



**Grade Level:**  
Preschool

**Time:**  
1 hour

**Season:**  
Fall

**Objectives:**  
Students will be better able to...

- Navigate the Mallard Marsh trail with a simple map and a grown up.
- Differentiate between prairie and wetland habitats

### Skills Used

Map reading, exploring, singing, observing, matching, listening, following directions, socializing in an outdoor/group setting, sequencing, describing, sizing, discerning features of objects by using senses of touch, sight, hearing, and smell



Prairie Wetlands Learning Center

# Prairie Wetlands Explorers

*Preschool Exploration Series*

## Summary

Students walk a short trail, each child carrying a map. They navigate to three special places on the map (prairie, wetlands, and oak savanna). Along the way, they problem-solve and sing songs. When they find these places, they use their senses to explore what they find (such as water, plants, soil, wind, sun). As a result, students discuss why maps are important at the Prairie Wetlands Learning Center and take home a Prairie Wetlands Learning Center trail map.

## Background

In this Prairie Wetlands Learning Center field investigation, Prairie Wetlands Explorers, preschoolers participate in an adventure outdoors. They apply what they already know about exploring in a real-world opportunity to explore and discover the natural world around them. They wonder, observe, sing songs, and use math skills. In problem solving, they practice strategies like stopping to think, asking for help, using what you know, persistence, and helpfulness.

Why should nature be a part of early childhood education? One reason is that they share much in common. “Environmental education and early childhood education have common key characteristics: first-hand experiences and active participation, interdisciplinary, conceptual, process development (cognitive, affective and behavioral) problem solving skills; and holistic approach.” (Vanorny, M. 1999. Nurturing Nature, Environmental Education for Young Children. Minnesota Children’s Museum.)

## Minnesota Academic Standards

**Subjects Covered:**  
Science, Social Studies, Music, Art

Supports 25 indicators in the Scientific Thinking domain. For details, see section: “Minnesota Early Indicators of Child Progress 2020.”



### Background, *continued*

During this field investigation, our intent is not to fill preschoolers with facts, nor to show and tell, but to guide them to making and owning their own discoveries. By making the opportunity for discovery possible through direct interaction between each child's senses and the prairie wetland environment, we are focusing on the whole child and upon the unfolding real experience. The process of ecological concept and skill building are emphasized. Open-ended activities and questions with learning driven by student inquiry are encouraged.

In her book, *The Sense of Wonder*, Rachel Carson wrote, "I sincerely believe that for the child, and for the parent seeking to guide him, it is not half so important to know as to feel. If facts are the seeds that later produce knowledge and wisdom, then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow. The years of early childhood are the time to prepare the soil."

#### Materials:

- ❑ laminated maps (one per student)
- ❑ laminated photos of the prairie, wetland, and oak savanna habitats (one set for field leader)
- ❑ habitat stickers (one set per student)

#### Credits

*Thanks* to Elise V. Bushard, Interpretive Naturalist at Lowry Nature Center, for sharing her ideas!

*Thanks* to Prairie Science Class naturalist Tia Thysell for reviewing this lesson plan. *Thank you* to the following teachers for reviewing this lesson plan:

Jessica Kohlhase, Shover Nursery School, Fergus Falls; Susan Leopold, Western Community Action Head Start; Vanessa Jacobson, home school parent/educator, Fergus Falls; and Gay Eckberg, West Central Area Schools.

*Photos* provided by Molly Stoddard, USFWS

### Teacher Preparation

Before your visit, please collect and make toilet paper tube binoculars for students and bring them with you to the Prairie Wetlands Learning Center. Collect two toilet paper tubes per student and staple them to each other. Use a hole punch to make two holes in the cardboard binoculars, one on each side. Tie a length of yard to the holes for the neck strap. Allow students to decorate their binoculars with markers.

Please organize your students into small groups at school, each small group matched with an adult chaperon, everyone wearing nametags. They will travel in their small groups on the trail at the Prairie Wetlands Learning Center, the whole group led by one of our staff.

### Prairie Wetlands Learning Center Staff Prep

- Use yellow sidewalk chalk to draw a large star on the sidewalk on the Mallard Marsh Trail at the intersection with the deck sidewalk.
- Print three stickers on mailing labels per child, one for each habitat.
- Locate laminated trail maps in the storage room.



