



Great Hollow

Nature Preserve & Ecological Research Center



EDUCATION PROGRAM CATALOG
2018-2019

DEAR EDUCATOR,

Great Hollow is pleased to present our 2018-2019 catalog of experiential environmental education programs for school and youth groups ranging from pre-K to 8th Grade. Environmental education is an essential part of your students' science literacy. Our immersive programs are designed to provide students with a glimpse into scientific field research, unique hands-on learning experiences, and countless opportunities to develop a deeper connection to the natural world. Aligned with Connecticut State Science Standards and Next Generation Science Standards, these fun and interactive programs are intended to bring the scientific concepts covered in your classroom to life and inspire the next generation of science practitioners and educators.

We offer onsite programs at our scenic, 825-acre nature preserve in New Fairfield, Connecticut as well as offsite programs delivered right at your school or facility. All programs include engaging activities that illustrate scientific themes and concepts, and many include live animal interactions. Multiple programs can be scheduled for the same onsite or offsite trip, and we are always happy to customize programming to meet particular needs and interests. Let us help you take your life science curriculum to the next level.

We look forward to working with you and your students in the great outdoors.

Sincerely,



Chad Seewagen, Ph.D.
Executive Director





SCHEDULE A PROGRAM

Onsite programs are two hours long and held primarily outdoors. Offsite programs can be either one hour indoor sessions or two hour outdoor sessions, if there is a suitable natural area on your grounds. Programs must be scheduled at least two weeks in advance and are available on a first come, first serve basis. Multiple programs can be scheduled for the same day. Please contact us with any questions or to schedule a program for your group.

**INFO@GREATHOLLOW.ORG
(203) 546-7789**

HOMESCHOOL CLASSES

All of our programs can be offered to homeschool children and adapted to meet the specific curriculum needs of your group.

PRICING

Pricing begins at \$10/student for onsite programs and \$12/student for programs delivered on location at area schools. Minimum group size is eight students and maximum group size at any one time is 30. Please provide one adult chaperone for every 10-12 students; there is no charge for the chaperones or teachers. Discounted rates are available for schools with more than 50% of their students enrolled in the Free and Reduced Price Lunch program.

CANCELLATION POLICY

There is no charge for programs canceled more than 48 hours in advance or for cancellations due to weather-related school closings. A \$50 fee will be assessed for all other cancellations.



PROGRAMS AT A GLANCE



fall



winter



spring/summer



offsite, indoor



*offsite, outdoor

Program	PK	K	1	2	3	4	5	6	7	8	F	W	S/S	O
Adaptations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Animal Classification		✓	✓								✓	✓	✓	✓
Biomimicry			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Connecticut Rocks!				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Custom Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Forest Ecology						✓	✓	✓	✓	✓	✓	✓	✓	✓*
Invertebrate Investigations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓*
Is it Alive?	✓	✓	✓								✓	✓	✓	✓
Life and Death in the Forest						✓	✓	✓	✓	✓	✓	✓	✓	✓*
The Life of Plants			✓	✓							✓	✓	✓	✓
Plant or Animal?	✓	✓									✓	✓	✓	✓
Reptiles & Amphibians of CT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Sensory Awareness	✓	✓	✓								✓	✓	✓	✓
Soil Science				✓	✓	✓	✓				✓		✓	✓*
Stream Ecology						✓	✓	✓	✓	✓	✓		✓	✓*
Stream Story	✓	✓	✓	✓	✓						✓		✓	✓*
Vernal Pools							✓	✓	✓	✓			✓	
Water, Water, Everywhere!				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Winter Ecology						✓	✓	✓	✓	✓		✓		✓*
The World of Birds	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*Appropriate outdoor area must be available.

► Program only available during Spring



Adaptations

ALL GRADES



Why are some organisms better suited to a specific environment than others? Students will learn about the specialized physical traits and behaviors that all living things (including people!) have to help them survive in their habitats. This lesson can be tailored to the plants or animals of your choice.

CT Science Standards: 1.2.a, 1.2.b, 1.3.a, 2.2.a, 3.2.a, 4.2.a, 5.2.a, 8.2.a, 8.2.b

NGSS: 1-LS1-2, 2-LS2-2, 2-LS4-1, 3-LS2-1, 3-LS3-1, 3-LS4-2, 3-LS4-3, 3-LS4-4, 4-LS1-1, 4-LS1-2, MS-LS1-4, MS-LS4-4



Animal Classification

GRADES K-1



What makes a bird a bird, a reptile a reptile, or a mammal a mammal? Through hands-on activities, games, and a visit from a resident reptile and amphibian, students will discover the characteristics (body coverings, life cycles, live young or eggs, etc.) that scientists use to classify animals.

