



Moose Hill Wildlife Sanctuary

School Programs

GRADES PRE-K-12

2020

[massaudubon.org/
moosehill](https://massaudubon.org/moosehill)



About Mass Audubon Programs

Through field studies and classroom explorations, Mass Audubon programs provide hands-on, inquiry based experiences with science content and practices. Our educators enhance students' scientific understanding of species and habitats; ecological concepts such as food webs, cycles, systems, adaptation, and evolution; climate change; and interrelationships between people and nature.

Greetings, Educators!

As a unique sanctuary, Moose Hill marks the ecotone boundary between the flat, southeast region and the hill region of Massachusetts. Historically, this represented the boundary between the Wampanoag and Massachusetts tribes. Hands on observation of our stone walls, fields, and barns show evidence of the Colonial period. These exciting features allow for a broad spectrum of educational and entertaining programs based on ecology, geology and history.

Space for your entire team: We can serve up to 130 students when two programs are selected for your full-day program.

Small student to naturalist ratio: We maintain a ratio of one Moose Hill teacher naturalist to 12 - 14 students ideally engaging every student in outdoor learning.

Staff: Our teacher-naturalists have backgrounds ranging from wildlife biology, geology, botany, education and more. Each has a passion for teaching and for sharing the wonders of Moose Hill.

Convenient location: The sanctuary is just a few minutes drive from Route 95 or Route 27 in Sharon.

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We strive to keep program costs low. The fee for most 2-hour programs here at Moose Hill is \$10 per student. Teachers and chaperones are free of charge.

The cost for a combined or full-day program starts at \$14 per student. If transportation costs are preventing you from coming to us, we offer onsite programs at your location.

The cost for programs after June 1 goes up to \$14 per student for a 2 hour program.

Most of our programs run if the weather is decent. Which means a light rain, cooler temperatures, etc. We work with you and your district to make sure that students will be safe with regards to the weather. We often can reschedule programs that need to be cancelled due to weather.

CONTACT INFORMATION

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Programs at Our Wildlife Sanctuary

We engage youth in learning while understanding their individual needs and desires. Programs include a mixture of exploring, observing, listening, playing, and reflecting. Through our program goals, children connect with nature through hands-on, outdoor experiences.

Grades Pre-K to 2

Homes are Habitats

Animals have the same needs as people—food, water and shelter. While exploring forest and field habitats with students, our teacher-naturalists focus attention on specific native wildlife, the signs they leave behind and how their needs are met. Students enjoy playing an active game that reviews what they have learned.

Maple Sugaring Season

Explore this magical time when the sap rises! Learn how tree function changes through the seasons; observe tools used by Native Americans; try using a hand drill and hammer; and savor the different tastes of maple sap and syrup.

T Offered only in February and March.

Native American Pathways

Enjoy a guided walk as you learn to view the forest as local Native Americans did—seeing the earth as your source of food, medicine and shelter. Listen and learn from a legend and visit our wetu!

Senses Galore

Heighten your senses and use them to explore the forest as a wild animal does. Use different eyes like binoculars to see like a hawk and other optics to see like an insect, test your nose along a scent trail and play a game to test your hearing skills!

Signs of the Season

Discover the delights of a walk in the woods as you observe how the plants and animals respond to seasonal weather changes. Play a game using natural elements to help you learn about the outdoor world!

Tree-mendous

Through role-play, students come to understand how a tree functions and changes with the seasons. Learn about conifers and broadleaf trees and identify some trees by leaf shape. Observe the life cycle from seedling to maturity to decay while we discover which animals rely on trees!

Programs at Moose Hill Wildlife Sanctuary

Grades 3-5: Life Science

Ecosystem of the Vernal Pool

Explore pool edges for signs of **amphibians**, study water samples in search of insect larva and determine what makes up the **food chain** of this **ecosystem**. This program is designed to be paired with our *Pond in the Classroom* program.

Habitat Hunt

Discover three habitats unique to different native animals and learn how to classify them based on food, shelter, and water you have found. Play *Oh Deer* to discover how **population** size is dependent upon the availability of resources in their **habitat**.

Insect Safari

Investigate the forest and field edges in search of insects, determine the insect group that they belong to and place them in the **food chain**. Learn about insect **classification** as you sing our Insect Song. Enjoy a relay game while you learn about different types of **metamorphosis**!

Maple Sugaring Through Time

Learn first-hand that plants make sugar! Discover the connection between the **properties of water** and the **adaptations of trees** to the season, try the **tools** used by **Native Americans** and **Colonial** farmers and observe the process of concentrating sap to produce syrup.

