



Fall Season



Activity Choices

Kettunen Center 4-H TRACKERS Program 8/08

(All activities are correlated to the Michigan GLCEs for Science and shared with the classroom teachers)

Come to Your Senses

Explore nature by using your five senses of sight, smell, taste, touch and hearing. Each sense collects information to understand the world around us. Improve observation skills by studying natural objects up close for color, texture, odor, sound and taste. Experience and enjoy the natural environment by participating in games, role-playing and outdoor hikes. Key concepts: senses, observation, habitat.



Fascinating Crawlies Everywhere



Learn about the largest group of animals on earth – insects! Discover insects in the water, soil, and living plants of forests and fields - they are everywhere! Insects can be pests or endlessly fascinating creatures. Learn interesting facts and examine the diversity, life cycles and the purpose of insects through collection, activity and outdoor hikes. Key concepts: invertebrate, ecosystem, observation, identification, life cycle

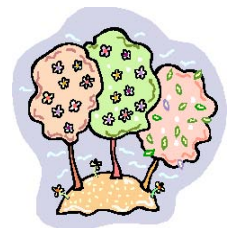


Fur, Fins and Feathers

Discover Michigan's diverse wildlife, exploring why, how and where they live, find water, food and shelter and the enjoy surprises in nature as you walk the trails. Whether learning about birds, reptiles, fish, mammals or amphibians on a discovery hike – gain an understanding and appreciation of Michigan animal species' physical characteristics, behaviors, interrelationships and seasonal adaptations. Key concepts: habitat, adaptations, vertebrates, survival needs, interrelationships.

THREE CHEERS FOR TREES!

Explore the world of Michigan's great forest resources. Learn about trees as factories and the process of photosynthesis, count annual rings or whorls, and use an increment borer to age a tree. Identify some of the 90 native tree species while you gain greater appreciation of their benefits and their obvious and not so-obvious products that we depend on and as a renewable energy resource. Key concepts: identification keys, photosynthesis, ecosystem, renewable energy resource, measurement.



The Weather Machine



Experience the *Incredible Journey* of the water cycle to introduce the importance of the sun's energy in changing weather patterns and the Earth's systems. Compare a 10-day news forecast to today's weather pattern. Use your senses and basic scientific tools to measure temperature, cloud type/cover, precipitation and wind direction & speed. Do an outdoor microclimate experiment comparing two-three sites for temperature, sun exposure, soil characteristics and plant growth and interpret results. Observe lichens as air quality indicator species and how it relates to the water cycle & weather patterns. Key concepts: renewable energy resources, air quality, weather patterns, cloud types, water cycle.

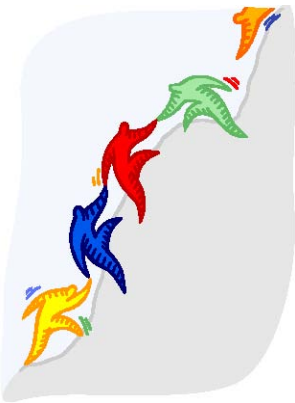


Outdoor Recreation for Physical Fitness

Learn about the physical fitness pyramid, sun safety and importance of drinking water! Experience and learn basic skills and safety tips for canoeing or kayaking on Center Lake (for 4-6 grades only). Basic instruction and equipment is also available for pier and shoreline fishing for all grade levels. Enjoy outdoor scavenger hunts, physical fitness hiking, Jump Into Fitness Course, outdoor Frisbee golf course, basic volleyball, relay races, kickball or other field games. Key concepts: safety, physical fitness, outdoor preparedness.

Plantastics!

Explore the ecosystems of Michigan forests, fields and wetlands and discover, identify and understand the biology and interrelationships of the flowering and non-flowering plants observed. Learn to use field guides, identification keys and other references. Enjoy tasting seasonal wild edibles, doing field experiments, games and other activities to study the world of native plants. Key concepts: pollination, plant structure, bio-diversity, invasive species, habitat, identification keys.



BUILDING A TEAM!

Willingness to be a team player is an important life skill for all ages. Outdoor group cooperative games and small group problem solving activities are used to build individual self-esteem, leadership and followship skills to help the team be successful. Key concepts: cooperation, communication, teamwork, group problem solving, leadership.



