SOUTH RIVER WATERSHED ALLIANCE + flux projects

South River

Ambassador Project

DEVELOPED BY JILLIAN MINARICH AND CATE HILENSKI FOR THE SOUTH RIVER WATERSHED ALLIANCE AND FLUX PROJECTS, 2024

SOUTH RIVER WATERSHED ALLIANCE + flux projects

WEEK 1
LESSON 1

South River Ambassador Project

INTRODUCTION: HOW RIVERS CONNECT US

Probing Questions/EQs	Learning Objectives – Students will be able to…
What is a watershed?	• **Explain where sources of water are located in Georgia**
Where does the water in Atlanta go?	• **Identify the South River on a map**
How are environments all over the world connected?	• **Engage with peers to connect content**

Introduction:

Teacher explains what a watershed is and presents this video: **Watersheds and Water Pollution (6:54)**.

Students are asked to consider the shape of the land in their communities and the relationship between water and gravity. What pollution have they seen in their communities? Encourage them to think beyond just trash pollution (ex. question: What pollutants might commonly wash into rivers from yards, farms, and streets?). The teacher can draw a brainstorm map on a whiteboard *or* students can work in pairs or small groups to brainstorm different types and sources of pollution. Consider what pollutants might be present that cannot be seen with the naked eye.

Activity:

Students are then presented with the question, "Where does pollution in our community go?" Students consider if an empty bag of chips (teacher prop) were dropped outside of the building and not picked up, where it would go. In pairs or triads, students take several minutes to talk this out. After, students create a diagram with their partner(s) - or for younger students, as a whole group - showing where the bag would go and where it might finally come to rest. This is a brainstorming activity and students are encouraged to think about how things move in the natural world - how does rain, wind, water, etc. make things move or change in the environment.

"Where does it go?" printable worksheet

For 6th grade students and older, consider making watershed models, as outlined in the activity video of the **Watersheds and Water Pollution** curriculum by San Diego Coastkeeper.

Closing:

Student pairs/groups share where they think the bag of chips would end up. If many have the same answer, have the students wonder why they all think the same? What information do they already have that makes them come to a common conclusion? If many have different answers, take time for groups to share their thinking processes.

Collect papers at the close of the lesson to save for the next lesson.

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WEEK 1
LESSON 1

South River Ambassador Project

INTRODUCTION: HOW RIVERS CONNECT US

Standards/Unit (based on GA Standards of Excellence):

SKE2. Obtain, evaluate, and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air). a. Ask questions to identify and describe earth materials—soil, rocks, water, and air.

S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment. a. Ask questions to collect information and create records of sources and effects of pollution on the plants and animals.

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes. a. Ask questions to determine where water is located on Earth's surface (oceans, rivers, lakes, swamps, groundwater, aquifers, and ice) and communicate the relative proportion of water at each location.

S6E5. Obtain, evaluate, and communicate information to show how Earth's surface is formed. d. Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition. (Clarification statement: Environments of deposition include deltas, barrier islands, beaches, marshes, and rivers.)

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South River Ambassador Project

INTRODUCTION CONT'D: HOW RIVERS CONNECT US (VIDEO)

Probing Questions/EQs	Learning Objectives – Students will be able to…
Where does the water near us stay or travel to?	• **Explain where sources of water are located in Georgia**
How do we affect the water near us?	• **Identify the South River on a map**
How do we affect the water around the world?	• **Engage with peers to connect concepts**

Introduction:

What is pollution, how is it caused, and what different kinds of water pollution are there? Students review their diagrams of how pollution, like trash, moves through the environment – particularly through water.

Explain to students that they will now watch a fun, informative video(s) that further illustrates how water connects us.

Activity:

Watch **Nature Cat "Ocean Commotion"** (46 min). This is a short movie accessible through AmazonPrime for purchase (4.99), rent (3.99) or through AmazonPrime's PBS Kids subscription channel.

