



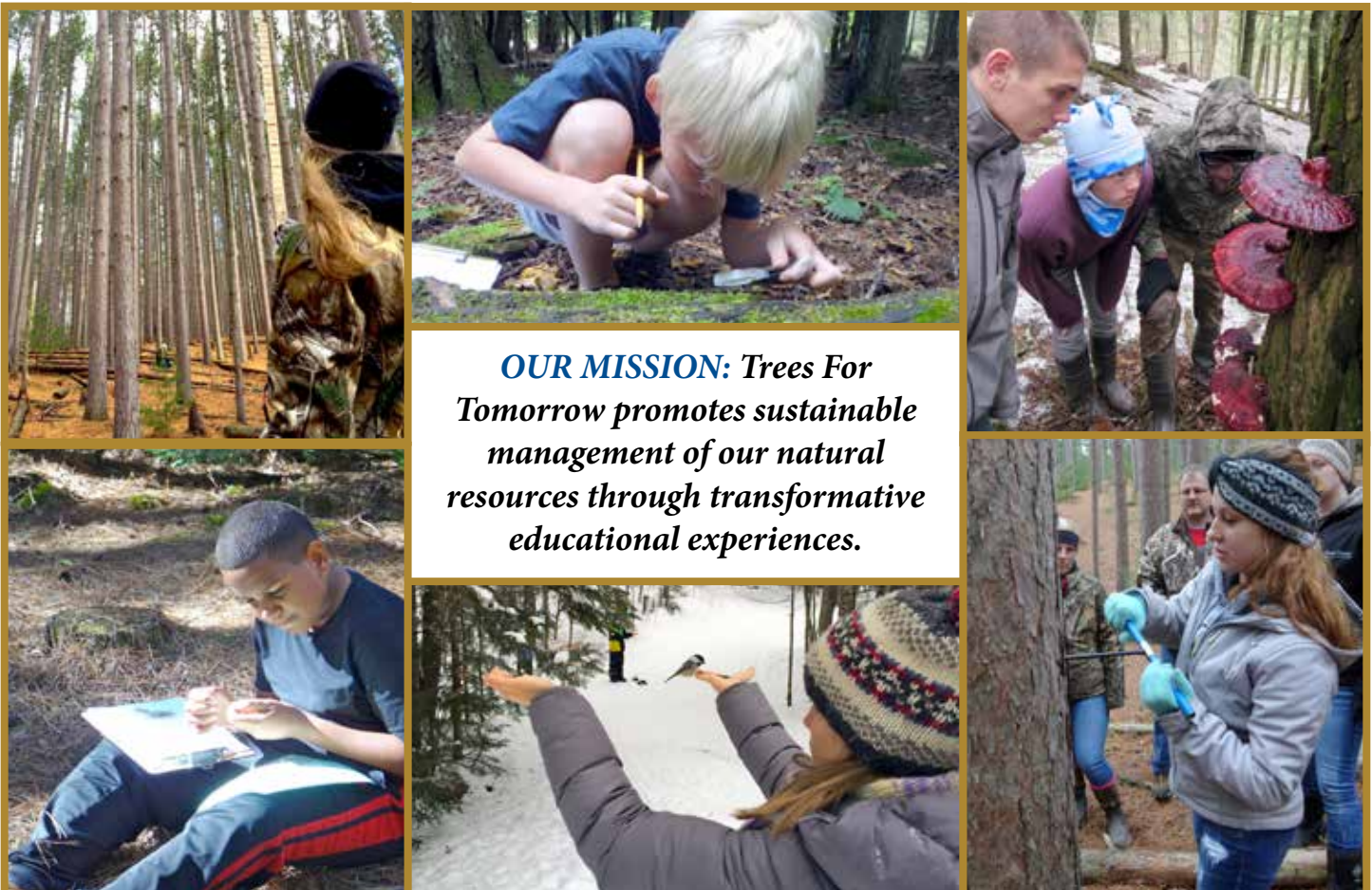
Trees For Tomorrow, an accredited natural resources specialty school located in Eagle River, Wisconsin, has been educating people about natural resources for 75 years. We invite you to our campus for a multi-day, overnight, or day experience exploring the Northwoods with your students.



