Educational Programs  2009-2010 School Year

Our Programs are aligned with the KC4 curriculum guideline to provide your students with hands-on, outdoor experiences. Calvin College students and volunteers share their enjoyment of nature and knowledge with your students during these programs. The combination of having college students teach elementary students makes our program unique. All the students love learning from each other. Your students are receiving a memorable educational experience while the Calvin students gain valuable experience teaching students in an outdoor setting. Many of the Calvin students are working towards becoming elementary school teachers or scientists.

Themes

Amazing Animals of West Michigan

Recommended Grade Level: 1st to 3rd Grade
Season: Fall & Spring
Length: 1 1/2 hours
Maximum # of students: 50
Key Concepts: classification of animals (vertebrate vs. invertebrate, mammals, birds, fish, reptiles, and amphibians), predator-prey relationships, camouflage, animal signs, basic needs of animals

Students will become nature detectives as they look for signs of animal life while walking through the preserve. They will examine the relationship between animals through observations and activities that illustrate predator-prey interactions and camouflage strategies.

Please know that we do not guarantee you will see animals as you walk through the preserve. It just depends on the day, weather, and other factors.

Caring for the Earth

Recommended Grade Level: 3rd to 6th grade
Season: Fall & Spring
Length: 30 minutes to 1 1/2 hours
Maximum # of students: 30
Key Concepts: natural resources, renewable vs. non-renewable resources, solar energy, water conservation, energy conservation, the three R’s (recycle, reuse, reduce), composting, environment

Using our award winning LEED certified "green" building as a model, students will learn ways we can protect the environment through our building practices, purchasing choices, and every day activities. While exploring the building, we will discuss green technology practices and then spend some time brainstorming simple ways all of us can personally care for the environment.

For Christian Schools: we offer a version of this program with a Christian perspective called Creation Care 101 - Becoming Stewards of God's Creation.
Critters in the Cold

**Recommended Grade Levels:** 1st to 3rd grade  
**Season:** Winter  
**Length:** 1 1/2 hours  
**Maximum # of students:** 30  
**Key Concepts:** hibernation, migration, dormancy, animal signs, population dynamics, predator/prey relationships

Discover how animals deal with Michigan’s cold weather and some strategies they have for surviving the winter. Students will take a winter walk to look for animal signs and play some games in the Bunker Interpretive Center that illustrate population dynamics and predator/prey relationships.

Activities will take place both outdoors and in the Bunker Interpretive Center.

Great Lakes Ecosystem Explorations

**Recommended Grade Level:** 2nd to 4th grades  
**Season:** Fall & Spring  
**Length:** 1 1/2 hours  
**Maximum # of students:** 50  
**Key Concepts:** habitat, ecosystems, basic needs of animals, food chains and webs, producer, consumer, decomposer, herbivore, omnivore, carnivore, adaptations

Students will explore different habitats in the Preserve to see how animals, plants, and humans depend on each other for survival. They will compare two different habitats and build a large food web to illustrate how energy flows through a community.

Macro-Invertebrate Investigation

**Recommended Grade Level:** 3rd to 6th grades  
**Season:** Spring  
**Length:** 1 1/2 hours  
**Maximum # of students:** 30  
**Key Concepts:** macro-invertebrates, aquatic food webs, vernal pools, detritus, complete vs. incomplete metamorphosis, taxonomic key, using macro invertebrates to assess water quality, limnology

Discover the weird and wonderful creatures that live beneath the surface of a pond. Students will learn more about aquatic environments, the pond’s health, and food webs through this hands-on program by collecting and identifying macro-invertebrates that live in a pond.

Michigan’s Terrific Trees

**Recommended Grade Level:** 2nd to 4th grades  
**Season:** Fall  
**Length:** 1 1/2 hours  
**Maximum # of students:** 50  
**Key Concepts:** life cycle of a tree, parts of a tree, basic tree identification, photosynthesis, basic needs of a tree

Imagine that you are a tree and learn about their needs and life stories. During this program, students will learn the basic skills needed to identify some of Michigan’s terrific trees in addition to building a large human tree from the inside out.
Sensory Adventures - Exploring Nature Using Our Senses

Recommended Grade Level: Pre-K to K  
Season: Fall & Spring  
Length: 1 1/2 hours  
Maximum # of students: 50  
Key Concepts: living vs. non-living, touch, smell, hearing, sight, taste, awareness of nature, colors found in nature, shapes found in nature, observation skills, seasonal changes

This hands on program will have students exploring our fields and forest using their senses. They will discover that our forest is filled with a variety of colors, shapes, textures, and sounds as well as both living and non living things.

A note to Preschool and Kindergarten teachers: Many of you have requested both a winter program and another program this age group so that your class can visit the preserve in all three seasons. We are working on both programs. Please check our website in January 2010 for information about these new programs.

Wildflowers in the Spring

Recommended Grade Level: 2nd to 4th grade  
Season: Spring (Last week in April and the 1st week in May are usually the best time for seeing most of the spring wildflowers in bloom.)

