



*Palouse-Clearwater
Environmental Institute*



Education Programs



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Welcome to the Education Program at the Palouse-Clearwater Environmental Institute (PCEI)

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Program Overview

The Palouse–Clearwater Environmental Institute (PCEI) is proud to offer highly interactive classroom and outdoor education programs to regional K-12 schools and community groups. All classes address the Idaho State Achievement Standards and focus on the unique features of the region’s natural history through place-based education. Our goals are to:

- Increase awareness and knowledge of locally relevant environmental issues
- Encourage exploration, investigation, and understanding of our watershed
- Engage community members in service projects that benefit our watershed
- Foster an appreciation for conservation and habitat enhancement practices
- Instill a sense of place – one that values the unique characteristics of our watershed

Cost

There is a \$45 fee for all classroom programs. This fee is based on a program length of one hour and average classroom size of 24 students; extra fees may apply for longer programs with extra students. Field trip costs are calculated by considering program length, staff time, and distance traveled. Classes will be invoiced shortly after being conducted and payment is due within one month of the program.

The Kindergarten Nature Series consists of 8 classes. Receive 8 classes for the price of 7 when you sign up for the series.

PCEI programs are accessible to all classes and groups. Scholarships may be available if your group has special financial circumstances.

Contact Information

Scheduling for programs is ongoing, but we recommend that you register at least two months prior to the desired date to ensure the availability of our educators.

To make an inquiry or request a program, contact education staff at <learning@pcei.org> or (208) 882-1444. In your email please state your name, grade, program requested, date(s) and times(s) desired, number of students, and any extra information that would help the PCEI Education staff to customize the program to your curricula. You will receive a confirmation email within 3 days.

Please check our website, <www.pcei.org>, for updated class information.

Using This Program Booklet

Kindergarten classes are listed separately from the 1st – 3rd grades and 4th – 6th grades sections. Within each section you will find class descriptions and their relevant Idaho State Standards as well as a key that describes which lessons are recommended for each grade. This key will help you to find the classes that specifically address your grade’s curriculum. However, classes can be modified for different grade levels and you are welcome to choose any program in this booklet.

The education staff is also willing to create custom programs. If you have an idea, let us know and we will work with you to create an exciting experience for your students.

The PCEI Nature Center

The PCEI Nature Center, located at 1040 Rodeo Drive in Moscow, is a demonstration site for sustainable living and working. The Nature Center showcases a Learning Nursery of native plants, straw bale bike pavilion, outdoor art, water catchment system, TerraGraphics Wetlands, and more.

Come out to enjoy our trails and learn about the sustainable practices at PCEI, and visit our website at <www.pcei.org> for a calendar of family oriented events taking place at the Nature Center.

Programs at the Nature Center

General sustainability tour: This tour, geared for university students or adult groups, is a general tour of the PCEI Nature Center's sustainability practices. Learn about native plants in the Learning Nursery and see how we use solar power and collect rainwater for the Pantry Garden. Topics may be adjusted to the group's interests. **FREE.**

Your class at PCEI: Bring your class to the PCEI Nature Center for exploratory activities about the area. Topics



The Gertrude Danielson Perrine House was dedicated in 2005 after a donation from Gertrude's family. This donation allowed PCEI to move from an office in downtown Moscow to the current 7.6 acre site.

covered include amphibian monitoring, soils, native plants, and sustainability. See the field trips sections for more details. Most lessons may be adapted to take place at the Nature Center.

Resources Available for Loan

The Education Program has a wide variety of resources to loan to local schools. Contact PCEI at <learning@pcei.org> or (208) 882-1444 to reserve supplies, field guides, or learning bins for your classroom.

Learning Bins: Orienteering Bin

This bin contains compasses and directions for setting up a compass game to help your class learn compass basics.

Oceans Bin

If your class is studying oceans, this bin will supplement your lessons with a variety of specimens (coral, sea turtle, walrus tusk, and Helmet Shell), an ocean floor map, and many books.

Rainforest Bin

Books and interesting artifacts (skins, butterfly specimens, and more) will enhance your rainforest lessons.

Tree ID and Forest Measurement Bin

Materials include measuring tapes, tangent tree height gauges, tree ring dating kit, box of tree cookies, clinometers, and calculators.

