



SCHOOL OUTDOOR LEARNING EXPERIENCES

for K12



Teaching Sustainable Natural Resource Use & Management



Elementary

We introduce young minds to the wonders of the natural world and build their understanding of the basic topics that are the foundation of future learning.



Middle School

We take the TFT experience a step further with hands-on learning through experimentation and observation in the outdoor classrooms of woods and water.



High School

We foster higher-level thinking in all of our courses, and show students how their outdoor learning experiences can apply to potential natural resource careers.

OUR MISSION: Trees For Tomorrow promotes sustainable management of our natural resources through transformative educational experiences.

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TreesForTomorrow.com

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Of all the paths you take in life, make sure a few of them are dirt.

~John Muir

The Science of Nature

Trees For Tomorrow (TFT), an accredited environmental education center located in Eagle River, Wisconsin, has been educating adults and children for eight decades about natural resources and their continued importance to our, and the earth's, survival.

Our campus

We invite your K12 students to learn through exploration and the science of nature on our campus for a multi-day, overnight, or day experience! Our professional teaching staff are experts at using field research and hands-on activities to awaken students' awareness of the land's capabilities and limitations, and inspire their enthusiasm for sustainable forest stewardship.

Throughout the program, students participate in outdoor learning experiences in Northwoods forests and waterways focusing on topics such as forestry, wildlife, water quality, and natural resource use. These activities demonstrate how natural resources can be sustained through proper management.

While on campus, students stay in furnished dormitories, eat meals in our dining hall and prep for field research in the M.N. Taylor Education Hall.

Your campus

Let us come to you! We welcome the opportunity to visit your classroom, engage your students and explore the fields and forests with your class. Many of the courses we offer can be adapted to fit your curriculum and school forest.

Our History

Trees For Tomorrow (TFT) was founded as a nonprofit organization in 1944 by a group of Wisconsin paper and electric utility companies with the purpose of reforesting northern Wisconsin and to educate the public about proper land management.

In our early days, TFT gave away tree seedlings, lent out planting machines, and hired foresters to develop land management plans. TFT also established an education facility at a former Civilian Conservation Corps training facility in Eagle River, Wisconsin and used the recovering Northwoods to teach about the need for proper forestry practices. After the success of reforestation efforts in the region, TFT turned all of its energy towards education in 1967.



All K12 School Outdoor Learning Experiences can be applied to home-school groups. Contact Mandy Gingerich (715.479.6456 x228 or mandy@treesfortomorrow.com) to discuss customizing programs to your needs.

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The M.N. "Mully" Taylor Education Hall houses three classrooms, restrooms, conference room, TFT's main office, and campus gift shop. Additional classroom space is available in Juday Hall.



TFT's historic dining hall is equipped with a large, modern kitchen and professional hospitality staff that prepares home-cooked meals and can accommodate any special dietary needs.



Each of the four dormitories can accommodate between 26-48 people, has a central lounge with a wood-burning fireplace and central bathrooms with showers.



TFT is accredited by Cognia. Our interdisciplinary, inquiry-based school outdoor learning experiences are designed to compliment your K-12 school curriculum, with many lessons aligning to Next Generation Science Standards as well as Academic and Career Planning guidelines.

School Outdoor Learning Experiences

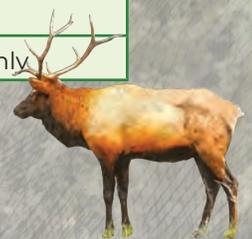
For optimal learning, elementary teachers are encouraged to limit their core class selection to one. Teachers may choose to round out their elementary SOLE by adding up to two optional lessons. Our Program Coordinator will work with you to develop the schedule that is best for you!

Core Classes	NGSS	Time	Season	Notes
Challenge Activities	---	45 min. +		
Conscious Consumers	5-ESS3-1	1.5 hrs.		Indoor only
Hands-On Herpetology*	4-LS1-1	1.5 hrs.		Indoor only
Fish Adaptations	4-LS1-1	1.5 hrs.		Indoor only
A Forest's Purpose	3-LS4-3, 5-ESS3-1	1.5 hrs.		
Know Your Snow	3-ESS2-1	1.5 hrs.		
Lake Food Webs	3-LS4-4, 5-LS2-1	1.5 hrs.		
Magnificent Macroinvertebrates	3-LS4-3	1.5 hrs.		
Meet the Trees	3-LS3-1	1.5 hrs.		
Predators and Prey	3-LS4-4, 5-LS2-1	1.5 hrs.		
Relating to Raptors*	4-LS1-1	1.5 hrs.		Indoor only
Snow and Tell	3-LS2-1, 5-LS2-1	1.5 hrs.		
Wetlands	5-ESS2-1, 3-LS4-3	3 hrs.		
What Makes a Mammal?	3-LS4-3, 4-LS1-1	1.5 hrs.		Indoor only
What's in a Tree?	3-LS3-2, 5-LS1-1	1.5 hrs.		
Winter Adaptations	3-LS2-1, 4-LS1-1, 3-5-ETS1-2	1.5 hrs.		Indoor only

Optional Classes	NGSS	Time	Season	Notes
Archery*	---	1.5 hrs.		
Animal Tracks*	--	1 hr.		≤30 participants
Bats: Invaders of the Darkness	---	1 hr.		Indoor only
Canoe Lessons*	---	1.5 hrs.		≤30 participants
Canoe Tour*	---	2-3 hrs.		≤30 participants
Cross-Country Ski Lessons*	---	1.5 hrs.		
Cross-Country Ski Tour*	---	3 hrs.		
Dress a Beaver	---	1 hr.		Indoor only
Introduction to GPS	---	1.5-3 hrs.		
Logging Days		1.5 hrs.		
Night Hike		1.5 hrs.		
Orienteering	---	1-3 hrs.		
Papermaking*		1.5 hrs.		Indoor only
Survival Skills		1.5 hrs.		
Wolves	---	1 hr.		Indoor only

 = Fall  = Winter  = Spring  = Summer

*Extra fees apply. See page 16 for details.





