainland from the Atlantic. The beaches on these islands constantly erode as waves and sometimes storms move the sand. In some places, stone seawalls have been constructed to slow erosion.

Over time, these islands have been home to Native Americans and Spanish missionaries, winter retreats for wealthy northerners, and modern tourist destinations. While four of the islands are directly connected to the mainland by bridges, the others must be reached by boat.

In Georgia's early history, small boats could use these waters to go up and down the coast without sailing into the open Atlantic Ocean. In the late 1930s, the federal government created the Intracoastal Waterway by deepening the channel and keeping it cleaned out so larger boats could use the waterways.



Notes

The unique ecosystem of the Okefenokee supports a wide variety of plant and animal species, including rare and endangered ones. The swamp provides a home for numerous birds, mammals, reptiles, amphibians, and many different kinds of plants. Pine and cypress trees fill its forests. In the early 20th century, however, logging carried off many trees.

Above: Canoeing in the Okefenokee Swamp. **Below:** Sunbathing alligators are a common sight in the Okefenokee Swamp. The name "alligator" is derived from *el largato*, which means "the lizard" in Spanish.



There once was a swamp, deep and wide,
Where gators and turtles liked to hide.
With moss hanging low,
And waters that flow,
It's nature's wild, watery pride.

Tell students to look at images of the Okefenokee Swamp found on pages 15 and 16. Have students examine each closely and then compare and contrast the images. Then, ask students to determine what the images show them about the Okefenokee Swamp.

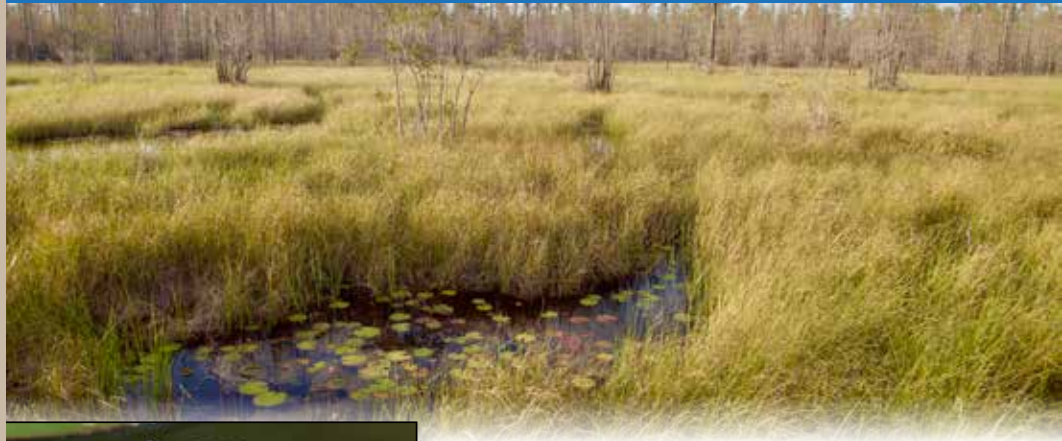
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Critical Thinking

Tell students that, in the 1970s, 350,000 acres of the Okefenokee Swamp were designated a National Wilderness Area. This means that the natural conditions remain preserved, there is limited human impact, and wildlife is protected. It is also a valuable place for recreation and education. Ask students how this designation impacts Georgia.

Answers to “Review and Summarize”

1. The Chattahoochee and Savannah Rivers are both major sources of drinking water. The Chattahoochee also provides agricultural irrigation and industrial use in Georgia. The Savannah River is used to generate hydroelectric power and cool nuclear power plants. It is also one of the busiest ports in the United States.
2. The barrier islands block the mainland from the wind and waves of the Atlantic Ocean.
3. The Okefenokee Swamp supports a wide variety of plant and animal species. It is home to 65 threatened and endangered plants and animal species.



Top: The Okefenokee Swamp. **Above:** Water lilies are a common sight in the Okefenokee Swamp. **Opposite Page, Background:** Amicalola Falls. **Opposite Page, Inset:** Mills like Freeman's Mill in Gwinnett County were once common in Georgia. They were powered by the current of a swift river, which turned the waterwheel, which turned heavy stones that ground corn into cornmeal or wheat into flour.