Field Guides:

Rockies Trees and Wildflowers Pocket Guide
Idaho Birds Pocket Guide
Weather Pocket Guide
Pond Life Pocket Guide
Rocky Mountain Tree Finder Pocket Guide
Peterson First Guide to Butterflies and Moths
Peterson First Guide to Reptiles and Amphibians
Peterson First Guide to Insects
Peterson First Guide to Birds
Trees of Idaho

Supplies:

Binoculars
Compasses
Berlese Apparatus
Petri dishes
Water quality monitoring equipment
Pond and stream study equipment
Wildlife pelts
Weather station with thermometers, cloud charts, and rain and wind gauges

"I love having PCEI come and the students really benefit from this."

— Moscow teacher

Kindergarten Nature Series

These classes are designed specifically with kindergarten students in mind. Classes integrate literature, pretend play, art, songs, and games to help students gain new perspectives and a deeper understanding of local ecology. Classes may be taken individually or as a full series. A discount applies for the series (see “Cost” on page 2).

The Kindergarten Nature Series addresses the following Idaho State Science Standards Goals: 1.2, 1.6, 2.1, 3.1, 3.2, 4.1, 5.1.

Sense-sational (September)

Become a naturalist! In this introductory program, students learn how animals use their senses and put their own to the test.

Going Batty (October)

Myths of bats are dispelled as students view bat specimens, learn about their amazing adaptations, and become familiar with local bat species.

Pond Pals (November)

Slippery salamanders and frolicking frogs, oh my! In this class students explore the fascinating wet world of local amphibians.

Getting Ready for Winter (December/January)

Puppets teach the students how different animals survive the winter, and then everyone creates snowshoe hares that change color with the seasons.

Wiggly Worms (February)

Worms are natural decomposing machines. Students learn to appreciate worms through a special hands-on experience within this lesson.

Taking Root (March)

Kindergarteners begin to understand what plants need to survive and how the different stages of a plant’s life cycle are connected.

PCEI Adventure (April)

Tour PCEI’s Nature Center, discover the diversity of plants in the Nursery Garden, and plant pumpkin seeds for the Kindergarten pumpkin patch!

Phillips Farm Adventure (May)

Everyone will test their naturalist skills of observation while visiting Phillips Farm County Park and learning about the plants and animals that live there.

“Thank you for your plans and for the enthusiasm with which you work with 5 year olds”

1st – 3rd Grades

Recycling Basics ★ ● ▲

Students will follow their trash from garbage can to landfill and understand the importance of recycling. By playing games to separate recyclable materials from the trash, they will begin to understand how their actions have positive effects on the environment.

Pair this class with a fascinating field trip to the **Moscow Recycling Center** and see first hand what happens to your recyclables. To set up a tour, contact Moscow Recycling at (208) 882-2925.

Idaho Science Goals 5.1, 5.3

Recommended for:

1st Grade: ★

2nd Grade: ●

3rd Grade: ▲



photo by Terry Gray

EcoArt ★ ● ▲

EcoArt is a hands-on program that integrates fine art with environmental education. Students are given the opportunity to express their creativity while exploring ecological concepts. Examples of past projects include seed mosaics, papermaking, and flower planters made from milk jugs. An extra fee may apply depending on materials.

Idaho Science Goals vary by project

Owl Pellets ● ▲

By discussing owl digestive systems and dissecting real owl pellets, students realize that owls are unique birds of prey with a variety of remarkable adaptations. This dynamic class incorporates math skills, animal physiology, and the identification of skeletal components.

Idaho Science Goals 1.2, 1.3, 3.1, 3.2

Owl Prowl ★

Whoooo's a top nocturnal predator? This class introduces students to local owl species with an examination of some of the physical adaptations that make owls unique. Through sounds, specimens, and games, students will give a hoot about owls!

Idaho Science Objectives 1.2.1, 1.4.1, 3.1.2, 3.2.1

Skin, Scales, or Slime? ★

Explore the concept of adaptations through animal "coats." Students will compare their own protective clothing to fur, shell, feather, and skin specimens, and they'll discover how each animal's covering is appropriate to its environment.

Idaho Science Objectives 1.2.1, 1.4.1, 3.1.2, 3.2.1



Native American Tools★

This program explores local Native American culture and their uses of tools and technology. Through a hands-on activity, students compare some of the tools we use today with tools that Native people used.

Idaho Social Studies Objectives 1.1.2, 2.2, 3.1.1

A Bug's Life ●

Even though every insect has a head, thorax, and abdomen, their appendages set them apart and make them look completely different from each other. This lesson teaches about the wide diversity of insect adaptations through demonstrations and a fun and interactive game.

