



Drumlin Farm Wildlife Sanctuary

EDUCATION PROGRAMS



SCHOOL AND GROUP PROGRAMS

PREK - 8TH GRADE

To **register** for any of our
school and group
programs, please contact us at:
781-259-2220 or
education@massaudubon.org



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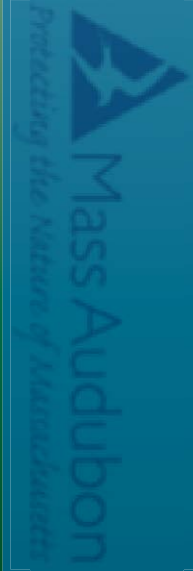
Protecting the Nature of Massachusetts



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ENVIRONMENTAL
EDUCATION
PROGRAMS



Drumlin Farm Wildlife Sanctuary

*Hello and Welcome to Drumlin Farm Wildlife Sanctuary
School and Group programs!*

Here at Drumlin Farm Wildlife Sanctuary we strive to promote awareness of the interdependence of people, land and wildlife through environmental education, stewardship of regionally significant habitat, and sustainable agricultural practices. By fostering an understanding of how our everyday choices affect the environment, we seek to inspire individuals, groups, and communities to develop and act upon their own conservation ethic in protecting the nature of Massachusetts.

Our goal is to integrate your classroom curricula with our educational programs and offer opportunities to investigate the ecology of diverse habitats and the adaptations of the plants and animals that live there.

We design all our programs to support the Massachusetts Curriculum Frameworks and offer curriculum consultation before and after every visit.

Please enjoy looking through our program catalog and let us know how we can help to provide you and your students with a memorable learning experience. We look forward to working with you!

Warmest Regards,
*The Drumlin Farm
Education Team*

The programs listed below offer many opportunities to investigate the ecology of diverse habitats at Drumlin Farm Wildlife Sanctuary as well as the adaptations of the animals and plants that live here. The 250 acres that comprise our sanctuary include vernal pools, wetlands, forests, fields and farm.

We design all our programs to support the Massachusetts Curriculum Frameworks in Life and Earth Sciences, Technology and Engineering, History, Geography and Social Science. Please call us if you need more information on how individual programs support these frameworks.

Pre K-K

Life on the Farm (Self Guided)

Explore fields, garden barns and trail at your own pace to discover life on a local farm. Interact with our Teacher Naturalists as they engage in daily chores and other farm activities. Observe and learn about the wild animals with which we share the land, enjoy a scenic hayride and taste some farm fresh treats!

Homes and Habitats

Explore fields, forests and wetlands with our Teacher Naturalists as you look for tracks and signs of native wildlife. Discover where these animals live and learn why they make these places their home.

Grades 1-2

Seeds and Plants

Investigate the life cycle of crops, plants and trees. You will look at seeds and how they travel, as well as how the roots, leaves, stems and flowers work together to help the plant grow and reproduce.

Animal Explorations

Explore field, forest and wetland habitats to study adaptations, habitats, tracks and signs of **one** of the following focus groups: *mammals, birds, reptiles and amphibians or insects.*

Soil Investigations

Explore the farm and sanctuary to find different soil types for study and compare their components and characteristics. Learn what soil is made of, where it comes from, and who lives in it.

Pond Life

Explore the shores and waters of vernal pools and ponds to learn about the plants, animals and insects that live there and the vital role these critical habitats play in their life cycles.

Farm Explorations

Learn about growing crops and raising animals on a sustainable farm. Each group within your class will focus on a different aspect of the farm. Depending on the season and the needs of the farm, you might plant, weed, harvest or care for our livestock.

Wild and Domestic

Through observing our farm animals and captive wildlife, compare and contrast the characteristics, adaptations and needs of native wildlife and those of traditional New England farm animals.

Native Pathways (September - December)

Explore our fields and forests as if it were 1000 years ago. Where would you live? What would you eat? What tools would you use? How has the land changed? Through a variety of hands-on activities, discover the relationships among plants, animals, people and the resources we share. Learn how we can live more lightly on the land by listening to the stories of the people who came before us.

