#### Archery, Grades 5-12

Students will learn the history of archery. They will also learn basic archery skills and have the opportunity to shoot a compound bow at our archery range. This is a skills-based lesson focusing on safety and the use of the bow and arrow throughout history. Early Fall and late Spring only.

#### Art in Nature, Grades 4-12

Students will become aware of how nature can be used as an inspiration for artwork. Students will learn some of the basic artistic movements in history and then spend time in nature creating two different art projects. Nature will be the inspiration for both a drawing/painting, as well as a temporary sculpture influenced by modern nature artists.

## **Beaver Adaptations, Grades 4-7**

Through an explorative hike and a dress-up activity students learn about beavers and their many adaptations. Behavioral and physical adaptations will be examined while searching for beaver signs along the shore of Minister Lake.

#### Bird Trackers, Grades 5-12

Students will use observation and research skills to identify birds on site. They will learn about citizen science monitoring and submit their data online to a worldwide database that tracks bird populations. They will learn how to use the database to search for data on migration patterns and population changes. Older students will analyze how environmental threats such as hurricanes, oil spills, floods and droughts affect specific bird species using data they can access and interpret from the worldwide database.

#### Bottom's Up, Grades 7-12

Students investigate the thermal stratification of a temperate lake. By measuring temperature, dissolved oxygen, and light penetration, they will draw a profile of the lake, plot each factor and determine which part of the annual cycle the lake is in. The effect stratification has on the biotic community will be discussed as well as how humans can affect stratification. **Warm months only**.

#### Canoeing, Grades 6-12

Students will learn the basics of canoeing while paddling the shores of Sunset Lake. After reviewing canoe and paddle parts and techniques, the students will practice their skills while learning some of the geologic and natural history of Sunset Lake. During inclement weather, another lesson will be chosen. **Early Fall and late Spring only.** 

#### Challenge Course, Grades 6-12

The Challenge Course is a team-building course that allows students to develop their skills as productive, cooperative team members. Utilizing trust, communication, cooperation, and problem solving skills, students will overcome physical and mental challenges. Frequent group discussions relate their experiences to life beyond CWES, and connect to team skills needed at home, school, and in their futures.

#### **Colorful Confusion, Grades 1-4**

Students will learn how coloration helps to hide an animal or draw attention to its niche in an animal community. Using model animals and various habitats around CWES, the students examine which animals are best camouflaged for survival in specific habitats. The concepts of warning, disruptive, advertising and false eye spot coloration will be introduced to older students.

#### **Cooperative Compass, Grades 5-12**

Students participate in a physically active orienteering exercise. After reviewing basic compass and pacing techniques, students will rely on their teamwork and orienteering skills to complete an off-trail compass course. Long pants and closed toed shoes are a must.

## Changing of the Land: Digging Up the Past, Grades 4-5

In this lesson, students will learn about the use of land around CWES over the past 150 years. During a visit to the Parsonage, the students will dig up the remains of a burnt homestead and piece together how the land was used and observe how it has changed since it was abandoned. **Early Fall and late Spring only.** 

## Changing of the Land: Early Explorers, Grades 4-5

In this lesson, students will experience what life may have been like for Wisconsin's early explorers and voyageurs. In the role of fur-trading voyageurs, they will journey through the new landscape of CWES, guided by the voices of explorers before them, and record their observations by creating a map and journal entry. They will learn about voyageurs' relationship with Native Americans by participating in a fur trading game.

#### Changing of the Land: Menominee Nations, Grades 5-8

This lesson aims to teach about First Nation people as main characters in Wisconsin history, and particularly focuses on the Menominee Nation people: people that once occupied the land at CWES. Gain knowledge and respect for indigenous cultures, lifestyles and contributions and how these people impacted today's society.

# Changing of the Land: Pioneers, Grades 4-5

In this lesson, students will learn about the history of the early settlers as thy moved into Wisconsin and their relationship to the land. They will be exposed to the history and culture of the time, and will see what life was like for children in the early days.

#### Feathered Friends, Grades K-2

What makes a bird a bird? Discover the interesting adaptations of birds. Your students will make their own bird and then head out on the trails in search of our Feathered Friends.