## Come learn with us!

TFT is a natural resources specialty school accredited by AdvancED. Our interdisciplinary, inquiry-based field experience is designed to compliment the K-12 school curriculum, with many lessons aligning to Next Generation Science Standards as well as Academic and Career Planning guidelines. Visiting schools stay at TFT's campus for one-day, overnight, or multi-night field experiences. While at TFT, students stay in furnished dormitories, eat three meals a day in our dining hall, and prepare for field studies in the classrooms of TFT's Education Hall.

Throughout the program, students participate in field studies in the forests and waterways of the Northwoods focusing on topics such as forestry, wildlife, water quality, geology, and natural resource use. These activities not only familiarize students with the plants and animals of the Northwoods, but also demonstrate how natural resources can be sustained through proper management. Our professional teaching staff are experts at using field studies and hands-on activities to awaken students' awareness of the land's capacity and inspire enthusiasm for sustainable forest stewardship.



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

# About Us

## Our History

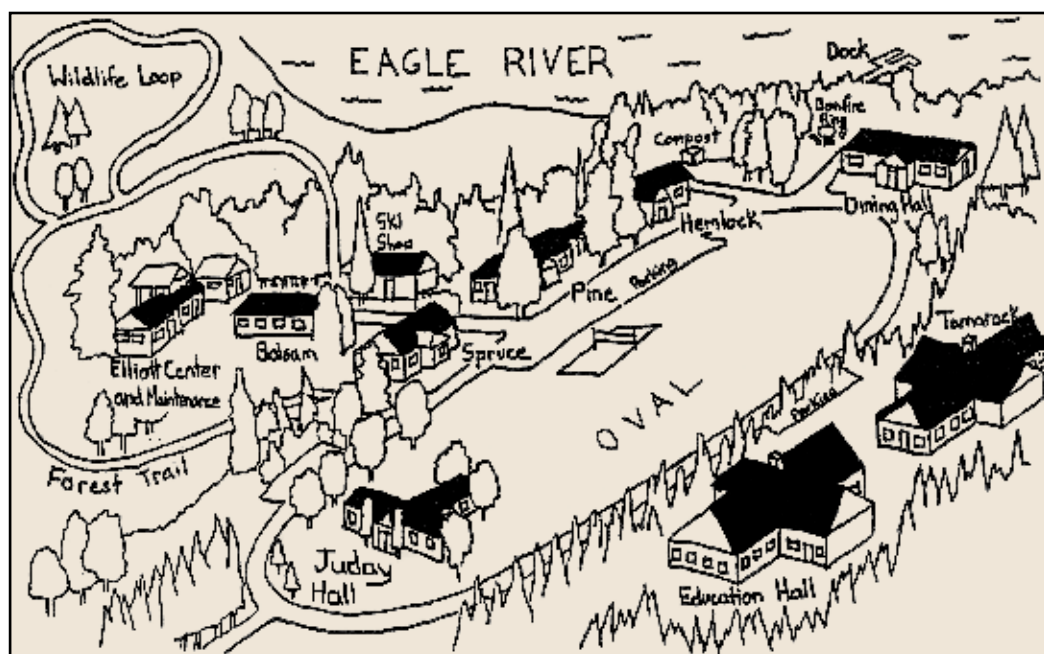


Trees For Tomorrow (TFT) was founded as a nonprofit organization in 1944 by a group of Wisconsin paper and electric utility companies with the purpose of reforesting northern Wisconsin and to educate the public about proper land management. In our early days, TFT gave away tree seedlings, lent out planting 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 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.

For over 70 years, the TFT experience has transformed the lives of students by immersing them in the heart of the northern forest. Today, over 5,000 elementary, middle, and high school students, teachers, and chaperones travel to the TFT campus annually for a natural resources education experience.

## Facilities

Trees For Tomorrow (TFT) is nestled on over 30 forested acres along the Eagle River Chain of Lakes. There are four dormitory style lodges, a historic full-service dining facility, and an education hall with classrooms, meeting space, and office space. We also utilize a ski/snowshoe shop, archery range, low elements challenge course, and additional classroom and office space in Juday Hall. Guests have access to free WiFi, a bonfire ring, large field, volleyball court, basketball hoop and sports equipment, self-guided interpretive forest trails, and much more.



## Lodging

Each of the four dormitories on TFT's campus varies in size and can house between 26-48 people. Each dormitory has a central lounge with a wood-burning fireplace and central bathrooms and showers. Individual rooms have between 2-6 bunk beds, a dresser, a coat rack, a small desk, and a curtained window looking out onto our campus.



