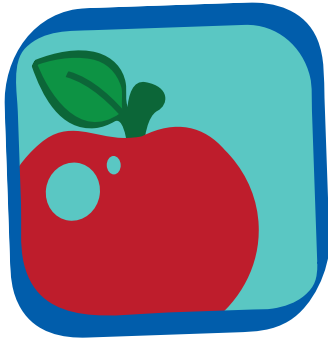


# NEW!



- In each Unit:**
- Tips for Taking Children Outside
  - Alignment to PreK Science Standards
  - Suggested Materials for Outdoor Study
  - Content for Teachers
  - Interest Areas Planning Form
  - Investigation Summaries & Activities
  - Extra Learning and Teaching Resources

## Mass Audubon STEM Preschool Teaching Units

**Ages 2.9–5 years**

[www.massaudubon.org/education](http://www.massaudubon.org/education)

**Y**oung children learn about the world around them by using their five senses while being mentored by a caring adult. By observing and learning about the natural world in classroom learning stations, outside in the school yard setting, and in their local communities, children can acquire an increased understanding about natural science and the world. Through these four units, you can jump start nature-based science learning and discovery by exploring your schoolyard or outdoor classroom and focusing on the things that capture attention in any setting—birds, soil, trees, and weather.

 **Mass Audubon**  
*Protecting the Nature of Massachusetts*  
[www.massaudubon.org/education](http://www.massaudubon.org/education)





- **Our Feathered Friends**
- **Digging into Soil**
- **Tree-mendous Trees**
- **Wicked Cool Weather**

These units are designed for educators to teach our youngest stewards about birds, weather, trees, and soils. These are all topics that can be taught and explored in any setting. The investigations are designed to develop inquiry, knowledge and enthusiasm and are not dependent on having access to a large outdoor space. We encourage you to adapt these experiences to suit your preschool setting and the needs and interests of your students.

These investigations contain a variety of inquiry-based questions and supporting indoor and outdoor activities for varied ability levels of preschoolers. Please use them as presented or as a guide to enhance your own curriculum. The number of days or weeks you spend exploring a topic is flexible and should be led by the inquiry of the children.

Getting outside is the most important factor for engaging young scientists in their environment. The important thing is to spark observation, in the best ways you can, always determined by your location and what you know will work best for your students. Your enthusiasm and flexibility is key.

Outdoor natural history observations and lessons often present wonderful teaching moments that are unexpected. Some of the most memorable experiences observing and engaging with nature are those which are not planned. Enjoy these moments with your students. Explore together. It is all a learning experience!

To learn more and to download these teaching units, visit [www.massaudubon.org/education](http://www.massaudubon.org/education).

## Sample Activities

### Our Feathered Friends

**Toilet paper roll binoculars:** Children assemble imitation binoculars for use many times throughout the bird unit. Have them decorate the rolls with markers (a name is also helpful). Use tape to connect the two rolls together. Use the punch to make a hole on the outer side of the two rolls. Insert the yarn through each hole to form a strap for the binoculars.

- Toilet paper rolls – enough for every child to have two.
- Markers for decorating
- Tape
- Hole punch
- Yarn – as a binocular strap



### Digging into Soil

**Soil Layers in a Jar:** Using your soil samples from Investigation #1 or new samples, add water to different soil samples in an old mayonnaise (or similarly shaped) jar. Make sure the cap is securely fastened. Shape the jar with water and let the soil settle. What happens as the soil settles? Let it sit over night. Do you see different layers? Do you notice anything floating at the top?



### Tree-mendous Trees

#### Observe an Oak Sapling:

I have something behind my back that will grow very big some day. Bigger than this Nature Center or school, bigger than your house. What do you think it is? This is something that is getting ready to sleep for the winter. Show them. What do you think this might be? Take several responses. It is an oak sapling. It is a small tree. If I return it to the ground it will grow into a big tree. There are many different parts to trees. What parts do you see?



### Wicked Cool Weather

#### Rain paintings

Materials: Coffee filters, washable markers, spray bottle (if not raining), trays

Description: Cut the coffee filters into raindrop shapes or use the filters as they come. Have the children color the filters with washable markers. Set the filters on trays. Either set the tray out in a gentle rain or spray the filters with water. What happens if you set the tray out in a heavy rain? Experiment with different amounts of water. Allow the filters to dry and see what has happened to the colors. You can even track how long it takes your filters to dry on different days. It's always a good idea to repeat these types of activities in different conditions—that's what helps us notice how the different weather affects the world around us!

