

Cope Environmental Center 2004 Educational Programs

Teacher Guide

Promoting the wise use of the earth's resources... through education!

Cope Environmental Center realizes the time crunch that educators work with each school day. We also realize how important hands - on experiences are for learners of all ages. Cope Environmental Center strives to help teachers and students by providing various program opportunities for schools and other learning organizations.

Field Trips

Field trips are a vital part of every child's learning experience. CEC field trips allow children to experience nature and the environment first hand. Repeated experiences outdoors are vital to children as they grow and learn. This is the only way that our future citizens will learn to love nature and in turn, become stewards of our environment. Without nature and our environment, mankind will not survive!

Field trips include games, hikes, and activities to provide a positive outdoor experience for all those involved. They are the perfect compliment to classroom studies, and all field trips are aligned to the Indiana State Academic Standards.

Although specific field trips have been created for each grade level, it is possible to adapt any of the current field trips to any grade level. New field trips may also be created to fit a teacher's needs with enough preparation time. Please contact Stephanie Hays-Mussoni, Program Director, for details.

K.L.O.E. Discovery Program

This interdisciplinary curriculum provides educators with all of the background information, materials, and directions to carry out a full science unit in their classroom. Each unit also involves a field trip to the Cope Environmental Center. The curricula uses the 4MAT Learning Cycle to deliver the content and concept in a way that all learning styles will understand. All activities align to Indiana State Academic Standards.

The first grade units are complete and three classroom teachers have piloted the curriculum. The curriculum has also undergone an evaluation process. (For detailed results, please contact Stephanie.) The fall and spring units are available but there are a limited supply of curriculum loaner kits. They are distributed on a first come, first serve basis. Cost for the curriculum and loaner kit is \$20.00 per unit. The field trip fee is \$1.00 per student (minimum \$25.00) with the rental of the loaner kit. Please call for details.

Fall and Spring units for grades Kindergarten and Grades 1 - 6 are currently being developed.

Outreach Programs

CEC also brings programs to your classroom that cover a variety of topics. All programs include hands-on activities and active learning for your students and are aligned to Indiana State Academic Standards. Outreach Program fees are \$2.00 per student within Wayne County. An additional mileage fee will be charged for programs outside of Wayne County.

Pond Studies and Special Field Trips

Special field trips, such as pond studies and all-day programs are also possible at Cope Environmental Center. Pond Studies involve students searching for macroinvertebrates and running analytical tests to determine water quality. a few day-long programs that may be facilitated at CEC include Native Americans and Surviving the Wild, Eco-Challenges, and Habitat Studies. Full-day field trips require at least one month advance notice. Fees are dependant upon the content and materials required for the program. Please call for details.

Program Director

Stephanie Hays-Mussoni, Program Director, received her B.S. In Natural Resources and Environmental Management (specialization in Environmental Management) with a minor in Biology from Ball State University in 1997. She will finish her M.A. in Biology with a concentration in Education in Fall of 2004. Her love for learning, children and the outdoors brought her to Cope Environmental Center in Fall of 1998 as the first CEC Program Director. Stephanie continues to add new programs yearly! Please contact her with questions or concerns at any time.

Preschool

Pre-school programs may be presented here at CEC or at your location.

All programs at CEC will include a hike. Programs off-site are 45 - 60 minutes long and programs at CEC are 60 - 90 minutes long.

Seasonal Nature Hike

focusing on animals, colors, similarities and differences, etc. (60 minutes) \$1.00 per student (minimum of \$20.00 per group)

Nature hike with Apple cider (Fall Only)

\$2.00 per student (minimum of \$30.00 per group).

Thematic Programs at Your Site

- Warm - blooded and Cold - blooded Critters
- Snakes
- Rainbows
- Day and Night
- Owls
- Frogs and Toads
- Mammals
- Butterflies and Moths
- Bats
- More Available per request!

Programs at your site are \$2.00 per student (minimum of \$30.00 per session) in Wayne County and \$3.00 per student outside of Wayne County (minimum \$45.00 per sessions)



Kindergarten

Science Explorers (Spring or Fall)

Length: 1.5 - 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: Science K.1.1, K.2.2, K3.3, K4.1, K.4.2, K.6.1 Social Science K3.4

Visit CEC to experience science in nature! Your students will “do” science in a variety of hands on activities, a nature hike with several “science experiments”, apple cider-making in the fall or additional experiments in spring.