Winter Ecology

Recommended Grade Levels: 2nd to 4th grade  
Season: Winter  
Length: 1 1/2 hours  
Maximum # of students: 30  
Key Concepts: Animal signs, animal adaptations, hibernation, migration, dormancy, winter weather, lake effect snow, wind chill, snow formation, Wilson “Snowflake” Bentley, thermometers, anemometers

Explore the preserve in the winter as we take a hike to discover how our animals are adapted to survive Michigan’s winter weather. Students will also learn more about the life of Snowflake Bentley, a famous scientist who studied snowflakes, and how snowflakes and lake effect snow are created. Finally, students will become meteorologists and use thermometers and anemometers to take measurements.

Activities will take place both outdoors and in the Bunker Interpretive Center.
Schedule a visit today

School programs are scheduled Monday through Friday during the following time slots: 9:00 to 10:30 am, 10:45 am to 12:15 pm, & 12:45 to 2:15 pm.

- Fall Season September 21 to November 13, 2009
  Registration for Fall Season opens September 9, 2009
- Winter Season February 8-26, 2010
  Registration for Winter Season opens January 7, 2010
- Spring Season April 19 to May 18, 2010
  Registration for Spring Season opens March 1, 2010

Fees and Payment Information  Program fee is $2 per a student. For every 10 students, one adult is admitted free of charge. Additional adult chaperones and siblings are $2 per an individual. Fees are due on the day of your programs. Cash or checks only.

Helpful Information  Group size is limited to around 50 students per a program. If you have more students please plan on scheduling additional programs in other time slots. We also ask that for every 10 students you provide 1 adult chaperone. For Pre-K and K groups, 8 to 10 students will be with a program leader depending on the availability of leaders for your time slot. For all other grade levels, groups of 10 to 12 students will be with a program leader.

To schedule a program please call Pat Buist in the Biology Department at 616-526-7700 between 9 a.m. and 4:30 p.m. Monday to Friday.

When you call please have the following information available:

- School /organization name
- Desired program theme
- Preferred dates and times & alternates
- Contact person
- Phone number, school address and email
- Grade level(s) and number of students and adults
- Any special needs

Reservations are taken on a first come-first serve basis. Confirmations will be mailed/ emailed before your visit. Please distribute the information to all participating teachers and inform us of any changes.

Get updates on programs and events via email! Just send us your email address to preserve@calvin.edu and we will add you to our list serve.
Frequently Asked Questions

Why are programs limited to only 50 students? The preserve is first and foremost a refuge for the flora and fauna that live there. Thus, we limit group size to lessen our impact on the land. Additionally, group limits take into account logistical concerns such as the number of program leaders available and our desire to have a low student to teacher ratio.

Are there facilities available on site for us to have lunch or a snack? Again because this is a preserve, we do not offer any picnic facilities in order to reduce the amount of trash and food waste on site. We encourage you to plan accordingly and/or visit a local city park for lunch. Thank you for your cooperation.

Are your facilities and trails handicap accessible? The Bunker Interpretive Center is accessible to wheelchairs. Our trails are wood chipped and accessible by some wheelchairs. Please note that the trails can be muddy in the spring. When scheduling, please let us know if any of your students have special needs.

Comments from Teachers & Parents

“Thanks for hitting many areas of study. I like the hands on, even on a cold day.” “The children were drawn into discussions with questions, eye spy and anticipation.”

“Loved that instructor was able to teach content and tie into what students already knew and what they were studying.” “Best [experience] I have ever had here and I often recommend this program to other teachers because it is run so well.” “Thanks for the deluxe tour, we loved it!” “Very personal with students, engaging, well organized.”

“It was very hands-on for the children and she did an excellent job including the children; It was a very impressive program and I enjoyed learning about the ecosystem.”

“This program will lead into many more learning experiences.” “I love the way you adjust to meet the needs of the group. Thank you!”
**About the Ecosystem Preserve**

**The Ecosystem Preserve** Our preserve consists of 90 acres of temperate deciduous forest, wetlands, and old fields on the campus of Calvin College on the east side of Grand Rapids, Michigan. Around 40 acres with a mile long trail is open for the public to walk through and enjoy the outdoors. The remaining 50 acres are maintained for a wildlife refuge and scientific research.

Hours: Trails are open everyday from dawn to dusk.

**Bunker Interpretive Center** Built in 2005, the building was designed following guidelines of the U.S. Green Building Council for developing innovative, high-performance, sustainable buildings. The building was awarded a Leadership in Energy and Environmental Design (LEED) Gold Certification. We invite you to visit the center and learn more about green technology through educational displays and tours.

Hours: Monday to Friday 9 am to 5 pm  
Saturday 10 am to 4 pm (School Year Only)  
Closed Sundays and Major Holidays

**Public Education** Throughout the year we offer a variety of public education programs for visitors, summer campers, and Calvin students to learn about the natural history of west Michigan. Visit our Web site at [www.calvin.edu/go/preserve](http://www.calvin.edu/go/preserve) for information and list of our current programs.