

2017-2018 STEP Program Offerings/Descriptions

Kindergarten (Silver Bluff Audubon Center Only)

- **Program Theme: Audubon Jr. Explorers**

Lab Study: Come To Your Senses

Field Study: Our Leafy Friends

Eco-Hike: Explorers' Hike

Students will make observations of taxidermy animals using their senses and simple tools. A hands-on classifying activity will focus on plant parts, and crawling through a soil tunnel students will see what grows underground. After examining a germinating plant seed, they will plant some seeds to take home. An eco-hike will involve an exploration of the natural world looking for clues that animals live at the Silver Bluff Audubon Center and Sanctuary. *SC Science Performance Indicators: K.L.2A.1, K.L.2A.5, K.L.2A.6*

1st Grade (Silver Bluff Audubon Center Only)

- **Program Theme: Green-Dirt**

Lab Study: Our Leafy Friends

Field Study: Exploration at the Soil Pit

Eco-Hike: Scavenger Hunt

Students will learn just how important soil is to plant life in this soil and plant combination program! Students will use science process skills and tools to discover different earth materials that make up what we call *dirt*, planting seeds to begin an experiment back at school. A study of plant parts, a seed dissection, and a trip through a soil tunnel will help students understand the relationships between soil and plants. A hike in the forest will get students up close with plants that survive in the soil of the forest. *SC Science Performance Indicators: 1.E.4A.1, 1.E.4B.1, 1.L.5A.1, 1.L.5A.2, 1.L.5B.1*

- **Program Theme: Green with Envy**

Lab Study: Plant Parts

Field Study: Cycling Plants

Eco-Hike: Plant Cycle Hike

Students will dive head long into all that is green and blooming! Through observation, investigation, and experimentation, students will gain a better understanding of the structures, functions, and life cycles of plants. Students will "adopt" of their very own tree, using technology and measurement tools to make observations! Students will classify plant parts and crawl through a soil tunnel to see what may be growing underground. An eco-hike in the forest will get students up close with the life cycles of many plants. *SC Science Performance Indicator: 1.L.5A.1, 1.L.5A.2, 1.L.5B.1*

2nd Grade (Silver Bluff Audubon Center Only)

- **Program Theme: Feathered Friends**

Lab Study: Feathered Taxidermy

Field Study: Fantastic Beaks

Eco-Hike: Young Birders' Hike

Students will enter the fantastic world of our feathered friends found right here in their own backyards! Through careful observations of taxidermy birds, students will infer behavior, diet and habitat based on their body structures. Next, students will use models to investigate how different bird beaks help them survive. This wildlife adventure will conclude with students going where the birds go; becoming animal detectives hunting for birds and the clues they leave in the forest. *SC Science Performance Indicators: 2.L.5B.1 and 2.L.5B.2*

- **Program Theme: Cycling Through Life**

Lab Study: Taxidermy Critters

Field Study: Life Cycle Scavenger Hunt

Eco-Hike: Life Cycle Hike

Through careful observation of taxidermy animals, students will infer how their body parts help them survive throughout their life. Students will discover how living things amazingly cycle through life beginning with a scavenger hunt, and then collaborate with a hands-on classifying and sequencing activity to determine the life cycle of an organism. A life cycle hike will enhance understanding and appreciation for the uniqueness of each organism's life journey! *SC Science Performance Indicators: 2.L.5A.2 and 2.L.5A.3*

3rd Grade (Silver Bluff Audubon Center Only)

- **Program Theme: Eco-Venture SBA**

Field Study: Wild Words, Hidden In Plain Sight

Field Study: Wet Wonders

Eco-Hike: Eco Adventure

Join us on an extended eco-hike adventure, participating in standards-based STEAM environmental activities including observations of terrestrial and aquatic ecosystems along the way. The hike covers 2 miles and will take about 2 ½ hours. Along the way students will make careful observations of their environment looking for critters hidden in plain sight, discovering the wonders of a wetland, and using wild words to describe their surroundings. Participants should wear long pants and closed-toe walking shoes. *SC Science Performance Indicator: 3.L.5A.1, 3.L.5A.2, 3.L.5B.1, Math:3.MDA.5, 3.MDA.6*