Sensing Nature (Spring or Fall)

Length: 1.5 - 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: K.1.1, K3.2, K.4.1, K.4.2, K.6.1 Social Science K.3.4

Students will explore CEC using their five senses. They will see nature high and low and stimulate their senses at the same time. Students will count objects, discover plants and animal signs, and spark their natural curiosity for the outdoors!



First Grade

Nature Observers (Spring or Fall)

Length: 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: Science 1.1.2, 1.1.3, 1.2.1, 1.2.4, 1.2.5, 1.3.3, 1.3.4, 1.4.2, 1.4.3, 1.4.4 Social Science 1.3.5

Your students will become prime Nature Observers as they hike through the woods and visit various “Experiment Stations” to discover how insects move, why some objects fall to the ground faster than others, how the sun warms the land, as well as where animals live and what they need to survive and prepare for winter. Students will also observe snakes (in cages) for their similarities and differences, play a game, and make apple cider in the fall (other activities will be substituted in the spring)! Seasonal changes will be incorporated into this fun-filled experience!

The Secret Lives of Plants (Fall Only)

This is part of the K.L.O.E. Discovery Program Grade One Unit Two, but may be done independently of the entire curriculum.

Length: 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: Science 1.1.1, 1.1.2, 1.1.4, 1.2.1, 1.2.5, 1.2.6, 1.3.5, 1.4.2, 1.4.3, 1.4.4, Social Science 1.3.5, 1.3.8

This program features the amazing lifecycle of plants. Students will observe a variety of plant seeds and answer the questions: Why do plants have so many seeds? What part of the plant are seeds found? Why are some fruits bright colors? How does this seed travel? Seasonal changes and how plants and animals are affected and plant and animal relationships will be explored. Students will play games to reinforce the lifecycle of plants and make apple cider to learn a direct benefit humans receive from plants!

Food, Water, Shelter, Habitat! (Spring Only)

This is part of the K.L.O.E. Discovery Program Grade One Unit Two, but may be done independently of the entire curriculum.

Length: 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: 1.42, 1.4.3, 1.4.4

Survival in the wild means finding food, water, and shelter! Animals find a variety of ways to find these resources to complete and carry out their life cycles. Students will observe tadpoles and learn the life cycle of butterflies and frogs in various ways. They will hike to look at various habitats to decide what animals may live there and how they find their food, water, and shelter to survive!



Second Grade

Plants and Animals: So Happy Together! (Spring or Fall)

Length: 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: Science 2.3.1, 2.3.4, 2.4.1, 2.4.2, 2.4.3, 2.4.4

Plants and animals rely on the actions of each other to survive and multiply! Hike to wetlands, prairie, woodlands, grasslands, and ponds to explore what plants and animals live in each habitat and what they need to survive and prepare for winter. Predator prey activities will demonstrate the food chain. Students will also explore the human need for plants and animals while making apple cider in the fall (other activities will be substituted in the spring)!

Wide Awake for Spring (Spring) or Getting Ready for Winter (Fall)

Length: 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: 2.3.2, 2.3.4, 2.4.1, 2.4.2, 2.4.3, 2.4.5, 2.4.7

The weather is changing and the plants and animals are changing their routines with it! Students will look at temperature charts from each different season for 2 years to observe how seasons come and go and affect everything and everyone in Indiana. How is the weather today and what was it like yesterday? Last week? Last month? What will it be like tomorrow, etc? What do the plants and animals do to survive during the various seasons? Migrating, hibernating, staying active, and going dormant will be discussed and demonstrated through a hike and activities. Apple Cider s an optional additional activity during the fall season.



Third Grade

Plants Rule the Land! (Spring or Fall)

Length: 2.5 hours

Program Fee: \$3.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: Science 3.1.2, 3.1.3, 3.2.4, 3.3.5, 3.4.1, 3.4.4

Most animals, including humans, can trace all of their food back to plants, and most plants trace their ability to make food back to the sun. Your students will become mini-botanists and search the property for a variety of plants. Each student will collect one specimen, identify it using field guides, keys, and other tools, then draw the plant, write a brief description about the plant and where it was found. These specimens will be gathered into a "Classroom Book of Plants." Students will participate in activities to demonstrate photosynthesis, learn to classify plants into groups (dicots and monocots), and find the close human and plant connection by making apple cider in the fall (other activities will be substituted in the spring).