Additionally or alternatively, students may benefit from these free, informative videos:

Watch **Water Pollution for Kids - Learn How to Keep Our Water Clean (7:22)**.
Watch **What is Water Pollution? - What Causes Water Pollution (5:48)**. Good for younger students.

Closing:

Students revisit the question, "Where does pollution in our community come from and where does it go?" Students are asked to consider how pollution moves from Atlanta to the Atlantic Ocean. Teacher projects **this map** of the South River's path in Georgia. Students take turns coming up to trace on the projected image where the South River begins in Fulton County, where it flows into Jackson Lake to help create the Ocmulgee River, and where the Ocmulgee River begins. The teacher refers to the state of Georgia map to explain how the Ocmulgee River flows to the Altamaha River, Georgia's largest river, which feeds the Atlantic Ocean at the Georgia coast.

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INTRODUCTION CONT'D: HOW RIVERS CONNECT US (VIDEO)

Standards/Unit (based on GA Standards of Excellence):

SKE2. Obtain, evaluate, and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air). a. Ask questions to identify and describe earth materials—soil, rocks, water, and air.

S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment. a. Ask questions to collect information and create records of sources and effects of pollution on the plants and animals.

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes. a. Ask questions to determine where water is located on Earth's surface (oceans, rivers, lakes, swamps, groundwater, aquifers, and ice) and communicate the relative proportion of water at each location.

S6E5. Obtain, evaluate, and communicate information to show how Earth's surface is formed. d. Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition. (Clarification statement: Environments of deposition include deltas, barrier islands, beaches, marshes, and rivers.)

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WEEK 2
LESSON 3

South River Ambassador Project

FINDING THE SOUTH RIVER

Probing Questions/EQs	Learning Objectives – Students will be able to…
Why should we know the path of the South River? **How could pollution in the South River affect people and wildlife outside of the Atlanta area?**	• **Define the path of the South River through Georgia** • **Identify the path of the South River on a map of Georgia** • **Engage with materials using fine motor skills to create a map showing the path of South River through Georgia**

Introduction:

Teacher passes out a copy of a **map of Georgia** showing various rivers in Georgia but highlighting the South River and its path. The students trace the path of the South River all the way from Atlanta to the Atlantic Ocean, saying aloud each change in its form (ie, the South River flows to Jackson Lake, where it becomes part of the Ocmulgee River). The teacher then shows how the Ocmulgee River joins with other rivers to make the Altamaha River. Next, students will trace that path with a marker on their maps.

Activity:

Using pre-made salt dough, students make a ½ to 1in high Georgia by filling in **the outline**. Then, using the **map of Georgia** as a guide, students use their fingers to make an imprint of the South River's path on their Georgia (remind students to make the spot for Jackson Lake a little wider). Students can then use toothpicks to add in the other rivers and tributaries if they choose.

Closing:

Students place their South River maps somewhere safe to dry. Students then recite the path of the South River through Georgia (can sing to a tune, or create a beat, etc.): The South River flows down from Atlanta to Jackson Lake. Then it joins other rivers to make the Ocmulgee, which then flows into the Altamaha River. From the Altamaha, it flows to the Atlantic Ocean.

Students can paint or color dry salt dough during free time or another time during the week.

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South River Ambassador Project

FINDING THE SOUTH RIVER

Standards/Unit (based on GA Standards of Excellence):

SKE2. Obtain, evaluate, and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air). a. Ask questions to identify and describe earth materials—soil, rocks, water, and air.

S2E3. Obtain, evaluate, and communicate information about how weather, plants, animals, and humans cause changes to the environment. a. Ask questions to obtain information about major changes to the environment in your community. b. Construct an explanation of the causes and effects of a change to the environment in your community.

S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes. a. Construct an argument supported by scientific evidence to identify surface features (examples could include deltas, sand dunes, mountains, volcanoes) as being caused by constructive and/or destructive processes (examples could include deposition, weathering, erosion, and impact of organisms).