## Field Investigation Procedure

### Welcome and Introduction Outside

1. Upon arrival, welcome everyone and review rules for the trail. The teacher can split the class into their small groups with one adult chaperon supervising each group. Remind students that they need to stay with their grown up. Walk from the parking lot, across the deck, down the stairs (elevator if needed), and under the deck.
2. Ask students what a map is for and listen to three answers. Explain to the class that they will take a walk on the trail and use maps to find three special places shown on the map. Each time they find one of the special places, you will help them explore it. Their job is figure out the name of each special place.
3. Inform chaperons of their role. Chaperons and staff should not find the three places for them on the trail but allow the children to find them and make discoveries themselves. Adults should simply help guide their thinking, help them problem-solve, and assist them in navigating with their maps.

### Explore Outside

5. Distribute one laminated map per child and ask them to put their finger on the yellow star. Wonder together where the yellow star might be located and use the barn as a helpful landmark. Walk towards it and allow them to discover it. At the star, the journey begins!
6. At each of the three locations, in small groups, encourage the children to use their senses of touch, sight, hearing, and smell to explore the habitat (such as water, plants, soil, wind, sun).

- Can they feel the sun and wind on their cheeks? Is the air warm, cool, or cold? Which way is the wind blowing to and from? How can they tell? (Wind moving plants or water.)
- Is the wind blowing hard, soft, fast, or slow?
- Is the light in the sky bright or dark? Is it daytime or nighttime?
- How warm, cool, or cold does the water feel? Is the water shallow or deep?
- Where does water in the pond come from? Water in the soil? Where does it go?
- How wet or dry is the soil? Lay down if possible – how does it feel? Hard or soft? Warm, cool, or cold? Stop at the edge of the wetland in order to access the mucky wetland soil.
- Can they find a plant that feels soft? Scratchy? Fuzzy? Prickly? Smooth?
- How might they describe the appearance of their plant? (round, fluffy, pointed, curly, tall, medium-sized, short, thin, thick).
- What part of the plant's life cycle do they see? (sprouting, growing, blooming, seeding, dying or decomposing). Which part came before? Which part will come next?
- Do all of the plants smell the same? Rub leaves and seed heads to find out. What do they smell like? (pizza, peppermint, lemon)
- How many different colors do they see? Different shades of one color? There may be an opportunity to introduce new colors such as magenta, chartreuse, or violet.
- How many different sounds can they hear? Close your eyes, quietly listen, and count on your fingers. What kinds of sounds are they? Who made them? What do they sound like? (shrill, loud, soft, quiet, bubbly). Why are they making sounds?





## Procedure, *continued*

### Explore Outside, *continued*

7. Traveling to the second and third habitats, invite the class to choose an animal you just saw in the previous habitat. Then sing “Let’s All Move like the Animals Do!” (Let’s all move like the animals do! The crickets jump, and we can, too! Jump! Jump! Jump! And then repeat with a different animal and action.) Repeat with another animal until you arrive at the next habitat.

### Reflect Together Outside

8. At the end of the walk, return to the amphitheater or sit together on the deck. Using the laminated habitat photos, review the names of the three special places they found on their maps and how they could tell them apart.
9. Ask students if they think maps are important and if so, why? Do they think these special places are important? If so, why? How can they be a kind friend to the prairie, wetlands, and oak savanna?
10. Give the teacher PWLC trail maps for students to take home and invite them to come back and show their parents the trail and prairie wetlands. Give each child a sticker, thank them for coming, and praise their positive behaviors.

## Weather Alternatives

Field investigations take place rain or shine. Everyone should dress appropriately for the weather. In the event of unsafe weather (lightning, high winds) or pouring rain, everyone must come indoors.

PWLC staff make every effort to make your travel worthwhile despite the weather and prepare indoor, age-appropriate plans. PWLC staff welcome teacher input into these plans. Some possible alternatives might include:

- Go outside for a very short amount of time, even if only under the deck, to make observations about the prairie and wetland at Center Pond.
- Tour the exhibit area and watch prairie wetlands videos with the objective of making observations of the fall prairie and wetlands depicted in the seasonal footage.
- Read a story or watch video on associated topics from the Prairie Wetlands Learning Center staff library.