The national government has recognized the importance of the Okefenokee Swamp. In the 1920s and 1930s, Franklin Delano Roosevelt visited Georgia for health treatments. At Warm Springs in western Georgia, Roosevelt built a home where he could come to soak in the healing waters bubbling up from underground. Shortly after building his home, Roosevelt became president of the United States. His connection to Georgia and its people led him to designate 80 percent of the swamp as a national wildlife refuge. In the mid-1970s, over 350,000 acres of the swamp received the additional protection of becoming a national wilderness area.

Few states can match the geographic diversity of Georgia. Rich in water, minerals, soil, plants, and animals, Georgia has provided its human inhabitants with life and livelihood for thousands of years. Its moderate climate and natural beauty have made it an appealing place to live and visit for generations of humans, from the early American Indians to modern Georgians. Each generation must care for the land and use its resources wisely so the state will remain a geographic treasure for future generations.

Did You Know?

Georgia is home to 65 threatened and endangered plant and animal species.

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REVIEW AND SUMMARIZE

1. How are the Chattahoochee and Savannah Rivers important to Georgia?
2. How do the barrier islands offer protection from wind and water?
3. Why is the Okefenokee Swamp considered an important natural wilderness area?

Notes

Special Feature The Importance of Rivers



Georgia's wide system of rivers is crucial to the state. A lack of rainfall, which can lead to drought, can lower the water levels of rivers and lakes and create many problems for Georgia's people and businesses. The rivers provide habitat for thousands of species of plants and animals. Before the invention of railroads, they were water highways for humans and the goods they traded. Throughout Georgia's history, rivers have provided the water used for drinking, cooking, bathing, washing, and other household functions for many areas of the state. They have also provided power. At first, it was hydromechanical power in which water rushed over a waterwheel hooked up to shafts and gears that could make tools function. For example, early waterwheels powered stones that turned to grind corn and wheat into flour or blades that sawed wood into boards. This type of power drove the first cloth mills in Georgia. In the 20th and 21st centuries, they have also generated hydroelectric power as the falling waters at Georgia's many dams power turbines that generate electricity. Water also cools the reactors at facilities that provide nuclear power. Electricity is crucial not only for our modern homes but also for business and industry. Our modern economy requires it.

Rivers are also a source of much pleasure for Georgians, who love to hike along their banks, canoe, kayak, swim, water ski, and participate in other water sports. Georgians also enjoy the beauty of their rivers, from the waterfalls of the northern regions to the marshes of the southern coast. However, overuse and pollution threaten both the state's rivers and the wildlife they support.

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Graphic Organizer

Have students make a T-chart and label one side "Then" and the other "Now." Tell students to record the uses of rivers then and now as they read about their importance.

Then	Now

Notes

Chapter Review

Summarizing

Before having students look at the Chapter Summary, ask them to write down the heading for each section in the chapter. Then, have them write several statements to summarize the main points under each heading. Ask them to compare their lists with the summary in the textbook.

Chapter Review

CHAPTER SUMMARY

Section 1: Georgia's Location

- Earth can be divided into two hemispheres using imaginary lines. The Equator is the line of latitude that divides the Northern from the Southern Hemisphere. The Prime Meridian is the line of longitude that divides the Western from the Eastern Hemisphere.
- Seven continents make up Earth's major land masses. The United States is located on the continent of North America in the Southeast region.

Section 2: Georgia's Geographic Regions

- Georgia is made up of five geographic regions based on landforms. The soil, physical features, and climate have influenced the state's history, settlement, employment, and economy.
- The Appalachian Plateau region, located in the northwestern corner of the state, was a large center for mining due to coal and iron deposits and poor soil.
- The Valley and Ridge region, located east of the Appalachian Plateau, is named for its nearly parallel ridges and valleys. The fertile valleys are important to the area's farming industry. Other industries include textile and carpet manufacturing and timber.
- The Blue Ridge is the name given to the portion of the Appalachian Mountains located within the state. This region contains the state's highest point, Brasstown Bald, as well as the starting points for the Chattahoochee and Savannah Rivers. In the 1800s, the country's first gold rush took place in this area. Today, it is largely supported by tourism.