"It's a 6th grade rite-of-passage for our kids."

I was really impressed with the entire Trees For Tomorrow experience. My daughter is now a freshman in high school and still talks about her time at TFT three years ago. Because of that, I decided to come as a chaperone with my son's 6th grade class this year.

I loved the mix of indoor classroom instruction with outdoor, practical application of newly-learned concepts. Our school has been coming here for nearly 30 years, and now I know why.

*Thanks for everything.
~Chaperone, Christian Heritage Academy*

Core Classes



Challenge Activities

Students work cooperatively through a series of physical and mental challenges designed to increase confidence and self-esteem, and to encourage teamwork. In spring, summer, and fall, an outdoor challenge course is available. This lesson will start off your elementary outdoor learning experience to prepare your students for group work that will be done throughout their time at TFT.

Conscious Consumers

Students will explore how the product choices we make affect our environment. They will assess

a product's life cycle from creation to the end of its use. They will then determine ways to improve on the product's design in order to minimize its environmental impact.

Hands-On Herpetology

Students explore adaptations of reptiles and amphibians through hands-on stations, including an up-close experience with our resident snakes and/or turtle!

Fish Adaptations

Students visit hands-on stations to learn about physical adaptations of northern Wisconsin fish species and how those adaptations may help them survive in their habitats. Students will create a fish and its suitable habitat, then compare and contrast their fish to other species and learn how invasive species may affect their fish.

A Forest's Purpose

Students simulate predator and prey relationships while comparing habitat types. Following this activity, students will be challenged to consider how to manage a forest to support wildlife.

Know Your Snow

Students will learn how snow forms, explore different kinds of snow, and discuss how snow can become a glacier. They will then go outside and investigate what the snow looks like at Trees For Tomorrow.

Lake Food Webs

Prerequisite: Magnificent Macroinvertebrates. In this hands-on lesson, students will collect data to determine what microscopic organisms are living in a lake ecosystem. They will then make a food web model based on their data and describe how populations would change with environmental conditions.

Magnificent Macroinvertebrates

Students will learn to identify macroinvertebrates that live in a nearby lake. They will take samples and discover the great diversity in our water. From that data, they will assess the health of the lake. *Pair with Lake Food Webs for a full experience!*



Core Classes (continued)

Meet the Trees

Students will learn how to use a dichotomous key to identify common Northwoods trees and apply that skill on an outdoor tree identification course. They will then group trees into families based on their similarities and differences.

Predators and Prey

Students will learn about characteristics of predators and prey in Wisconsin, then play a predator/prey simulation game to see how the population of one affects the other. Students will graph the results of their simulation and compare the results to a real-life predator/prey research study.

Relating to Raptors

Students will explore raptor adaptations and make comparisons between raptors and other animals to determine the characteristics that are unique to raptors and their lifestyles. The class will culminate with an introduction to TFT's live raptor!

Snow and Tell

In this lesson, students learn and practice observation skills through the identification of animal signs using materials such as animal track and scat guides, and trail camera data. They will then create a storyboard using their data to share a day in the life of the animal they observed.



Wetlands

Students will travel off-site to explore a bog and a marsh. By using observations skills and identification guides, students will describe characteristics that define a wetland, and separate a bog from a marsh. As a wrap up, students will discuss the importance of wetlands.

What Makes a Mammal?

Students will learn about mammal adaptations and morphology by exploring different mammals through animal artifacts such as skulls, feet, and pelts. Students will use what they learn to create a mammal with the adaptations to survive certain environmental challenges.

What's in a Tree?

Prerequisite: Meet the Trees. In this lesson, students will become foresters and learn how to take different tree measurements. They will use this knowledge to determine what could be built out of one tree. Students will conclude by exploring sustainable use of our natural resources.



Winter Adaptations

Through a Jeopardy-style game, students learn about the adaptations of Wisconsin plants and animals that allow them to survive the frozen winter. Students then use their creativity to design a plant or animal that would have the adaptations to survive winter.

Optional Classes



Archery

Students will learn how to safely load a bow and shoot an arrow. Everyone will get to practice shooting at a target.

Animal Tracks

Students explore real-life animal tracks and other animal signs. Then, students use Plaster of Paris with rubber molds to create an animal track in this make-and-take program.

Bats: Invaders of the Darkness

This slide program focuses on these interesting and misunderstood flying mammals. Topics covered include various species of bats, their life history, and their special adaptations for hunting on the wing.

Canoe Lessons

Students learn about equipment, safety procedures, and basic strokes necessary to become comfortable with paddling a canoe, then practice their skills on a lake.