**Offered in February, March, and possibly early April.

Pond Life

Use tools to **sample** the wetland edge as you learn to **classify** aquatic insects; observe stages of **metamorphosis** and discover the **adaptations** used to survive in a watery world. Build an aquatic food chain using the creatures we discover. This program is enhanced when combined with our *Pond in the Classroom* program.

Tracks and Traces

Examine the **physical characteristics** of body, leg and foot type determine an animal's track **pattern** and apply this knowledge to **solve** track mysteries. Explore the trails for the signs animals leave behind and discover how burrows and scat are used to identify an animal!

Trees are Terrific

Explore the forest as you learn to **classify** trees, observe the **life cycle** from seed to log, and dig into the earth to discover that decomposing leaves help to create **soil**. Enjoy activities that will help you to understand tree anatomy and how it functions to make sugar and adapts to seasonal changes.



Grades 3-5: Social Science

Colonial Life

The challenges of the early days come to life as students card and **spin wool**; write with **quills**; dress in Colonial-style **clothing** and make decisions about where to build a homestead. This program can be held partially indoors or held at your school.

Native American Life

Experience various aspects of what life was like for indigenous people here in Massachusetts.—hear a **legend** in the wetu (home), see **foods** that were gathered and grown, use a bow drill **fire kit**, learn hunting skills, play games, and make a symbolic necklace **craft**. This program can be held partially indoors. We can also bring this program to your school.





Programs at Moose Hill Wildlife Sanctuary

Grades 3-5: Earth Science

Erosion and Landforms of New England

Bring earth's history to life for your students as they stand on bedrock that was formed in the Paleozoic and see first-hand how glaciers have marked the New England landscape through weathering and erosion. Climb to the summit to observe exposed bedrock, striations, and evidence of plucking. Visit our glacial erratic and use critical thinking skills to determine the path the glacier took. See evidence of erosion on our property and see ways in which erosion is naturally controlled. This program can be combined with our *Rock On* program for a full day.

Rock On

Through games, hikes and comparisons students will learn about the **rock cycle** and how **soils** are formed. Use a simple key to determine rock type; observe signs of erosion and **weathering** atop Moose Hill! This program can be combined with our Landform program for a full day.

Weather & the Forest Community

Act out being air molecules to gain an understanding of the **atmospheric conditions** that influence weather. Take simple weather **measurements** and make a **forecast**. Enjoy a walk as you discover how the forest community is **adapting** to climate change over time. Surcharge: \$1/student

Custom programs:

We love working with teachers and students to develop programs that we can either bring to you at your school, or have you experience here at Moose Hill.

Topics we have expertise in:

Weather

Climate Science

Climate Change in Massachusetts

Teaching observation skills

Hosting Climate Cafe sessions at your school



Programs at Moose Hill Wildlife Sanctuary

Grades 6-8

Adaptations and the Food Web

Compare mammal skulls and discover the **adaptations** that allow animals to survive as a predator or prey. Use your knowledge to identify an unknown skull. Enjoy a short hike while looking for signs left behind by **primary and secondary consumers**, determine the food chains involved and link these to create the diverse **food web** of this ecosystem.

Climate Science & the Forest Community

This program introduces students to how **Climate Science data is collected and used**. Enjoy a guided walk as you discover how the forest community has **adapted** to climate and learn what scientists think will happen to this forest in response to climate change.

Decomposition Mission

In this activity, students investigate the fascinating and complex process of decomposition and lay the foundation for deeper understanding of concepts related to matter and energy transfer in ecosystems. Through exploration and discussion, students go beyond simple definitions. Instead, students discover key characteristics of decomposition as they create a sequence for decomposing wood and leaves.

Forest Ecosystem and Adaptation

Ecosystems are constantly changing. Discover the keystone species that cause most change to our forests; learn to identify invasive species, observe a field undergoing **succession** and look for signs of **competition** among plants. A role-play activity will bring understanding of the **environmental issues** of fragmentation and habitat loss.

Landforms of New England

Bring earth science to life for your students as they see first hand how **glaciers** have marked the New England landscape of Moose Hill. Stand atop an **esker** while you imagine a river passing under the ice. Climb to the summit to observe exposed **bedrock**, striations and evidence of plucking. Discover how geologists use **erratics** to determine the glacier's path.

Ropes of Ecology (3 hours)

Our Ropes of Ecology program combines the group development aspects of a traditional teambuilding program with ecological literacy. The program is hands on and can cover specific topics such as geology, hydrological cycle, and ecological terminology. Or you can select an overview type of program which focuses on several topics.

Teambuilding (3-6 hours)

Our team development program provides a custom designed experience for your students. This program is a great way to start off your school year or build your school group or team. Our program can be done either as a half or a full day option.

