

Prairie Wetlands Explorers

GRADE: Preschool
GROUP SIZE: 1 class

SEASON: Fall **TIME:** 1 hour
RATIO: 1:5, adults: students



For the Teacher

OVERVIEW	Students walk a short trail in small groups, each group carrying a backpack, map, and star pocket. They look for three special items on the map (prairie, wetlands, and oak savannah). When they find these items, they receive an explorer star to put in their star pocket. Along the way, they use their senses to explore what they find (such as water, plants, soil, wind, sun). They problem-solve, sing songs, and receive a certificate to color. As a result, students discuss why maps are important at the PWLC and take home a PWLC trail map.
SUBJECTS	Science, Social Studies, Music, Art
MN EARLY INDICATORS OF CHILD PROGRESS	Supports 25 indicators in the Scientific Thinking domain. For details, see section: "Minnesota Early Indicators of Child Progress 2020."
SKILLS USED	Coloring, cutting, map reading, exploring, singing, observing, matching, organizing, 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
PERFORMANCE OBJECTIVES	After completing this activity, students will be able to... <ul style="list-style-type: none"> • Navigate the Mallard Marsh trail with a simple map and a grown up. • Differentiate between prairie and wetland habitats.
VOCABULARY	Prairie, wetlands, senses, explore

For the PWLC Instructor

PWLC THEME	The Prairie Pothole Region
PRIMARY EE 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.
PWLC EE OBJECTIVE	Identify the components and functions of a given ecosystem by observing, counting, and describing the animals and plants in that ecosystem.
MATERIALS	Provided by teachers: <ul style="list-style-type: none"> • Explorer stars and pockets, certificates, nametags Provided by PWLC staff: <ul style="list-style-type: none"> • backpacks, maps, and stickers, one set per chaperone • PWLC trail maps on clipboards • A representative photo of the prairie, wetland, and oak savanna
LOCATION	Amphitheater and Mallard Marsh Trail

Background Information

In this PWLC field investigation, Prairie Wetlands Explorers, preschoolers participate in an adventure outdoors. Using a popular cartoon character as a familiar role model, 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, 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.)

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.”

Teacher Preparation

There are two ways teachers should prepare students to become Prairie Wetlands Explorers. Please contact the PWLC if you do not have access to the Internet.

1. Review lyrics of songs together as a class. The best songs would be the Dora the Explorer Theme Song, Backpack Song, and Map Song. The lyrics are available at:
http://www.nickjr.com/shows/dora/printables/travel_games/dora_songbook.jhtml.
2. Teachers also need to be sure that each student makes and brings a star pocket with their name on it and three explorer stars for each child. The instructions and original are available at: <http://www.nickjr.com/printables/doras-star-pocket.jhtml>
3. When booking your date, please let PWLC staff know if you would prefer this program be conducted without reference to a television program. See section below, “PWLC Staff-Led Adaptation.”

PWLC Staff Preparation

PWLC staff needs to make or obtain (from the previous preschool visitors) explorer stars which should then be divided and provided to the chaperones. They also need to print out stickers from:

Field Investigation Procedure

1. At the amphitheater, welcome the class and review rules for the trail. Split the class into small groups with one adult chaperone supervising each group. Remind students that they need to stay with their grown up. (As secretly as possible, provide three explorer stars per child to the chaperones.)
2. Provide each chaperone with a backpack, map, and one star pocket. Ask students to sing "Backpack." They can put their star pockets into the backpack. Ask them to sing "Map." Ask them to say, "Map!" then get out the map.
3. Explain to the class that they will take a walk on the trail and use their maps to find the three special places shown on the map. Each time they find one of the special places, they can explore (see #5) and receive an explorer star to put in their star pocket. (The three places are the prairie, the wetland, and the oak savanna).
4. Inform chaperones of their role. Chaperones 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.
5. 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 night time?
 - 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?
6. In each habitat, suggest that they find an animal that moves and watch how it moves. 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.) Prairie animals might include the 13-lined ground squirrel, a grasshopper or cricket, or a monarch butterfly. Wetland animals might include a duck, goose, muskrat, or water boatman. Animals of the oak savanna might include a squirrel, cottontail rabbit, black-capped chickadee, or downy woodpecker. They might also describe the appearance of the animal (rounded, soft, pointed, curly, moving forward, sideways, or backward, tall, medium-sized, small, quick, slow, fluttery). How does this animal spend the fall? The winter? The summer? Which stage of its life cycle is taking place in fall?
 7. At the end of the walk, return to the amphitheater or sit together on the deck. Using a representative photo of each habitat, review the names of the three special places they found on their maps and how they could tell them apart. 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?
 8. Students should remove their explorer stars and pockets from the back packs and return the backpacks and maps to PWLC staff back at the amphitheater. PWLC staff 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. PWLC staff give each child a sticker and thank them for coming!

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 around 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 PWLC library.

PWLC Staff-Led Adaptation

This program can be adapted and conducted without a popular cartoon character role model and without reference to a television show. Instead of using Explorer Stars, staff can provide images of a cattail for the wetland, big bluestem for the prairie, and an oak tree for the oak savanna. An alternative song can be provided for each habitat. When scheduling groups, PWLC staff need to ask the contact person if this adaptation of the

program is preferred.

Teacher-Led Extensions/Adaptations/Assessment Ideas

- Send home the PWLC maps with your students. Tell parents about your visit in a letter or newsletter. Encourage families to visit the PWLC with their preschooler guiding them on the trail with the map.
- Print out enough explorer stars so each student can color and cut out three of them. Send these stars to the PWLC for the next visiting preschool class to use.
- They did it! They were Prairie Wetlands Explorers! Print out enough “We Did It” certificates for each student to color and keep. You can find the original at: http://www.nickjr.com/parenting/ages_and_stages/4/creative_arts/doras_you_did_it_certificate.jhtml

Minnesota Early Indicators of Child Progress 2020

This lesson supports the following indicators in the Scientific Thinking domain that are set out in the Minnesota Early Indicators of Child Progress.

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

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, <http://kindernature.storycounty.com/>
- National Science Teachers Association, Early Years Blog, <http://blogs.nsta.org/EarlyYearsBlog/default.aspx>

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
- <http://www.nickjr.com/shows/dora/index.jhtml>
- <http://www.fws.gov/midwest/pwlc>
- <http://kindernature.storycounty.com/>
- <http://www.moea.state.mn.us/ee/index.cfm>
- <http://science.nsta.org/earlyyearsblog>

Credits

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