

Science Technology Enrichment Program (STEP)

Program Offerings

2009 – 2010

The Science and Technology Enrichment Program (STEP) is a cooperative effort between Savannah River Nuclear Solutions, Silver Bluff Audubon Center, and the Ruth Patrick Science Education Center. **Two field trip locations for STEP include the Savannah River Site and the Silver Bluff Audubon Center.** At each location, STEP students utilize classroom and outdoor laboratories to conduct scientific investigations on topics such as water ecology, soils, wildlife, forestry, archaeology, navigation and more. For program information and a STEP reservation request form, please visit the STEP website at: <http://rpsec.usca.edu/step/>

Abbreviations

SCSST- South Carolina Social Studies Standards

SCSS- South Carolina Science Standards

SCMS- South Carolina Math Standards

GASST- Georgia Social Studies Standards

GASS- Georgia Science Standards

GAMS- Georgia Math Standards

Program Descriptions

Can You Find Your Way Out of the Woods:

Students learn to use a compass and practice measuring circumference, diameter, length and width. Students will also learn to estimate or calculate their step length in meters. Students then head outdoors to complete a navigation course through a wooded area. **(Grades 4, 5, 6, 8)** *SCSS:* 4-1. *SCMS:* 4-5, 6-5, 8-5. *GAMS:* M5G2, M6M2. *Map Global Skills Matrice* 1.

You Be The Archaeologist: This is a hands-on program in which students learn the excitement of being an archaeologist. The program will introduce students to archaeological methods and goals, providing them with a simulated dig experience. They will learn how to use archaeological tools; how to map sites; and how to put archaeological finds into historical context. **(Grades 3-8 and High School)** *SCSST:* 3-1, 3-2, 4-2, 6-1, 7-1, 8-1. *Literary Elements* F, H, L, and S. *GASST:* SS8H1. *Information Processing Skills* 5, 10, and 11. *Map Globe Skills Matrices* 3. *World Geography* SSWG2.

Investigating an Aquatic Ecosystem: Students will use scientific guides to identify and classify specimens found in our pond. By using appropriate tools (thermometers, pH meters, and graduated cylinders), the students will collect data, take measurements, and perform dissolved oxygen and turbidity tests to evaluate how the abiotic and biotic factors influence the quality of life. **(Grades 3-5, 7 and High School)** *SCSS:* 3-2, 3-3, 4-2, 5-2. *SCMS* 4-5, 5-5. *GASS:* S7L4. *Environmental Science:* SEV1, SEV2, SEV3. *S.C. Biology:* B-6.

New K-2 Program: Students will explore the natural environment by understanding the interaction of various organisms, seasonal changes, and properties of earth material. Students will conduct simple scientific investigations by collecting, observing and analyzing data. **(Grades K-2)** *SCSS:* K-1, K-2, K-4, 1-1, 1-2, 1-4, 2-1, 2-2.

Let's Get Dirty: Students will study and collect data on different layers of soil found in the area. They will use scientific equipment and their observation skills to record temperature, pH levels, depth analysis, and infiltration rates. The students will be able to differentiate soil by its physical properties such as color, texture, and its capacity to grow plants. The students will take a soil profile home as a gift. **(Grades 3, 5-7 and High School)** *SCSS:* 3-1, 3-3, 5-1, 5-2, 5-4, 7-4. *GASS:* S3E1, S6E5. *Environmental Science:* SEV1, SEV2, SEV3.

Green Envy: Students will identify the physical and behavior characteristics of plants by exploring their habitat. The lesson will begin inside focusing on classifying and measuring leaves. Students will conclude the lesson outside with a scavenger hunt that covers dendrology or tree identification. **(Grades 1-4)** *SCSS:* 1-1, 1-2, 2-1, 2-2, 3-1, 4-1, 4-2. *SCMS:* 2-5, 3-5, 4-5. *GASS:* S1E1, S1L1, S2L1, S3E1, S4L1. *GAMS:* M2M1, M3M3, M3M4, M4M1.

Learn About Forestry: Students use measuring devices to measure the height and circumference of trees on the site. Students have to calculate diameter from circumference and learn why foresters make these measurements. Students also calculate the length of their step. *SCMS:* 6-5, 7-5, 8-5. *GASST:* SS6E9. *Economics:* SSEF1.

Wildlife Adaptations: Students will find clues to identify the organisms that thrive within the environment. They will analyze the physical and behavior adaptations that allow the organism to survive and continue the flow of energy through their ecosystem. Categories of wildlife include: Insects, ornithology, and animals with fur. *SCSS:* 3-2, 4-2, 5-2, 6-2, 6-3, 7-4. *GASS:* S4L1, S4L2, S7L4.

Please indicate if you need any special services, assistance, or accommodations to participate in our programs by contacting Tara Jenkins at TaraJ@usca.edu or 706-830-3630

Program descriptions, correlations to standards, and reservation request forms can be found on our website at:

<http://rpsec.usca.edu/step/>