Canoe Tour

After completing canoe lessons, groups can get out and paddle on a variety of nearby lakes. Students will continue developing skills while enjoying the beautiful Northwoods!





Optional Classes (continued)



Cross-Country Ski Lessons

Students will learn classical cross-country ski techniques. Ski skills include proper flatland, hill, turning, and touring techniques to safely enjoy this exciting sport.

Cross-Country Ski Tour

Students will glide along a variety of snowy Northwoods trails, building upon previously learned ski skills and developing confidence with their skills. Tours focus on the natural history of our forests, wildlife, and snow.

Dress A Beaver

This fun and engaging program introduces students to beaver adaptations, ecology, and life history. Watch as one of your students transforms into a beaver before your eyes!



Introduction to GPS

Students will be introduced to GPS technology. Classroom and field portions teach students how to use GPS, read a map, and record scientific data.



Logging Days

Students will learn about Wisconsin's logging history, compete in their own lumberjack competition, compare historical practices to modern logging practices, and discuss sustainable forest management.

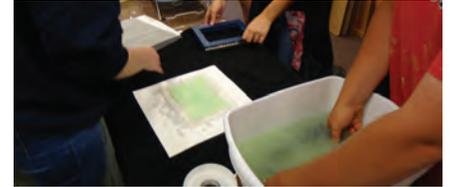
Night Hike

Students will hike in the woods after dark. Along the hike, they will engage in sensory activities to explore the adaptations of nocturnal wildlife and discuss how those adaptations compare to diurnal animals like humans.

Orienteering

Students combine classroom instruction with an outdoor learning experience designed to teach the basics of map and compass use. Classroom work introduces how to use a compass and read a map. Students then

use these skills to complete an orienteering field course while investigating the forest.



Papermaking

Students will learn about Wisconsin paper mills, then model the actual paper-making process by making their own paper by hand to take home.



Survival Skills

In this hands-on lesson, students will discuss what humans need to survive, the most important factors in a survival situation, and how to be prepared before going out into the wild. They will model these skills indoors, then go outside to build fires or shelters.

Wolves

This slide show helps students separate fact from fairy tale as they learn about wolf life, ecology, communication, and management techniques.

I will always remember making my first fire and lighting my first match. Trees For Tomorrow has forever changed my view on nature. Thank you for this extraordinary experience. It really means a lot to me, having someone let me have this once in a lifetime experience. Thank you for letting me go to this special, breathtaking camp.

Many Thanks,
Ben, 6th grader, Christian Heritage Academy



School Outdoor Learning Experiences



Trees For Tomorrow offers inquiry-based lessons for grades 6-8 which are aligned with Next Generation Science Standards (NGSS). Teachers choose lessons from one of three theme-based units, which are designed to build upon one another. The final lesson of each unit will pull all of the students' new knowledge and skills together in a culminating activity. Teachers may choose to round out their SOLE by adding up to two optional lessons. Our Program Coordinator will work with you to develop the schedule that is best for you!

Theme-Based Unit	Class	MS NGSS	Time	Season	Notes
Forest Sys.	Introduction to Field-Based Science Skills	LS2-1, LS2-2	3 hrs.		
Forest Sys.	Forest Succession	LS2-1, LS2-2, LS2-4	3 hrs.		
Forest Sys.	Animal Adaptations	LS1-4, LS2-2	3 hrs.		
Forest Sys.	Thermal Adaptations (also Winter Science)	PS3-3	1.5 hrs.		
Forest Sys.	Nature's Design	LS4-2, ETS1-1	1.5 hrs.		Indoor only
Forest Sys.	Taking the Right Step (also Winter Science)	ETS1-2	1.5 hrs.		
Forest Sys.	Land Use (Culminating Activity)	LS2-4, LS2-5	2.5 hrs.		
Water Sys.	Introduction to Water Science Skills	LS2-1	3 hrs.		
Water Sys.	Lake Ecology (with canoes*)	LS2-1, LS2-2, LS2-4	3 hrs.		
Water Sys.	Bog Investigations	LS2-1, LS2-4	3 hrs.		
Water Sys.	Understanding Groundwater	ESS2-4, ESS3-4	1.5 hrs.		Indoor only
Water Sys.	Fish Adaptations	LS2-1, LS2-4	1.5 hrs.		Indoor only
Water Sys.	Water Use (Culminating Activity)	LS2-4, LS2-5	2.5 hrs.		
Winter Sci.	Winter Animal Signs	LS2-1, LS2-2	3 hrs.		
Winter Sci.	Snow Shelters	PS3-3	1.5 hrs.		
Winter Sci.	Science of Snow	ESS2-5	1.5 hrs.		
Winter Sci.	Winter Lake Ecology	LS2-1, LS2-4	3 hrs.		
Winter Sci.	Seasonal Habitats (Culminating Activity)	LS2-2, LS1-4, LS1-5	2.5 hrs.		
Optional	Archery*	---	1.5 hrs.		
Optional	Birds of Prey*	---	1.5 hrs.		Indoor only
Optional	Bog Ecology	---	1.5 hrs.		
Optional	Canoe Lessons*	---	1.5 hrs.		≤30 participants
Optional	Canoe Tour*	---	2-3 hrs.		≤30 participants
Optional	Challenge Activities	---	45 min. +		
Optional	Critter Catching	---	1.5 hrs.		
Optional	Cross-Country Ski Lessons*	---	1.5 hrs.		
Optional	Cross-Country Ski Tour*	---	3 hrs.		
Optional	Exploring Energy	---	1.5 hrs.		Indoor only
Optional	Human Survival Skills	---	1-2 hrs.		
Optional	Introduction to GPS	---	1.5-3 hrs.		
Optional	Logging Days	---	1-1.5 hrs.		
Optional	Night Hike	---	1.5 hrs.		
Optional	Orienteering	---	1-3 hrs.		
Optional	Reptiles and Amphibians*	---	1 hr.		Indoor only
Optional	Skulls, Skins, and Bones	---	1.5 hrs.		Indoor only
Optional	Tree Identification	---	1.5 hrs.		
Optional	Wolves	---	1 hr.		Indoor only