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes. a. Ask questions to determine where water is located on Earth's surface (oceans, rivers, lakes, swamps, groundwater, aquifers, and ice) and communicate the relative proportion of water at each location.

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WEEK 2
LESSON 4

South River Ambassador Project

CONNECTING WITH THE COMMUNITY: GUEST SPEAKER FROM SOUTH RIVER WATERSHED ALLIANCE / VISIT TO THE SOUTHTOWNE TRAIL

Probing Questions/EQs	Learning Objectives – Students will be able to…
Why is the South River important to us? **How is the South River a part of our community?**	• **Explain the mission of the South River Watershed Alliance** • **Identify at least one place or neighborhood in Atlanta that is a part of the South River watershed** • **Engage with space within the South River watershed**

Introduction:

Review the path of the South River with this **interactive map of the South River watershed**. Zoom in and out to explore tributaries, neighborhoods, and landmarks. Find the nearest waterbody (river, creek, stream) to the school.

Activity:

Option 1: Guest Speaker from **South River Watershed Alliance** (SRWA), a grassroots riverkeeper for the South River. Students will learn what strategies SRWA uses to protect and restore the river, as well as ways everyone can help protect and enjoy the watershed.

Students can create artwork or designs for a t-shirt/sticker/poster for SRWA showcasing something they're excited to explore or learn about the South River watershed.

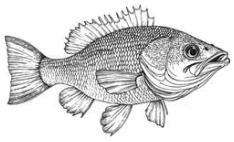
Option 2: Field Trip to a public park with access to the South River or one of its tributaries. Inquire with **SRWA** for ideas and register with **TrailLink** to find more places to explore.

For ex. visit the **PATH's Southtowne Trail** in **Swann Nature Preserve**. Walk the trail and take mindful breaks along the way to observe/listen/smell. What flora and fauna can be seen and heard (sounds of birds, wind in the trees, insects, etc.)? At Swann Nature Preserve, walk the Southtowne Trail to find a footbridge that crosses the South River.

Closing:

Students create art (ex. cyanotype drawings), crafts (ex. pressed flowers), collage, photography, design, ceramics, poetry, music, or other creative expression inspired by the river or nature. Ex. As a group, **create a mandala** with natural elements collected outdoors. Examples:

image above and left credit: **Abbey Hendrickson on Flickr**



The River, a Haiku by Jonathan S. Harris

Life is a river
with some chaotic rapids
and some calming streams.

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FINDING THE SOUTH RIVER

Standards/Unit (based on GA Standards of Excellence):

SKE2. Obtain, evaluate, and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air). a. Ask questions to identify and describe earth materials—soil, rocks, water, and air. b. Construct an argument supported by evidence for how plants can be grouped according to their features.

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals. b. Ask questions to compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter).

S3E1. Obtain, evaluate, and communicate information about the physical attributes of rocks and soils. b. Plan and carry out investigations to describe properties (color, texture, capacity to retain water, and ability to support growth of plants) of soils and soil types (sand, clay, loam). a. Ask questions to differentiate between plants, animals, and habitats found within Georgia's geographic regions.

S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment. a. Construct an argument supported by scientific evidence to identify surface features (examples could include deltas, sand dunes, mountains, volcanoes) as being caused by constructive and/or destructive processes (examples could include deposition, weathering, erosion, and impact of organisms).

S6E5. Obtain, evaluate, and communicate information to show how Earth's surface is formed. d. Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition. (Clarification statement: Environments of deposition include deltas, barrier islands, beaches, marshes, and rivers.)

S6E6. Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth.

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WEEK 3
LESSON 5

South River Ambassador Project

INTRODUCTION TO INTERDEPENDENCE

Probing Questions/EQs	Learning Objectives – Students will be able to…
Why do our actions matter to other humans and environments around the world? **How far do the decisions of one person or community reach?**	• **Define interdependence in their own words (the principle that objects and events arise from a multiplicity of other causes and conditions and therefore things can be interconnected even across long distances or periods of time)** • **Identify their place within different communities (home, school, city, world)** • **Engage in creating a visual representation of a system that demonstrates how the objects and events that we need come from the acts of countless others.**

Introduction:

Help students recall what they learned about the path of trash last week as well as how the path of the South River starts in Atlanta and meanders through much of Georgia to the coast.