Winter Detectives (December - March)

As the days grow colder and winter sets in, explore the different ways plants, animals and people survive the season. Search the sanctuary for the tracks and signs that are left behind as you study which animals hibernate, brumate, migrate and stay active.

Maple Sugaring (February - March)

Learn about maple trees and their unique role in our New England farms. Participate in the collection and processing of sap to syrup, taste-testing along the way.

Grades 3-5

Pond Communities

Explore aquatic environments using dip nets and collection equipment to study both the organisms and their dependence on these habitats. Develop critical thinking skills by learning to use keys and field guides and collecting and analyzing data.

The Ecology of Seeds and Plants

Investigate the life cycle of wild flora and domestic crops from seed to plant. Study seed dispersal, plant structure, function and adaptations as you engage in crops chores and more.

Animal Investigations

Explore the sanctuary to discover habitats, tracks and signs of our local wildlife. Discover why animals are able to survive and thrive in their niche and the varied seasons of Massachusetts. Learn about the life cycle, adaptations, and interdependence of **one** of the following: *mammals, birds, reptiles and amphibians or insects.*

Habitats of New England

Learn how geography and climate determine the makeup of our local ecosystems. Explore the sanctuary to find and compare different habitats (including forest, field, wetland and farmland) and study their various components. Learn about the health of our local environment and the importance of biodiversity.

Soil Science

Sample and study diverse soils and compost found in various habitats including field, forest, farm and wetland. Identify the components and properties of soil and learn about erosion, decomposition, absorption and other key elements of this habitat and its inhabitants.



Grades 3-5 (continued)

From Farm to Market

Work with animals and crops using real farm tools. Learn how and why we grow and raise what we do and the journey of farm animals and plants to your home. Depending on the season and the needs of the farm, you might muck, feed, water, plant, weed and/or harvest.

Ecological Issues
(Recommended for 5th grade only)

Humans need places to live, food to eat and materials to use. What is the balance between the earth's limited space and resources and the basic needs of plants, animals and humans? While studying our captive wildlife and working farm, explore and learn about the interrelationships between humans and the natural world.

Native Pathways
(September - December)

What is our relationship to the first people who lived here? How did they survive and how does it compare to our current way of life? Through a variety of hands-on activities, explore the dependence of people to the land and its resources. Learn how we can live more lightly on the land by listening to the stories of the people who came before us.

Winter Detectives (December - March)

Explore the adaptations of plants, animals and humans for survival in winter. Learn about survival strategies – hibernation, migration, brumation, staying active and dormancy, as we explore the sanctuary for tracks and signs in different habitats.

Maple Sugaring (February - March)

Learn about this traditional New England crop from sap to syrup through tree investigation, assisting with sap collection, using sugaring equipment and taste-testing.

Grades 6-8

Ecological Issues

Humans require land to live on. We need to grow and raise food, generate energy, manufacture materials, recreate and more. What is the balance between the earth's limited space and resources and the basic needs of plants, animals and humans? What are the consequences if this delicate balance is disrupted? Explore these and other ecological issues by studying our captive wildlife and sustainable farm to inspire student discussion.

The Science of Farming and Where Our Food Comes From

What are the challenges involved in growing and raising food? How do you feel about raising animals for meat or developing land for crops? What are the energy, quality of life and ecological issues surrounding the food industry? Explore the facts and your feelings surrounding how your food is grown and raised. As you participate in the day-to-day workings of our farm, explore the issues surrounding genetically-modified food and land use and management.

Habitats of New England

While exploring local New England habitats (including forest, field, wetland and farmland) learn about their various components and interrelationships, how geography and climate determine the makeup of our local ecosystems and strategies for protecting our most critical habitats.

Pond Ecology

Use aquatic sampling equipment to identify and compare the physical, chemical and biological aspects of pond and vernal pool ecosystems and their inhabitants. Discuss vernal pool certification and the importance of protecting these critical habitats.

Winter Ecology (December - March)

Study the many adaptations of native plants, animals and people to a colder climate. Examine the relationship between temperature, humidity and snowfall. Learn how winter conditions affect the survival and habits of different species of both plants and animals – hibernation, dormancy, migration, brumation and staying active.

