



# Environmental Education Kits

## A Catalog

Missaukee Conservation District's mission is to provide leadership in the promotion and protection of our county soil, water, and other natural resources through **education** and technical assistance

We can help you fit additional environmental literacy into your lesson plans that will support your curriculum and expand student knowledge through games and activities with a conservation theme. We have kits with adaptive lesson plans that you can check out or schedule a time for our Education Coordinator to come teach your class about a topic or specific lesson.

These kits provide supplemental education tools to help diversify your lesson plans and create a learning experience tailored to environmental education without having to purchase or store the items for this lesson yourself.

Many of the resources we have, although conservation-themed, can be used in science, math, language arts, social studies, art, and even physical education. These lessons work with Michigan and Next Generation Science Standards.

## Categories

For ease of finding kits for the proper age groups we have divided them into four major categories:

- Lower Elementary - these lessons involve more hands-on or visual learning with little to no reading skills needed.
- Upper Elementary/Middle School - these lessons have some reading involved with active games or detailed crafts.
- High School - These lessons have some more in-depth reading with presentations and/or games with critical thinking.
- General Public - These can be used in a classroom or at an event with multiple ages present and adapted to match a lesson for any grade level.

See the lessons intended grade level next to kit title i.e.

Kit Name (Grades)

## Process

1. Select a kit.
2. Review the Contents.
3. Gather any additional supplies from Missaukee CD or ensure you can get them from your school.
4. Check out with a Missaukee Conservation District Staff.
5. Have a fun lesson with your class or group.
6. Return in as clean condition as possible noting if items need to be replenished for the next person. Payment may be necessary for any damage to equipment or supplies.

# Lower Elementary

**Nature Discovery Box (K-5)** - This kit is full of nature's goodies for general discussion about what is found in nature, what animals leave behind or uses for natural items. Great for sensory observations. Includes instructions for "Backyard Safari" to see what they can observe on school grounds or at a nearby park.



**Large Space  
Required**

**Every Tree for itself (K-8)** - Students will learn about the needs of a tree (nutrients, space, water), the structure of a tree trunk, and play an active game with different scenarios. Discussions about human impact and disease can be added for older grades.

**Garden in a glove (K-2)** - Student will learn the anatomy of a seed, the basics of seed germination, and crops commonly grown in Michigan/Missaukee County.

**Looking at Leaves - (Pre K - 2)** - Learning about trees and all the leaf shapes. Review evergreen vs. deciduous trees and leaves changing colors in the fall. Students can collect leaves or use the examples to make a craft using leaf rubbing technique.

Art, Shapes and Colors

**Owl Pellets (K-4)** - Students will take a closer look at what owls eat and the unique way they process their food. Students will get to dissect real owl pellets finding bones from voles and more.

**Freddie the Fish (2-5)** - Follow the story provided and see what negative human impact can have on Freddie the Fish. This container can act as a display where "helpers" can be utilized or using simple materials each student or group of students can follow along and create their own Freddie the Fish.

Instructions for both are available.

Language Arts, and Civics

**Fish Prints (K-5)** - Students will be introduced to types of fish in Michigan and the parts of a fish. More advance classes can work through a dichotomous key to learn how to identify fish using the parts of the fish. Pairs well with "Intro to Fishing"

Art

# Lower Elementary

**The Mitten (K-2)** - This is a Read Along Activity, where up to 9 participants assemble their laminated mitten with a shoe string and insert the animals as you read along the book, *The Mitten*. Multiple copies available for group readings and suggested follow up questions for group discussion on symbolic meaning of the story along with its folklore origins are provided.

Language Arts, Social Studies

**Water Bracelet (K-3)** - Students will learn the basics of the history and practices involved for good water conservation. Each student will make bracelets and take the water steward pledge.

Civics, Art

**Birds - Rubbing Plates - (Pre-K-2)** - These plastic outlines of birds are great for general discussion about birds (worldwide) and all the different shapes, adaptations, colors and sizes.

Art, History, Geography

**Birds - Food Sources and Migration Poem (K-2)** - Students will learn what birds eat and why some birds migrate vs others can over winter.

**A Water's Journey (K-3)** - This a station based activity for students to learn all the places a water droplet travels in the water cycle. Each student will make a pipe-cleaner bracelet to document their journey. This can be set up inside or outside.

Art

**Egg Anatomy (2-4)** - Students will make a diorama of an egg. Building a connection to where our food comes from and/or bird reproduction. Pairs well with book "*Little Tom Turkey*."

Language Arts

**Tree Detectives (Pre-K-6)** - Students will learn about the structure of trees and how history is preserved in trees by looking at "cookies" cross section of tree trunks to estimate age and what kind of environment it was exposed to.