## Dining

TFT's historic dining hall was originally constructed for the Civilian Conservation Corps (CCC) training facility that previously occupied our campus. It is now equipped with a large, modern kitchen and can accommodate up to 60 people at one time. Our professional food service staff prepare three home-cooked meals per day, including vegetarian options, fresh fruit, a salad bar, and dessert. Our staff is able to accommodate food allergies, dietary preferences, and other special food needs.



## Education Hall

The M.N. "Mully" Taylor Education Hall houses three classrooms with tables and chairs that can be arranged to fit your group. The Education Hall also has restrooms, a conference room, and TFT's main office, as well as the Tree Trunk, our campus gift shop. Our Education Hall lobby features a wood-burning fireplace, nature bookshelf, and interactive exhibits. Additional classroom space is available in Juday Hall.



# Elementary School Lessons

Trees For Tomorrow offers inquiry-based lessons that borrow concepts from former curriculum but are now aligned with Next Generation Science Standards (NGSS). Lessons are grouped into themes and designed to scaffold learning. Each multi-day field experience will begin with Challenge Activities and conclude with a Culminating Activity. Teachers may choose lessons from **no more than one theme per day**; when choosing multiple themes, choose at least one lesson that connects both themes. Teachers may choose to round out their elementary 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!**

## Themes:



= Forest



= Land & People



= Water



= Wildlife



= Winter

Theme	Class	NGSS	Time	Season	Notes
	Challenge Activities	---	45 min. +		
	Conscious Consumers	5-ESS3-1	1.5 hours		Indoor only
	Hands-On Herpetology*	4-LS1-1	1.5 hours		
	Fish Adaptations	4-LS1-1	1.5 hours		Indoor only
	A Forest's Purpose	3-LS4-3, 5-ESS3-1	1.5 hours		
	Know Your Snow	3-ESS2-1	1.5 hours		
	Lake Food Webs	3-LS4-4, 5-LS2-1	1.5 hours		
	Life of Paper*	3-5-ETS1-1	1.5 hours		Indoor only;
	Lumberjack Lore	3-ESS3-1, 5-ESS3-1	1.5 hours		
	Magnificent Macroinvertebrates	3-LS4-4	1.5 hours		
	Meet the Trees	3-LS3-1	1.5 hours		
	Northwoods Night Life	4-LS1-2	1.5 hours		
	Predators and Prey	3-LS4-4, 5-LS2-1	1.5 hours		
	Relating to Raptors*	4-LS1-1	1.5 hours		Indoor only
	Snow and Tell	3-LS2-1, 5-LS2-1	1.5 hours		
	Survival 101	3-5-ETS1-1, 3-5-ETS1-2	1.5 hours		
	Wetlands	5-ESS2-1	3 hours		
	What Makes a Mammal?	3-LS4-3, 4-LS1-1	1.5 hours		Indoor only
	What's in a Tree?	3-LS3-2, 5-LS1-1	1.5 hours		
	Winter Adaptations	3-LS2-1, 4-LS1-1, 3-5-ETS1-2	1.5 hours		Indoor only
	Culminating Activity	---	45 min.		Indoor only
Optional	Archery*	---	1.5 hours		
Optional	Animal Tracks*	--	1 hour		≤30 participants
Optional	Bats: Invaders of the Darkness	---	1 hour		Indoor only
Optional	Canoe Lessons*	---	1.5 hours		≤30 participants
Optional	Canoe Tour*	---	2-3 hours		≤30 participants
Optional	Cross-Country Ski Lessons*	---	1.5 hours		
Optional	Cross-Country Ski Tour*	---	3 hours		
Optional	Dress a Beaver	---	1 hour		Indoor only
Optional	Introduction to GPS	---	1.5-3 hours		
Optional	Orienteering	---	1-3 hours		
Optional	Wolves	---	1 hour		Indoor only

\*Extra material fees apply. See page 14 for details.

# Elementary School Lessons

*Amazing time! The kids were involved and learned a lot. I love the new curriculum as it makes it very easy for me to align some of my science lessons with your curriculum.*

--Elementary Teacher

## Core Lessons:

### 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 field experience to prepare your students for group work that will be done throughout their experience.



### 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.

## Core Lessons, Continued:

### 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 model of a food web based on their data and describe how populations would change with environmental conditions.

