



School Program Name: Pond Habitat
Name of Sanctuary: Arcadia Wildlife Sanctuary
Grade Level: 3-5
Location Options: Arcadia
Time: 2 hours
For more info: arcadia@massaudubon.org or
413-584-3009

Program Description

Using nets and bug boxes, children will conduct an in-depth survey of the pond with a focus on populations and species identification. While classifying the animals that live in the pond students will investigate the adaptations needed for survival in this watery habitat.

Massachusetts State Curriculum Frameworks

Subject: Science and Technology
Topic: Life Science
Sub-Topic: Structures and Functions
Adaptation of Living Things
Energy and Living Things

Learning Frameworks

Structures and Functions

- 3-5 Life Science #3: Recognize that plants and animals go through predictable life cycles that include birth, growth, reproduction and death.
- 3-5 Life Science #4: Describe the major stages that characterize the life cycle of the frog and butterfly as they go through metamorphosis.

Adaptation of Living Things

- 3-5 Life Science #7: Give examples of how changes in the environment (drought, cold) have caused some plants and animals to die or move to new locations (migration).
- 3-5 Life Science #9: Recognize plant behaviors, such as the way seedlings' stems grow toward light and their roots grow downward in response to gravity. Recognize that many plants and animals can survive harsh environments because of seasonal behaviors, e.g., in winter, some trees shed leaves, some animals hibernate, and other animals migrate.

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: English Language Arts
Topic: Language
Sub-Topic: Questioning, Listening, and Contributing Writing

Learning Frameworks

Questioning, Listening, and Contributing

3-5 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.

Massachusetts State Curriculum Frameworks

Subject: Arts
Topic: Visual Arts
Sub-Topic: Observation, Abstraction, Invention, and Expression

Learning Frameworks

Observation, Abstraction, Invention, and Expression

PreK-12 Visual Arts #3: Students will demonstrate their powers of observation, abstraction, invention, and expression in a variety of media, materials, and techniques.

Lesson Objectives

What will students know and be able to do? These objectives must be observable and measurable.

Students will know and be able to:

- Explain how the needs of the organisms are met in the habitat.
- Describe several life cycles within the pond habitat.
- Observe how pond organisms are adapted to survive in their habitat.
- Explain how energy is passed along the food chain.
- Describe how organisms are interdependent.



Vocabulary

adaptations	amphibian		
consumer	decomposer	environment	
food chain	habitat	interdependent	interrelationships
larvae	life cycle	invertebrate	metamorphosis
organism	photosynthesis	producer	pupae
pond	vernal pool		

Assessments

How will you know that the students have met the standards?

- Mass Audubon Educator will observe students exploring, observing, and identifying pond organisms.
- Students will participate in answering Mass Audubon Educator prompted questions about how organisms meet their needs in a pond habitat.
- Students will demonstrate their understanding of how pond organisms are interdependent by participating in a wrap-up activity.
- Students visit a pond to observe, collect, and study organisms in their natural habitat.

Summarizer

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

- Students will create a web of life showing the interconnections of the pond organisms they observed. By playing a web of life game, students will explain several interconnections of pond organisms.



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.
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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.
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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.

