During the 2016-17 school year, Greenville County 4-H will be offering a multitude of standard-based enrichment programs for the classroom, giving students exposure to a variety of STEM & Natural Resource “hands-on” activities and labs.

What is 4-H?
- 4-H is a community of young people across the nation who are learning leadership, citizenship and life skills.
- 4-H strives to provide educational opportunities for young people to “Learn by Doing.”

For More Information, Contact:
Patricia Whitener
E-mail: pwhiten@clemson.edu
Phone: (864) 365-0627
GREENVILLE COUNTY 4-H PROGRAMING

GPS & Geocaching
Covers the basics of how satellites and global positioning systems work and what they are used for. Students use handheld Garmin units to download and share coordinates to hunt for geocached items. *$80 per semester

Strawberry DNA
Isolate DNA protein strands from fruit. Lesson covers the basic structure of DNA, the concept of heredity, Punnett squares, and isolation technique. Students each take home their very own micro centrifuge tubule of plant DNA! *$10 per semester per grade

Paper Rockets
Design, build and launch a paper rocket using a compressed air launcher. Lesson covers the basics of rocket design, psi, distance, height, velocity and trajectory while overcoming the force of gravity.

Health & Nutrition
Lesson utilizes “My Plate” concepts of making balanced, healthy choices from every food group. Activities cover essential nutrients, calorie densities, portion sizes, label reading and the importance of physical activity. Tastings of exotic fruits and vegetables or healthy snacks can be provided if current grant funding allows.

Wildlife Tracks
Students make their own wildlife tracks from plaster and molds or stamps and paint. Discuss predator/prey relationships of furbearing mammals and population dynamics. Actual fur pelts and skulls facilitate questions and answers. (If there is a suitable site nearby such as a creek or stream, we can conclude with a wildlife track hunt of our own. *$3 per class to cover cost of plaster or paint.

Insects
Basics of entomology: parts of insect, ecological roles, feeding strategies, beneficial vs. Pests and invasive species. Live Madagascar hissing cockroaches and Bess Beetles are brought along for kids to hold (or not 😊). Clever catch trivia ball tests their knowledge; if a suitable site exists and weather permits, we can go outside and try to catch, identify and release local insects. All materials provided
Reptiles

Basics of herpetology: ecological roles, amphibians vs. reptiles, ectotherms vs. endotherms, cryptic coloration, and habitats. Focuses on SC native species- Live tortoise, corn snakes, king snake and alligator brought along for students to handle.

Parts of a Plant

A variety of topics can be discussed and demonstrated depending on the needs of the teacher. Annuals vs. perennials, Seed germination, seed dispersal, flower dissection, types of roots, and needs of a plant, stem water transport, transpiration, types of leaves etc.; five different interactive stations represent each part of the plant.

Soils & Erosion

Land use history, soil processes, parent material, rock and mineral collections, soil layers and particle size. Forces of erosion are discussed. Hands on activity demonstrate importance of soil layering to prevent erosion in order to protect soil and watershed. * $10 per semester per grade

Gardening

Create an outdoor classroom or champion an under-used garden while beautifying your school. I can assist in building a garden from the ground up and connect you with resources and curriculum that provides endless learning opportunities throughout the growing season. (Warm and cool season gardens – butterfly and vegetable). School Gardening for SC Educators program has grant funding for Title I schools and provides teacher training with CE credits.

Snap Circuits

Build closed circuits to demonstrate how energy is transformed from chemical to electrical to mechanical. Snap circuit kits provided for 10 small groups (2-3 students in a group) Light a bulb, power a motor, and make sound. *$30 per semester
Wind Energy

Brief history of how we harness wind to do work. Discuss pros/cons of wind energy as a renewable energy source. Build pinwheels and design and build sail boats to carry a weighted cargo over a specified distance.

Enviroscape

Enviroscape topographical model used to demonstrate how pollutants move through the watershed. Students use critical thinking to apply what they have learned and “trap” pollutants to keep the water sources clean.

Elephant Toothpaste

Super cool chemistry experiment demonstrating the effect of a catalase (yeast) on Hydrogen Peroxide. Lesson covers enzymes, catalase, reactants, and Chemical changes resulting from an exothermic reaction. * $5 per day (covers 6 class periods)

States of Matter

Discussion of different states of Matter (Solid, liquid, and Gas) and processes of the water cycle, evaporation and condensation. A soda can implosion experiment demonstrates the pressure changes due to rapid heating or cooling.

The United States Constitution requires schools to respect the rights of all external organizations to distribute flyers to students at school if the school permits any such organization to distribute flyers. Accordingly, the school cannot discriminate among groups willing to distribute flyers at school and does not endorse the content of any flyer distributed at school. The school encourages parents to assist their children in making choices appropriate for them.

Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, sex, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer.