



*Curriculum
Sample*

Introduction

A note about EverWild Forest School's Curriculum

Each school year, EverWild Forest School's team of certified teachers and experienced educators carefully develop 36 weeks of targeted lesson plans that utilize the local community and environment to teach concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum. Known as place-based education, EverWild Forest School's curriculum emphasizes hands-on, real-world learning experiences. This approach to education increases academic achievement, helps students develop stronger ties to their community, enhances students' appreciation for the natural world, and creates heightened commitment to serving as active, contributing citizens.

EverWild Forest School's curriculum is dynamic, and meant to be adapted by teachers to meet the unique needs and interests of their students. Play and exploration are major parts of the classroom experience, so the curriculum is made to seamlessly integrate those elements into the facilitation of targeted learning outcomes.

The sample provided below demonstrates an overview of one week's worth of curriculum, as well as lesson plans for two days within that week.

Adapt, Extend, Enrich

Adapting for Younger Children

EverWild Forest School teachers customize this curriculum for younger students by considering the particular knowledge and skills that their younger students have. Curriculum can be customized for younger students through teachers critiquing the materials ahead of time and tailoring them to the needs of younger students. Adaptations such as simplification and excluding some aspects of a task/activity can allow teachers to use an activity designed for older students. It's important to remember that young children are still learning how to listen and pay attention to what they hear.

Examples to simplify and adapt lessons include:

- Simplify the topic (focus on one part vs. the entire thing)
- Reduce the amount of information presented
- Slow the pace of activities
- Give no more than one or two-part directions
- Demonstrate exactly what to do and how to do it

Extending for Older Children

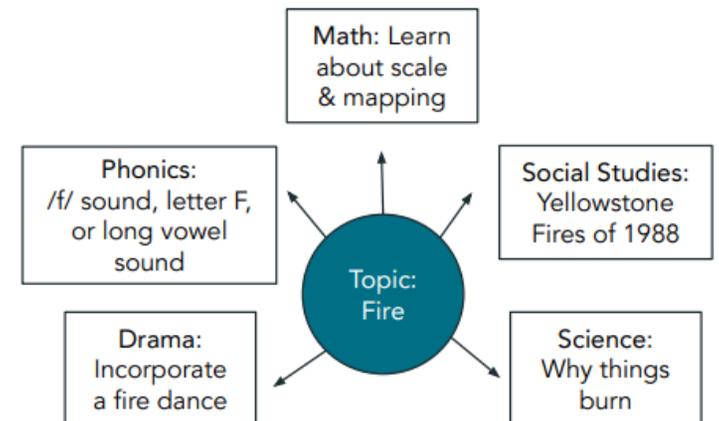
For older groups or more advanced learners, EverWild Forest School teachers extend certain activities or concepts to present greater cognitive challenges. Children are given space to take what they already know and apply it to the next level. The aim is to adjust tasks to fit their level, or ask students to apply their own judgment or experience to a given situation or question.

Examples to extend lessons include:

- Incorporate more information (or more abstract information)
- Problem-solve (often using examples derived from real-world situations)
- Use advanced critical and creative thinking skills
- Question more deeply
- Understand subtle distinctions

Enrichment for Everyone

The more connections that the mind makes, the better it is able to learn and retain information. Cross-curricular teaching helps students make more connections and gives more meaning and relevance to the subjects and skills they are learning. Teachers should always take opportunities to incorporate learning across subjects.



	<i>March</i> Ecosystems & Biodiversity	<i>April</i> Conservation	<i>May</i> Plants & Insects
Week 1	<u>Earth's Water Systems</u>	<u>Women in Conservation</u>	About Insects
Week 2	<u>Streams & Rivers</u>	<u>Conservation in our Community</u>	Pollinators
Week 3	<u>Ponds & Lakes</u>	Earth Week	Wild Herbs & Edibles
Week 4	<u>Our Forest</u>	Umbrella Species	Year in Review

MARCH

Week 3 Ponds & Lakes

	1	2	3	4
Topics	Waterfowl	Frogs	Worms	Spring Pond Study
Books	<i>Just Ducks</i> by Nicola Davies <i>One Duck Stuck</i> by Phyllis Root	<i>From Tadpole to Frog</i> by Wendy Pfeffer <i>An Extraordinary Egg</i> by Leo Lionni	<i>Wonderful Worms</i> by Linda Glaser <i>Wiggling Worms at Work</i> by Wendy Pfeffer <i>It's a Good Thing There are Earthworms</i> by Jodie Shephard	<i>In the Small, Small Pond</i> by Denise Fleming <i>It's Mine</i> by Leo Lionni <i>Over & Under the Pond</i> by Kate Messner
Activities	Ducks Limited	Lily Pad Hop Frog Life Cycle	Soil Sample Worm Investigation Worm Measurement	Pond Nature Study Aquascopes
Discussion Questions	What can affect migration?	How do frogs change and grow? How is a frog like other creatures?	What are decomposers? Why are decomposers important?	What animals live in pond environments? What live above the water and what live below? What makes ponds different from other bodies of water?