*Extra fees apply. See page 16 for details.



I am a teacher who has brought students to Trees For Tomorrow for over 15 years. Every year, the staff outdoes themselves by exceeding my expectations, and this year has been no exception.

Generous donations make it possible to fund these experiences for some students who are SO interested but could otherwise not afford it.

The academic knowledge my students leave with, along with the wealth of buy-in for their natural resources and potential careers is worth every penny. I am forever grateful for the opportunity for our future leaders to experience all they do here at TFT.

*~7-12+ Science Educator,
Marion High School*

Forest Systems Theme-Based Unit

Introduction to Field-Based Science Skills

Students will develop observation and data collection skills by practicing journaling techniques and using a variety of tools to study trees and wildlife. These skills will be used throughout the forest systems theme-based unit.

Forest Succession

After a brief introduction, students will journey to a field site to gather data on a forest following a past disturbance. Students will use their data to support a theory on patterns of change in the forest following the disturbance, explain the phenomenon of ecological succession, and make predictions about how the site will change in the future.

Animal Adaptations

In the classroom, students will make observations on the adaptations of an animal artifact and infer how those might help the animal survive. Students will then explore new field sites to determine whether their animal is suited to live in a

variety of habitats. Students will use trends in the data to explore themes such as specialist vs. generalist animals and wildlife management.

Thermal Adaptations

Students explore different factors that affect body temperature in cold climates. They will conduct a simple experiment to determine how different materials can affect heat loss. Students will use their data to create a graph and analyze their findings.

Nature's Design

In this evening experience, students explore engineering applications of scientific knowledge. Students will research specific adaptations of organisms and apply these adaptations to a design, which they will then share with the class.

Taking the Right Step

Students will determine surface area and weight displacement of animal feet to see how they are suited to life in cold climates. They will design and test their own

device, then compare devices and make inferences as to why some were more successful than others.



Land Use

In this culminating lesson, students use the knowledge and skills gained in previous lessons to decide how to best manage a piece of land at a new field site. They collect and analyze data to help make their decision. Students then present their management plan to the class using data they collected to support their choice.



Water Systems Theme-Based Unit

Intro to Water Science Skills

Students build data gathering skills by collecting data at a nearby aquatic ecosystem. After collecting a variety of biotic and abiotic data from the water resource, students learn about the meaning of a variety of measurements including pH, dissolved oxygen, turbidity, and biotic indices. Students use the data they collect to support an argument that the quality of water is healthy enough to support life.

Lake Ecology

Students will travel to a nearby lake and collect data to determine the trophic state (or relative age) of the lake. Using data they collect such as: clarity, phosphate concentration, and bottom composition, students will classify the lake as either oligotrophic,

mesotrophic, or eutrophic. This class can be done with or without canoes (*if using canoes, canoe lessons is a prerequisite*).

Bog Investigations

In this field experience, students will visit a bog and collect data about water quality, plants, and animals. Students will analyze data to compare a bog to other aquatic ecosystems visited.

Understanding Groundwater

In this evening experience, students will engage in a series of activities to explore the actions and function of groundwater. They will explore how water travels through substrates, use relief maps to chart nearby watersheds, and determine human impacts on groundwater resources.

Fish Adaptations

In this evening experience, students will examine fish adaptations to understand the diversity of fish morphology and how it provides adaptive advantage for specific habitats. As a wrap-up activity, students will use what they've learned to design a "best fish" for a given habitat.

Water Use

In this culminating lesson, students use prior knowledge to collect data from a water ecosystem. Students use that data to construct an argument about the quality of water for a specific purpose. Students must also decide on and defend a shoreline restoration plan. Students will present their data and mitigation plan(s) to their peers.

Winter Science Theme-Based Unit



Winter Animal Signs

Students will learn the basics of identifying animal tracks. They will then apply these skills to a field site, determining what animals live in specific habitats.

Snow Shelters

Over two evenings, students will build a model-sized snow shelter. They will then collect data to determine how effective this shelter is at maintaining thermal energy.

Science of Snow

Students will learn how snow forms differently based on weather conditions, and how snow can change over time. They will then move outside to study the snow on campus at TFT.



Winter Lake Ecology

Students will venture onto the ice of a local lake to explore an aquatic ecosystem during winter. They will examine the physical, biological, and chemical aspects of a lake under the ice, and discuss how these factors influence the survival of aquatic life.