**Vocabulary**  
prairie, wetlands,  
senses, explore







## Teacher-Led Extensions and Assessments

Try these activities at school to extend your visit.

### School Connection

- Walk around the school yard. What kinds of habitats do your students recognize? Is the school yard most like the prairie, wetland, or oak savanna?
- How are these areas similar to or different from the habitats you visited at the Prairie Wetlands Learning Center?

### Neighborhood Connection

- What kind of habitat do you have within a short walk of your school? Walk to other local sites where you can find habitats, such as a nearby city park. Compare and contrast your discoveries with what you observed at the Prairie Wetlands Learning Center.

### Prairie Wetlands Learning Center Connection

- Send the trail map home with your students. Invite parents to visit with their children guiding them on the trail with the map, returning to the same three habitats we explored together.

### Home Connection

- Encourage families to find a wild habitat near their home to explore. Do they live near a river, lake, woods, prairie, and/or wetland? How many different habitats can they find?

## For the Prairie Wetlands Learning Center Educator

**Prairie Wetlands Learning Center Theme** – the Prairie Pothole Region

**Primary Environmental Education Message** – The prairie pothole region is valuable and in need of restoration and protection.

**Sub-message** – Habitat: The prairie pothole region is a unique and rare ecosystem.

**Prairie Wetlands Learning Center Environmental**

**Education Objective**– Identify the components and functions of a given ecosystem by observing, counting, and describing the animals and plants in that ecosystem.



## 2017 Early Childhood Indicators of Progress: Minnesota's Early Learning Standards for 3 to 5- Year-Olds

**This lesson supports the following indicators in the Scientific Thinking domain.**

Students who demonstrate understanding can:

- ST1.5 Notice differences or similarities among materials, objects and phenomena
- ST1.6 Use experience to stimulate questions
- ST1.7 Verbally identify obvious differences and similarities
- ST1.8 Express curiosity and/or formulates questions of complex concepts
- ST2.7 Seek to gain additional knowledge in areas of interests
- ST2.10 Start with a useful, general approach to investigation even if details may be lacking
- ST2.11 Use discernment to inform exploration
- ST2.8 Explore with the intention of finding out something specific
- ST2.9 Use many tools as designed
- ST3.11 Make a simple plan in advance to see what will happen
- ST3.12 Use a greater variety of strategies to carry out ideas
- ST3.13 Attempts to make a prediction of an expected outcome
- ST3.16 Make a prediction when prompted
- ST4.7 Describe all parts of an outcome by comparing, sorting, classifying and/or organizing
- ST4.9 Begin to rely on or expect evidence, things seen or experienced directly, as reasons for results obtained
- ST4.11 See outcomes as the result of one's behavior or actions
- ST4.12 Reflect upon evidence and draws reasonable conclusions using data gathered
- ST5.9 Verbally express ideas/thought process
- ST5.11 Verbalize possible explanations for an outcome
- ST5.13 Retell/describe own actions in process of experimenting
- ST5.14 Talks with others about questions, actions, ideas, observations or results
- ST5.15 Articulate and shares aloud explanations based on reasoning and evidence
- ST6.7 Use prior experience to identify details that may be relevant
- ST6.8 Compare findings to predictions or expected results
- ST6.9 Identify what to look for, measure, or test to answer questions



## References and Resources

### Books and Web Sites for Adults

- *Minnesota Project Learning Tree Early Childhood Supplement* by Minnesota Department of Natural Resources
- *Natural Wonders, a Guide to Early Childhood for Environmental Educators* by the Minnesota Early Childhood Environmental Education Consortium, Marcie Oltman, Editor
- *The Sense of Wonder* by Rachel Carson
- *The Story of My Life* by Helen Keller, 1954 edition
- *KinderNature, a Resource for Early Childhood Educators*, web site
- *National Science Teachers Association, Early Years Blog*, web site

### Books and Web Sites for Children

- *A Prairie Alphabet* by Yvette Moore and Jo Bannatyne-Cugnet
- *A Tallgrass Prairie Alphabet* by Cluadia McGehee
- *In the Tall, Tall Grass* by Denise Fleming