Sorting and Classifying (Everything from plants and animals to recycling!) (Spring or Fall)

Length: 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: Science 3.4.1, 3.4.2, 3.4.3, 3.4.4, 3.4.8

Everything on the planet can be sorted into a category of some kind! Even the trash we throw away each day! Your students will explore how various critters and plants can be classified into simple groups. They will also learn about the plants and animals along the way! All human and animal food can be traced back to plants! (It is important plants are sorted correctly so we do not eat anything poisonous!) Plants and animals have needs just like humans and are sometimes classified by their needs (herbivore, carnivore, omnivore, etc). All of these nature classifications and more will be addressed through an interactive hike and other activities.



Fourth Grade

The Fabulous Cycles of Plants and Critters, Seasons and Water! (Spring or Fall)

Length: 2 hours

Program Fee: \$2.00 per student (teachers and Chaperones: Optional)

Indiana State Academic Standards: Science 4.3.8, 4.4.2, 4.4.3, 4.4.4, 4.4.5, 4.4.6 Social Sciences 4.4.3, 4.3.7

Everything in our world is a part of a cycle! We will explore the natural cycles and how they tie together. We will take an "Incredible Journey" through the water cycle, hike to observe the cycles of plants and play games to become part of the animal cycle. In the fall, apple cider making is an optional activity for an additional .50 cents per student.

Birds of a Feather... and other Fascinating Animal Adaptations

Length: 2 hours

Program Fee: \$2.00 per student (teachers and Chaperones: Optional)

Indiana State Academic Standards: 4.4.1, 4.4.2, 4.4.3, 4.4.4, 4.4.5, 4.4.6

Why are birds bones hollow? Why do birds have different types of beaks? Why do some animals nest high in trees? Why is the skin on amphibians moist and "slimey." These are all ways that animals have adapted to better survive their environments. Answer these questions and more through activities and a hike through CEC. We will discuss amazing animals that live right here in Indiana!



Fifth Grade

Pond/Wetland Investigation (Spring or Fall)

Length: 3-4 hours

Program Fee: \$5.00 Per student (Teachers and Chaperones: Optional)

Indiana Academic Standards: Science 5.1.1, 5.1.2, 5.1.6, 5.2.8, 5.4.2, 5.4.4, 5.4.5, 5.4.7

Maximum of 50 students and 5 adults able to monitor and assist 10 students each. Fifth graders, critters, water, and wetland soil (or mud!) - what a perfect combination for learning. Your students will be divided into smaller groups to investigate one of the ponds or wetlands at CEC. We will complete pH and Dissolved Oxygen tests on the water and collect plants and critters to identify and classify. There will also be a chance to inspect pond water and pond plants under the microscope. Once all the data is collected, each group will use their findings to determine the quality of their wetland or pond. Each group will report their findings to the other groups and compare and contrast results. Student are required to bring extra shoes or water boots and wear appropriate clothing for wading into the shallow areas of the wetland or pond. A change of clothing is also a good idea...just in case!

Our Watershed (Spring or Fall)

Length: 2.5 hours

Program Fee: \$3.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: 5.1.5, 5.1.6, 5.3.4, 5.3.5, 5.3.8, 5.4.5, 5.4.7, Social Science 5.3.4

Water, water everywhere and not a drop to drink! Students will learn about the local, regional, and the "planetary" watershed we live in. Activities will demonstrate the water cycle, the impact humans and animals have on our watersheds, how watersheds from far away affect Indiana (and vice versa), and what can be done to have healthy watersheds for the future. Several activities and experiments will demonstrate the properties of water and the importance of the world's water supply.

Survival of the Fittest (Spring or Fall)

Program Length: 2 hours

Program Fee: \$2.00 per student (Teachers and Chaperones: Optional)

Indiana State Standards: Science 5.4.4, 5.4.6, 5.4.7

While hiking the many habitats at Cope Environmental Center, students will venture through forest, grasslands, prairie, around ponds and wetlands to explore what plants and animals live in each area and why. Students will explore how plants and animals may change an area and how those changes affect other inhabitants. Strategies of plants and animals will be discussed and demonstrated to understand just how competition works in the wild and which plants and animals will come out on top!



Sixth Grade

Oh, What a Web We Weave!

Length: 3 hours \$3.00

Program Fee: \$3.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: Science 6.3.13,6.3.16, 6.4.1, 6.4.2, 6.4.6, 6.4.7, 6.4.8, 6.4.9, 6.4.10

Explore the relationships and interdependence between various species and habitats at the Cope Environmental Center! While hiking we will discuss competition for resources between various plants and animals. Using microscopes we will inspect plant and animal cells for their differences and similarities and differences and discuss the flow of energy among producers and consumers. Explore the web of life and how humans fit into the web!