# First Nations: Symbols and Stories, Grades 1-4

Students will learn about the seals, mythology, and constrction and games of several WI nations. Using their own creativity, students wil create their very own seal and myths, all while participating in an engaging, culminating event.

# Five Alive, Grades K-4

In this lesson, students will use their five senses to enhance awareness of the environment around them. They will hone their hearing by matching sounds. They will explore the outdoors for colors and become friends with a tree. They will use their noses to identify scents from nature. Through the engagement of their senses, these activities allow students to connect with nature in a whole new way.

# Forest Diversity, Grades 5-12

This activity introduces students to 3 components of diversity within a forest: Species, Structural, and Functional Diversity. Each of these measures of diversity will be done on a red pine plantation and a mature mixed forest. Students will compare the diversity levels of the two different forest types and discuss the value of diversity.

#### Forest For the Trees, Grades 2-6

Students discover what makes trees and forests special. After investigating tree characteristics, students explore the forest and its distinct layers. **Warm months only.** 

# Forest Inventory, Grades 5-12

Participants will estimate the monetary value of an acre of timber. To do this, they will use equipment forester's use to measure or "cruise" timber. They will calculate the dollar value of individual trees and also what one acre of forest is worth to make into lumber.

# **Global Positioning Systems, Grades 6-12**

Students will learn the basics of global positioning system (GPS) units. After mastering the basic GPS concepts and techniques, students will complete a geocaching activity. This is a another extension to basic orienteering skills learned previously or in conjunction with Cooperative Compass.

# Group Initiatives, Grades 5-12

Teamwork leads your students to success! As a group, students participate in activities that challenge them both mentally and physically. Through these challenges and the ensuing discussion they learn the importance of communication, cooperation, trust, and problem-solving skills in their every day lives.

# Habitat Suitability, Grades 5-12

In this lesson students will conduct studies of several sites to determine the suitability of the plots as habitat for gray squirrels. They will compare these sites and discern what habitat elements are present or limiting on each plot.

# Have Seed Will Travel, Grades 3-5

Students will discover the function and importance of plant seeds. Methods of seed dispersal as a plant adaptation are emphasized in this lesson. Students will invent a seed that could be dispersed by one of the methods. Comparisons to actual seeds will be made and implications of the adaptations discussed.

# How Birds Make a Living, Grades 3-5

Students become hungry birds and feed in different habitats with specialized beaks. Their experience of trying to "feed" in these different habitats using special tools helps students understand how beak adaptations help birds survive. Quiet exploration of the Environmental Station reveals birds in their habitats.

# Lake Ecology, Grades 5-12

Students will investigate lake quality using multiple testing methods including pH, nitrate, phosphate, dissolved oxygen, and bottom sampling. Lake type will be determined and water samples will be explored using a microscope laboratory.

# Laws of Nature, Grades 4-12

What principles govern the natural world? Do humans follow these principles? Students will be introduced to four "Laws of Ecology" and have a chance to prove them wrong/right. Students apply the four laws to the data gathered from an active game illustrating the concept of bioaccumulation.

# Leaps and Bounds, Grades K-2

Slink, slither, hop, and stomp through this lesson about how animals move. Students will learn about different types of movements and how they help animals survive in its environment.

## Magnificent Mammals, Grades K – 4

Through engaging activities and a hike, students will explore some magnificent mammals! Students will review the differences between mammals and non-mammals. They will get to handle different mammal furs and discuss how mammals use their fur. They will explore the different habitats of mammals and build a mini-habitat for a mammal.

## Map and Compass Skills (Indoor activity), Grades 6-12

Using a map scavenger hunt, students learn how to locate land features on a map, how to measure distances between two points on a map, and how to plot a course on a map with a compass. This is a great extension to basic orienteering skills learned previously or in conjunction with Cooperative Compass.