Tracks and Traces

Learn how the **physical characteristics** of body, leg and foot type determine an animal's track **pattern** and apply this knowledge to **solve** track mysteries. Explore the trails for the signs animals leave behind and discover how burrows and scat are used to identify an animal!

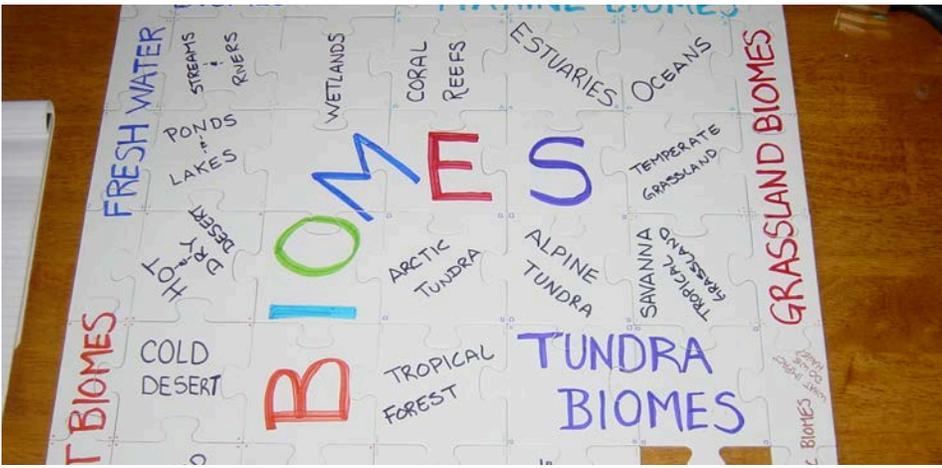
Watersheds and Wetlands

See a demonstration of **watershed** function; use a **contour map** to develop a hypothesis about water flow at Moose Hill and evaluate the actual topography to determine if you are correct. Make wetland and upland **soil comparisons**; learn about wetland **indicator plants**; and play a game that demonstrates the importance of wetland protection.

Weather and the Forest Community

Act out being air molecules to gain an understanding of the **atmospheric conditions** that influence weather. Take simple weather **measurements** and make a **forecast**. Enjoy a guided walk as you discover how the forest community has **adapted** to climate and learn what scientists think will happen to this forest in response to climate change.





Programs at Moose Hill Wildlife Sanctuary

Grades 9-12

Climate Science

Using climate data for Massachusetts and New England this program brings students through an exploration of what climate science is and how the data is used. We will also look at what is changing here by having students make observations that will be added to our citizen science work.

Ropes of Ecology (3 hours)

Our Ropes of Ecology program combines the group development aspects of a traditional teambuilding program with ecological literacy. The program is hands on and can cover specific topics such as geology, hydrological cycle, and ecological terminology. Or you can select an overview type of program which can focus on several topics.

Teambuilding (3-6 hours)

Our team development program provides a custom designed experience for your students. This program is a great way to start off your school year or build your school group or team.

Our program can be done either as a half or a full day option.

Specific topics can also be focused on such as leadership, communication, planning, and developing a sustainable community.

Tracking and the Science of Observation.

Tracking has been called the origins of science. This program introduces students to the methodical practice of gathering information about tracks left behind by animals and using that information to determine what made those tracks. This program also focuses on learning to determine when and how the animal was moving.

Custom programs:

We love working with teachers and students to develop programs that we can either bring to you at your school, or have you experience here at Moose Hill.

Topics we have expertise in:

Weather

Climate Science

Climate Change in Massachusetts

Hosting Climate Cafe sessions at your school

Programs at Your School & in Your Community

Grades K-1

Bats - Learn about the only winged mammal - how big are these creatures? What do they eat? How do they eat? Where do they go in the winter?

Butterflies - Learn that butterflies are insects and understand their life cycle, hear a Native American legend and discover how the patterns on their wings help butterflies evade predators.

Eggs and Nests - Learn why birds don't use nests year round. Look at nests and determine how they differ. Play a game to discover how much work it is for parent birds to feed a nest full of babies.

Frogs and Toads - Learn how these creatures differ as well as what they have in common. Explore the survival techniques of native frogs and visit with one.

Honeybees - Learn the three types of bees in a honeybee hive. Props are used to illustrate the different roles a worker bee takes on during her life.

Insects - Explore the life cycle of insects and learn how to identify some common species. Study the body parts of an insect. Games make this a fun class.

Native American Pathways: Select one of the following programs that teach about the lifestyle of local tribes—Foods Gathered and Grown or the Home and Legends.