Introduce the term "interdependence" and brainstorm what it might mean (break down prefix and root word).

Activity:

On a large sheet of paper (or on a whiteboard) write "My school building" in the center of the paper and circle it. Ask students to consider what was needed for their school building to be built and to be a safe place for children to learn. Take one or two examples (or give one to two examples if students struggle with the concept), such as cement, glass, electrical wires, or wood. Draw a line coming from the center circle, write the material at the end of it, and then circle that word. Ask students to consider how that material is made, or gets used, or becomes ready to use to build. For example, was it processed in a lumber mill, created in a factory, or sold by a company? Draw a line from the material, write the location at the end of the line, and circle it.

Students work in pairs or small groups with large sheets of paper. They are asked to copy what the group thought of together and then continue to brainstorm everything (and everywhere!) needed for their school building to exist. Encourage them to think further and consider the things needed for the locations to work (ex. people, machines, trucks to bring the materials, etc.). Students may add pictures/drawings to clarify or illustrate the connections.

Closing:

Students/groups can share their ideas with the class. Students consider and discuss the following:

What do you notice about the interconnectedness webs you've made? *(many resources, many places, items needing to travel distances or be taken from nature)*

What does it feel like to think of yourself as a part of this web?

What do you think a web like this would look like for the South River?

*Adapted from **The SEE Learning School Curriculum**: Early Elementary by Emory University, which is a freely accessible curriculum. The first two chapters can be **downloaded here**. To access the remaining chapters, individuals are asked to complete a free, asynchronous virtual training called **SEE 101**.

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WEEK 3
LESSON 5

South River Ambassador Project

INTRODUCTION TO INTERDEPENDENCE

Standards/Unit (based on GA Standards of Excellence):

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals. b. Ask questions to compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter).

S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment. a. Ask questions to collect information and create records of sources and effects of pollution on the plants and animals. b. Explore, research, and communicate solutions, such as conservation of resources and recycling of materials, to protect plants and animals.

S4L1. Obtain, evaluate, and communicate information about the roles of organisms and the flow of energy within an ecosystem.

S6E6. Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth. b. Design and evaluate solutions for sustaining the quality and supply of natural resources such as water, soil, and air.

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WEEK 3
LESSON 6

South River Ambassador Project

THE WATER OF THE WORLD CONNECTS US

Probing Questions/EQs	Learning Objectives – Students will be able to…
How does the natural environment make water cleaner and healthier?	• **Define filter** • **Identify natural filters** • **Engage in filtering water using natural filters**

Introduction:

Ask students to quickly brainstorm as a group what water on earth is used for. The teacher can document these ideas on a large piece of paper or on a whiteboard, or can just let the discussion flow.

Activity:

Read **One Well: The Story of Water on Earth by Rochelle Strauss** to, or **watch the read aloud** with, the students and ask them for an example of interdependence in the story.

Closing:

Students illustrate the most interesting fact they learned about water from the story. Pictures are then, with student permission, posted around the room.

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WEEK 3
LESSON 6

South River Ambassador Project

THE WATER OF THE WORLD CONNECTS US

Standards/Unit (based on GA Standards of Excellence):

SKE2. Obtain, evaluate, and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air).

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals.

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes.

S6E5. Obtain, evaluate, and communicate information to show how Earth's surface is formed. d. Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition. (Clarification statement: Environments of deposition include deltas, barrier islands, beaches, marshes, and rivers.)

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WEEK 4
LESSON 7

South River Ambassador Project

THE WATER OF THE WORLD CONNECTS US PT. 2 (EXPERIMENT)

Probing Questions/EQs	Learning Objectives – Students will be able to...
How does the natural environment make water cleaner and healthier?	• **Define filter** • **Identify natural filters** • **Engage in filtering water using natural filters**

Introduction:

Have students walk around the room to look at the water pictures from the previous lesson. Once back in a whole group, ask for thoughts.