#### Micro-World, Macro-WOW!, Grades K-3

Students search out and examine the small creatures and their roles in nature's micro-world. They will explore the basic needs for survival of microorganisms and compare these needs to those of larger organisms. **Warm months only.** 

# Nation-to-Nation: a natural resource sustainability game, Grades 5-12

Students become environmental leaders in this life size world simulation game. Through environmental challenges and trade deals with other countries, they learn that the only way to see their country grow is to find a comfortable balance between preserving their natural resources and being able to meet the needs of their people.

# Nature Journaling, Grades 4-8

After creating their own journals, students use them as a tool for closely observing the natural world and reflecting on their personal connection with the environment. Through writing and drawing, they develop critical and creative thinking skills, build awareness and knowledge, and reflect on their values in relation to the environment at CWES.

# Nature Photography, Grades 4-12

Students will disover the amazing world of Nature Photography. After discussing why we might take photos of nature and learning about photographers famous for their photos, students will explore the natural world with camera in hand. Using a variety of techniques, students will utilize their cameras to more closely observe and connect with the natural world.

# Pond Power, Grades 7-12

Students explore a pond community by locating, collecting, and identifying pond animals. They examine the adaptations of each animal and their role in the pond food web. They will develop an energy flow pyramid for the pond by collecting and categorizing various pond organisms. **Early Fall and late Spring only.** 

# Pond Study, Grades K-6

Students explore a pond community by locating, collecting, and identifying pond animals. They also examine the role of each animal in the pond food web and some adaptations aquatic animals have for living in their watery environment. **Early Fall and late Spring only.** 

# Resource Management Role Play, Grades 5-12

Students role-play resource managers in a land use planning activity. In this simulation, a section of land requires management for water, timber, wildlife, and recreation resources. Teams of students develop their public speaking skills by presenting their plan to the rest of the group. They will then problem solve and compromise with other teams in order to meet the needs of all the managers.

#### Skullduggery, Grades 4-8

Blindfolded students will be introduced to an array of mammal skulls. Using a dichotomous key, students discover the secret identity of their animal. A variety of different skull adaptations will be discussed, especially those relating to the structures and functions of different types of teeth.

# Snow Walkers, Grades 4-12

After learning about the history and types of snowshoes, students will experience them by tromping through the woods. They also discuss winter survival adaptations for animals. Exploring CWES by snowshoe will give your students a unique perspective on the world of winter. Winter months. If snow cover is inadequate another lesson will be substituted. **Winter only.** 

#### Snowshoeing, Grades 5-12

Students will learn about the history, uses, and parts of snowshoes. They will discover how foot load relates to the function of snowshoes and how snowshoes design was based upon the adaptations of animals. They will also have an opportunity to explore the woods on them. Winter only.

#### Sound Surveillance, Grades 6-12

Students will enhance their listening skills as they begin to use sound to distinguish birds from other sounds in the forest, and tell the difference between individual bird calls. They will begin to learn ways to remember bird calls and use the calls as a tool for identification while out on a birding hike.

# Spring Fling, Grades K-2

Students will "sense" their way into spring through hands-on discovery activities. Exploration of soil texture, temperature, and smells, as well as, colors and shapes of natural objects will enhance your student's observational skills. **Springtime only.** 

# Survival Lessons from Nature, Grades 1-4

The students will observe how animals survive winter through conservation of heat energy and storage of food. They will compare how humans use these lessons from nature in our daily lives. An outdoor miniature shelter building activity allows creativity and puts their newly learned information to the test. **Winter months only.** 

#### Survival of the Fittest, Grades 5-12

Students continue their role as ecologists as they explore the hardships some predators face in acquiring enough energy to survive. Assuming the role of predator and prey, students will participate in an interactive simulation to provide data to study four different predators' energy consumption for one month.

# Survival Strategies, Grades 5-12

Students will participate in a survival scenario. After learning about basic human survival needs, they will work as a group to apply what they learned. They will create a plan and prioritize their needs for survival in an emergency situation. Students will then use limited resources to construct a shelter and attempt to build a small fire.

# Tree ID, Grades 4-12

Students will learn how to use a dichotomous key to identify trees. They identify 10 common Wisconsin tree species using both dichotomous keys and tree characteristics.