March Week 3 | Worms

OBJECTIVE:

Students will learn what a decomposer is and the importance of worms.

VOCABULARY:

Decomposer- an organism, especially a soil bacterium, fungus, or invertebrate, that decomposes organic material

ENGAGE

- Brainstorm some of the creatures that can be found around ponds and lakes.
- Ask: *Why do these creatures live in aquatic environments?*
- Ask: *Have you ever seen a worm? Where did you see it?*
- Worms and their relatives live anywhere there is moist soil and dead plant material. Earthworms are most abundant in damp forest areas, but can be found in many habitats on land and in freshwater. All earthworm species need moist soil conditions to survive.
- Ask: *How many legs does a worm have? How many arms does a worm have?* Worms do not have any legs or arms. They use their strong muscles to help them move forwards and backwards.
- Ask: *Where do worms live? Do they live up high in the trees or down low in the ground?* Worms live underground.
- Today we are going to be talking about a very special type of worm called a red worm. Red worms are decomposers. Red worms decompose (eat) rotting food.

Intro game:

- Create a worm puzzle by printing a photo of worm and cutting it into puzzle pieces or cutting out a long worm and cutting into segments.
- Have them work together to put puzzle pieces together.

Cognition, Including Math & Science #9: Inquiry through Observation & Investigation- Child observes, explores, and investigates objects (living & non living) and events in the environment, and becomes increasingly sophisticated in pursuing knowledge about them.

MATERIALS:

Be creative! Choose supplies that are available to you.

- DIY Worm Puzzle
- Nature Anatomy pg 126-127

Extension Materials (non-natural):

- Mustard powder
- Spray bottle
- Forceps & magnifying glasses
- Yarn or string

EXPLORE

Read story on topic.

Literature options:

- *Wonderful Worms* by Linda Glaser
- *Wiggling Worms at Work* by Wendy Pfeffer
- *It's a Good Thing There are Earthworms* by Jodie Shephard

EXPLAIN

- Red worms like to eat a lot of the same foods we enjoy eating. Raise your hand if you like grapes. Raise your hand if you like strawberries. Raise your hand if you like apples. Raise your hand if you like bananas. Raise your hand if you like carrots.
- They can eat a variety of fruit and vegetable scraps. They can eat citrus but not large quantities.
- Red worms will even eat some things we don't eat but that we have around the house. They will eat newspaper, cardboard, and even a banana peel.
- *Ask: Does a worm have any teeth?* No, worms do not have any teeth to help them chew their food. Worms can only eat the food when it's rotting, sometimes it has mold on it and that's just the way they like their food. They eat their food the same way you eat ice cream. They too use their lips to take small bites.
- Worms are unable to eat dairy (ice cream, cheese, and yogurt), meat, or bones.
- *Ask: Instead of throwing food scraps away, what could we do with them?* You can use red worms to eat the food scraps. Red worms will turn the food scraps into compost. Composting with worms is when you take newspaper, vegetable and fruit scraps and the worms turn it into soil.
- When we compost our food scraps with worms it helps our earth in two ways:
 - Food scraps will turn into useful soil that we can add to gardens or potted plants.
 - Our landfills don't fill up too quickly, so it saves landfill space.

EXTEND

Activities to extend understanding of the topic:

1. Soil Sample
 - Put a sample of soil in a jar.
 - Shake the jar to discover things inside.
 - Draw what you see.
2. Worm Investigation
 - Dissolve 1 teaspoon of dry mustard powder into water in a small spray bottle or cup. Shake it up well.
 - Slowly pour or spray the mustard solution over the soil inside the boundaries of your study area. Pour it so it soaks into the soil instead of running off the soil. The worms will start coming up. Don't worry; while the mustard irritates their skin and makes them escape to the surface, it does not harm the worms.
 - Pick up the worms with a forceps and put them right into a pan of fresh tap water to rinse off the mustard solution.
 - Now you can take them out of the water, lay them out and use a magnifying glass for a closer look.
 - Explain that the worms are "breathing" oxygen through their wet skin, so they must be kept moist at all times. Set out a few water misters for the class to share. Explain that worms are fragile animals and can be hurt easily, so they must be handled with gentleness.
3. Worm Measurement
 - Have different pieces of yarn/string pre-cut to act as worms.
 - Mix up the pieces and let the children take turns sorting out by length.
 - Have them look for the smallest and set it down. Then have them find the rest in order.

Discussion Questions:

- ★ What are decomposers?
- ★ Why are decomposers important?

March Week 3 | Spring Pond Study

Approaches to Learning - Self Regulation #4: Curiosity & Initiative in Learning - Child explores the environment in increasingly focused ways,

OBJECTIVE:

Students will learn about pond life, specifically pond food chains.

VOCABULARY:

Ecosystem- Interaction between organisms and their environment

Food Chain- the order that organisms eat each other.