Share that one way all of the water on earth stays usable is due to filtration. This process can happen naturally, or it can be helped by humans. Students will then be told they will be completing an experiment that will show them how water is filtered in nature.

Activity:

Water Filtration Experiment

Separate students into pairs or small group(s).

Supplies:

- *2 Glass Jars*
- *Sand*
- *Gravel*
- *3-4 Coffee Filters*
- *Dirty Water*
- *Plastic Cup with a Hole Cut in the Bottom*

A jar full of dirty water (from a local source or from a place near someone's home like a lake, pond, or puddle).

In the plastic cup, start by lining the bottom with the coffee filters. Then place a layer of clean sand followed by a layer of gravel. Place the cup into an empty jar. Pour the dirty water into the cup so it can filter down through the gravel, sand and coffee filters. Notice how the filter slows down the water. Look at the difference in the water before and after! The filter collects all of the dirt and particles in it making the water much cleaner.

Closing:

Students share their observations of the experiment.

Discuss:

Why is it important for water to be filtered?

What might happen if layers were removed? Would the water be affected? How?

As you know, the water around Atlanta flows into the South River. What might happen if we remove the natural filters – like soil and rocks – from our area? What might happen if we remove the plants and trees whose roots hold the soil in place? How might it affect the plants, animals, and people further down river?

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THE WATER OF THE WORLD CONNECTS US PT. 2 (EXPERIMENT)

Standards/Unit (based on GA Standards of Excellence):

SKE2. Obtain, evaluate, and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air).

SKL2. Obtain, evaluate, and communicate information to compare the similarities and differences in groups of organisms.

S3E1. Obtain, evaluate, and communicate information about the physical attributes of rocks and soils. b. Plan and carry out investigations to describe properties (color, texture, capacity to retain water, and ability to support growth of plants) of soils and soil types (sand, clay, loam).

S4L1. Obtain, evaluate, and communicate information about the roles of organisms and the flow of energy within an ecosystem c. Design a scenario to demonstrate the effect of a change on an ecosystem. (Clarification statement: Include living and non-living factors in the scenario.)

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes.

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WEEK 4
LESSON 8

South River Ambassador Project

WE LOVE THE SOUTH RIVER

Probing Questions/EQs	Learning Objectives – Students will be able to…
Why is it important to know what is happening in the land around the South River?	• **Define tributary** • **Identify the tributaries that flow into the South River** • **Create a visual representation of the South River and its tributaries**

Introduction:

Review the path of the South River, pointing out how creeks and streams join the river and how the river flows into other rivers, eventually feeding the Atlantic Ocean. Encourage critical thinking. What elemental force largely determines where the water flows? How does damming a river affect the water and aquatic life? What is water's role in the most dramatic geological features on earth (ex. the Grand Canyon)?

Ask students to consider where the water in the South River comes from. Consider that life on earth depends on freshwater, and clean, freshwater sources on earth are extremely finite.

Activity:

Using the South River watershed tributary map, students will draw a thick line showing the South River's path through the watershed on pieces of cardstock/posterboard. Students will then look at individual copies - or a large projected version - of the South River watershed tributary map and begin making lines using glue (from a bottle, not a stick) showing the creeks that feed into the South River (*note: depending on time and age level, you may pre-select a limited number of creeks for the students to locate on the map and add, or you can allow them to add all 20+ creeks identified on the map). Before the glue dries (depending on the number of creeks being added, you may want to consider students doing the next step after every 2-3 creeks), students will shake glitter over their paper/board to highlight the tributaries feeding into the South River.

Closing:

Read aloud the names of the creeks that feed into the South River. Are they familiar to students? Have any students visited creeks or perhaps live near one? Project Google Maps and zoom in near some of the creeks mentioned (Shoal, Snapfinger) to see if the students can identify some of the streets, businesses, or buildings in the areas. Experiment with typing in known landmarks and seeing how far those are from a creek.