## Web of Life, Grades 5-12

During this exciting simulation game, students learn about predator-prey relationships, the food pyramid, bioaccumulation, and the Four Laws of Ecology: 1) everything is connected to everything else, 2) everything goes somewhere, 3) nature knows best, and 4) there is no such thing as a free lunch. Students will be given boundaries in which they need to find food, water, shelter, air and a mate while hiding from their predators. **Only available with 40+ students, lesson will be presented to students together.** 

#### Winter Lake Study, Grades 5-12

Through direct research and observation students will evaluate the "livability" of an aquatic ecosystem. Participating in group discussion, students will compare the winter environment of aquatic and terrestrial habitats based on study of temperature, signs of life, and other factors. Food webs will also be examined to determine the stability of life beneath the ice in winter. **Winter months only.** 

#### Winter Severity, Grades 5-12

Students become winter ecologists as they compare the severity of winter at a variety of different outdoor locations. In small groups, they will record high/low temperatures, wind velocity, wind chill, and snow depth and record evidence of animal activity in each area. Back inside, the students will compare the sites by graphing snow depth, low temperature, high temperature, and evaluate habitat suitability for animals based on animal activity and a site description. Winter months only.

#### Survival Strategies, Grades 5-12

Students will participate in a winter survival scenario. After learning about basic human survival needs, they will work as a group to apply what they learned. They will create a plan and prioritize their needs for survival in an emergency situation. Students will then use limited resources to construct a shelter and attempt to build a small fire and boil snow.

# Worm Wigglers, Grades K – 3

Let your young ones explore the scientific method with a fun experiment involving wiggly earthworms. In this lesson, students will search the soil at CWES for worms and try to predict why they find more earthworms in certain areas than in others. They will separate adult worms from young worms, and practice counting and basic math as they tally up their finds. **\*Warm months only.** 

#### **Evening Programs**

#### Baffling Beaver, Grades 4-12

Students will be introduced to the world of beavers. They will learn a little bit about the history of the beaver, its adaptations and lifestyle. Inside, students will see some amazing beaver pictures and get to touch real beaver pelts and skulls. Note: This is a great program is you are not doing the Beaver Adaptations lesson.

#### Bat Program, Grades 4-12

Students will be introduced to the physical and behavioral adaptations that make bats unique and allow them to colonize habitats across the globe. They will test their bat smarts against common facts and fictions surrounding this oftenmisunderstood creature, and gain an understanding of and appreciation for its ecological significance through a slideshow presentation. dress-up activity. audio recordings. and an interactive game.

#### Bald Eagles of Wisconsin, Grades 4-12

The Bald Eagle is our national symbol and might actually be seen at CWES during your stay. Learn about the natural history and get a chance to touch replica skulls and talons. A hands-on nest building activity will teach your students how humans affect this amazing raptor.

#### Hoo Gives a Hoot, Grades 4-12

Students are introduced to owls and their nighttime adaptations. Compare and contrast owls to hawks and discover the special adaptations of these magnificent creatures through sensory activities. A dress-up activity allows for teachers to get involved if inspired!

#### "Loon" ey Tunes, Grades 4-8

Students become familiar with the common loon and its adaptations for surviving in its watery environment. Students listen to the loon's calls and view slides of its habitat. A dress-up activity allows for teachers to get involved if inspired!

#### Lumberjack Louie, Grades 4-6

Students will actively participate in a Lumberjack Olympics. New skills are fostered through a good spirited team competition. A great way to relax and have fun after a full day of forest education or the Changing of the Land program.

#### Stars and Stories, Grades 4-8

Experience the stories behind the constellations! This evening program includes hands-on activities designed to unravel the mysteries of space. Depending upon weather, you might be able to step outside and see some astronomical marvels.

#### Campfire, Grades 4-12

After a full day of learning, let your students relax and have a little fun. The CWES staff will entertain your students through songs and skits. Students and teachers are encouraged to get in on the action.

#### Night Hike, Grades 4-12

Students experience the night world by hiking in small groups and performing various sensory activities. They learn about nocturnal animals, experience their own night vision, and, hopefully, begin to feel comfortable about being outside in the dark.