Maple Science (February - March)

Investigate the production of this traditional New England crop by exploring the history of sugaring and the tools needed to go from sap to syrup. Learn tree identification, anatomy and physiology as you visit our sugar bush and the evaporator. Discover the physical and chemical changes, which occur as sap is transformed into syrup.

- **Classroom Discovery** - a Teacher Naturalist visits your classroom with native wildlife and/or farm animals.
- **Outdoor Exploration** - a Teacher Naturalist takes you and your students further afield to discover ecology in your schoolyard OR at a local habitat. Depending on the program, outdoor explorations may also include meeting native wildlife in your classroom.

For programs that can take place as a Classroom Discovery or Outdoor Exploration or a combination of both, LOOK for this symbol!



We design all our programs to support the Massachusetts Curriculum Frameworks in Life and Earth Sciences, Technology and Engineering, History, Geography and Social Science. Please call us if you need more information on how individual programs support these frameworks.

PreK-K (2, 3 years-K)

Note: Pre-school programs are for a maximum of 15 participants per program.

Which came first?
Chickens and Eggs

Learn about life cycles as you take a careful look at chickens and their eggs. Book this program in combination with "Life on the Farm" and save 10%!

Hatching Out

Birds aren't the only animals that lay eggs! Meet other egg layers and discover more about the wonderful world of eggs.

Miraculous Mice

Busy as a mouse? Discover why these fascinating animals scurry to and fro. Observe mice families interacting with each other and their surroundings.

Wild & Domestic

Explore the differences between wild and domestic animals by observing and comparing native wildlife and farm animals. Book this program in combination with "Life on the Farm" or "Homes and Habitats" and save 10%!

Farm Friends

Meet a few of our farm animals. What are their different roles at the farm? How do we care for them? Book this program in combination with "Life on the Farm" and save 10%!

Soil Cyclers

People aren't the only ones who recycle. Study worms and native wildlife to find out how animals recycle too!

Wild Tales

Hear a favorite childhood story and then meet an animal from the story! Learn where it lives and what it eats. We have our favorites; however feel free to ask us to create a custom Wild Tales program for your students.

Animal Senses

Visit with native wildlife and learn how they use their senses just like us!

Seasonal Discovery

Depending on the time of year, your students can join our naturalists for: Autumn Crawly Critters, Winter Warm Fuzzies, or Springtime New Babies. Book all three and save 10%!

Grades 1-2

Connected Creatures-Web of Life

All living things are connected. By observing live animals, learn how they are interrelated with each other, humans, and the world around them.

Birds of Prey

Observe live birds of prey to learn how they see, hear, fly, and catch their food.

Adaptable Animals:
Backyard Creatures

Many animals learn to make the city or suburban backyards their habitat. Learn how their adaptations help them to thrive in ever-changing environments.

Wild Animals of the Farm

Farms provide homes for domestic animals as well as habitats for wild animals. Meet wildlife that use our fields, forests, and barns as their home.

Egg Layers

Why lay eggs? Learn about this unique adaptation as you study egg development and compare and contrast the various animals that lay eggs.

Miraculous Mice

Observe these active animals and learn how they interact and work together. Watch mice at different life stages as they investigate their surroundings, eat, care for their young, and create shelter for themselves.

Soil Cyclers

Explore the important role worms play in an ecosystem and meet animals that depend on them for food and survival.

Insects and Insect Predators

Insects play a critical role in food webs and ecosystems. Discover some interesting aquatic and terrestrial insects, as well as one of our native animals that relies on insects for food.

Habitats: Living Things
and their Environment

Meet a variety of native animals and learn where they live and why. Discover through observation and inquiry what a habitat is and how different animals adapt to make them their home.

Pond Communities

Does your schoolyard have a pond or is there one nearby? We will send a Teacher Naturalist with ponding equipment to help you and your students explore and learn about the plants, animals and insects that live there and the vital role these critical habitats play in their life cycles. After your field exploration, take an up-close look at native wildlife that depend on pond habitats.