Ex.
- Shoal Creek - Winona Park Elementary School, Dearborn Park, Shoal Creek Park
- Snapfinger Creek - Woodridge Elementary School
- Big Cotton Indian Creek - Cotton Indian Elementary School
- Sugar Creek - Cedar Grove Middle School

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WEEK 4
LESSON 8

South River Ambassador Project

WE <3 THE SOUTH RIVER

Standards/Unit (based on GA Standards of Excellence):

S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment. a. Ask questions to collect information and create records of sources and effects of pollution on the plants and animals.

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WEEK 5
LESSON 9

South River Ambassador Project

MEET THE MUSCOGEE

Probing Questions/EQs	Learning Objectives – Students will be able to…
In what ways was the South River important to the indigenous people of Georgia?	• **Identify where the native Muscogee lived in Georgia** • **Explore the history and culture of the Muscogee**

Introduction:

Before we lived in Atlanta, the Muscogee (Creek) people lived throughout much of Georgia - including where we are now and where the South River flows. According to historical books and maps, it is documented that the Muscogee called the South River the *Weelaunee*, loosely translating as "green-brown water".

Color Muscogee (Creek) area of Georgia on the **Creek Map handout**. Add the South River!

Activity:

Present **Atlanta's Indigenous People: Learning about the Muscogee Nation** slides.

Closing:

Read aloud/play YouTube recordings of the stories at the end of the slide presentation:

We Are Water Protectors and ***The Great Ball Game: A Muscogee Story***.

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WEEK 5
LESSON 9

South River Ambassador Project

MEET THE MUSCOGEE

Standards/Unit (based on GA Standards of Excellence):

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals. b. Ask questions to compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter). c. Design a solution to ensure that a plant or animal has all of its needs met.

S3L1. Obtain, evaluate, and communicate information about the similarities and differences between plants, animals, and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia.

S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment.

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes. a. Ask questions to determine where water is located on Earth's surface (oceans, rivers, lakes, swamps, groundwater, aquifers, and ice) and communicate the relative proportion of water at each location.

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WEEK 5
LESSON 10

South River Ambassador Project

AWARE WILDLIFE CENTER PROGRAM OR PRIVATE ENCOUNTER

Probing Questions/EQs	Learning Objectives – Students will be able to...
Why is keeping the South River watershed clean and safe important to the animals in the area? **How can you help keep native animals in your area safe and healthy?**	• **Define native** • **Identify animals native to Georgia, specifically animals native to the South River watershed area** • **Engage with art materials to share learning**

Introduction:

Have students brainstorm animals they believe are native to their area/the South River watershed. Review how the Muscogee respected the natural world.

Activity:

Either field trip to the **AWARE Wildlife Center** for their animal program, or welcome a visitor from the AWARE Wildlife Center for the animal encounter program.

Closing:

Students draw their favorite animal from the experience.

If funds are an issue, this lesson can be replaced with viewing this **list of animals native to Georgia and asking students to create a watercolor painting of an animal of their choice. The same activity could be done with plants native to the area.**

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AWARE WILDLIFE CENTER PROGRAM OR PRIVATE ENCOUNTER

Standards/Unit (based on GA Standards of Excellence):

SKL2. Obtain, evaluate, and communicate information to compare the similarities and differences in groups of organisms. a. Construct an argument supported by evidence for how animals can be grouped according to their features. b. Construct an argument supported by evidence for how plants can be grouped according to their features.

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals. b. Ask questions to compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter).

S3L1. Obtain, evaluate, and communicate information about the similarities and differences between plants, animals, and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia. a. Ask questions to differentiate between plants, animals, and habitats found within Georgia's geographic regions. b. Construct an explanation of how external features and adaptations (camouflage, hibernation, migration, mimicry) of animals allow them to survive in their habitat. c. Use evidence to construct an explanation of why some organisms can thrive in one habitat and not in another.