Idaho Science Objectives 1.4.1, 3.2.1, 3.2.2

Tree-mendous Trees ●

Take your plant lesson to a whole new level by focusing on trees. Students learn how to identify local trees, look at leaves and seeds up close, and discover the importance of trees. By the end of the class, they will gain an appreciation for how trees help us every day.

Idaho Science Objectives 1.2.1, 1.4.1

Celebrating Soil ●

This class is an extension to the Pebbles, Sand, and Silt FOSS kit. Depending on what has been already covered in the classroom, students may learn the components of soil, how different local soils support different types of vegetation, or how clay and humus affect permeability and plant growth.

Idaho Science Objectives 1.2.1, 2.1.1

Feathered Friends ▲

During this program students will examine the characteristics of birds and explore some of their amazing behaviors. In particular, they will investigate the relationship between a bird's beak and its ability to find food in a "bird beak buffet."

Idaho Science Objectives 1.2.2, 1.5.1, 3.1.1

The Wild Palouse ▲

What do you know about our neighborhood fauna? The program uses wildlife pelts, skulls, and specimens to highlight native species' anatomy, classify animals, and show the variety of different adaptations. Students will begin to see the Palouse as teeming with wildlife!

Idaho Science Objectives 1.5.1, 3.1.1, 3.2.3

Field Trips!

Palouse Wildlife Adaptations ★ ● ▲

Where: PCEI Nature Center, Idlers Rest, Phillips Farm County Park, or Rose Creek Nature Preserve.

This highly adaptable program challenges students to use their observational skills to search for animal signs and study the local ecology on a micro and macro level.

Idaho Science Goals 1.5, 3.1, 3.2

Pond and Stream Ecology ● ▲

Where: PCEI Nature Center, Hordemann Pond, or any local stream or pond.

Wrap up your life cycles unit by sampling macroinvertebrates at a local stream or pond and recording the findings (recommended in spring). This may also be done as a two-part lesson with PCEI: a classroom introduction followed by the field trip.

Idaho Science Goals 1.5, 3.1, 3.2

Do you have an idea for a field trip? Contact Jenica at (208) 882-1444 or <jenica@pcei.org> to discuss your idea and develop a custom plan!

Restore the Palouse

Classes are invited to assist PCEI's Watersheds Program with local restoration projects. See page 7 for more details.

4th – 6th Grades

EcoArt ♦ ♦ ✘

EcoArt is a hands-on program that integrates fine art with environmental education. Students are given the opportunity to express their creativity while exploring ecological concepts. Examples of past projects include seed mosaics, papermaking, and flower planters made from milk jugs. An extra fee may apply depending on art project materials.

Idaho Science Goals vary by project

The 6 R's ♦ ♦ ✘

Most students are familiar with the phrase “reduce, reuse, recycle,” but do they understand the concepts behind the words?

This engaging class will prompt students to think about why it is important to act upon the 6 Rs: rethink, reduce, reject, reuse, recycle, and remember.

Pair this class with a fascinating field trip to the **Moscow Recycling Center** and see first hand what happens to your recyclables. For more information, call Moscow Recycling at (208) 882-2925.

Idaho Science Goals 5.1, 5.3

Nez Perce Plant Use ♦

Idaho's river valleys and fertile prairies yield an abundance of roots, berries, and other plants that were used in Nez Perce daily life. After this class, students will never look at camas, cow parsnip, serviceberry, or other native plants in the same way again.

Idaho Social Studies Objectives 1.3.3, 1.3.6, 3.1.1

Lewis and Clark's Animal Encounters ♦

History comes alive in this class about the diversity of animals that Lewis and Clark could have encountered on their journey through Idaho. Using maps and pictures, students make the connection between local animals' adaptations and their habitats.

Idaho Social Studies Objectives 1.2.1, 2.1.1, 2.3.3

Recommended for:

4th Grade: ♦

5th Grade: ♦

6th Grade: ✘



photo by Terry Gray

Bats ♦

Students compare and contrast bats and birds by studying their anatomical differences and viewing stuffed specimens. Following this foundation of basic bat anatomy, students examine local bats' adaptations in more detail.

Idaho Science Objectives 1.2.1, 3.1.1, 3.1.3

Geology Rocks! ♦

Glaciers, volcanic activity, and wind are all pieces of the Palouse geologic puzzle. Through a comprehensive introduction of the local geology and how rock types influence landforms, students begin to fit the pieces together and understand why rocks rock our world.

