

Middle School Programs



Students measure the velocity of Spirit Creek

“THE ACTIVITIES WERE GRADE APPROPRIATE AND KID ORIENTED. THE INSTRUCTORS HAD A GOOD RAPPORT WITH THE STUDENTS.”



Odocoileus virginianus

The Georgia Performance Standards separate Earth Science, Life Science, and Physical Science by grade level. The programs at Spirit Creek Educational Forest are designed to meet those standards in each of the sciences as well as incorporating the Benchmarks for Science Literacy and Characteristics of Science of the Georgia Performance Standards. Each program can be tailored to cross over into another Science. For example, our Limnology Program covers standards for Earth Science, Life Science, and Physical Science. These program time blocks range from 1 hour to 2.5 hours.

Programs

The Fallen Log – 60 minutes
GPS: S7L4a, b

What happens to trees after they die? As students examine a decaying log, they will see first hand the “circle of life” and how matter/energy cycle through an ecosystem.

Field, Forest and Stream– 2 hours
GPS: S6E3b S6E4a S74b, c

Teams of “scientists” will gather data to find out what an ecosystem is. Simple physical tests in three different environments will be conducted to determine how non-living elements influence the living elements in an ecosystem.

How Big is Your Tree? – 60 minutes

Our ancestors used parts of their bodies to measure things. Students will do this to determine the accuracy of this urban myth. Students will then learn to measure a tree’s height and circumference by estimation, comparison, geometry, and forestry instruments.

Limnology – 2 1/2 hours
GPS: S6E3a, S6E5h,i, S6E6b, S7L1b, S7L4c, S8P1e

Students will learn about the watershed boundaries of Spirit Creek. They will collect and identify aquatic life to help them, make predictions about the physical characteristics of the water. Using Chemical analysis of temperature, Ph, and Dissolved Oxygen, these predictions will then be evaluated. If time permits, water volume may be measured. This activity includes a wagon ride down to Spirit Creek. Extra Chaperones needed.

Nonvascular Plants – 90 minutes
GPS: S7L2c, d S7L3b

This wonderful Autumn activity will have students looking closely at lichens and fungi. Students will learn the characteristics of this organisms and their symbiosis relationships.

Nothing Succeeds Like Succession – 60 min.
GPS: S6E5c, i S7L4c, S7L5a

How does a forest evolve from bare soil to a mature forest? Succession is the change in composition of plants and animals within an ecosystem over time. Students will investigate the different stages of succession to determine the connections between plants and animals and how they can change an ecosystem.

*Middle School Programs continued***Orienteering** – 90 minutes

Anyone wishing to partake in outdoor activities may find it useful to be able to read a map and compass. Students will first learn how to measure their stride and then use the compass to locate objects and orient themselves in the forest.

Rocks and Minerals – 60 minutes

GPS: S6E5b,c,i S7L1b, S8P1b, e

Students will be able to differentiate between rocks and mineral. After observation and examination, students will classify rock specimens as igneous, metamorphic, or sedimentary and explain how each is formed. Through a variety of tests and by using Moh's Hardness Scale, students will identify their rock with a dichotomous key.

Structures of a Leaf – 90 minutes

GPS: S7L1a, b S7L2b

Have you ever wondered how to identify a tree or plant? Students will learn the different parts of a leaf, be able to describe their shape, margin, and arrangement and tell if it is a monocot or dicot. Students will use this information to help guide them through a dichotomous key as they walk through our Arboretum.



Looking at the rings of a living Loblolly pine tree.

**Tree Cookies** – 30 minutes

GPS: S7L2c,d S7L4c

Hungry? These cookies may be a little crunchy. These cross sections of trees show the annual growth rings. The history of the tree is written in its rings; fire, drought, flood, and the tree's age. Students will learn how a tree grows and how to interpret the tree's life events.

Vascular Plants– 2 hours

GPS: S7L1b S7L2c,d

Trees, ferns, and celery are all vascular plants. Students will learn the characteristics of vascular plants by studying the different parts of ferns and trees. They will learn the difference between angiosperms and gymnosperms. By examining roots and tree cookies, students will understand how a tree grows.

What's Beneath your Feet– 2 hours

GPS: S6E5c,e,g,h,i

By looking at different soil horizons, students will be able to discover how water holding capacity, pH and plant growth effect the ground beneath their feet. Based on data collected, students will analyze the soil for different land uses such as for building or planting

Special Program!**Living With Fire!**

(Grades 5 –12) 90 minutes

GPS: S7L3c,

S7L4 c, S8P2, SB4a, b,
c, d, e, SB5d

In this four part activity, students will learn the basics behind fire and what it needs to exist. They will also discuss the benefits and drawbacks of fire, and its importance to the Southern Ecosystem. Students will discuss prescribed burning, collect weather data, and observe how foresters use fire to accomplish land management goals.



2nd Week in October is Fire Prevention Week