- The Piedmont region is home to most of the state's population. Though granite can be found here, clay also marks the region. Farming was important in the Piedmont for over 300 years, but today poultry processing is an important industry.
- The Fall Line marks the beginning of the Coastal Plain region, which can be further divided into Upper and Lower sections. The Upper Coastal Plain region contains fertile soil while the Lower region has rich marshes and the Okefenokee Swamp. The production of paper and pulp as well as commercial fishing and tourism are important contributors to the region's economy.

Section 3: Georgia's Physical Features

- Georgia's two most important rivers are the Chattahoochee, which flows into the Gulf of Mexico, and the Savannah, which flows into the Atlantic Ocean.
- The state's rivers are important for drinking water, recreation, irrigation, and industry. The rivers' importance can lead to disagreements over their use between Georgia and neighboring states.
- Georgia's Golden Isles are fourteen barrier islands that protect the mainland from the intense winds and waves of the Atlantic Ocean. Erosion can be a problem in these islands.
- The Okefenokee Swamp, located in the southeastern corner of the state, is among the largest swamps in the country. It is home to a wide variety of flora and fauna. In the 1930s, President Franklin D. Roosevelt issued federal protections for the swamp, which were extended in the 1970s.

Notes

ACTIVITIES FOR LEARNING

Vocabulary

Match each of the following with the correct definition below:

continents
elevation
fault
hemisphere
landforms
nation
region
Southeast

1. half a sphere
2. height above sea level
3. break in Earth's crust
4. region where Georgia is located
5. natural features of a land surface
6. an area with common characteristics
7. large continuous masses of land located on Earth
8. a country with a common government and territory

Understanding the Facts

1. Explain Georgia's location in relation to the world.
2. List Georgia's five geographic regions and identify agricultural contributions for each.
3. Describe the barrier islands and the purpose they serve.
4. Use a map to identify the rivers that form portions of Georgia's borders.

Developing Critical Thinking

1. Using information from Section 1, write five sentences describing Georgia's location. Use this example as your first sentence. "Georgia is located in the Northern Hemisphere." Now, write four additional sentences, making each sentence more geographically precise than the previous one.
2. In which Georgia region (as described in Section 2) do you live? Which region do you find most interesting? Why?

Writing across the Curriculum

Pretend you are traveling from your school to a large city in Georgia. Write an itinerary (a planned route of your journey) of the route from your school to reach your desired city. (Possible cities include Atlanta, Columbus, Macon, Savannah, and Valdosta.)

Extending Reading Skills

Look at Map 1.4 on page 12. What is the title of the map? Which of the rivers do not flow into the Atlantic Ocean? Which river forms part of the border of southeastern Georgia between Georgia and Florida?

Applying Your Skills

Create a five-page booklet, with each page focused on one of the five regions of Georgia. At the top of the page, identify the region. Next, add to the top half of your paper a photograph or image that illustrates the geography of the region. Finally, write one sentence that describes the geography of the region. Place this sentence under the image.

Exploring with Technology

1. Use a search engine to find as many specialized maps of Georgia as you can (for example, a mineral map that shows where various deposits are located).
2. Use a search engine to compare how the Okefenokee Swamp compares to other famous swamps in terms of the ecosystem and wildlife. Possible swamps include the Great Dismal Swamp, Everglades, Atchafalaya Basin, and Honey Island Swamp.

Answers to "Activities for Learning"

Vocabulary

1. hemisphere
2. elevation
3. fault
4. Southeast
5. landforms
6. region
7. continents
8. nation

Understanding the Facts

1. Georgia is located in the Northern and Western Hemispheres on the North American continent.
2. The five geographic regions are the Appalachian Plateau, Valley and Ridge, Blue Ridge, Piedmont, and Coastal Plain. Student answers about agricultural contributions will vary.
3. The barrier islands lie off the coast and protect the mainland by blocking the Atlantic Ocean's strong winds and waves.
4. Savannah, Chattahoochee, and St. Marys Rivers

Developing Critical Thinking

1. Student answers will vary.
2. Student answers will vary.

Writing across the Curriculum

Student answers will vary.

Extending Reading Skills

Title: Georgia's Rivers

Do not flow into the Atlantic: Chattahoochee, Flint, Ochlockonee, Withlacoochie, Alapaha, Suwannee

Forms part of border: St. Marys

Applying Your Skills

Student answers will vary.

Exploring with Technology

1. Student answers will vary.
2. Student answers will vary.

Notes