CT Science Standards: K.1.a, K.2.a 1.2.a, 1.3.a

NGSS: 1-LS3-1

Biomimicry

GRADES 1-8



Did you know that VELCRO® was invented by a man who took a close look at the burrs he found on his dog after a walk? Through hands-on activities students will learn about biomimicry, an innovative method of problem solving that looks to the natural world for solutions to human challenges.

CT Science Standards: 1.2.a, 1.2.b, 2.2.a, 3.2.a, 3.4.a, 5.2.a, 7.4.a

NGSS: 1-LS1-1, 2-LS2-2, 4-LS1-1, 4-ESS3-2, MS-LS4





Connecticut Rocks!

GRADES 2-8



Take a hike and discover the geological processes that created the Connecticut landscape. Along the way students will learn about the rock cycle, geologic time, and the role that the weathering-erosion-deposition process had, and still has, in the formation of our terrain.

CT Science Standards: 3.1.a, 3.3.a, 3.4.a, 4.3.a, 7.3.a, 7.3.b

NGSS: 2-ESS1-1, 4-ESS1-1, 4-ESS2-1, MS-ESS1-4, MS-ESS2-2, MS-ESS2-3

Custom Program

ALL GRADES



Not finding exactly what you're looking for? Contact us to have a program designed specifically for your class.

CT Science Standards: Any

NGSS: Any



Forest Ecology

GRADES 4-8



Students will hike Great Hollow's trails to explore the relationships between organisms and their forest habitat. By engaging in hands-on activities students will learn about the biotic and abiotic factors in a forest ecosystem, the adaptations of forest organisms, symbiotic relationships, and energy transfer through the trophic levels. This program pairs well with "Life and Death in the Forest."

*Wooded area must be available on school grounds or within walking distance to be offered at your school.

CT Science Standards: 4.2.a, 6.2.a, 6.2.b, 7.4.a

NGSS: 5-PS3-1, 5-LS2-1, MS-LS2-1, MS-LS2-2, MS-LS2-3, MS-LS2-4

Invertebrate Investigations

ALL GRADES



Invertebrates make up at least 97% of all animal species on Earth! In this class students will collect, classify, and compare invertebrates from a stream, the forest floor, and understory shrubs using three different sampling methods. Additional topics covered include unique invertebrate characteristics and adaptations.

*Wooded area must be available on school grounds or within walking distance to be offered at your school.

CT Science Standards: PK.1.a, PK.2.a, K.2.a, 1.2.a, 1.3.a, 3.2.a, 4.2.a, 5.2.a, 6.2.a, 6.2.b

NGSS: K-LS1-1, 1-LS1-1, 1-LS1-2, 2-LS4-1, 3-LS2-1, 3-LS4-3, 3-LS1-1, 3-LS4-2, 4-LS1-1, 4-LS1-2, 5-LS2-1, MS-LS2-1, MS-LS2-2, MS-LS1-4

The Life of Plants

GRADES 1-2



Is It Alive?

GRADES PK-1



Is it alive? How do we know? Through an interactive discussion students will learn the seven characteristics that all living things possess (movement, respiration, sensitivity, growth, reproduction, excretion, and nutrition), and then put their knowledge to the test by comparing a live earthworm to a gummy worm.

CT Science Standards: PK.1.a, PK.2.a, K.2.a, K.3.a, K.4.a, 1.2.a

NGSS: K-LS1-1, K-ESS2-2

Life and Death in the Forest

GRADES 4-8



In this interactive game students will learn about the relationships between producers, consumers, decomposers and their environment by experiencing it firsthand. Data will be graphed between each round and be used in a cumulative discussion covering trophic levels, population fluctuation and carrying capacity. This program pairs well with "Forest Ecology."

* Large open area (sports field, gym, etc.) must be available to offer this program at your school.