- **Program Theme: Earth Beneath Our Feet**

Lab Study: CSI Soil

Field Study: Archaeology Adventure

Eco-Hike: Soil BINGO

There is so much going on just below our feet! Investigations of soil types and properties will be used to help students solve a mystery of a missing bike. . Students will participate in an Archaeology Adventure with Dr. Chris Moore, an Archaeologist from SRS. Finally, students will go on an eco-hike to identify soil types in the Silver Bluff Audubon Center and Sanctuary forest. *SC Science Performance Indicator: 3.E.4A, Social Studies: standard 3-2*

4th Grade (SRS or Silver Bluff Audubon Center)

- **Program Theme: Birds Alive!** (SBA Only)

Lab Study: Bird Taxonomy

Field Study: Operation: Bird Survival

Eco-Hike: Ornithology Hike

Have you ever thought about how birds survive around the world? Students will make careful observations of taxidermy birds looking for ways that each animal can defend itself, move, obtain food, and camouflage from predators. After a simulated game of survival in a natural disaster, students will have a better appreciation of the challenges presented by an intricate and dynamic environment of our feathered friends! A scavenger hunt of local birds and the clues they leave behind is a real adventure. *SC Science Performance Indicator: 4.L.5B.3*

- **Program Theme: Dazzling Diversity**

Lab Study: Animal Taxonomy

Field Study: Animal Detectives

Eco-Hike: Diversity Hike

Students will immerse themselves into the dazzling diversity of organisms that live in their own backyard! Close-up investigations of native taxidermy and live animals will allow for observation and inference of just how each critter is adapted to its individual habitat. Students will also become nature explorers searching for a wide diversity of animals and their clues in the forest. An eco-hike in the forest will provide dazzling examples of diversity. *SC Science Performance Indicator: 4.L.5B.2, 4.L.5B.3*

- **Program Theme: Water Dance**

Lab Study: Water Cycle Game

Field Study: Pond Investigators

Eco-Hike: Cycle Hike

Students will investigate the water cycle and the role it plays on earth. Students will be immersed in the movement of water through simulation activities. Also, students will determine water quality through macro-invertebrate collection at a pond on site. Finally, students will hike to identify cycles in nature. *SC Science Performance Indicator: 4.E.2A.2, 4.L5.A.1, 4.L5.A.3*

5th Grade (SRS or Silver Bluff Audubon Center)

- **Program Theme: Eco-Venture SBA (SBA Only)**

Field Study: Wild Words, Hidden In Plain Sight

Field Study: Wet Wonders

Eco-Hike: Eco Adventure

Join us on an extended eco-hike adventure, participating in standards-based STEAM environmental activities including observations of biotic and abiotic factors of aquatic and terrestrial ecosystems that affect the balance of nature. The hike covers 2 miles and will take about 2 ½ hours. Participants should wear long pants and closed-toe walking shoes. *SC Science Performance Indicator: 5.L.4A.1, 5.L.4A.2, 5.L.4B.2, 5.L.4B.3, 5.L.4B.4*

- **Program Theme: Water, Water Everywhere**

Lab Study: Wonderful Watersheds

Field Study: Pond Investigators

Eco-Hike: Ecosystem Explorers

Students will investigate the wonderful world of water through macro-invertebrate collection of a local pond. In addition, watershed modeling and problem-solving will enhance student understanding of the land-water-human connection. Finally, students will compare aquatic and terrestrial ecosystems through observations made on an eco-hike. *SC Science Performance Indicators: 5.E.3A.1, 5.L.4A.1*

6th Grade (SRS or Silver Bluff Audubon Center)

- **Program Theme: Sparrow and the Woodpecker (SBA Only)**

Lab Study: Taxidermy Adaptations

Field Study: Operation Bird Survival

Eco-Hike: Habitat Assessment Hike

Students will explore the challenges of avian survival. Through observation, inference and use of a dichotomous key, students will use taxidermy birds to investigate adaptations that allow for success of birds in diverse and changing environments. Students will engage in a game of survival to see if they have what it takes to endure a natural disaster! Finally, students will hike the area to investigate the habitat challenges and formulate strategies to help protect some of our most endangered native birds. *SC Science Performance Indicator: 6.L.4B.2*