### Life of Paper

Students will learn about Wisconsin paper mills, then model the actual papermaking process. Students will make their own paper by hand to take home and discuss the pros and cons of using recycled paper by testing the qualities of paper from different sources.

### Lumberjack Lore

Students will explore Wisconsin's logging history through active role playing and hands-on activities. Students then compare historical practices to modern logging practices and discuss sustainable forest management.



### 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!

### 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.



# Elementary School Lessons

## Core Lessons, Continued:

### Northwoods Night Life

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 such as humans.

### 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.

### Survival 101

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.



*The new topic oriented curriculum choices were a good way to organize the programming and make them relevant to each other.... Your hard work and planning has increased the rigor of the programs - challenging, informative, and presented well!*

--Elementary Teacher

## Core Lessons, Continued:

### 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 characteristics that 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.

### Culminating Activity

As a final activity, students will reflect on prior lessons and connect concepts learned throughout their experience at Trees For Tomorrow. They will then apply those concepts to their lives back home.

# Elementary School Lessons

## 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.



### 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!

### 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.



## Optional Lessons, Continued:

### 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.



### 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.



### Wolves

This slide show helps students separate fact from fairy tale as they learn about wolf life, ecology, communication, and management techniques. A demonstration of a wolf howl survey is also available.



*Our experience was phenomenal! The staff was friendly, prepared, and very engaging. The students were drawn into the lessons and never lost interest.*

--Elementary Teacher

# Middle School Lessons

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 two thematic strands, 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 middle 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!**

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

\*Extra material fees apply. See page 14 for details.



*It is opportunities like these that stick with our students and create the land stewards of the future.*

--Middle School Teacher



# Middle School Lessons

## Forest Systems Strand:

### 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. This lesson is an introduction to skills that will be used throughout the forest systems strand.



### Ecological Succession

After a brief introduction on forest succession and changes, 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 create predictions about how the site will change in the future.



### Animal Adaptations

In the classroom, students will make observations on the adaptations of a “mystery” animal and will infer how those might help the animal survive. Students will then explore new field sites to determine whether their animal is adapted 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.



## Forest Systems Strand:

### Taking the Right Step

Students will determine surface area and weight displacement of animal feet to see how they are adapted 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 Strand:

### Introduction 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).



*I love the new curriculum, much stronger and aligned to NGSS....I appreciate the enthusiasm for science and teaching. Best experience in 20 years of bringing students to Trees for Tomorrow!*

--Middle School Teacher



# Middle School Lessons

## Water Systems Strand, Continued:

### 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.



*I am in awe of your program. Sound science practices, and a program that aligns perfectly with our new STEM curriculum at [our school] is a big plus!*

--Middle School Teacher

## 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 Strand 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.

### 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!



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

# Middle School Lessons

## Optional Lessons, 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

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.

### 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, and what they should always have with them when they go out into the wild. 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.

## Optional Lessons, Continued:

### 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.

### Stories in the Snow

If you know where to look, the mysteries and struggles of winter survival are all recorded on the winter snowscape. Through this slide program, students learn to recognize typical track patterns for Wisconsin mammals. In addition, they are introduced to other animal signs that help them to better read the landscape when they are outside in winter.

### Tree Identification

Open to groups not taking Forest Systems Strand 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. A demonstration of a wolf howl survey is also available.

*I didn't believe that I could learn so much in three days. I really enjoyed my time at Trees for Tomorrow.*

--Middle School Student

# High School Lessons

Trees For Tomorrow now 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 strand, which are designed to build upon one another. The final lesson of each strand 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!**