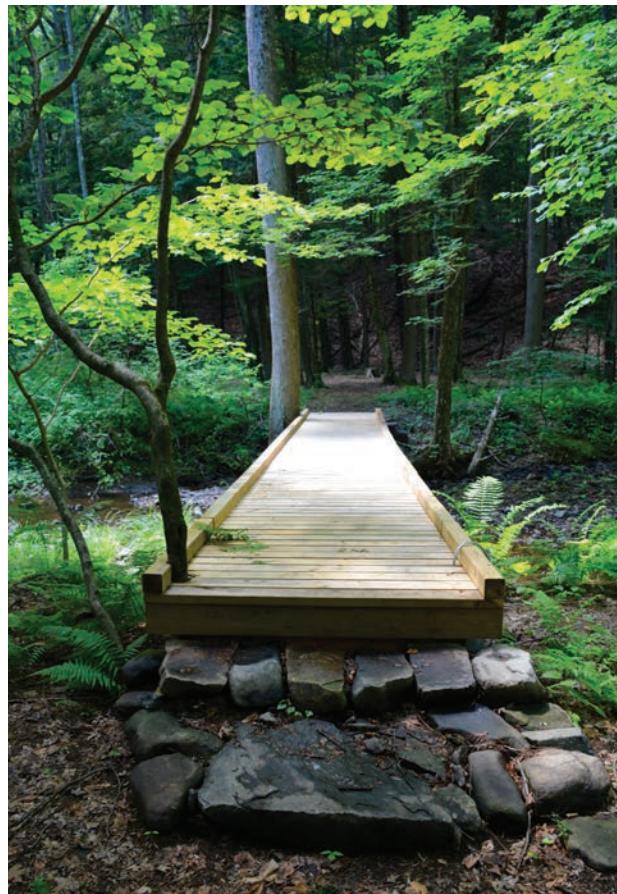
CT Science Standards: 4.2.a, 6.2.a, 6.2.b, 7.4.a

NGSS: 5-PS3-1, 5-LS2-1, MS-LS2-1, MS-LS2-2, MS-LS2-3, MS-LS2-4

Life as we know it would not exist without plants! By engaging in hands-on activities and games students will explore the incredible life cycle of plants. Topics covered include photosynthesis, seed dispersal/pollination, plant adaptations, and carnivorous plants.

CT Science Standards: 1.2.b, 1.3.b, 2.2.a, 2.3.a, 2.3.b, 2.4.a

NGSS: 2-LS2-1



Plant or Animal?

GRADES PK-K



What makes a plant a plant and an animal an animal? Students will learn the characteristics of both groups of organisms by engaging in hands-on activities and comparing live animals and plants up close.

CT Science Standards: PK.1.a, PK.2.a, K.2.a, K.3.a, K.4.a

NGSS: K-LS1-1



Reptiles and Amphibians of Connecticut



*

ALL GRADES

Do snakes have bones? Can turtles come out of their shells? Why are frogs slimy? Students will learn about the importance of the “herpetiles”—reptiles and amphibians—in our area by engaging in age-appropriate hands-on activities and seeing a living example of each type of animal up close. Students will also go on a scavenger hunt to track down turtles that are tagged with radio transmitters at Great Hollow as part of a scientific study.

*Outreach program does not include turtle tracking.

CT Science Standards: PK.1.a, K.1.a, K.2.a, 1.2.a, 1.3.a, 2.3.b, 3.2.a, 4.2.a, 5.2.a, 6.2.a, 6.2.b, 8.2.b

NGSS: K-LS1-1, K-ESS3-1, 2-LS4-1, 3-LS4-3, 3-LS1-1, 3-LS3-2, 3-LS4-2, 4-LS1-1, 4-LS1-2, MS-LS2-1, MS-LS1-4, MS-LS2-4, MS-LS4-6

Sensory Awareness



GRADES PK-1

How do our senses compare to those of the animals that live around us? By engaging in hands-on games and activities and visiting with one of Great Hollow's resident animals, students will discover how local critters (and people!) use their senses to survive.

CT Science Standards: PK.1.a, PK.2.a, K.1.a, 1.2.a, 1.2.b

NGSS: K-LS1-1

Soil Science

GRADES 2-5



What's so important about soil? By engaging in investigations using scientific tools such as soil probes, sifters, and "Berlese funnels" (to sample invertebrates from the forest floor), students will discover that soil—a substance many people rarely give a second thought—is the foundation of all life.

*Wooded area must be available on school grounds or within walking distance to be offered at your school.



CT Science Standards: 2.3.a, 2.3.b, 2.4.a, 3.3.a

NGSS: 2-ESS2-1, 4-ESS2-1, 5-LS1-1

Stream Ecology

GRADES 4-8



Students will determine the health of a stream ecosystem by engaging in biological sampling of macroinvertebrates and chemical testing of the water. Topics covered include biotic and abiotic factors of a stream ecosystem, water quality, biological indicator species, bioaccumulation, direct vs. indirect observation, and the effects of pollution on stream ecosystems.

*Stream must be available on school grounds or within walking distance to be offered at your school.