Seasonal Habitats

In this culminating activity, students will identify specific changes that occur with the seasons. They will further determine how these changes impact the animals who live there.

Optional Lessons

Archery

Students will learn how to safely load a bow and shoot an arrow. Everyone will get to practice shooting at a target.

Birds of Prey

This slide program introduces students to the birds of prey in Wisconsin. It includes general characteristics of raptors, the seven families found in Wisconsin, threats facing birds of prey, and conservation efforts. A live bird of prey is available for this program.



Bog Ecology

Open to groups not taking water systems theme-based unit lessons. Mysteries of the bog are revealed through this slide program and follow-up field tour. It's a place filled with "black holes," scraggly trees, and bouncing mats of moss. Students get a chance to get into wetlands while quaking and shaking on the bog.

Optional Lessons (continued)

Canoe Lessons

Students learn about equipment, safety procedures, and basic strokes necessary to become comfortable with paddling a canoe, then practice their skills on a nearby lake.

Canoe Tour

After completing canoe lessons, groups can get out and paddle on a variety of nearby lakes. Students will continue developing skills while enjoying the beautiful Northwoods!

Challenge Activities

Students work cooperatively through a series of physical and mental challenges designed to increase confidence and self-esteem and to encourage teamwork. In spring, summer, and fall, an outdoor challenge course is available.

Critter Catching

Open to groups not taking water system theme-based unit lessons. Students get hands-on as they sample nearby aquatic habitats for macroinvertebrates that live there. The types of organisms found help students diagnose the water quality.

Cross-Country Ski Lessons

Students will learn classical cross-country ski techniques. Ski skills include proper flatland, hill, turning, and touring techniques to safely enjoy this exciting sport.

Cross-Country Ski Tour

Students will glide along a variety of snowy Northwoods trails, building upon previously-learned ski skills and developing confidence with their skills. Tours focus on the natural history of our forests, wildlife, and snow.

Today I got the special chance to explore a bog with my seventh grade students. We learned about why bogs are so special in our state, how they were originally formed by glaciers, and how they are a finite ecosystem. Together with my students, we stepped carefully onto the mats of sphagnum moss and identified plants such as pitcher plants and cranberries. It is an experience we won't soon forget! Thank you for making this experience possible for us.

My sincere gratitude,
~7th grade science teacher, Aldo Leopold

Exploring Energy

Energy comes from a variety of sources, both renewable and nonrenewable. In this activity, students will see how much they know about energy usage and energy supplies as they test their knowledge in Energy Jeopardy. Then they will be able to ride the "energy cycle" to feel just how much energy different lights and appliances use.

Human Survival Skills

In this hands-on activity, students will discuss what humans need to survive, what are the most important things to know in a survival situation.. They will then go outside and practice making shelters and/or fires.

Introduction to GPS

Students will be introduced to GPS technology. Classroom and field portions teach students how to use GPS, read a map, and record scientific data.

Logging Days

Watch out, Paul Bunyan! After a glimpse at early logging camp life, students swing into logging events such as cross-cut sawing, lighting a match with a small hatchet, and the tree cookie roll.

Night Hike

This reflective, sensory experience is designed to bring students in touch with nature at night. Students walk in the woods after dark without the use of flashlights to learn how human and animal senses work in the dark.

Orienteering

Students combine classroom instruction with an orienteering field course designed to teach the basics of map and compass use. Classroom work introduces how to use a compass and read a map. Students then use these skills to complete an orienteering field course while investigating the forest.

Reptiles and Amphibians

Who's slimy and who's not? Students take a close-up look at the differences between reptiles and amphibians and learn more about species found in Wisconsin. Participants will have an opportunity to observe TFT's own reptiles up close!

Skulls, Skins, and Bones

Students will identify animals by their skulls, skins, and bones. We will be looking at the structure and function of different parts of animals and what they can tell us about that animal.



Tree Identification

Open to groups not taking forest systems theme-based unit lessons. Students will discuss unique characteristics of trees and use a dichotomous key to identify native Wisconsin tree species. They then apply their knowledge in a tree identification course on TFT's campus.

Wolves

This slide show helps students separate fact from fairy tale as they learn about wolf life, ecology, communication, and management techniques.



School Outdoor Learning Experiences

Trees For Tomorrow offers three units of inquiry-based lessons for grades 9-12. These lessons will introduce students to careers in natural resources, in conjunction with Wisconsin's Academic & Career Planning (ACP) guidelines. Teachers choose lessons from one theme-based unit that are designed to build upon one another. The final lesson of each unit will apply the students' new knowledge and skills in a culminating activity. Teachers may choose to round out their high school field experience by adding up to two optional lessons. Our Program Coordinator will work with you to develop the schedule that is best for you!