- **Program Theme: Roots and Shoots (SBA Only)**

Lab Study: Leaf Me Alone

Field Study: Gee, I'm A Tree

Eco-Hike: Explorer Hike

In this STEM program, students will investigate the roots, shoots and all other structures that allow success in the plant world. Through creation and use of dichotomous keys, students will gain a better understanding of the great diversity of plants and clever modes of seed dispersal. Also, students will discover the geometry behind a forester's field technology tools. Finally, students will hike to observe examples of tropisms and classify species within the plant kingdom. *SC Science Performance Indicators: 6.L.5B.3; SC Math Standards: 6.EE1.6, 6.NS.5*

- **Program Theme: 3 DAY Project Based Learning – Grade 6 (SRS ONLY)**

In this Project Based Learning Program, students will research and investigate two threatened bird species and develop a media campaign to communicate their plight. This program takes place over three days, the first two at SRS and the third at their school site with STEP instructors.

7th Grade (SRS or Silver Bluff Audubon Center)

- **Program Theme: Survivor! (SBA Only)**

Lab Study: Advanced Operation Survive

Field Study: Biological Aquatic Investigation

Eco-Hike: Forest Health Hike

Students will determine the quality of an aquatic ecosystem through observations, macro-invertebrate collection and data recording at a pond site. Also, they will participate in a simulation of population fluctuation during a natural hazard. Finally, students will collect data as they hike to determine the health of the forest. *SC Science Performance Indicator: 7.EC.5A.1, 7.ECC.5A.3, 7.EC.5B.3*

- **Program Theme: Diggin' the Dirt (SBA Only)**

Lab Study: Permeability Investigation

Field Study: Archaeology

Eco-hike: Soil Assessment

Time to get our hands dirty! Students will investigate quality of soil through use of tests and tools in both our soil pit and our soils lab. Through these hands-on, minds-on activities, a better understanding will be gained of the importance of healthy soil to plants, animals and all living things in our ecosystem. A possible third session may be done at Silver Bluff – archaeology with Dr. Chris Moore. *SC Science Performance Indicator: 7.EC.5A.2, CCSS Math: 7.G.6, Social Studies Literacy Skills for the 21st Century: Explain change and continuity over time and across cultures.*

- **Program Theme: 3 DAY Project Based Learning – Grade 7 (SRS ONLY)**

In this Project Based Learning Program, groups of students will develop a science fair project as a culmination of an extensive investigation of soil. This program takes place over three days, the first two at SRS and the third at their school site with STEP instructors.

8th Grade (SRS or Silver Bluff Audubon Center)

- **Program Theme: Hunger Games**

Lab Study: Taxidermy Bird Adaptations

Field Study: Watershed Modeling

Eco-hike: Survival

How do natural and man-made factors contribute to species survival? Students will investigate how weathering, erosion, and deposition affect water quality within a watershed, and what can be done to avoid polluting our water. Through observation of taxidermy birds, students will discover how biological adaptations help species survive. Finally, students will find real life examples of these concepts on an eco-hike as they determine forest health for two local birds of concern. *SC Science Performance Indicator: 8.E.5A.1, 8.E.5A.2, 8.E.6B.1, 8.E.6B.2*

9th-12th Grade (SRS or Silver Bluff Audubon Center)

- **Program Theme: It's a Tough World!**

Lab Study: Advanced Taxidermy Study

Field Study: Survival of the Fittest Challenge

Eco-Hike: Advanced Habitat Assessment

Through a game of survival and interaction with taxidermy animals using a dichotomous key, students will investigate adaptations that allow for survival of the individual and the stability of the species. Finally, students will investigate, record data and conclude upon the health of forest soil and its inhabitants with an eco-hike and soil testing. *SC Science Performance Indicator: H.B.6.A, H.B.6D.1*

- **Program Theme: Wet World**

Lab Study: Advanced Watershed Modeling

Field Study: Advanced Aquatic Assessment

Eco-Hike: Diversity Hike

On our blue planet, humans play a vital role in the protection and preservation of our watery resources. Students will learn more about these effects through experimenting with human behaviors that influences the location, quality and quantity of water within a watershed. Biological analysis will reveal the quality of a local pond. Students will collaborate on an eco-hike to determine the diversity of a local forest ecosystem. *SC Science Performance Indicator: H.B.6.A1*