Photosynthesis- plants turn sunlight into energy

MATERIALS:

Be creative! Choose supplies that are available to you.

- Pond animal cutouts
- Nature Anatomy pg 194-195

Extension Materials (non-natural):

- Lily Pad cutouts

ENGAGE

- Ask: *What is a pond? Is it like an ocean?* No it's much smaller than an ocean, right? *Is it like a river?* No, a river's water is always moving in one direction. Water in a pond is still and contained. *Is it like a lake?* It's similar to a lake, but much smaller.
- Ponds are a type of habitat, an aquatic habitat, that has great conditions for many creatures.
- Ask: *Can you think of anything or anyone who lives in a pond?*
- The pond and everything and everyone who lives there is an example of an ECOSYSTEM. That means all the organisms and the pond itself interact with each other.

Intro game:



- Explain that a food chain is the order that animals eat each other. It starts with a plant (because they make their own food through photosynthesis) and goes up and up the chain.
- Give each child a card with a plant or animal on it like the example above.
- Ask the class who would eat what and try to put themselves in the correct order.

EXPLORE

Read story on topic.

Literature options:

- *In the Small, Small Pond* by Denise Fleming
- *It's Mine* by Leo Lionni
- *Over & Under the Pond* by Kate Messner

EXPLAIN

- Ask: *Why do so many things live in a pond?* There is plenty of food! With all the plants, insects, larvae, fish, etc. there is plenty to eat for a wide range of animals.
- Ask: *Who is in the pond?*
- There is algae. It's like a plant but much smaller, sometimes so small that you can't see it. Like a plant it makes its own food through photosynthesis, which is when plants turn sunlight into energy. If the algae grows too well in a pond it can turn the water green or cloudy. It's not good for the pond as it can block out the sunlight coming into the pond, making living conditions difficult or impossible for other organisms. Someone needs to eat up the algae so it doesn't grow out of control!
- Plants live in and around a pond too. Some plants live completely underwater, some have their roots underwater, and their tops float on the surface (water lilies), and some plants live on the pond's edge, providing shade, shelter, and food for other animals. Plants and algae are at the bottom of the food chain.
- Crustaceans live in a pond! They are related to insects, they live in the water, they have a segmented body and their skeletons are on the outside (exoskeleton). They are crabs, shrimp, crayfish, and even rolie polies! Ask: *What do you think they eat?* They eat bits of dead animals and plants. Ask: *Who eats them?*
- Nymphs - an immature version of certain insects. Ask: *What do you think they eat?* Larvae, tiny fish, water insects. Ask: *Who might eat them?*
- Spiders build their webs close to the pond's edge, so they have many insects to catch!
- Worms live in and around ponds too. Ask: *Worms are decomposers so what would they eat? Who would eat them?*
- Fish live in a pond. Usually little fish, like minnows. Ask: *What do fish like to eat in the pond? Who might want to eat them?*
- Frogs, Toads, and Newts live in ponds too. Ask: *What do they eat? Who eats them?*
- Water birds, like ducks, geese, herons will be close to ponds also. They'll set up their nests close to the pond for a good reliable food source. Ask: *What do you think is their favorite meal from the pond?*
- Animals like water voles, shrew, minks, otters, are all good swimmers and enjoy the plentiful food available in the pond. They dig burrows close by, so they are close to their food.

EXTEND

Activities to extend understanding of the topic:

1. Pond Nature Study
 - Start off with a quiet walk around the pond. Talk before you start about how everyone needs to use their "nature skills" to explore the pond area. These skills include walking quietly, speaking quietly, and trying not to disturb the wildlife around you. This is also a great opportunity to teach children how to study nature without disturbing it, to observe but not take, and to show respect for the natural environment surrounding them by being careful where they step and what they touch.
 - Sensory Exploring: Use your senses as a group to explore the pond area. Ask the class to share what they see. Observe the pond by hearing and smell. What do we hear around the pond? What do we smell? Let them touch some different plants or items around the pond, do they all feel the same or different?
 - Hands-On adventure: Now let the class get in the pond, wet and up close to the different plants and animals living there. Use nets, buckets, magnifying glasses, and microscopes to take a close look at all the organisms living there!
 - Draw: Have the class take out their nature journals and draw something they found in the pond or a picture of the whole pond habitat. What was their favorite part about studying the pond?
2. Aquascope
 - Cut off the top and bottom of a container so you have a long tube.
 - Place plastic wrap over one end and secure it with a rubber band. Make sure the plastic wrap is not completely tight so that it will stretch inward just a bit in the water.
 - Push the plastic wrap end of the aquascope underwater and look through the open end. You should be able to see clearly underwater.
 - NOTE: Request students to bring their own container to use. After the activity, they can save the aquascopes for multiple uses.

Discussion Questions:

- What animals live in pond environments? What live above the water and what live below?
- What makes ponds different from other bodies of water?