Theme-Based Unit	Class	Time	Season	Notes
Forestry	Intro to Forest Measurements	3 hrs.		
Forestry	Timber Harvest as a Management Tool	3 hrs.		
Forestry	Fire as a Management Tool	1.5 hrs.		
Forestry	BMP's for Water Quality	1.5 hrs.		
Forestry	Invasive Species in Forestry	1.5 hrs.		
Forestry	Managing Woodlands for Wildlife	3 hrs.		
Forestry	Online Soil Assessment	1.5 hrs.		Indoor only
Forestry	Create A Forest Management Plan (<i>Culminating Act.</i>)	3 hrs.		
Wildlife	Radio Telemetry	2-3 hrs.		
Wildlife	Wildlife Capture Techniques	3 hrs.		
Wildlife	Deer Impact	3 hrs.		
Wildlife	Wildlife Signs Investigation	1.5 hrs.		Indoor only
Wildlife	Wildlife Transects	3 hrs.		
Wildlife	Wildlife Research Proposals (<i>Culminating Activity</i>)	2 hrs.		Indoor only
Energy/Climate	Energy Basics	3 hrs.		
Energy/Climate	Energy Generation	3 hrs.		
Energy/Climate	Carbon Footprint	1.5 hrs.		Indoor only
Energy/Climate	Climate Change Basics	1.5 hrs.		
Energy/Climate	Carbon Sequestration	3 hrs.		
Energy/Climate	Future Forests	1.5 hrs.		Indoor only
Energy/Climate	Green Home Design (<i>Culminating Activity</i>)	3 hrs.		Indoor only
Optional	Archery*	1.5 hrs.		
Optional	Birds of Prey*	1.5 hrs.		Indoor only
Optional	Bog Ecology	1.5-2 hrs.		
Optional	Canoe Lessons*	1.5 hrs.		≤30 participants
Optional	Canoe Tour*	2-3 hrs.		≤30 participants
Optional	Challenge Activities	45 min. +		
Optional	Critter Catching	1.5 hrs.		
Optional	Cross-Country Ski Lessons*	1.5 hrs.		
Optional	Cross-Country Ski Tour*	3 hrs.		
Optional	Human Survival Skills	1-2 hrs.		
Optional	Introduction to GPS	1.5-3 hrs.		
Optional	Night Hike	1.5 hrs.		
Optional	Orienteering	1-3 hrs.		
Optional	Reptiles and Amphibians*	1 hr.		Indoor only
Optional	Wolves	1 hour		Indoor only

*Extra fees apply. See page 16 for details.

= Fall = Winter = Spring = Summer



I want to thank Trees For Tomorrow for all the wonderful educational and hands-on experience TFT provided for my 10th and 11th grade students. The educational staff was extremely knowledgeable in all their areas; the classes were all amazing. The instructors, staff and management went above and beyond to ensure the students' comfort, educational wants and needs, and individual questions was met to the highest standards, I will recommend this to all my colleagues. Thank you so much for the amazing experience.

*~High School Science Teacher.
Goodman-Armstrong Creek School*

Forestry Theme-Based Unit

Intro to Forest Measurements

In this introductory class, students discuss unique characteristics of trees and use a dichotomous key to identify native Wisconsin tree species. Students also learn to use forestry tools such as a DBH tape, Biltmore stick, and wedge prism to inventory a forest.

Timber Harvest as a Management Tool

Students visit a study site on the Star Lake Peninsula and take measurements such as tree ID, basal area, and DBH in two experimental study plots to directly observe one result of thinning as a management tool. As time allows, a hike around an interpretive nature trail and discussion of different forest types is also included.

Fire as a Management Tool

Students will learn the history of wildland fire policy on public lands, and how fire is managed today. We discuss how prescribed burns are used and careers involved in forest fire management. Students end the class by exploring what variables impact wildfires using a fireboard to model fire activity in different types of forests.

BMP's for Water Quality

Students learn the role forests play in contributing to water quality and how logging practices can impact water resources. Students will survey and identify potential areas of concern at a field location and explore best management practices (BMPs) used by forestry professionals to protect water quality. Students will then design a timber sale at the field site by following these best management practices.

Invasive Species in Forestry

Students will learn what invasive species are and what impact they have on our northern forest ecosystem. Through a biodiversity study on TFT's campus, students learn firsthand how invasive species are impacting our campus forest.

Managing Woodlands for Wildlife

Students will gather data on different forest types in the field and use that data to guide a discussion on how different forest types are managed for different species.

Online Soil Assessment

Students will learn how to navigate through the USDA's Web Soil Survey to investigate the different soil types and properties found on TFT's campus. Students will then gather information on soil limitations and performance as it relates to timber harvest activities. This information will later be used when students plan a forest management in their final project.

Create A Forest Management Plan (Culminating Activity)

Students will create a Forest Management Plan for a portion of TFT's campus forest based on a given set of landowner goals and best management practices. Students will collect data in the field using knowledge, skills, and tools learned in previous TFT forestry classes to support their plan.



Wildlife Theme-Based Unit

Radio Telemetry

Students learn how radio telemetry is used in wildlife research, then use the equipment to practice the techniques of homing and triangulation. Students will apply this skill by using data to determine an animal's home range.

Wildlife Capture Techniques

Students will be introduced to the use of live capturing in wildlife research and its ethical considerations. Students will set out and check small mammal traps and record data about the animals caught. Students will analyze their data to estimate population.

Deer Impact

Students learn about the history of deer populations in Wisconsin, and what habitat is needed to maintain a deer population. We then travel to the field to compare the health of a regenerating forest both with and without deer feeding pressure.

Wildlife Signs Investigation

Students will learn to identify tracks, scat, calls, and other signs of common Northwoods animals. These skills will be applied in subsequent lessons.