Maple Syrup Programs

Length: 2 hours

Program Fee: \$3.00 per student (Teachers and Chaperones: Optional)

Indiana State Academic Standards: First Grade: Science 1.1.2, 1.1.3, 1.2.1, 1.3.1, 1.3.3, 1.4.2, 1.4.4 Social Science 1.1.1, 1.1.6, 1.3.5, 1.3.6, 1.3.8

Second Grade: 2.1.7, 2.3.1, 2.3.5, 2.3.6, 2.4.3 Social Science 2.1.1

Third Grade: 3.3.5 Social Science 3.1.1, 3.3.4

Fourth Grade: 4.1.5, 4.1.8, 4.2.1, 4.4.4 Social Science 4.1.2

Fifth Grade: 5.3.4, 5.3.5, 5.3.8, 5.3.9

Sixth grade: 6.4.1

Bring your students to CEC for an early Springtime treat! Students will learn the origins of pure maple syrup. The good stuff does not come from a factory! Students will learn the inner workings of trees, how seasonal cycles affect them, and why we depend on trees for more than just a sugary substance to put on breakfast meals. Beginning inside, we will look inside a tree and begin to uncover the mystery of maple syrup making! We will journey outside to meet a Native American that will shed light on maple syrups origins, then visit an early settler that will demonstrate the “newer” ways of making syrup. Finally, we will travel to the Sap House to see how maple syrup operations work today. Of course, the finale will be a sample of pure fresh maple syrup made right here at CEC!

This program fills up quickly. Registration begins January 17 for programs beginning the last week of February.



Other Field Trip Options

Are you working on a special unit in your classroom? Let CEC develop the perfect field trip to meet your specific needs! We will work with you to develop one or more field trips to enhance your classroom curriculum. Typical fees for special programs of 2 - 3 hours range between \$2.00 - \$5.00 per student.

Nature Appreciation Hikes

Interested in just getting your students outside to appreciate the outdoor world? General nature hikes may last from 1 - 2 hours depending on your needs. Fee is \$2.00 per student. Hikes may also be focused on specific topics such as Wildflower Identification, Tree Identification, Bird Behavior and Identification, etc.

Self – Guided Field Trips

Teachers that are comfortable leading their class on a hike with self-led activities are welcome! Cost is \$1.00 per student. All trips must be scheduled 2 weeks in advance and will be worked into the program schedule when possible. Teachers must meet with the program director prior to the field trip.



Programs in the Classroom

Bring CEC to your classroom! Program Fee for most classroom programs in Wayne County are \$2.00 per student (minimum of \$40.00.) Outside of Wayne County fee is \$3.00 per student (minimum of \$60.00).

Adaptable for All Ages:

- Bats
- Nocturnal Animals
- Mammal Showcase
- Energy Savers
- Endangered Species of Indiana
- My Lunch Came from Where?
- Owls
- Reptiles and Amphibians
- Recycling Adventures
- Let's Get this Garden Started!
- Let's Adapt!
- More are available!

Educator Workshops

Educator workshops give teachers the tools to bring environmental education and science to the school on their own! Three innovative national curriculum are available for educator training. Each full of ideas and activities to spice up science and encourage hands-on learning. Teachers may also learn how to use CEC on their own to cut down on costs and to completely tailor the CEC Outdoor Classroom to their own needs!

Project Learning Tree

Length: 6 hours (may be divided into two sessions)

Program Fee: \$25.00 per teacher and includes the Project Learning Tree Activity Guide (370 pages)

Become trained using the Project Learning Tree Curriculum and receive the guide filled with 96 activities for various grade levels. All aligned with national educational standards. All activities are hands-on and interdisciplinary and provide students the opportunity to explore environmental issues.

Project WILD

Length: 6 hours (may be divided into two sessions)

Program Fee: \$25.00 per teacher and includes the Project Wild and Project WILD Aquatic Activity Guide.

This award winning interdisciplinary conservation and environmental education program emphasizes wildlife. "The goal of Project WILD is to assist students of any age in developing awareness, knowledge, skills, and commitment to result in informed decisions, responsible behavior, and constructive actions concerning wildlife and the environment."

