



FREE & FUN Middle School Programs



These opportunities for 6th, 7th, and 8th grade classes challenge students with hands-on learning experiences in the park's cultural and natural resources, including critical issues affecting these resources.

** Some programs are more suitable for groups up to 60 students than others - call to discuss.*

** All programs are free*

** Bus assistance money may be available*

Salamanders

Best suited for 8th grade. Students will generate a hypothesis to guide their examination as they participate in on-going monitoring studies of terrestrial and aquatic salamanders. Using identification guides, they will identify their finds and learn about how air quality is impacting the iconic salamanders of the Smokies.

Time frame: 1.5 hours in length, school usually choose two programs

Locations:

- * Purchase Knob, near Maggie Valley
- * Mingus Mill, near Oconaluftee Visitor Center

***North Carolina Essential Standards
Grade 8 Science***

Clarifying objectives 8.L.1.1, 8.L.3.1, 8.L.3.2, 8.L.3.3, 8.L.4.1, 8.L.4.2

Stream Scientist Classroom

Best suited for 8th grade. Students will create a hypothesis on the health of a river system. Procedures for testing the hypothesis include chemical water quality tests in small working groups, identification of point and non-point pollution sources as well as a benthic macroinvertebrate search using scientific methods.

Time frame: 1.5 hours in length, school usually choose two programs

Locations:

- * Purchase Knob, near Maggie Valley
- * Mingus Mill, near Oconaluftee Visitor Center
- * Deep Creek Picnic Shelter, near Bryson City

***North Carolina Essential Standards
Grade 8 Science***

Clarifying objectives 8.E.1.1, 8.E.1.3, 8.E.1.4

Phenology

Best suited for 8th grade. Students collect tree phenology data for on-going monitoring study. Students will learn about tree identification & phenology.

Time frame: 1.5 hours in length, school usually choose two programs

Locations

- * Purchase Knob, near Maggie Valley
- * Mingus Mill, near Oconaluftee Visitor Center
- * Deep Creek, near Bryson City.

***North Carolina Essential Standards
Grade 8 Science***

Clarifying objectives 8.P.2.1, 8.P.2.2, 8.L.3.1, 8.L.3.3



(Turn over for more!)

Program Description

The following programs are best suited for 7th grade.

Time frame: 1.5 hours in length, schools pick two programs.

Locations = Purchase Knob, near Maggie Valley (ozone, snails, lichens, and tardigrades), **Oconaluftee Visitor Center**, near Cherokee (snails, lichens, and tardigrades), and **Clingmans Dome** (snails and lichens)

Ground Level Ozone Garden

Students collect data for on-going monitoring studies estimating the amount of damage to plants from exposure to ground level ozone. Only at Purchase Knob location.

Lichens

Students collect data for on-going monitoring studies estimating lichens from exposure to sulfur in the air.

Snails

Students monitor snail populations which possibly are impacted by acid deposition.

Tardigrades

Students will explore the biodiversity of microscopic organisms including tardigrades (water bears). Students will be introduced to the process of collecting lichens and isolating resident tardigrades and other microscopic organisms.

North Carolina Essential Standards

Grade 7 Science

Clarifying objectives 7.E.1.6, 7.L.1.2 (ozone program only), 7.L.1.2 (tardigrade program only)

The following programs are best suited for 6th grade.

Time frame: 1.5 hours in length, schools pick two programs.

Locations = Purchase Knob, near Maggie Valley and **Oconaluftee Visitor Center**, near Cherokee

Terrestrial Invertebrates

Students inventory the macroinvertebrates of the deciduous forest using scientific methods.

Soil Discovery

In small teams, the class will analyze soil properties and recognize the interdependence of abiotic and biotic factors.

North Carolina Essential Standards

Grade 6 Science

Clarifying objectives 6.E.2.3, 6.E.2.4, 6.L.2.1, 6.L.2.2, 6.L.2.3



Each program was developed in cooperation with North Carolina school teachers and are correlated with state and national curriculum standards for the specific grade level with an emphasis on science, language arts, and math.

For additional information or to sign your class up, call today!

828-926-6251

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Most programs have on-line databases that can be accessed back at school to allow for student-led inquiry as they compare their data to that of other groups.

Programs also meet many Math and Language Arts standards but they aren't listed due to space constraints.