Strand	Class	Time	Season	Notes
Forestry	<i>Forest Measurements</i>	1.5-3 hours		
Forestry	<i>Logging Practices</i>	1.5-3 hours		
Forestry	<i>Tree Identification</i>	1.5 hours		
Forestry	<i>Wildlife Signs Investigation</i>	1.5 hours		Indoor only
Forestry	<i>Wildlife Transects</i>	3 hours		
Forestry	<i>Forest For Sale (Culminating Activity)</i>	2 hours		Indoor only
Wildlife	<i>Radio Telemetry</i>	2-3 hours		
Wildlife	<i>Trail Cameras</i>	3 hours		
Wildlife	<i>Wildlife Capture Techniques</i>	3 hours		
Wildlife	<i>Wildlife Rehabilitation*</i>	1.5 hours		Indoor only
Wildlife	<i>Wildlife Signs Investigation</i>	1.5 hours		Indoor only
Wildlife	<i>Wildlife Transects</i>	3 hours		
Wildlife	<i>Research Proposals (Culminating Activity)</i>	2 hours		Indoor only
Energy/Climate	<i>Energy Basics</i>	3 hours		
Energy/Climate	<i>Energy Generation</i>	3 hours		
Energy/Climate	<i>Consumerism</i>	1.5 hours		Indoor only
Energy/Climate	<i>Carbon Footprint</i>	1.5 hours		Indoor only
Energy/Climate	<i>Climate Change Basics</i>	1.5 hours		
Energy/Climate	<i>Carbon Sequestration</i>	3 hours		
Energy/Climate	<i>Future Forests</i>	1.5 hours		Indoor only
Energy/Climate	<i>Green Home Design</i>	3 hours		Indoor only
Optional	<i>Archery*</i>	1.5 hours		
Optional	<i>Birds of Prey*</i>	1.5 hours		Indoor only
Optional	<i>Bog Ecology</i>	1.5-2 hours		
Optional	<i>Canoe Lessons*</i>	1.5 hours		≤30 participants
Optional	<i>Canoe Tour*</i>	2-3 hours		≤30 participants
Optional	<i>Challenge Activities</i>	45 min. +		
Optional	<i>Critter Catching</i>	1.5 hours		
Optional	<i>Cross-Country Ski Lessons*</i>	1.5 hours		
Optional	<i>Cross-Country Ski Tour*</i>	3 hours		
Optional	<i>Human Survival Skills</i>	1-2 hours		
Optional	<i>Introduction to GPS</i>	1.5-3 hours		
Optional	<i>Night Hike</i>	1.5 hours		
Optional	<i>Orienteering</i>	1-3 hours		
Optional	<i>Reptiles and Amphibians*</i>	1 hour		Indoor only
Optional	<i>Wolves</i>	1 hour		Indoor only

\*Extra material fees apply. See page 14 for details.

# High School Lessons

## Forestry Strand:

### Forest Measurements and Management

Students become foresters as they learn to use forestry tools to inventory a forest, then make management decisions based on their data. This class includes the option to meet a forester, depending on schedule availability.

### Logging Practices

Students explore historical logging practices and compare them with the modern logging industry. This class includes the option to visit an active logging site and meet a logger, depending on schedule availability.



### Tree Identification

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.



### Wildlife Signs Investigation

In this hands-on activity, students will learn how to identify tracks, scat, calls, and other signs of common Northwoods animals. This skill will be applied in other lessons throughout the field experience.



### Wildlife Transects

Students walk transects through the forest and use a GPS unit to record animal signs, which are then uploaded to an online map. Students look for spatial patterns in the data and analyze how animal diversity and behaviors change with habitat type.

### Forest for Sale (Culminating Activity)

Students work in teams to develop land management plans in a mock sale of a nearby forest. Students will explore this forest during their lessons to gain the knowledge and skills needed to develop a land management plan. As a final activity, they will present their plans to their classmates.

*This was a nice intro for the students to learn more about what is involved in becoming a scientist.... The information presented kept the students engaged.*

--High School Teacher

## Wildlife Strand:

### 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.



### Trail Cameras

Students will learn how trail cameras are used in wildlife research. They will identify species in trail camera photos from a statewide citizen science project. They will then analyze trail camera data to answer questions about wildlife.

### Wildlife Capture Techniques

Students will be introduced to the use of live capturing in wildlife research and its ethical considerations. Throughout their stay, students will check small mammal traps and record data about the animals. Students will analyze their data to discover population density and diversity.

### Wildlife Rehabilitation

Students will explore the career of wildlife rehabilitation. Through hands-on exploration of various rehabilitation scenarios, students uncover the multiple challenges faced by wildlife rehabilitators. This lesson ends with an opportunity to meet TFT's rehabilitated animals.

### Wildlife Signs Investigation

In this hands-on activity, students will learn how to identify tracks, scat, calls, and other signs of common Northwoods animals. This skill will be applied in other lessons throughout the field experience.

### Wildlife Transects

Students walk transects through the forest and use a GPS unit to record animal signs, which are then uploaded to an online map. Students look for spatial patterns in the data and analyze how animal diversity and behaviors change with habitat type.



### Research Proposals (Culminating Activity)

Using the knowledge and skills gained throughout their field 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.