Project WET

Length: 6 hours (may be divided into two sessions)

Program Fee: \$25.00 per Teacher and includes the Project WET Activity Guide

The goal of Project WET is to "Facilitate and promote awareness, appreciation, knowledge and stewardship of water resources through the development and dissemination of classroom-ready teaching aids and through the establishment of state and internationally sponsored Project WET programs." It is a great resource to teach a wide variety of the characteristics of water and the issues that surround it.



Using CEC as an Outdoor Classroom

Length: 3 hours

Program Fee: \$15.00 per teacher

Visit CEC to find out how you can take advantage of this wonderful resource! Take a hike and tour of the grounds, learn about the programs offered at CEC, discuss independent use of CEC facilities for classroom projects, ask questions and enjoy a few hours outdoors!

August Education Open House

Date/Time: TBA

Program Fee: FREE

Visit CEC in early August to see what we have to offer! There will be tours, activity samplers, discussion and question and answer sessions, and more. This is a perfect opportunity to plan your class field trips, get to know CEC, and take away new ideas to use in and out of the classroom with your students! If you are interested in being contacted for this event, please email Stephanie at s.hays@copeenvironmental.org or call 765-855-3188.

The Tomato Project

Length: Begins Early February and continues through the May 14 Earth Day Event. Please call in late November or early December if interested. We are only able to accommodate 3 groups in 2005.

Program Fee: \$6.00 per student and includes: seeds, growing medium, containers, light kits, 2 visits (30 - 45 minute presentations) from a CEC staff member, support throughout the project and a booth at the Earth Day Celebration to give-away plants with containers and present research.

Grade Level: Fifth Grade through High School

The Tomato Project is a great way to involve your classroom with the annual Earth Day Celebration, the Community, and to familiarize them with food production and how it affects our natural resources. This is also a great project to cover Indiana State Academic Standards.

Students will begin with a visit from a CEC staff member to begin discussions surrounding the origins of the food we eat. The topic of local food production will be introduced. The students will receive materials to start tomato and pepper plants in the classroom. They will research the needs of the plants, such as water and light requirements. Teams may be formed to test different growing methods. These teams will also pick one topic to research and report back to the rest of the classroom (From soil to the grocery. . . The Life of a Tomato or Pepper, how tomatoes and peppers are processed, what resources are consumed to produce a tomato or pepper, how pests are controlled, Can tomatoes or peppers grow in a container? The Advantages of growing your own food. etc). Students will present their findings using various media to their classmates, the rest of the school, and at the Earth Day Celebration. During the Earth Day Celebration, students will give away plants along with containers for visitors to begin container gardens of their own. Students are also encouraged to keep one plant to grow for the rest of the season. This project has many possibilities and can be very simple or more involved. It is adaptable for grades 5 through High School.

Service Learning Opportunities

Are you looking for a way to encourage your classroom, after-school group or club to give back to the community? Service Learning opportunities are abundant at CEC. Spring and fall projects include but are not limited to: Pulling invasive plants, chipping trails, gardening, trail maintenance, and more. Each group that participates in a Service Learning Project over 3 hours will receive a free hour-long nature hike and tour.

Call Traci Lewis for details!



Contact Information

Program Director

Stephanie Hays-Mussoni
S.hays@copeenvironmental.org

Volunteer Coordinator

Traci Lewis
T.lewis@copeenvironmental.org

Cope Environmental Center

4910 Shoemaker Road

Centerville, IN 47330

765-855-3188

Fax - 765-855-1160

www.copeenvironmental.org

Visitor Hours

Cope Environmental Center trails are open to the public for hiking from dawn to dusk, seven days a week. The Administration Building is open from 9:00 AM to 5:00 PM, Monday through Friday, except holidays.

Directions

From I-70 take Exit 145 and go south on Centerville Road for 3 miles to the traffic light in Centerville. Go east on U.S. 40 for 1.6 miles to Airport Road. Go south for 1 mile to the Prairiewood Entrance on the west side of the road. For the Homestead Entrance, continue south from the Prairiewood Entrance on Airport Road for .3 miles to Shoemaker Road. Go west for 600 feet to the Homestead Entrance on the north side of the road.

Homestead Entrance

(Education Center & Administration Building)
4910 Shoemaker Road
Centerville, IN 47330

Prairiewood Entrance

(Prairie and Wetlands Vista & Trailhead)
1792 Airport Road
Centerville, IN 47330



Cope Environmental Center Map