History

# Upper Elementary/Middle

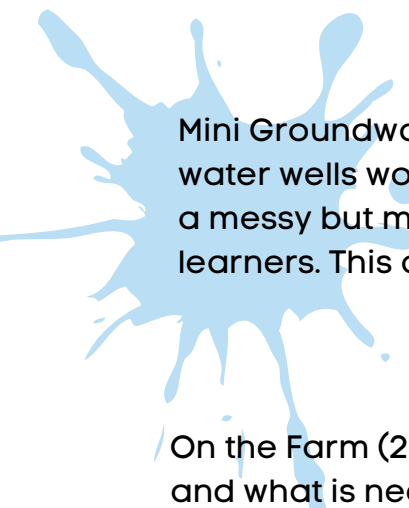
**The Shore Tour (K-8) - Highly adaptable and has extensions - This kit comes with a binder of lessons and the supplies needed for labs and board game. Students will learn about shoreline habitat and how to protect our waters using the surrounding land.**

Civics, and History

Field Trip to Lake Missaukee, Clam River Dam, State Forest Campgrounds on a Lake, etc.

**Food Chain and Energy (Non-edible version) (4-6) - Students learn the process of energy transfer through consumption using a simulation about the energy needed to survive vs. how much is consumed in a food chain. Can be used with Skittles or a similar candy for an edible version.**

**Bird Detectives (6-8) - From Cornell Lab - 6 Lessons - Students learn all about birds - how to identify birds, bird diversity, population studies through citizen science (eBird), and adaptations.**



**Mini Groundwater (4-8) - Students learn about groundwater, pollution and how water wells work by making their own groundwater system in a cup. This one is a messy but memorable activity and great way to cover hands-on and visual learners. This activity can be an edible or non-edible version.**

**On the Farm (2-5) - Students learn where food and clothing come from and what is needed to sustain farm animals. This kit has unprocessed wool, corn, soybeans, twine and a worksheet discussing sheep, pigs cows and chickens.**

History, Geography, Economics

Field Trip to a Dairy Farm

# Upper Elementary/Middle

**Eat or Be Eaten - (K-5)** This kit is very adaptable to teach about the basics of the food web and discuss producers and consumers, energy transfers and what happens when a part of the food web or chain is threatened. Game included for groups of 2-4 people - this kit has 12 sets enough for the whole class.

**Right Plant, Right Place (3-5)** - Students learn the difference between the terms native and invasive plants, competition and adaptations. Three activities are included to reinforce the concepts. Some space required for part of kit.

**Soybeans go to School (3-5)** - Students learn all about soybeans, a popular crop grown in Michigan. They will find out what environment the crop needs and all the ways soybeans are used in our daily life.

History, and Economics  
Field Trip to a Soy Bean Farm

**It's All Connected (4-6)** - Students learn the relationship between producers, consumers, and decomposers. While looking at 5 posters of various Michigan habitats, students can discuss how the plants and animals are connected in each habitat.

**Ecosystems (3-6)** - Students will learn about the different levels of our ecosystem and how it's connected. Lesson can be adapted to fit grade level with depth of questions.

Language Arts, and History

**Invasive Fish Game (4-10)** - A game for groups of 4-5 students that will teach the class about the invasive species, such as the round goby and how invasive species disrupt an ecosystem.

Field trip to a Fish Hatchery or Carl T. Johnson Center

**Stormwater game (2-6)** - This station-based activity will teach groups all the places water can travel and how we can take care of our freshwater.

Field Trip to Wastewater Treatment Plant

# Upper Elementary/Middle



***These activities are best outdoors or in a large room***

Great Migration (Birds) (4-8) - This station-based activity teaches groups about the many challenges birds face to migrate and survive - expansions can introduce invasive species, human impact and avian diseases that affect bird populations.

Busy Bees (3-5) - Students will learn about pollination, the reproductive parts of a flower and the important role of our pollinators. The game can be adapted to have extensions on pesticide use and human impact to pollinators.

Monarch Migration (4-8) Adapted from the Great Migration this station-based activity focuses on Monarch Butterflies and the journey they make twice a year. This can be paired with raising a monarch caterpillar, tagging monarchs or growing milkweed, depending on the time of year.

Dodge the Invader (4-7) An active game that demonstrates to your class the effects invasive species can have on a community. Prerequisite: Food Web lessons.

Invasive Species -Outdoor Lab (6-9) Take a step outside and evaluate diversity of an area, the density of plants in a forest or field using quadrants. Gathering data to determine any impacts invasive species have on the local plant community.

Field Trip to Park or Natural Area

The Great Swim (3-12) - This game is set up with stations and scenarios. Learn about the journey of non-native salmon and how invasive species and human impact can alter the population.

# High School

**Chemistry of Plastics (10-12)** - Take a closer look at plastics with your students, to evaluate the chemistry of plastics and how they react to stresses. This kit will require a lab with access to Bunsen burners and can be paired with lessons on recycling (included).

Chemistry and Civics  
Field Trip to Recycling Center

**Water Quality Lab (9-12)** - Take your students to a local body of water such as a lake or pond to investigate the abiotic and biotic factors of water quality. (Waders and Nets are available with this kit)

Field Trip to Lake Missaukee or Muskegon River etc.