S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment. a. Ask questions to collect information and create records of sources and effects of pollution on the plants and animals.

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SOUTH RIVER WATERSHED ALLIANCE + flux projects

WEEK 6
LESSON 11

South River Ambassador Project

POLLUTION TRAVELS

Probing Questions/EQs	Learning Objectives – Students will be able to...
Why does plastic use matter? **How do our actions in our community affect water in other places?**	• **Identify the problems caused by plastics in the ocean and other waterways** • **Engage in planning activist art to share awareness**

Introduction:

Teacher projects **this image** of the South River's path in Georgia (labeled as the South River watershed) and students review how they know water flows from smaller areas to larger areas. They also review what they've talked about regarding how pollution in one place doesn't necessarily stay in one place, but can travel along with the water. Have students wonder - what happens to all that pollution and trash?

Activity:

Watch this video on YouTube about **The Great Pacific Garbage Patch**. It may be shown twice if students were interested but didn't quite get all of the information. The second time through, the teacher may pause in certain spots to tie it to previous knowledge or have the students wonder about things (ex. plastic that sinks vs. plastic that floats).

Watch this seven minute video on YouTube called **Water Pollution for Kids - Learn How to Keep Our Water Clean**. It may be shown twice and/or the teacher may pause in certain spots to ask or answer questions (ex. How does pollution get into the water? How does it make its way from our cities to our creeks, rivers, lakes, and oceans? Explain the earth's water cycle and how rain can create polluted stormwater runoff. How can we help prevent pollution? How do trees and soil help protect waterways?)

Closing:

Brainstorm items students could bring in the following day (or that the teacher can compile) to create a "trash island" sculpture or other activist artwork to be displayed at school, on the Beltline, or other location.

Ex. Clean plastic bottles, juice/milk/soda jugs, 6/12-pack plastic bottle rings, plastic wrap, plastic netting, packaging materials, bags, straws, styrofoam, bubblewrap, cardboard, newspaper, etc.

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WEEK 6
LESSON 11

South River Ambassador Project

POLLUTION TRAVELS

Standards/Unit (based on GA Standards of Excellence):

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals. b. Ask questions to compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter).

S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment. a. Ask questions to collect information and create records of sources and effects of pollution on the plants and animals. b. Explore, research, and communicate solutions, such as conservation of resources and recycling of materials, to protect plants and animals.

S4L1. Obtain, evaluate, and communicate information about the roles of organisms and the flow of energy within an ecosystem.

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes. a. Ask questions to determine where water is located on Earth's surface (oceans, rivers, lakes, swamps, groundwater, aquifers, and ice) and communicate the relative proportion of water at each location.

S6E6. Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth. b. Design and evaluate solutions for sustaining the quality and supply of natural resources such as water, soil, and air.

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WEEK 6
LESSON 12

South River Ambassador Project

TRASH ISLAND ACTIVIST ART

Probing Questions/EQs	Learning Objectives – Students will be able to…
Why does plastic use matter? **How do our actions in our community affect water in other places?**	• **Identify the problems caused by plastics in the ocean and other waterways** • **Engage in planning activist art to share awareness**

Introduction:

Teacher projects **this map** of the South River's path in Georgia (labeled as the South River watershed) and students review how they know water flows from smaller creeks and streams to the river. They also review how pollution in one place doesn't necessarily stay in one place, but can travel along with the water. Encourage students to wonder how pollution and trash spread and travel. Where does it go and how does it affect wildlife and the natural environment?

Activity:

Watch this **video clip on YouTube about the garbage in the Pacific Ocean**. It may be shown twice if students were interested but didn't quite get all of the information. The second time through, the teacher may pause in certain spots to tie it to previous knowledge or have the students wonder about things (ex. trash that sinks vs. trash that floats).