# High School Lessons

## Energy & Climate Strand:

### 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 will use their evidence from the energy audit to support their recommendations for how TFT can increase energy efficiency.



### Energy Generation

Students will discuss the different sources of energy (non-renewable such as coal, renewable such as wind, solar, etc.) and how energy 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.



### Consumerism

In this evening class, students will learn about the term "carbon footprint" and discover the amount of energy used during the manufacturing, packaging, and transport stages of a product on its way from creation to consumer. They will then complete a calculation of their own, individual carbon footprint and discuss ways they can realistically be more sustainable in their resource use.

### Climate 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.

## Energy & Climate Strand (cont.):

### 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 discuss 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.



### 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)

In this culminating activity, 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."



# High School Lessons

## 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 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 critters that live there. The types of organisms found help students diagnose the water quality.

*I will truly cherish and remember this trip for the rest of my life, along with the skills and knowledge taught by the amazing staff here.*

--High School Student

## Optional Lessons, 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.

### 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, and what they should always have with them when they go out into the wild. 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. A demonstration of a wolf howl survey is also available.

# Pricing



## Day Rates:

Fee includes instruction. 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	\$7.50/person
Full Day	\$10.50/person

## Overnight Rates:

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

Number of Nights	Cost per person	
	Standard Rates	Off Season* Rates
1	\$66-84	\$60-76
2	\$126-145	\$114-131
3	\$166-186	\$150-168
4	\$208-228	\$188-206

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

## Sample Daily Schedule:

7:30 AM	Breakfast
8:30 AM	Morning class(es)
11:30 AM	Free time
12:00 PM	Lunch
1:00 PM	Afternoon class(es)
4:00 PM	Free time
5:00 PM	Dinner
6:00 PM	Evening Class
7:30 PM	Gift shop open
	Rest of evening on your own

**NEW!**  
Discount and  
Scholarship  
Program

All fees are per student/adult participant and are subject to change.

**Custom programs are also available - contact us today to discuss!**

## Additional Lesson/Equipment Fees:

Additional fees are required for these lesson or equipment rental.

Animal Tracks	\$2.25/person
Archery	\$2.00/person
Canoes	\$6.00/person
Cross-Country Skis	\$15.00/person
Life of Paper	\$2.00/person
Live Animal Programs	\$2.00/person
(Birds of Prey, Hands-On Herpetology, Relating to Raptors, Reptiles and Amphibians, and Wildlife Rehabilitation)	
Snowshoes	\$9.00/person

## Vehicle Rental:

Trees For Tomorrow has vehicles that may be rented for travel to off-campus field sites during your stay for an additional \$11/person. Subject to availability.

## 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:

Scholarships may be available. Contact us today for more details on scholarship availability and application materials.

For more information or to schedule your program, contact  
Trees For Tomorrow at: 715.479.6456  
ctodea@treesfortomorrow.com

# RETURNING to Trees For Tomorrow?

**NEW!**  
Discount and  
Scholarship  
Program

DISCOUNT PROGRAM	DISCOUNT
<b>FILL THE BUS</b> 55 or more participants	10% off
<b>OFF-SEASON</b> November and December Workshops	10% off
<b>EARLY CONTRACT PROGRAM</b> Sign your contract within 60 days of departure	Guarantee current year's rates
<b>REFERRAL DISCOUNT</b> Refer a grade or new school that attends TFT	3-5% off your next visit
<b>HIGH-NEED SCHOLARSHIP</b> Scholarship applied per person based on school and community financial needs	Varies

*Discounts subject to change without notice. Discounts and scholarship can be combined and are applied to final invoice.*

## NEW to Trees For Tomorrow?

ELEMENTARY & MIDDLE SCHOOL				
	Year 1 85% off actual cost	Year 2 75% off actual cost	Year 3 65% off actual cost	Year 4 50% off actual cost
2 Days	\$30	\$45	\$81	\$90
3 Days	\$40	\$67	\$120	\$135
4 Days	\$55	\$90	\$165	\$180

*Note: all fees are approximate, per person, and are subject to change based on specific arrival and departure times, and final programs selected.*

### HIGH SCHOOL

Contact Cheryl directly for pricing.

Contact Cheryl for more information:  
ctodea@treesfortomorrow.com, 715.479.6456 x228



**Trees For Tomorrow**  
Natural Resources Specialty School

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