

## Educational Programs

**Be A Tree Detective** - Armed with Maine Tree Identification books and questions/activities to do, examine five or six trees located around the back of the Science Center facility. Using your detective skills examine the bark, leaves or needles, cones, and colors to figure out the names of the trees. As you examine the trees with your small groups, find items to put in a bag to create a piece of tree art. (Plan on the day for this or two half days. Best done in the fall before the leaves drop or in the spring after the trees have leaved out.)

**Birds, Birds, Birds** - How have birds adapted to survive in our forest ecosystem? While in the Science Center, students will learn about bird adaptations. Students will hike in and around the bird sanctuary to look more closely at the forest habitat and determine whether or not it has the necessary elements to support bird life. Students may also build a bird explaining their adaptations, or camouflaging it to blend in with chosen areas in the building.

**Dinosaur Safari** - Hop aboard our Dinosaur Safari! Watch the full dome show Death of the Dinosaurs or Dinosaur Prophecy. Find the dinosaurs roaming around the Science Center. Learn more facts about them. Share your facts!

**Discovering A Forest Ecosystem** - Discovering a Forest Ecosystem: Our Tree Plantation provides a unique ecosystem for the plants and animals who live here. Our first mini-lesson will be to watch the full dome video, Ecosystem. The second mini-lesson will be to review what makes up a forest ecosystem. The final mini-lesson will be to hike through the forest to determine what elements there are here to provide a suitable habitat for our birds and animals to survive. (It is helpful if students have some previous knowledge of what an ecosystem and food chains are.). This program may take longer than two hours to encompass all the activities listed above.

**Dive Into the Depths** - We do not live near the ocean, but come take a “walk on the beach” with us! Begin your journey by watching the full dome video, Into the Deep. Jump through the waves on our imaginary beach and then explore the various ocean zones learning what creatures live there. Discover the remains of sea creatures on our beach. What are they and in what ocean zone do they live? Share your findings! (This program takes 2 to 2 1/2 hours.)

**Don Fendler: Lost On A Mountain In Maine** - After reading the book or watching the movie, Lost on a Mountain in Maine by Donn Fendler as told to Joseph Egen with your class, come to the Science Center for a day that includes four short mini-lessons related the book and Donn’s ordeal. Mini-session 1: Learn to pack a backpack with items Donn could have used. Mini-lesson 2: Learn to read a map and find items that Donn needed on his trip to help him survive hidden around the grounds of FMSC. Mini-lesson 3: What

was Pamola and who was Roy Dudley? Weave your own Pamola tale while sitting around a “campfire. ” Mini-lesson 4: Learn about the telephone system that helped to let the world know Donn had been found. Make a paper-cup phone and play Donn Fendler Bingo. (This requires a 4 hour visit with a lunch break.)

**Electrified** - Learn the basics of electricity through a series of hands-on activities. We will begin our investigations with a review of the parts of the atom. Next we will investigate the properties of static electricity and finish off with explorations of current electricity, comparing series and parallel circuits.

**Explore the Cedar Bog Trail** -Join us for a hike on our new bog trail built with grant money. Be prepared to walk the new board walk while exploring this ecosystem. Discover insect-eating plants that live here. Learn why a bog is so important to protect. Boots are a must!

**Explore Vernal Pools** - In early May, let’s explore a Vernal Pool found in Easton. What unique creatures can be found here? Report your data to the University of Maine scientists who are watching how climate change is affecting these fragile creatures. On the first day, learn what a Vernal Pool is, what creatures live there, and what process you will be using to gather information. On the second day, explore the Vernal Pool using equipment provided (even the boots if you don’t have them.) On the third day, using computers/tablets at your school, record your data to be used by UM scientists.

**Follow Drop Through the Water Cycle** -Follow Drop, the water droplet as she maneuvers through the water cycle in the book, Drop: An Adventure Through the Water Cycle by Emily Kate Moon. All life depends upon drops of water. Plant a bean seed in a toilet paper tube. Take it back to school and watch it grow! Or for older students, make a water gauge out of recycled water bottles. Put it outside and track the amount of rain that falls during a week or month. What did you learn? Chart the data. (This can be paired with Weather Forecasting if you bring two classes.