Grades 1-2 (continued)

River Habitats

We can take you to the river or bring the river to you! Discover river habitats by meeting native wildlife and investigating water samples collected from your local rivers and ponds. Explore the plants, insects, and animals that make rivers their homes and the important role these habitats play in local biodiversity.

Soil Explorations

Meet native wildlife that make the underground their home. Explore your schoolyard or nearby habitat to find different soil types and compare their components and characteristics. Learn what soil is made of, where it comes from, and who lives in it.

Winter Survivors!

How do wild animals cope with the changing seasons? They migrate, hibernate or stay active! Focus on the many ways New England animals survive the cold winter.

Earthkeepers

People and animals interact with the land in many ways and continue to adapt to a changing environment. Through a variety of hands-on activities, storytelling and observation of native animals, discover the relationships among plants, animals, people and the land.

Grades 3-5

Web of Life

By observing live animals, discover how every animal is connected to one another and the world around them. Create links between plants, animals, and the flow of energy between them. Discuss the effects if these connections are altered.

Birds of Prey

More compelling than a photo in a textbook, have live birds of prey in your classroom! Learn about the behavioral and physical adaptations they use to hunt and catch their prey.



Backyard Wildlife (Urban or Suburban)

Many animals have had to adapt to making backyards and city parks their habitat. Learn how these amazingly adaptable creatures interact with a constantly changing human environment.

Wild Animals of the Farm

Farms are home for domestic animals and provide habitat for wild animals. Observe native wildlife and learn how the loss of open fields as an important habitat has affected these animals.

The Evolution of Eggs

Learn about eggs and the diversity of animals that lay them. Discover the evolutionary development from amphibians to reptiles to birds.

Soil Science

Meet native wildlife that make the underground their home. Sample and study diverse soils and compost found around your schoolyard or a habitat nearby. Identify the components and properties of soil and learn about erosion, decomposition, absorption and other key elements of this habitat and its inhabitants.

Wetlands and Watersheds

We can take you to the river or bring the river to you! Discover riparian habitats through meeting native wildlife and investigating water samples collected from local rivers and ponds. Explore the plants, insects, and animals that make rivers their homes and the important role these habitats play in local biodiversity.

Pond Ecology

Does your schoolyard have a pond or is there one nearby? Our Teacher Naturalists will come with field equipment to help your students explore and learn about the plants, animals and insects that live there and the vital role these critical habitats play in their life cycles. After your field exploration, take an up-close look at native wildlife that depend on pond habitats.

Mouse Life Cycles

Observe mice at different developmental stages and learn how they relate to each other and their environment.

Insects and Insect Predators

Insects play a critical role in many food webs and in the health of ecosystems. Discover some interesting insects, native and exotic (including Madagascar Hissing Cockroaches or mealworms) as well as one of our native animals that relies on insects for food.

Winter Survival

Winter is a challenging time for wildlife. What coping mechanisms do they use? What physical and behavioral adaptations help them survive? Discussion using wild animals will focus on migration, hibernation, brumation, or staying active.

Habitats and Adaptations

What's the connection between habitats and adaptations? Meet native animals and discover the relationship between what they look like and where they live! Compare the adaptations of different Massachusetts's wildlife.

Earthkeepers

People and animals interact with the land in many ways and continue to adapt to a changing environment. Through a variety of hands-on activities and observation of native animals, discover the relationships among plants, animals, people, and the land.

Grades 6-8

The Science of Birds

Explore concepts of flight as well as the engineering and architecture that goes into nest building. Program materials such as nests, wings, and feathers will be used as well as examples of live native birds.

Critical Habitats

Using live native animals, observe and discuss habitat needs, adaptation, and how energy flows through an ecological community. Discuss the connections between humans and wildlife with the environment we share

Wetlands and Watersheds

We can take you to the river or bring the river to you! Discover riparian habitats by meeting native wildlife and investigating water samples collected from local rivers and ponds. Explore the plants, insects, and animals that make rivers their homes and the important role these habitats play in local biodiversity.

Vernal Pools and Pond Communities

Does your schoolyard have a vernal pool or pond or is there one nearby? Our Teacher Naturalists will come with field equipment to help you and your students explore and learn about the plants, animals and insects that live there and the vital role these critical habitats play in their life cycles. After your field exploration, take an up-close look at native wildlife that depend on pond habitats. Ask us about helping you certify a local vernal pool!