**Pond Study (9-12)** - Take a closer look at the water to see what organism can be seen only with a microscope! Example specimens and sample tubes available. Could be paired with Water Quality Lab.

Field Trip to Lake Missaukee or Muskegon River etc.

**Michigan Geology (8-12)** - The history of glaciers in Michigan creates a unique geology. Let your students touch and see up close the different rocks in the state. Included is a guide to create an outdoor or indoor visual of earth's key historical moments putting into perspective how old the earth is in comparison to human presence.

History  
Field Trip to a Quarry or Main St. Rocks

**Name that Tree (8-12)** - Connect a botany lesson to what kind of trees grow in Michigan along with their uses and habitat. Students will learn how to use a dichotomous tree and the traits used to distinguish tree species. Example specimens included.

Field Trip to Missaukee Mountain, School Forest, State Forest Land

**Generate! (8-12)** - Evaluate our energy resources and factors considered when deciding where to pull energy from for a county/region. Game included to help student brain storm mixture of energy sources while considering the planet, cost and efficiency.

Math, Civics and Language Arts  
Field Trip to Wolverine, Consumer, Viking Energy, etc. to see how they work in person

# High School

Great Lakes Most Wanted (7-12) - Students will learn the difference between native, non-native and invasive then become familiar with eight of Michigan's invasive species. This kit involves group activities and presentations. Access to computers for research is beneficial.

Break the Barrier (7-10) - Students will learn about the Sea Lamprey invading the great lakes and various methods used to control the population and prevent further spread. Six game sets available for groups of 4.  
Connect with DNR to get Lamprey in the Classroom!

Zoonotic Diseases (10-12) - Students will learn about different types of pathogens, vocabulary involved when discussing zoonotic diseases and dive into what practices are implemented in a lab or farm to protect everyone from diseases or from spreading a disease.  
Field Trip to a Large Animal Vet.

**Our Programs are always expanding and updating with the latest information. Please reach out if you want a program not seen in this booklet.**



Looking for more agricultural based education? Our local Farm Bureau has resources available for the community to utilize to help with agricultural knowledge for the next generation.

Missaukee Conservation District often partners with Farm Bureau and can assist you in getting the materials or speakers you need for your class or group.

# General Public Kits

**Bat Education Kit** - Access to a whole set of lesson plans from "EDUBat", this kit is full of resources that can meet any age group. In this kit you'll find Bat themed story books, puppets, fact sharing tools, how to identify bats, how to protect bats, and games to better understand bats and their role in our ecosystem.

**Native Garden and Stormwater Information** - All the handouts you need to understand native gardens and stormwater management. Included is the Stormwater Game for younger age groups.



**Large Space  
Required**

**Intro to Fishing (Backyard Bass and Fishing Knots)** - This kit is great for all ages to give fishing a try. Backyard bass is a safe way for people to practice casting a line and reeling in a fish. Knot tying utilizes broken up hangers and rope to practice knots on a larger scale before trying to tie thin and clear fishing line.

**Animal Tracks** - See what kind of wildlife live in Michigan and how a simple foot print in the mud or snow could help you identify what is visiting your backyard or local park etc. Prints can be replicated by attendees with ink and stamps or using plaster to preserve or replication a print.

**Hands on Wildlife** -Attendees can touch pelts from wild animals and compare texture and thickness with fur and learn about adaptations that help this animals survive. Story books along with Pelts, skulls, animal track and scat replicas are included in this box.

History and Sensory Play

## Get Certified as a Green School by the State of Michigan

An annual certification highlighting the great work in creating the next generation of conservationist. Applications are open January 1- March 1.



Visit their website [tinyurl.com/MIGreenSchool](https://tinyurl.com/MIGreenSchool) to learn more or contact your local Green School Coordinator at Missaukee Conservation District



## Other Activities:

Candle making - Craft can be adapted to fit your needs: focus on the practice of reusing/repurposing glass jars, taking old crayons no longer used and making a colorful candle from the bits, incorporating nature into your candles for a fun gift or natural scent, take a glance into the history of and the science of candles.

Papermaking - Learn how paper is made and how old paper can be repurposed and made anew. Native seeds can be added for a fun gift or card.

Bee Hotel - Learn about our native solitary bees, their lifecycle, and how to provide habitat and watch for bee activity.

Bird Feeder/Suet - Re-purposing recyclables into feeder and houses. Suet making is a great winter activity to create feeders using lard or peanut butter and bird seeds.

Visit [MissaukeeCD.org/education](https://MissaukeeCD.org/education) to download a kit request form and use agreement. The completed form can be emailed to [missaukeecd@gmail.com](mailto:missaukeecd@gmail.com) or dropped off at the office to see if your kit is available for pick up and any additional items you may need.

A deposit in the form of a check and/or copy of ID may be required to check kit out.

This programming is provided in a nondiscriminatory manner and available to the county thanks to the millage passed in 2018.

## Volunteer with the District

Missaukee Conservation District has many opportunities for the community to get involved. Volunteers are utilized for citizen science programs, educational presentations and sharing the knowledge of the district with neighbors and family.





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