CT Science Standards: 4.2.a, 5.2.a, 6.2.a, 6.2.b

NGSS: 4-LS1-1, 5-LS2-1, 5-ESS3-1, MS-LS1-4, MS-LS1-5, MS-LS2-1, MS-LS2-3, MS-LS2-4, MS-LS2-5, MS-LS4-6, MS-ESS3-3

Stream Story

GRADES PK-3



Streams can tell a fascinating story about the life contained in and around them, if we only take the time to listen. In this class students will have the opportunity to get their hands dirty and their feet wet as they explore one of Great Hollow's streams looking for signs of life. Topics covered include stream organisms (trout, frogs, salamanders, macroinvertebrates, beavers, etc.), metamorphosis, adaptations, and predator-prey interactions.

*Stream must be available on school grounds or within walking distance to be offered at your school.

CT Science Standards: PK.1.a, PK.2.a, K.1.a, K.2.a, 1.2.a, 1.3.a, 2.3.a, 2.3.b, 3.2.a, 3.4.a

NGSS: K-ESS2-2, K-ESS3-1, 3-LS4-3, 3-LS4-4, 3-LS1-1, 3-LS3-2



Vernal Pools

GRADES 4-8



Students will get their hands dirty and their feet wet as they explore interrelationships of the organisms that call these ephemeral woodland ponds home. We will also discuss what defines a vernal pool, the “obligate species” that are dependent on these unique habitats (e.g., fairy shrimp, mole salamanders), and the seasonal cycle of vernal pools.

**The hike to Great Hollow’s vernal pool is approximately ½ mile with significant elevation gains.

CT Science Standards: 4.2.a, 4.3.a, 5.3.a, 6.2.a, 6.2.b, 6.4.a, 7.4.a, 8.3.b

NGSS: 4-LS1-1, 5-PS3-1, 5-LS2-1, MS-LS1-4, MS-LS2-1, MS-LS2-2, MS-LS2-3, MS-LS2-4



Water, Water, Everywhere!

GRADES 2-8



Did you know that the water you brushed your teeth with this morning is the same water that a dinosaur splashed in eons ago? All the water currently on Earth is all there has ever been. Through hands-on activities students will learn about the water cycle, determine the ratio of freshwater to saltwater on our planet, and explore methods of using this precious resource responsibly.

CT Science Standards: 2.3.a, 2.3.b, 4.3.a, 6.2.a, 6.4.a, 7.3.a

NGSS: 2-ESS2-3, 4-ESS2-1, 4-ESS3-2, 5-ESS2-2, MS-ESS2-4, MS-ESS3-1

Winter Ecology

ALL GRADES



Students will hike Great Hollow’s trails to learn about the relationships between living things and their winter environment. Through age-appropriate outdoor games and hands-on activities students will discover the variety of strategies that organisms employ to survive (or avoid altogether) the harshest season of the year. Students will also track animals in the snow, weather permitting.

*Wooded area must be available on school grounds or within walking distance to be offered at your school.

CT Science Standards: PK.2.a, PK.3.a, K.3.a, 1.2.a, 1.2.b, 2.2.b, 4.2.a, 5.3.a, 6.2.a, 6.2.b, 8.3.a, 8.3.b

NGSS: K-LS1-1, K-ESS2-2, K-ESS3-1, 4-LS1-1, 5-LS2-1, MS-LS2-1, MS-LS2-2, MS-LS1-4, MS-ESS2-6



The World of Birds

ALL GRADES



Students will learn all about the fascinating lives of birds and the unique features and adaptations that separate them from all other animals. By engaging in age-appropriate hands-on activities students will discover the relationship between the physical characteristics of beaks and the food birds eat, how birds descended from dinosaurs, and how early birds first took to the sky. Many concepts are illustrated with our captive, non-releasable hawks and owls, with which students can have up-close encounters. During spring and fall programs, students will also observe how birds are captured and banded at Great Hollow for research, providing them with close looks at the colorful spring migrants that pass through our area.

**Outreach program does not include the bird capture and banding demonstration.

CT Science Standards: PK.1.a, K.1.a, K.2.a, 1.2.a, 1.3.a, 2.3.b, 3.2.a, 4.2.a, 5.2.a, 6.2.a, 6.2.b, 8.2.b

NGSS: K-LS1-1, K-ESS3-1, 2-LS4-1, 3-LS4-3, 3-LS1-1, 3-LS3-2, 3-LS4-2, 4-LS1-1, 4-LS1-2, MS-LS2-1, MS-LS1-4, MS-LS2-4, MS-LS4-6





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