Which way is North? (4th-6th grades only)

Gain skills and knowledge needed for outdoor survival and enjoyment. The *compass skills and map reading activity* introduces the purpose, parts, proper use of a compass and basic topographic map reading skills. Demonstrate the skills by following an outdoor course using a compass and instructions. Or go high-tech and learn the operation, purpose and use of a GPS handheld device in the *Global Positioning System (GPS) session*. Demonstrate the skills by using a GPS unit on an outdoor discovery course. Key concepts: safety, outdoor survival, global positioning system, compass skills, topographic maps.



Give Water a Hand (4th-6th grades only)

All life depends on water; it connects all living things today and through time. In a never-ending cycle, water is used and reused by animals, plants and people. Learn about how people can impact the quality of surface water. Collect macro-invertebrates and identify pollution sensitive and tolerant species, test for dissolved oxygen, pH, temperature, turbidity and learn how to interpret the data. Key concepts: watershed, ecosystem, water quality, invertebrate, data collection, data interpretation.





Winter Season Activity Choices

Kettunen Center TRACKERS: Environmental & Outdoor Education Program for K-6

All activities are correlated to the new Science Grade Level Content Expectations.



Nature Detective: Tracking Winter Wildlife

Explore and discover the forest, wetland, and field ecosystems of northern Michigan in the winter. Be a nature detective and observe, identify and interpret signs of wildlife using tracks, chew marks, droppings, homes and other discoveries.

Key concepts: adaptations, habitat, mammals, field guides, living and nonliving components.

Winter Hydrology

What happens to lakes in the winter? Learn about the atmosphere and what causes the changes in the weather. Study our local lake to find out what happens when it freezes over and how that changes the water ecosystem. Make a hole in the ice using a simple tool and try to find life below. **Key concepts:** weather, ecosystem, water, invertebrates.



Snow Science

Examine snow characteristics such as crystal formation, descriptions, depth and temperature. Analyze its density discovering the insulating properties of snow. After an invigorating session in the field, return inside to interpret the data and make homemade snow-ice cream.

Key concepts: matter, data collection and analysis, measurement, density, insulation.



Which way is North?

Gain skills and knowledge needed for outdoor survival and enjoyment.

The *compass skills and map reading activity* introduces the purpose, parts, proper use of a compass and basic topographic map reading skills. Demonstrate the skills learned by following an outdoor course using a compass and instructions. Or go high-tech and learn the operation, purpose and use of a GPS handheld device in the

Global Positioning System (GPS) session. Demonstrate the skills by using a GPS unit on an outdoor discovery course. **Key concepts:** safety, outdoor survival, global positioning system.



(Activity choices continued on back...)

Six Keys to Winter Survival

Do you like the winter season? What do living things need to survive? Learn how to prepare yourself to enjoy the cold temperatures and be safe while experiencing the wonders of the outdoors in the winter. Learn how to prevent winter emergencies and what to do if in those situations. Learn the six keys to survival and other safety measures as well as how to build a shelter and start a fire with limited resources.

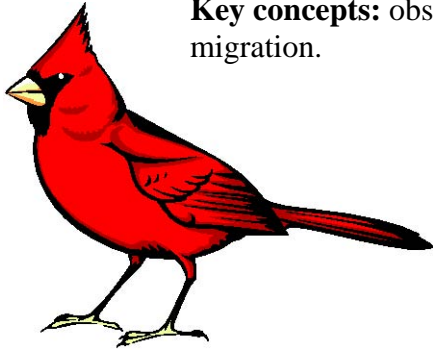
Key concepts: adaptations, safety, basic needs for survival.



Winter Wings!

What birds stay in Michigan through the winter? How do birds adapt to the winter temperatures and snow cover? Learn how to use binoculars and field guides and apply the skills during an outdoor hike and visiting an observation station. Learn about the local species and their identifying calls, preferred food, adaptations and unique behaviors. Participate in Cornell University's Project Feeder Watch winter research project.

Key concepts: observation, data collection, identification keys, "birding skills", adaptations, migration.