**Follow The Signs** - Everyday, we follow signs designed to give us information. We can use signs that animals and birds leave as well to determine what lives in our Tree Plantation. After a brief introduction in the Science Center, let’s hike the trail looking for some of these signs. We’ll look for animal tracks, scat, feathers, hair, or other signs of animals. We’ll also listen and watch for actual sightings. Using all this information, determine what animals or birds you have seen. Recommended for the winter when the signs are more visible in the snow.

**Going on a Critter Hunt** - Learn more about the animals and birds that can be found in Aroostook County. Listen to the book, We’re Going on a Bear Hunt by Michael Rosen and Helen Oxenbury. Using clues, we will go on our own critter hunt discovering animal

pelts, scat, prints, and even a few “stuffed” critters found in Maine. Read about each animal and identify the animals that we find along the way!

**Learn To Read A Map** - Learning to read a map is very important in becoming an avid outdoor adventurer. Using maps of the area, learn the symbols on maps and how to read them. Test your new-found skills, by using a map of the Science Center to discover hidden surprises.

**Numeracy In Nature** - Come hike on our Norway Spruce Trail. Use your “math eyes” to look closely at the shapes of flowers and leaves. Do they look like stars or triangles? Count the number of cones in one place. Observe the sticks on the ground. Do any of them form parallel lines or a right angle? Nature abounds with math-related terms. Let’s find them! (Best done in the spring or fall.)

**Phenology Challenge** - Become a citizen scientist by observing the same tree and its surroundings found at FMSC three times, in the fall, winter, and spring observing signs of change. What happens to the plants, trees, birds, and animals as the temperatures drop and then rise again? Students will keep a nature journal in which to record their observations. On the last visit, we will discuss our finds and draw conclusions. Older students may record the data in Nature’s Notebook through the USA National Phenology Network or NASA’s Globe Observer.

**Puzzling the Poles** - Have you ever wondered what it is like in Antarctica or the Arctic? Come put our giant puzzles together and learn about the early explorers, the animals that live there, and some of the intriguing facts about it. Represent a country that has a presence on Antarctica or take part in a race to the North Pole. What team will plant their flag first? Or represent team Cook or Peary, as. Your team races to the North Pole demonstrating the Peary system.

**Rocks and Minerals: Rocks and Minerals** - Bring your favorite rock to the Science Center. Learn more about it. First, we will explore the rock cycle and identify the characteristics used to determine if your rock is igneous, metamorphic, or sedimentary. Next, we use the tests a geologist uses to help identify the minerals in a rock. Finally, we will test you to see how well you know your special rock!

**Take A Hike** - Come hike with us! Enjoy and learn about the natural environment, as well as get some exercise, too. While hiking one of our trails, we will talk about Leave No Trace Ethics. Using the senses of smell, touch, sight, and sound, we will identify cool things in nature while completing a Scavenger Hunt and maybe create a piece of nature art. Number #1 most requested program for 2022-2023

**Tree of Life** - Trees provide shelter and food for animals, birds, other plants, and even people. Why are they so important? What role do they play in the world? After an

introduction to the topic, come with us to explore these roles in our living lab on the Science Center trails. Allow 2-4 hours for this program.

**Trees, Trees, and More Trees** - Trees play a vital role in helping prevent climate change. Join FMSC's volunteer Maine Forest Ranger, Randy Legasse, to learn to identify trees found at the Science Center and the role they play. The first part of the program will include a slide show presentation to help identify the trees. With tree identification books in hand and Forester Randy's help, the students will identify trees found on a hike while completing an inventory of them. Allow 2-4 hours for this program.

**Weather Forecasting** - Have you ever asked, "What is the weather for today?" Let's try to figure out our own weather forecast by examining weather equipment used by meteorologists. From there we will go on one of our trails to collect weather data that include: temperature, barometric pressure, rain or snow amounts and cloud cover. Upon returning to the center we will write our own FMSC Weather Report.

**"X" Marks the Spot** - Another alternative to learning how to read a map. Come hunt for buried treasure at FMSC. Pirates always made maps to be able to find their treasure. Brush up on your map reading skills and for older students learn to read a compass to find "buried treasure" hidden near the science center or in our tree plantation. (We ask educators to bring the treasure to the FMSC before the program, so we can hide it.)