



**School Program Name:** Changing Species  
**Name of Sanctuary:** Blue Hills Trailside Museum  
**Grade Level:** 6 - 8  
**Location Options:** At museum or outreach  
**Time:** 1 hour  
**For more info:** [bluehills@massaudubon.org](mailto:bluehills@massaudubon.org) or  
617 – 333 – 0690

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### Program Description

Students will investigate how populations of native wildlife have changed in the past 500 years in response to the environmental changes.

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### Massachusetts Curriculum Frameworks

**Framework:** Science and Technology  
**Strand:** Life Science  
**Topic:** Changes in Ecosystems Over Time

### Learning Standards

#### Changes in Ecosystems Over Time

12. Relate the extinction of species to a mismatch of adaptation and the environment
  
17. Identify ways in which ecosystems have changed throughout geologic time in response to physical conditions, interactions among organisms, and the actions of humans. Describe how changes may be catastrophes such as volcanic eruptions or ice storms.

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### Lesson Objectives

Students will know and be able to:

- Explain in general terms how Massachusetts ecosystems have changed in the past 500 years
- Give specific examples of animal species whose status or presence has changed
- Give specific examples of natural catastrophes that affect Massachusetts ecosystems
- Explain how the adaptations of animals affected their survival in changing ecosystems

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### Vocabulary

invasive species, endangered, extinct, special concern, threatened, extirpated, species range

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### Assessments

Students will demonstrate their understanding by:

- Explaining how the population of one species of animal has changed over historic time
- Making a reasonable prediction of how ecosystem change might affect species

### **Summarizer**

Students will:

- Define “threatened,” “endangered,” “special concern,” “extinct
  - Predict possible changes in animal populations due to change
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### **Mass Audubon Teacher Naturalist Reflections**

Share data from the *State of the Birds* when appropriate.

### **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.

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### **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.