



School Program Name:	Insect Safari
Name of Sanctuary:	Moose Hill Wildlife Sanctuary
Grade Level:	Grades 3 – 5
Location Options:	At the sanctuary or your site
Time:	2 hours or combine with a second program for a full-day field trip
For more info:	moosehilledu@massaudubon.org

Program Description

Students will learn how insects are classified when you sing our “Insect Song.” Investigate the forest and field edges in search of insects and place them in the food chain. Enjoy a relay game while you learn about different types of metamorphosis.

Significant savings are offered when you select a second program to create a full-day of hands-on learning at Moose Hill. This program combines well with Habitat Hunt, Pond Life, or Ecosystem of the Vernal Pool. Because of our large trail system and full-day option, we can serve up to 130 students for many programs. We provide a ratio of one Moose Hill teacher-naturalist to 12 to 14 students.

Massachusetts State Curriculum Frameworks

Subject:	Science and Technology
Topic:	Life Science

Learning Standards

Characteristics of Plants and Animals

3-5 Life Science #1: Classify plants and animals according to the physical characteristics that they share.

Structures and Functions

3-5 Life Science #3: Recognize that plants and animals go through predictable life cycles that include birth, growth, development, reproduction, and death.

3-5 Life Science #4: Describe the major stages that characterize life cycles

3-5 Life Science #5: Differentiate between observed characteristics of plants and animals that are fully inherited (e.g., color of flower, shape of leaves, color of eyes, number of appendages) and characteristics that are affected by the climate or environment (e.g., browning of leaves due to too much sun, language spoken).

Adaptations of Living Things

3-5 Life Science #8: Describe how organisms meet some of their needs in an environment by using behaviors (patterns of activities) in response to information (stimuli) received from the environment. Recognize that some animal behaviors are instinctive





(e.g., turtles burying their eggs), and others are learned (e.g., humans building fires for warmth, chimpanzees learning how to use tools).

Energy and Living Things

3-5 Life Science #11: Describe how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within a food chain from producers (plants) to consumers to decomposers.

Massachusetts State Curriculum Frameworks

Subject: Arts
Topic: Music

Learning Standards

Singing

PreK-12 Music #1: Students will sing, alone and with others, a varied repertoire of music.

Massachusetts State Curriculum Frameworks

Subject: English Language Arts
Topic: Language

Learning Standards

Discussion

PreK-12 Language #1: Students will use agreed-upon rules for informal and formal discussions in small and large groups.

Questioning, Listening, and Contributing

PreK-12 Language #2: Students will pose questions, listen to the ideas of others, and contribute their own information or ideas in group discussions or interviews in order to acquire new knowledge.

Vocabulary and Concept Development

PreK-12 Language #4: Students will understand and acquire new vocabulary and use it correctly in reading and writing.



Lesson Objectives

Students will know and be able to:

- Identify the parts of the body that classifies animals as insects with the help of a song.
- Place specific insects within a food chain.
- Identify an insect that goes through complete metamorphosis and one that goes through incomplete metamorphosis.
- Understand and act out the process of complete and incomplete metamorphosis.

Vocabulary

arthropod

insect

arachnid

metamorphosis

food chain

vertebrate

invertebrate

exoskeleton

proboscis

elytra

Assessments

How will the Mass Audubon educator know that the students have met the standards?

- Mass Audubon educator will observe students exploring, observing, and identifying different types of arthropods and understanding of complete and incomplete metamorphosis.
- Students will participate in answering teacher prompted questions.
- Students will demonstrate their understanding of arthropod food chain by participating in a wrap-up activity.

Summarizer

How will the Mass Audubon educator close the lesson to see if students met your objective?

- Students will actively participate in a relay game where they will act out the stages of complete and/or incomplete metamorphosis.
- As a whole group the students will learn the parts that make up an insect/arachnid through singing a song.
- Students will identify the type of arthropods that they find during the field exploration.
- Students will play an active game that demonstrates the food chain that insects are a part of.



Mass Audubon School Programs

At Mass Audubon we strive to create learning experiences that are enriching, innovative, meaningful, and engaging. All our school programs are aligned with Massachusetts Curriculum Frameworks. Our network of wildlife sanctuaries and nature centers located in urban, suburban, and rural communities around the state enable us to have strong relationships with local schools.

Our Education Foundations

- Place-based education is an educational philosophy that connects learning to what is local for an individual. We help build conservation communities, working with students and teachers in cities and towns to develop place-based environmental education that is linked directly to their home community.
- Inquiry-based learning is focused on teamwork, being learner-centered, questioning ourselves and the world around us, providing a more focused, time-intensive exploration, promoting lifelong learning, communication, and learning as fun.
- We are fully committed to creating a positive and supportive environment for all learners.
- We strive to be culturally sensitive, recognizing and embracing cultural differences.

Differentiated Instruction

- We strive to create a positive learning environment that is inclusive, supportive to all learners, and sensitive to cultural diversity.
- Outdoor classroom experiences are structured to meet the needs of the particular learners.
- Students work in small groups using hands-on materials.
- A variety of educational media are used, including colorful illustrations.
- With advance notice, efforts will be made to accommodate all learning styles and physical needs.

Notes

- Nature exploration is dependent upon the weather and other conditions. A class might observe different wildlife than they expected to see. An outdoor lesson can sometimes provide unexpected, but enriching teachable moments on a natural history topic that was not planned.
- Mass Audubon nature centers each have a unique landscape and will customize programs to work best at their particular site.
- Our lessons can be adapted to incorporate a classroom teacher's needs when given enough notice.