Wildlife Transects

Students will use GPS equipment to gather data about animal signs

along a specified transect through the forest. This data will be used to compare population density and biodiversity in different habitat types.

Wildlife Research Proposals (Culminating Activity)

Using the knowledge and skills gained throughout their outdoor learning experience, students work in teams to develop a hypothetical wildlife research proposal. Teams will consider appropriate data collection techniques and scientific implications of their proposal. As a final activity, they will present their proposals to their classmates.

Energy & Climate Theme-Based Unit

Energy Basics

Students will learn about different types of energy. They will then perform an energy audit at both indoor and outdoor sites on TFT's campus to map where energy is coming from and where energy is flowing to. Students use the concepts learned in this class as they conduct other investigations in future Energy and Climate courses.

Energy Generation

Students will discuss the different sources of energy (non-renewable such as coal, renewable such as wind, solar, etc.) and how electricity is generated from these sources. Students will then conduct a series of measurements outside to construct an argument as to whether or not TFT has suitable sites for installation of a wind or solar power installation. Back in the classroom, students will experiment with different types of blades and gear ratios to compare and evaluate competing designs for a wind turbine based on electrical output.

they can realistically be more sustainable in their resource use.

Climate Change Basics

After an introduction on the basics of what climate is and how the global climate has changed over the recent decades, students will visit outdoor stations to learn about how predicted climate change will affect forest dynamics such as plant communities, water resources, and wildlife.

Carbon Sequestration

Students will travel off-campus to compare how much carbon is stored in different forest types. Through taking a series of forest measurements, students will estimate the carbon storing ability of each forest type. Back in the classroom, students will discuss trends they observed in the data and a forest's ability to sequester carbon at different stages in its "life." They will then use the data they collect to discuss ways a forest could be managed to maximize carbon sequestration, and the pros and cons of those management decisions.

Carbon Footprint

In this evening class, students will learn about the term "carbon footprint" and discover the amount of energy used during manufacturing, packaging, and transport stages of a product from creation to consumer. They will then complete a calculation of their own individual carbon footprint and discuss ways



Energy & Climate Theme-Based Unit (continued)

Future Forests

In this evening class, students will learn about what a scientific model is, and practice making their own, simple model. Once they have grasped the process of modeling, they will explore the USFS Climate Change Tree Atlas to discover how Wisconsin's forests might change over the next century. Through completing this activity, students will discover that forests

may change in composition, but should not disappear as a result of climate change.

Green Home Design (Culminating Activity)

After a brief indoor energy audit to examine energy efficiency, students are given the opportunity to design their own hypothetical home and landscaping on a small plot of land.

Using knowledge they've gained over the past days, students must choose among several options for add-ons and appliances to their home, but must stay within a realistic budget. After presenting their home designs, students will be able to evaluate how "green" their home was and participate in a discussion about the compromises that must be made when trying to "go green."

Optional Lessons

Archery

Students will learn how to safely load a bow and shoot an arrow. Everyone will get to practice shooting at a target.

Birds of Prey

This slide program introduces students to the birds of prey in Wisconsin. It includes general characteristics of raptors, the seven families found in Wisconsin, threats facing birds of prey, and conservation efforts. A live bird of prey is available for this program.

Bog Ecology

Mysteries of the bog are revealed through this slide program and follow-up field tour. It's a place filled with "black holes," scraggly trees, and bouncing mats of moss. Students get a chance to get into wetlands while quaking and shaking on the bog.

Canoe Lessons

Students learn about equipment, safety procedures, and basic strokes necessary to become comfortable with paddling a canoe, then practice their skills on a nearby lake.

Canoe Tour

After completing canoe lessons, groups can get out and paddle on a variety of nearby lakes. Students will continue developing skills while enjoying the beautiful Northwoods!

Challenge Activities

Students work cooperatively through a series of physical and mental challenges designed to increase

confidence and self-esteem and to encourage teamwork. In spring, summer, and fall, an outdoor challenge course is available

Critter Catching

Students get hands-on as they sample nearby aquatic habitats for macroinvertebrates that live there. The types of organisms found help students diagnose the water quality.

Cross-Country Ski Lessons

Students will learn classical cross-country ski techniques. Ski skills include proper flatland, hill, turning, and touring techniques to safely enjoy this exciting sport.

Cross-Country Ski Tour

Students will glide along a variety of snowy Northwoods trails, building upon previously learned ski skills and developing confidence with their skills. Tours focus on the natural history of our forests, wildlife, and snow.

Human Survival Skills

In this hands-on activity, students will discuss what humans need to survive, what are the most important things to know in a survival situation. They will then go outside and practice making shelters and/or fires.

Introduction to GPS

Students will be introduced to GPS technology. Classroom and field portions teach students how to use GPS, read a map, and record scientific data.

Night Hike

This reflective, sensory experience is designed to bring students in touch with nature at night. Students walk in the woods after dark without the use of flashlights to learn about how human and animal senses work in the darkness.

Orienteering

Students combine classroom instruction with an orienteering field course designed to teach the basics of map and compass use. Classroom work introduces how to use a compass and read a map. Students then use these skills to complete an orienteering field course while investigating the forest.

Reptiles and Amphibians

Who's slimy and who's not? Students take a close-up look at the differences between reptiles and amphibians and learn more about species found in Wisconsin.