Individualized Programs

If you don't see exactly what you are looking for, call us! We offer individualized programming for schools, scout troops, home schools, special needs students, senior citizens, and a variety of other groups and organizations. Whether you would like one special visit or an on-going series program here at Drumlin Farm or in your community, our education team can help you develop a program that suits your needs.

Please contact

Robin Stuart, our School and Groups Program Coordinator, at 781-259-2217 or rstuart@massaudubon.org for more information.



School Wide and District Wide Professional Development Opportunities

We offer professional development opportunities at Drumlin Farm and at your school. Programs include, but are not limited to: *Wetlands and Watersheds*, *Schoolyard Ecology*, and *Teaching Science through Habitat Investigations: Field, Forest, and Wetland*. Each workshop covers science education as it relates to local habitats through a hands-on, investigative, and inquiry-driven approach.

Please contact

Kris Scopinich, our Education Manager, at 781-259-2221 or kscopinich@massaudubon.org for more information or to design a workshop specific to your curricular needs.

WOW! The Wonders of Wetlands

Members of our education staff are also trained as facilitators for the nationally recognized WOW! *The Wonders of Wetlands* teacher professional development program and curriculum guide. This fun, hands on workshop will cover the basics of wetland habitats and their unique characteristics and be complimented with hands-on activities that you can use in your classroom. Each participant will receive a copy of WOW! *The Wonders of Wetlands: an Educator's Guide*.

Please contact

Robin Stuart, our School and Groups Program Coordinator, at 781-259-2217 or rstuart@massaudubon.org for more information.



On-Site Programs at Drumlin Farm

All programs run **rain or shine** and there is a **ten student minimum**. Program fees are based upon the length of the program and the number of participants, as follows:

Environmental Field Studies and Farm Programs

Students work with a Drumlin Farm Teacher Naturalist in groups of 12-15 students. One teacher or chaperone is included at no charge for every group; additional adults are charged the program price.

2 hours:	\$9.25/student
3 hours:	\$11.75/student
4 hours:	\$13.00/student

Life on the Farm

This is a 2 hour, **self-guided** program with teacher-led learning programs. One teacher or chaperone for every 6 students is included at no charge; additional adults are charged the program price.

2 hours:	\$8.25/student
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Native Pathways and Maple Sugaring

Students work with a Drumlin Farm Teacher Naturalist in groups of 12-15 students. One teacher or chaperone is included at no charge for every group; additional adults are charged the program price.

2 hours:	\$9.50/student
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Audubon Ark Outreach Programs at your School

Classroom Discovery

A Teacher Naturalist visits your classroom with native wildlife and/or farm animals.

Pre-school programs have a maximum of 15 participants.

All other programs have a maximum of 30 participants.

Weekdays

(2 program minimum)	\$80.00/30 minutes
(2 program minimum)	\$110.00/45 minutes
	\$135.00/hour

Evenings

\$195.00/hour

Weekends

\$195.00/hour

Outdoor Explorations

Let our Teacher Naturalists help you discover a whole new world in your schoolyard or in your community. Depending on the program, explorations may include meeting native wildlife. We can accommodate outdoor investigations at your site for up to 30 participants per visit. Available for Grades 1-8.

Weekdays

\$245.00/90 minutes

Combination of Classroom Discovery and Outdoor Exploration

Book a Classroom Discovery and Outdoor Exploration program together and **save 10%** on each program.

Comprehensive Programming

Book a combination of On-Site Programs at Drumlin Farm Wildlife Sanctuary and Ark Outreach Programs together and **save 10%** on each program. Please ask for more details.

Large Group Demonstrations

Informal and interactive teaching stations designed for large group functions and events.

Any day, Anytime \$270.00/hour

**** A travel fee applies to all Audubon Ark Outreach Programs.

High School, After-School, Scout, Home School and Other Group Programming

In addition to our comprehensive selection of programming, we offer curriculum consultation to develop programming that meets your individual needs.