Closing:

Brainstorm items students could bring in the following day (or that the teacher can compile) to create a "trash island" sculpture or other activist artwork to be displayed at school, on the Beltline, or other public location.

Ex. Clean plastic bottles, juice/milk/soda jugs, 6/12-pack plastic bottle rings, plastic wrap, plastic netting, packaging materials, bags, straws, styrofoam, bubblewrap, cardboard, newspaper, etc.

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WEEK 6
LESSON 12

South River Ambassador Project

TRASH ISLAND ACTIVIST ART

Standards/Unit (based on GA Standards of Excellence):

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals. b. Ask questions to compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter).

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S6E6. Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth. b. Design and evaluate solutions for sustaining the quality and supply of natural resources such as water, soil, and air.

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WEEK 7
LESSON 13

South River Ambassador Project

SOUTH RIVER ENVIRONMENTAL, PLACE-BASED ART

Probing Questions/EQs	Learning Objectives – Students will be able to...
What are some reasons people might not feel connected to their environment? **How could you engage with your environment more?**	• **Define environmental, place-based art** • **Identify ways people engage with the environment in their community** • **Engage with natural materials to create place-based crafts or artwork**

Introduction:

Have the students recall what they thought of making activist art. Was it different from other art they had seen? What makes art, art? Does art have to be made inside, or can it be made outside?

Activity:

Show the **slide presentation South River Art**. Discuss the examples of environmental, place-based art shown in the slides.

Invite students to go outside the building (staying nearby) and to find natural materials to use. Students are challenged to create a *small* piece of place-based environmental art. They can work independently or with a partner or small group.

Closing:

Ask the students how they think people will react when they see the student art outside.

Students reflect on how *they* felt creating the art.

Explain to students that they will be going to the South RIver watershed to create environmental, place-based art soon. Ask them to be thinking about everything they have learned about the South River, its history, and the people and community around it so they can bring that inspiration with them!

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WEEK 7
LESSON 13

South River Ambassador Project

SOUTH RIVER ENVIRONMENTAL, PLACE-BASED ART

Standards/Unit (based on GA Standards of Excellence):

SKE2. Obtain, evaluate, and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air). a. Ask questions to identify and describe earth materials—soil, rocks, water, and air. b. Construct an argument supported by evidence for how rocks can be grouped by physical attributes (size, weight, texture, color). c. Use tools to observe and record physical attributes of soil such as texture and color.

S6E6. Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth. b. Design and evaluate solutions for sustaining the quality and supply of natural resources such as water, soil, and air.

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WEEK 7
LESSON 14

South River Ambassador Project

FIELD TRIP TO THE SOUTH RIVER WATERSHED – ENVIRONMENTAL, PLACE-BASED ART

Probing Questions/EQs	Learning Objectives – Students will be able to...
How can you show how being at the South River watershed makes you feel using environmental, place-based art?	• **Engage with the South River watershed**

Introduction:

Review the **slide presentation South River Art**. Discuss the examples of environmental, place-based art shown in the slides.

Activity:

Upon arriving at the South River watershed location, students engage with the natural materials around to create environmental, place-based art.

Closing:

Ask the students how they think people will react when they see the art they've created.

Students reflect on how *they* felt creating the art.

Students share one thing they will remember/take away from their learning about the South River watershed.

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SOUTH RIVER WATERSHED ALLIANCE + flux projects

WEEK 7
LESSON 14

South River Ambassador Project

FIELD TRIP TO THE SOUTH RIVER WATERSHED – ENVIRONMENTAL, PLACE-BASED ART

Standards/Unit (based on GA Standards of Excellence):

SKE2. Obtain, evaluate, and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air). a. Ask questions to identify and describe earth materials—soil, rocks, water, and air. b. Construct an argument supported by evidence for how rocks can be grouped by physical attributes (size, weight, texture, color). c. Use tools to observe and record physical attributes of soil such as texture and color.

S6E6. Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth. b. Design and evaluate solutions for sustaining the quality and supply of natural resources such as water, soil, and air.

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