Participants will have an opportunity to observe TFT's own reptiles up close!

Wolves

This slide show helps students separate fact from fairy tale as they learn about wolf life, ecology, communication, and management techniques.

Additional High School Opportunities



Multi-School Programs for High Schoolers

Perfect for any teacher who:

- Wants to bring a small group of students (3-12) on a School Outdoor Learning Experience
- Wants their students to experience learning alongside other high schools in a small-group setting
- Enjoys the convenience of having a predetermined program theme and class schedule

Program dates, themes and curriculum are pre-set. Join other high school groups from around the upper Midwest on Trees For Tomorrow's campus for multi-day, immersive, outdoor learning experiences centered on sustainable management of our natural resources.

2022-2023 Theme-based unit: Wildlife*

A progressive and hands-on series of wildlife ecology and research culminating in a final project where students put their knowledge to use.

** Theme rotates each school year*

Choose the dates that work the best for your group

- October 23-26, 2022
- November 6-9, 2022
- December 7-10, 2022
- January 22-25, 2023
- March 8-11, 2023
- April 23-26, 2023



Natural Resource Careers Exploration Workshop

June 11-16, 2023

Application, including recommendation from teacher or counselor, is required & due April 7, 2023. Application is available online.

\$200/Student includes instruction, materials, 5 nights lodging and 15 meals.

Designed for sophomores, juniors and graduating seniors who are interested in exploring a career in all aspects of natural resource management, this course provides meaningful oppor-

tunities to gain insight into a variety of career paths. Students experience real-life field-work, learn about education and training requirements, expected salary ranges, and what today's

job market looks like. They also gain exposure to a variety of natural resource issues, learn life skills and have the opportunity to make new friends who share their interests.

School Outdoor Learning Experiences (SOLE) Pricing (All prices subject to change without notice)

Fees are for the SOLE program only and are per student/adult participant

Day Rates:

Fee includes instruction and materials. Additional lesson fees may apply. Lunch is also available for an additional fee. Minimum charge of \$100 for half day and \$200 for full day.

Half Day	\$8.00/person
Full Day	\$11.00/person

Overnight Rates:

Fees vary depending upon arrival and departure times. Fee includes food, lodging, and instruction. Additional lesson fees may apply.

K12 BASE PROGRAM FEE		
Number of Nights	Cost per person	
	Standard Rates	Off Season* Rates
1	\$76-87	\$68-87
2	\$139-149	\$125-134
3	\$181-192	\$163-172
4	\$214-235	\$193-211

*Off season dates: March 1-30, April 1-10, November 10-30, and December 10-31

Vehicle Rental:

Trees For Tomorrow has vehicles that may be rented for travel to off-campus field sites during your stay for an additional \$13/person. Subject to availability.

Additional Lesson/Equipment Fees:

Additional fees are required for these lessons or equipment rental. Fees are per person.

· Animal Tracks	\$2.50/per.	· Live Animal Programs	\$2.00/per
· Archery	\$2.00/per.		
· Canoes	\$7.00/per.		(Birds of Prey, Hands-On Herpetology, Relating to Raptors, Reptiles and Amphibians, and Wildlife Rehabilitation)
· X-Country Skis	\$17.00/per.		
· Life of Paper	\$2.00/per.		
· Snowshoes	\$10.00/per.		

Payment and Cancellation Policy:

You will be billed for a minimum of 80% of the expected number of participants listed on signed contracts for services. If more participants attend than what is listed on the contract, appropriate fees will be billed upon completion of services. 50% of total course fees are due 30 days prior to course. Balance will be billed upon completion of course. Credit card payments may be charged an additional processing fee. Cancellation fee may be charged if your entire group cancels.

Scholarships & Transportation Funding:

Scholarships are available from the Trees For Tomorrow (TFT) Scholarship Fund. Contact us today for details on qualifications and application materials.

Funding for transportation to and from TFT is available through other organizations. Visit our website or contact Mandy Gingerich (see blue box below).

Discount and Scholarship Program

RETURNING to Trees For Tomorrow?	
DISCOUNT PROGRAM	DISCOUNT
FILL THE BUS 55 or more participants	10% off
OFF-SEASON November and December Workshops	10% off
EARLY CONTRACT PROGRAM Sign your contract within 60 days of departure	Guarantee current year's rates
REFERRAL DISCOUNT Refer a grade or new school that attends TFT	3-5% off your next visit
HIGH-NEED SCHOLARSHIP Scholarship applied per person based on school and community financial needs	Varies
<i>Discounts subject to change without notice. Discounts and scholarship can be combined and are applied to final invoice.</i>	

NEW to Trees For Tomorrow?			
ELEMENTARY & MIDDLE SCHOOL			
Year 1	Year 2	Year 3	Year 4
85% off actual cost	75% off actual cost	65% off actual cost	50% off actual cost
<i>Note: all fees are approximate, per person, and are subject to change based on specific arrival and departure times, and final programs selected.</i>			

HIGH SCHOOL
Contact Mandy directly for pricing.

Contact Mandy Gingerich for more information:
mandy@treesfortomorrow.com
 or 715.479.6456 x228



www.TreesForTomorrow.com

Trees For Tomorrow's campus includes National Forest property under permit from the USDA Forest Service. TFT is an Equal Opportunity Employer.

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