Outdoor Recreation for Physical Fitness

Learn basic skills and enjoy cross-country skiing and snowshoeing on the outdoor trails. Learn the basic skills of ice fishing on Center Lake. Supervised outdoor sledding can also be an activity choice.

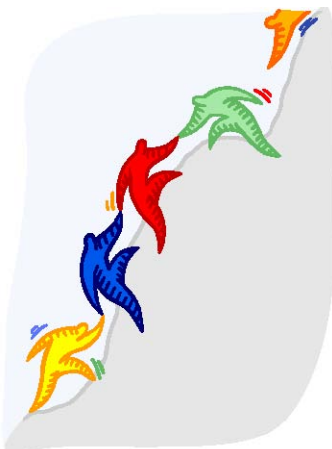
Key concepts: safety, physical fitness, outdoor preparedness.



Building A Team!

Willingness to be a team player is an important life skill for all ages. Group cooperative games and small group problem solving activities are used to build individual self-esteem, leadership and followship skills to help the team be successful. Primarily indoor activities during the winter program but will go outside if the weather permits.

Key concepts: communication, teamwork, problem solving, leadership.





Spring Season Activity Choices

Kettunen Center TRACKERS: Environmental & Outdoor Education Program for K-6

All activities are correlated with the new Michigan Science Grade Level Content Expectations.



Spring Wings Many species of birds are returning during the spring months from their winter migration. Enjoy an outdoor hike through hardwood forests and open fields to learn about the local species and their identifying calls, what they eat, their preferred habitat, nesting habits, physical adaptations and unique behaviors. Learn how to use binoculars, field guides and a bird life-list as simple tools for outdoor observation and data collection. Discuss reasons for the results of your observations.

Key concepts: observation, identification keys, adaptations.

Three Cheers for Trees

Explore the world of Michigan's great forest resources. Learn about trees as factories, the process of photosynthesis and the interrelationships in a forest ecosystem through student role playing activities. Investigate the age, size, physical adaptations, and species type of some of the 90 native trees of Michigan by using simple tools (measure with yarn, using a Tree Finder dichotomous key), and a demonstration of professional forestry tools (increment borer, and measuring tape). Keep a chart of your findings and compare results, and discuss reasons for differences. Generate questions and share ideas of the benefits of trees and learn about many not-so-obvious products that we depend on.

Key concepts: identification keys, photosynthesis, ecosystem, measurement.



Bogs, Frogs and Pollywogs

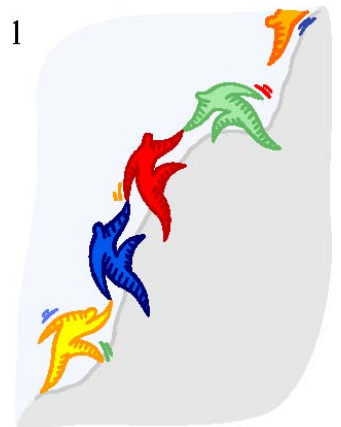
Ready to get wet? Discover how wetlands are like a sponge, a baby cradle, a box of cereal, a strainer and other unique metaphors. Conduct an investigation of wildlife and plants occupying a wetland ecosystem (woodland swamp or marsh) through collection, observation, using simple tools and recording data. Find and identify aquatic insects at different stages of growth and other wildlife species using a dipping net, pencil, hand lens, data sheet, identification keys and field guides.

Encourage questions and reasons for the results of the investigation and the effect humans and other organisms may have on the balance of a wetland ecosystem.

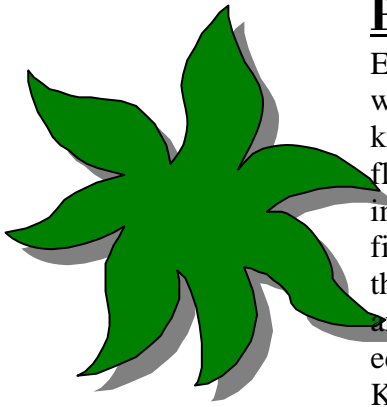
Key concepts: habitat, water, invertebrates, identification key, metamorphosis.

Building a Team!