Opossums - Discover cool facts about this marsupial and how playing dead is not really a game.

Owls - Learn how owls have adapted to hunting at night by studying a skull, talons, and feathers. Study our models of New England owls and hear their calls!

Salamanders - Discover the differences between lizards and salamanders. Visit with a salamander and learn about local species.

Turtles - What makes a turtle a reptile? Listen to a story about box turtles. Learn about native turtles. Examine turtle shells and discover why a snapping turtle deserves respect.

Winter Survival - A Native American legend leads us into a discussion on how animals hibernate, migrate, or stay active during the cold months. Feel the difference between an animal's summer and winter coat. Test and

Grades 2-6

Amphibians - Learn how frogs, toads, and salamanders differ as well as what they have in common. Explore the survival techniques of amphibians and visit with one. This program combines well with our Vernal Pool field trip.

Bird Beak Adaptations - Short beaks, long beaks does it make a difference to the bird? Try your hand at manipulating tools that mimic bird beaks and learn what different birds eat. Discover why some birds must migrate in the fall. Surcharge: \$10/classroom.

Butterflies and Host Plants - The different food needs of caterpillars and butterflies are compared. Students work through an activity where they identify an image of a butterfly with a field guide and then determine its needs during different stages of its life cycle.

Colonial Life - The challenges of the early days of New England come to life for students as they card and spin wool; write with quills; dress in Colonial-style clothing and/or determine where to build a homestead. Select two of the listed options per hour. Additional naturalists are available to add programs and create stations the students rotate through.

Compass Skills - Through games and instruction, students learn the parts of a compass and how to take bearings. We provide the compasses; you provide the yard or gym!

Endangered Species - Discussion and interactive games introduce students to some of Massachusetts' threatened and endangered animals. Learn how threats such as habitat loss, fragmentations, and incompatible land use affect how animals and plants survive and flourish.



Afterschool Enrichment Programs

We provide a dynamic and inquiry-based afterschool enrichment experience. Students learn about field science, local habitats, and wildlife. Individual and series programs are available and may include nature-based crafts, games, literature, storytelling, journaling, and other activities.

Naturalist-in-Residence Programs

A Moose Hill teacher-naturalist will facilitate seasonal explorations of schoolyard or nearby habitats. Programming is integrated into classroom curricula to increase students' knowledge of and appreciation for local landscapes, and wildlife.

Teacher-naturalists partner with classroom teachers to develop lessons that vary in structure. Examples include field studies; planting/harvesting; meeting native wildlife; and incorporating nature-based literature, art, and journaling.

Specialty Programming

We offer personalized curricular consultation and customized programming to meet your learning goals and objectives. Options include:

Assemblies

Scout Programs

Home School Programs

Keynote addresses:

Nature Play

Nature Connection

Nature and Mindfulness Connections.

Professional Development Programs

We are a DESE-approved PDP provider.

Workshops are designed to give classroom teachers and additional staff tools needed to develop and implement engaging field investigations that support core concepts and practices found in the Massachusetts Science Standards.

We study local habitats to learn about ecological principles, scientific inquiry, and species identification. Our educators will demonstrate how to teach lessons in a classroom or schoolyard setting, using a hands-on, practice-based approach.

Program Overview

Curriculum Review

Review existing curriculum to gain an understanding of needs and be able to design individualized programs for each grade level.

Schoolyard Habitat Investigations

Develop outdoor, field-based science curriculum using available natural resources.

Content Workshops

Review ecology and earth, life, and physical science concepts outside the classroom, and learn how to curate both schoolyard and classroom-based learning experiences.

Curriculum Planning & Support

Develop site- and grade-level-specific, practice-based outdoor curriculum in direct support of Massachusetts Science and Technology/Engineering Standards.



Mass Audubon protects 36,500 acres of land throughout Massachusetts, saving birds and other wildlife, and making nature accessible to all. As Massachusetts' largest nature conservation nonprofit, we welcome more than a half million visitors a year to our wildlife sanctuaries and 20 nature centers. From inspiring hilltop views to breathtaking coastal landscapes, serene woods, and working farms, we believe in protecting our state's natural treasures for wildlife and for all people—a vision shared in 1896 by our founders, two extraordinary Boston women. Today, Mass

Audubon is a nationally recognized environmental education leader, offering thousands of camp, school, and adult programs that get over 225,000 kids and adults outdoors every year. With more than 125,000 members and supporters, we advocate on Beacon Hill and beyond, and conduct conservation research to preserve the natural heritage of our beautiful state for today's and future generations. We welcome you to explore a nearby sanctuary, find inspiration, and get involved. Learn how at massaudubon.org.