

# PEEC Activity Descriptions

*(Most lessons run 1.5 hrs. Optimum group size is 12-15.)*

## Core Curriculum for 4<sup>th</sup> to 12<sup>th</sup> Graders & Other Groups:

**Astronomy** – Students study the stars, the moon and the planets in the night sky during this indoor/outdoor class. Topics of interest include constellations, the Milky Way and shooting stars.

**Botany** – Delve into the fabulous, intriguing, and beautiful world of plants! Students will learn basic botanical vocabulary and be introduced to using a taxonomic key. In the field, students will become familiarized with some of the most common plant species in this region.

**Canoeing** – An introduction to canoeing basics (equipment, safety and paddling techniques) followed by a paddling outing on one of PEEC's ponds. Available May through October.

**Environmental Promise Tree** – This is a nice finishing activity that will help with carrying your PEEC experience back to home and school. Participants will learn about and select an action they can take to reduce their impact on the environment. The environmental “promise” will be written on a “leaf” to be attached to a mural with a tree. This mural can be displayed at school to help share the PEEC experience with other students.

**Environmental Stewardship** – This session is designed to help students know how they can get involved and help the environment. Topics may include global climate change, sustainable practices at home, the three R's, waste free lunches, Leave No Trace practices, and more. Can be used as intro to Environmental Promise Tree as closing activity.

**Forest Ecology** – PEEC's campus provides an ideal classroom for students to observe different forest communities. Students will learn about common trees in this region, the structure of forests, concepts of forest succession and forest dynamics.

**Geology** – Students will learn about the geologic history and processes that have shaped this region. Students will also learn about plate tectonics and the formation of fossils. Emphasis will be placed on understanding glacial processes and the landscapes glaciers leave behind them.

**Interpretive Hikes** – The PEEC campus contains 5 hiking trails ranging in length and difficulty. Students can become familiar with the aquatic aspects of PEEC along the 1.5 mile Two Ponds trail. Explore the 2-mile long Scenic Gorge trail for a tour of a beautiful hemlock ravine. The 1.25-mile Fossil Trail provides a geological journey with a look into a fossil bed containing ancient marine life forms. The most scenic of trails is the 3-mile Tumbling Waters trail which follows various terrains until leading hikers to a gorgeous waterfall. The longest trail at PEEC is the 5-mile Ridgeline Trail, which provides hikers with views of many different habitats. All trails have corresponding interpretive brochures.

**Intro to Camping** – The focus of this session is on planning for spending time outdoors. What are factors to consider if you plan to do a day hike or an overnight trip? How can one prepare to be safe and comfortable in nature? This session will help students to see the natural world as a fun place to be. Topics/activities may include Leave No Trace Principles, knot tying, setting up a tarp, cooking outdoors, how to read a trail map and guide book.

**Night Hike** – Students will take a hike in the dark and learn about night vision and nocturnal animals. Several activities and games during the hike will develop student's understanding of human and nocturnal animals nighttime adaptations.

**Orienteering** – Students are taught how to use a map and compass to find points in the woods that are labeled with orienteering markers. This is an empowering lesson for anyone who wants to spend time hiking or traveling outdoors. Students increase confidence in themselves and within their group.

**Pond Study** – Students enjoy learning and exploring in this hands-on class! Two ponds on campus provide the perfect opportunity for studying aquatic creatures. Class curriculum focuses on the different habitats in a pond and the creatures adapted to living within each habitat. Students will also be able to learn about the importance of pond creatures as biotic indicators in determining pond water quality.

**Soil Study** – Students will collect various soil samples and compare the physical and chemical properties of the samples. The lesson will investigate the origin of soil and the importance of soil to whole ecosystems.

**Stream Study** – This lesson focuses on the ecological study of a local stream and includes explorations of stream organisms and hydrology. Other topics may include metamorphosis, food webs, stream flow, riparian ecology, and water quality. This lesson can be extended to include water testing, riparian ecology, and/or hydrology.

**Town Meeting** – A group challenge in which students simulate a meeting of community members with different interests for a piece of public land. Students try to convince the 'panel' their interest in land use is the best use of the property. Develops individual opinions, personal values and an understanding on how land use decision can be made.

**Watershed Study** – Students will gain an understanding of the concept of a watershed through classroom and field activities. Focus is on how the characteristics of, and activities in a watershed affect stream life and water quality as well as on the importance of watersheds in environmental issues and land management. Discussion will include consideration of the watershed where you live.

**Wildlife Study** – An exploration into the world of wildlife! Students will learn to identify wildlife and signs of wildlife through hands-on learning inside and outside of the classroom. Focus is placed on understanding habitat, human impacts and relationships between wildlife and their environment. Up-close examination of skins and skulls may be included.

**Winter Ecology** – Students learn about the adaptations that plants and animals have developed in order to stay alive in the winter. An exploration into topics such as hibernation, dormancy and migration allows students the chance to understand what happens to the natural world in the winter. Other topics may include winter tree identification and snow studies.

## **Additional PEEC Activities 4<sup>th</sup> -12<sup>th</sup> Grade:**

**Air Quality**– Students will learn about air quality topics such as acid rain and ground level ozone. The lesson will focus on how these forms of air pollution are created, the chemistry and processes involved and what can be done to reduce these problems.