Willingness to be a team player is an important life skill for all ages. Outdoor group cooperative games and small group problem solving activities are used to build individual self esteem, leadership and followship skills to help the team be successful. Key concepts: communication, teamwork, problem solving, leadership



Plantastics!



Explore the Plant Kingdom while hiking outdoors in forests, fields or near wetlands. Observe by using all your senses, generate questions related to current knowledge and observations, and conduct a simple investigation to identify flowering and non-flowering plant species, recognizing adaptations and interrelationships. Use simple tools such as pencil, hand lens, ruler, data sheet, field guides and identification keys in the investigations. Communicate findings of the investigation and discuss reasons for results, and describe the effect humans and other organisms may have on plant communities. Enjoy tasting seasonal wild edibles or making a craft using plants.

Key concepts: pollination, plant structure, bio-diversity, invasive species, habitat.

Nature Detective: Discovering Spring Wildlife



Discover Michigan's wildlife (birds, insects, mammals, amphibians, reptiles) while hiking outdoors near wetlands and through forests and fields of northern Michigan's natural ecosystems. Observe by using all your senses, generate questions and observations during a simple investigation of tracks, chew marks, scat, homes and other discoveries to determine the species of wildlife that live in a specific habitat. Use simple tools such as field guides, data sheet, pencil, hand lens, and ruler. Share findings and record on a chart and compare results of different habitats and reasons for the results. Key concepts: senses, adaptations, habitat, ecosystem, living and nonliving components, field guides.



Which Way is North?

Gain skills and knowledge needed for outdoor survival and enjoyment. The compass skills and map reading activity introduces the purpose, parts and use of a compass and basic topographic map reading skills. Demonstrate the skills by following an outdoor course using a compass and instructions. Or go high-tech and learn the operation, purpose and use of a GPS handheld device in the Global Positioning System (GPS) session. Demonstrate the skills by using a GPS unit on an outdoor discovery course.

Key concepts: safety, outdoor survival, global positioning system.



Outdoor Recreation for Physical Fitness

Experience swimming or boating at Center Lake. Learn basic canoeing skills. Equipment provided. Enjoy seasonal changes with scavenger hunts, and "teachable moments" hiking the trails through Michigan's natural ecosystems. Basic instruction and equipment is also available for pier and shoreline fishing.

Key concepts: safety, physical fitness, outdoor preparedness



(updated 3/10/09)



Kettunen Center 4-H TRACKERS Program Overnight Camp Programs



If you are looking for a place to take your students for a multi-day camp experience, the Kettunen Center has all the amenities to meet you and your students needs. We offer a wide range of daytime activities (see seasonal activity choices) that encourage students to think about their connections to the environment. We have a flexible staff that is eager to help plan the camp program and teach activities. We encourage the involvement of classroom teachers by offering “pick up and teach” activity choices. To help compliment the camp programs at the Kettunen Center, we have compiled a list of evening educational and recreational activities. The time frame involved is approximately 6:00 p.m.-10:30 p.m., or after dinner to bedtime. We will work with the school staff to plan and facilitate the evening activities. One of our 4-H TRACKERS staff can be available in the evening to facilitate large group activities if requested. These programs can be included with your 4-H TRACKERS Program & are approximately one hour in length.

FREE Evening Presentations:

Folk Dancing: (groups 50 or less, or larger schools can be divided into two groups)

An opportunity to learn the history of Folk Dancing and enjoy participating in many cultural dances.

Scavenger Hunts:

This activity gets the students moving around looking for items on their scavenger hunt list. Students will be outside (weather permitting) looking for natural items. After the group reassembles, they will all share the most unusual thing they found!

Recreational Games:

The Kettunen Center staff has a large number of activities to keep your group active after dinner. Anything from relay races, cooperative games, volleyball, basketball, kickball, Frisbee golf, etc. Have something else in mind, just let us know!

Outdoor Campfire:

Nothing beats a cozy campfire on the shore of Center Lake after an exciting day of activities. Grab a stick and roast some marshmallows while telling your favorite stories or jokes and singing campfire songs. This is also a great time to reflect on the camp experience!