Idaho Science Objectives 4.1.1, 4.2.1

Edible Aquifer ♦

In this fun and interactive class, students use edible materials to illustrate the geology of the Palouse aquifers. Students “build” individual models of our aquifers with treats such

as ice, soda, and ice cream, and then they demonstrate how pollution can enter the groundwater.

Idaho Science Objectives 1.2.3, 4.1.1

Palouse Prairie Primer ♦

This class teaches students that the Palouse is more than rolling hills. In fact, the native Palouse Prairie is lush with unique plants and animals. This class introduces the students to the diversity within the Palouse Prairie and how its biotic and abiotic factors are connected.

Idaho Science Objectives 1.1.1, 1.5.1

Where Does the Water Go? ✘

This class uses a model of local landforms to illustrate how our waterways are connected. After gaining an understanding of how water in Paradise Creek reaches the ocean, students step back in time to see how people have affected this watershed through the ages. This is an excellent extension of the MOSS unit on watersheds. Available in 2009.

Pair this class with an informative trip to Moscow's Wastewater Treatment Plant! Contact Elaine Moulton at (208) 882-2725 or <emoulton@ci.moscow.id.us> to schedule a tour.

Idaho Science Objectives 1.1.1, 1.2.3, 5.1.1

Getting Lost With Map and Compass ✕

Students learn the components of a compass, how a compass works, and how to use one for navigation. Students then test their skills with an outdoor compass game that familiarizes them with sighting and following compass directions. Note: this class is best if it can be 1.5 hours long.

Idaho Social Studies Goal 2.1

Field Trips!

Pond and Stream Ecology ◆◆✕

Where: PCEI Nature Center, Hordemann Pond, or any local stream or pond

Dive into the world of macroinvertebrates with your class by sampling at a local stream or pond. Students record what they find, learn the importance of bioindicators, and determine the water's health. This may also be done as a two-part lesson with PCEI: a classroom introduction followed by the field trip.

Idaho Science Objectives 1.2, 1.5, 3.1

Kamiak Butte Explorations ◆◆✕

Where: Kamiak Butte County Park

Kamiak Butte is a wonderful location to explore local geology and indigenous plant and animal species.

Whether your class is studying landforms or adaptations, the Education staff can create a memorable and fun trip.

Idaho Science Goals vary



"The class really enjoyed the variety of teaching styles used: games, stories, art, outside work, etc..."

— Moscow teacher

Amphibian Monitoring ◆◆✕

Where: PCEI Nature Center (only in spring)

Your class can assist PCEI in a long-term amphibian monitoring project! Students learn differences between native and non-native species, how to identify local amphibians, and several monitoring techniques. After acquiring this base knowledge, they investigate the traps in the PCEI wetlands and record their findings.

Idaho Science Objectives 1.2, 3.1, 5.3

Simple Machines Restoring Nature ◆

Where: Part one in classroom, part two at local site
Students will put their knowledge of simple machines to work on a local restoration project. Part one takes place in the classroom. Students review the many different types of levers and they begin to understand why shovels and hand tools are classified as simple machines. In part two students get their hands dirty with a local project.

Designed to complement Simple Machines FOSS Kit

Do you have a great idea for a field trip? Please contact education staff at (208) 882-1444 or <learning@pcei.org> to discuss your idea and develop a custom plan!

Restore the Palouse

All classes are invited to assist PCEI's Watersheds Restoration Program with local restoration projects. Depending on the time of year, students may plant native plants or maintain areas through weeding or watering. Restoration projects are free, but contact PCEI at (208) 882-1444 or <learning@pcei.org> at least one month in advance to request a date.





*Connecting
People, Place
and Community*

The Palouse-Clearwater Environmental Institute (PCEI) is committed to serving our region's environmental needs.

- PCEI is the region's leading watershed restoration organization, completing more than 60 stream restoration projects in 12 different watersheds since 1994.
- In 2011 PCEI delivered more than 300 education programs to 5,000 K-12 students in the Palouse region.
- Volunteers participate in every aspect of the organization, such as loading bicycles for Africa (the Village Bicycle Project), providing reusable dishes to reduce waste at community events (Plate Project), and tending garden plots at the Moscow Community Garden.

The mission of the Palouse-Clearwater Environmental Institute is to increase citizen involvement in decisions that affect our regional environment. Through community organizing and education, we strive to enable members of our community to find effective and sustainable solutions to local and regional environmental problems. PCEI is a non-profit organization. Donations are tax deductible.

Palouse-Clearwater Environmental Institute

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