**Campfire** – A PEEC staff person will prepare a fire for your group. Upon request, this time can include a fire-building lesson and/or a discussion of “Leave No Trace” responsible fire practices. S’mores available on request for a small fee.

**Cross-Country Skiing** – An introductory lesson in basic techniques, safety and equipment, followed by a ski tour through PEEC’s pine plantations. Shoes and skis are included in this session.

**Discover PEEC Scavenger Hunt** – Get to know PEEC by going on a scavenger hunt. A great way for visitors to become familiar with their new surroundings!

**Environmental Art** – What kinds of crafts can be done with everyday items that would otherwise end up in the trash? Make a spider from an egg carton, make a hat from plastic bags, use scraps to make a journal etc. The focus will be on using natural materials or reusing household materials to create functional items or works of art.

**Journal Making** - Students create a journal of their own using natural objects and/or a natural theme. Includes an introductory journaling activity.

**Leave No Trace Fires** – Students will learn about the environmental impacts of fires and how to build and manage a fire that creates minimal damage to the natural world. This is a nice lesson to plan before having a campfire with your group.

**Nature Journaling** – Participants are encouraged to write or draw about their experiences in nature through a sequence of guided activities. Students can make or bring journals and use them to record observations, explorations and values about the natural world. Journaling can be linked into many of the other program offerings.

**New Games** – Students are encouraged to run, laugh, roll and get out some energy with active, non-competitive games. This session provides students with a fun way to work on group cooperation, coordination and concentration! This can be done as one large group (for example, upon arrival at PEEC) or in smaller learning groups.

**Sensory Awareness** – Various activities help students understand the importance of using the senses they typically do not rely on. The culminating experience is leading each other along a trail blindfolded while using a rope handhold. This program builds confidence and trust while promoting the use of senses.

**Team Building/Confidence Course** – A series of challenges which promote team building, cooperation and decision making within a group. Students need to work together in order to accomplish the task with minimal help from teachers or staff. Confidence Course elements are more individual and build group trust, self confidence, and accomplishment.

## **K – 3<sup>rd</sup> Activities**

### **Science-Based:**

**Bat Study** – This lesson will cover the myths and misconceptions about bats and show students how important these creatures are to humans. Activities will explore the beneficial aspects of bats, adaptations, predator/prey relationships and life histories. Students will see a bat house and search the evening sky for feeding bats.

**Beaver Study** - An exploration into the world of beaver adaptations and life-styles. Students learn the importance of beaver presence in wetland habitats and the effects of human interaction on beaver survival. Field studies allow students the opportunity to observe signs of beaver at PEEC.

**Birds** – Introduction to birds. What special characteristics do birds have? What can we know about birds based on their characteristics? Why can birds fly? Students will observe birds at our feeders or outside on a trail and be introduced to some common birds in this area.

**Botany** – This lesson provides a basic introduction to plants for young students. What is the difference between a tree and a plant? How do plants grow? Life cycles of plants, photosynthesis and more!

**Fossils** – Take a hike on our Fossil Trail and learn about the marine animals that used to live here! Students will hold and identify fossils and ponder how they got into the rocks.

**Tracking and Stalking** – Practice the art of tracking and stalking wild animals in this class! Students learn about tracks and signs of many different animals through observation and investigation. Learn how to control one's breathing, balance and patience in order to get a closer look at animals.

### **Recreation-Based:**

**Canoeing** – see above in Core Curriculum

**Interpretive Hike** – see above in Core Curriculum

**Map Reading** – Get the basics of map reading. Interpreting different colors and symbols, understanding north and south, and finding one’s way from one place to another. This activity will likely utilize the PEEC Campus map and students will find their way to landmarks on campus using the map.

**Sensory Awareness** – see above in Core Curriculum

**Synthesizing:**

**Environmental Stewardship** – see above in Core Curriculum

**Environmental Promise Tree** – see above in Core Curriculum

**Watershed** – As stated above, but with a *basic* introduction to the water cycle and watershed concept.

**Additional PEEC Activities K-3rd Grade:**

**Environmental Art:** Make a spider from an egg carton or make a hat from plastic bags. The focus of this class will be on using natural materials or reusing household materials to create functional items or works of art.

**Campfire:** A PEEC staff person will prepare a fire for your group. Upon request, this time can include a fire-building lesson and/or a discussion of “Leave No Trace” responsible fire practices. S’mores available on request for a small fee.

**Other Program Additions for any Age Group:**

**Special Presentations** (Require additional fees.)

Outside presenters can be contracted to provide a wide range of programs ranging from live animal shows to square dancing or campfire entertainment.

Ask us for more information if you are interested.

**Field Trips** (Require additional fees.)

**Child’s Park** – A 1.5 mile walk along Dingman’s Creek to enjoy scenic views, cascading waterfalls, and the remnants of a historic wool mill.

**Delaware Water Gap** – A geologic phenomenon, where the Delaware River has cut a path through the Kittatinny Mountain Ridge.

**Dingmans and Raymondskill Falls** – Visit these majestic waterfalls located in the Delaware Water Gap NRA.

**Grey Towers** – Tour the home and estate of the early conservationist, Gifford Pinchot, former Governor of Pennsylvania and founder of the US Forest Service.

**Rock Quarry** – Trip to a local active rock quarry to hunt for Devonian marine fossils.