Night Hike: (groups of 15 students at one time)

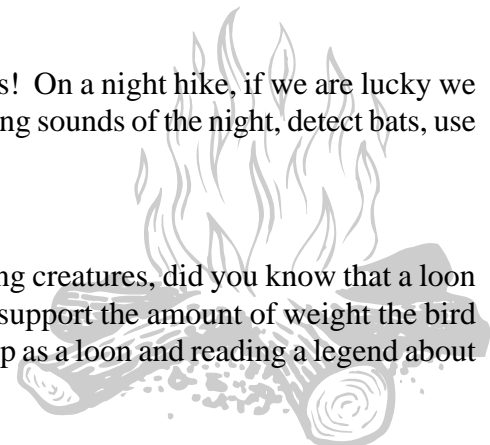
“Who cooks for you, who cooks for you all,” that is what the barred owl says! On a night hike, if we are lucky we will be able to call owls! This is a wonderful time to experience all the amazing sounds of the night, detect bats, use your night vision and learn about the night sky.

Common Loon Presentation:

Join us as we learn more about the Common Loon. These are such fascinating creatures, did you know that a loon can not stand on land! It’s true! Their feet are too far back in their body to support the amount of weight the bird carries! We will be watching an informative slide show, dressing a student up as a loon and reading a legend about the loon! Let’s get loony!

Environmental Issue, Student Improvisational Skit:

Each year we select a new “environmental topic” and students will be given time to be creative and plan a skit to present to their classmates. Props will be supplied. Students will learn something new and have fun too!



FEE-BASED Program Presentations:

The following evening programs require a fee that must be paid directly to the presenter by the school requesting the program. Each program listed is approximately one hour. The 4-H TRACKERS Program Coordinator will assist the school with arrangements.

Michigan's Valuable Wetlands or Michigan's Birds of Prey: MUCC \$325.00

This program was designed to help Michigan's citizens increase their knowledge and appreciation of our valuable wildlife resources. During presentations, live animals are used to highlight a wide range of wildlife concepts including information on the animals' biology, life history, adaptations, myths, and wildlife problems. Ecological relationships, such as habitat requirements, species interactions, and population status in Michigan are also discussed. Visit their website at www.mucc.org.

Wildlife Recovery Association: Joe Rogers \$250.00

Joe gives hundreds of presentations every year to people of all ages. This very entertaining yet informative presentation will leave you feeling connected to the natural environment. He brings a number of raptors (owls and hawks) to each program and you get an up close and personal look at the amazing birds of prey. Visit their website at www.wildliferecovery.org.

Rent a Rambling Naturalist: Wil & Sarah Reding \$230.00

The character, "Yas Ennya Oyaka", knows a lot about Great Lakes mammals, he has been doing sharing sessions for over 24 years. Participants will find the information enjoyable to experience and personally enriching. In addition to lively story-telling, with plenty of direct eye contact, "Yas" uses: sight (he dresses as a woodsperson in a fake bear skin cape, big black hat with feather, a patch over one eye and walking softly in moccasins) smell (he eats a bit of garlic before each presentation), sound (he has a gruff voice) and touch (he involves his audience in his presentations) to teach. His information is about the rich ecosystem of the Midwest United States and its' inhabitants or any place he finds himself rambling. Visit their website at www.rentaramblingnaturalist.ws.

French Fur Trapper: Wendall Hoover \$150.00

This retired interpreter from Hartwick Pines State Park brings a wealth of information about Michigan's early settlement era. Rustic tools, trapping equipment, household implements, furs and tons of fun facts that will bring Michigan history to life!

Magician: Dennis Hebert \$150.00

Dennis brings a number of age appropriate traditional magic tricks that will wow the crowd! Kids really enjoy the show and they will spend days trying to figure them out!

Folk Music Entertainers: Lake Effect Folk Singers \$150.00

This is one of Michigan's premier family-roots bands and has been playing music for nearly 30 years! Lake Effect enchants audiences of all ages with a full smattering of hilarious original and traditional songs, from old time string band music to original ballads. Instrumentation includes banjo, guitar, lap dulcimer and an unusual assortment of percussion instruments. With Lake Effect, the forecast is always FUN! Weather permitting; Lake Effect can entertain your school around the campfire.