



Grade Level:
Kindergarten

Time:
1 hour

Season:
Fall

Skills Used:

Following directions, listening, cooperating, exploring, describing, matching, observing, asking and answering questions, and comparing and contrasting

Materials:

- Wax paper, felt, and sandpaper samples (one set per chaperon)
- Color paint samples (one set per chaperon)
- Journal and pencil for instructor use
- Plastic mallard decoys (hen and drake)
- Blaze orange fleece fabric



Prairie Wetlands Learning Center

Prairie Sensory Walk

Kindergarten Observation Series

Summary

Using a KWL approach, students will use their senses of touch, sight, hearing, and smell to explore, observe and make discoveries about the prairie. They will ask and answer questions about the prairie based upon what they already know and what they experience while walking in the prairie.

Background

The purpose of this lesson is to introduce kindergarteners to the prairie and give them an enjoyable first-hand prairie experience. This lesson would also make a suitable review of a unit on prairie, matching, or colors.

The prairie is North America's grassland biome. It extends from central Canada to Texas, from the Rocky Mountains to Ohio. The prairie pothole region is defined geographically as the northern portion of the prairie. It covers approximately 300,000 square miles within five states and three Canadian provinces including part of Minnesota, Otter Tail County, and Fergus Falls. The prairie and its potholes are the land we call home, the land that our cities, roads, and farms are built upon, the land of which remnants can be found in places like the Prairie Wetlands Learning Center.

A rich garden, over 100 plant species can occur in a prairie of less than five acres. (One acre is the size of a professional football field.) The major grasses of the tallgrass prairie are big bluestem, Indiangrass and switchgrass. These grasses can grow up to ten feet tall, averaging a height of six to eight feet. The tallest flowers are cup plant, compass plant, and prairie dock, growing up to eleven feet tall. More than plants live on the North American prairie, including 80 mammal species, 300 bird species, 200 plant species, and thousands of insect species.

Minnesota Academic Standards

Subjects Covered:
Science,
Language Arts,
Math

Helps support 11 standards and 11 benchmarks. See sections "2019 Minnesota Academic Standards in Science" and "2010 Minnesota Academic Standards in Language Arts"



Background, *continued*

During this fall visit, students see vibrant wildflowers blooming and tall grasses taking on their fall color with ripening seed. They may touch and smell the soil of a plains pocket gopher mound, listen to migrating ducks and geese, watch a 13-lined ground squirrel scamper to its burrow, and smell scented leaves. Since summer nesting is past, they also have the opportunity to step off-trail and become immersed in the swaying plants, our sea of grass.

Objectives:

Students will be able to

- Use four of their senses (not taste) to explore, observe, describe, and answer questions about the prairie
- Match the texture of a plant to a common household item
- Name and match one color in the prairie to a color sample
- Measure the height of prairie grass against their body height
- Recognize prairie habitat based upon its common characteristics such as tall grass and flowers, dry soil, absence of trees, open sun and wind, and specialized animals
- Enjoy using their senses to explore the prairie

Teacher Prep

- Read the book, *In the Tall, Tall Grass* by Denise Fleming to your students prior to arriving at the Prairie Wetlands Learning Center. Ask your students how a prairie might be different from a forest or wetland. Discuss the meaning of the word habitat (an animal or plant's neighborhood where it finds the food, water, shelter, and space needed to survive). What makes the prairie a special place?
- To maximize outdoor exploration time at the Prairie Wetlands Learning Center, you may conduct the introductory steps in the section "Field Investigation Procedure" at school. Upon arrival at the Prairie Wetlands Learning Center, the Prairie Wetlands Learning Center instructor may conduct a quick review before proceeding.
- Organize students into small groups, each group led by a chaperon, everyone wearing nametags. Each chaperon is responsible for helping their students to follow-through with directions and with dispersal and collection of materials.
- We highly recommend conducting one or more of the suggested extensions before your visit in order to integrate this field investigation into the classroom study of prairie, habitat, nature, senses, camouflage, or other topics. We believe such integration enhances student motivation for learning in other curricular areas. Please see section, "Teacher-Led Extensions/Adaptations/Assessment Ideas."

Prairie Wetlands Learning Center Staff Prep

Prepare and organize materials. Select prairie location, such as the butterfly garden, barn lawn, south of the dorm, or adjacent to Center Pond. Hide a mallard hen decoy and some blaze orange fleece in two different places in the tall grass near the trail.



Field Investigation Procedure

Introduce the Topic Outside

1. Welcome students, teachers, and chaperons to the Prairie Wetlands Learning Center upon arrival. Review respectful behavior for the trail.
2. Sit outside in a large circle as a whole class on the deck or ground.
3. Ask students if they know what that first word in our name means? What is the prairie? How do you know you are in a prairie and not a forest or wetland? (This is the K of the KWL model – what do they already know about the prairie? In the past, students have named animals and plants that live in these habitats and what they do, including farm animals. They have described landscape features including the bridge, and topography like hills and lakes. They have also mentioned duck banding and siblings who come to school here every day in the Prairie Science Class).
4. Ask students what questions they have about the prairie – what do they wonder about it? (This is the W part of the KWL model.) Write their questions down in your journal. (In the past, they have asked questions mainly about animals including those that may be frightening to them like snakes, skunks, snapping turtles, but also have asked about plants and water).
5. Tell students today they will have the chance to think about if the prairie is a special place.
6. Explain that students will use their senses to explore the prairie and answer some of their questions. Review the four senses they will be using. Invite them to guess which sense is the only one they will not be using (taste).

Exploring Outside

7. Walk to a nearby prairie area and introduce the prairie to them from the trail. How can they tell it's prairie and not woods and not a wetland? Lead any combination of the following activities, using as many different senses as time and conditions allow before going off trail.
 - **SOUND:** Stand with eyes closed and listen to sounds around you. Count on fingers each time a different sound is heard. How many different sounds did they hear? How would they describe the sounds? (shrill, bubbly, loud, soft, quiet) What made the sounds? (likely candidates include crickets, ducks, geese, wind, people, traffic)
 - **SIGHT:** Invite students to find a prairie grass and measure the height of the it against their bodies. Who is taller, the grass or them? Try again with a prairie flower.
 - **SMELL:** Smell wild bergamot or other fragrant plants like prairie sage. What do they smell like? (lemon, pineapple, candy)
 - **SMELL:** Find gopher mounds. Pick up a small sample of soil. Invite them to smell it. What does it smell like? Explain how a gopher pushes soil out of its hole.
 - **TOUCH:** Students may also gently pat the gopher mound. What does prairie soil feel like? Is it like sand in a sandbox? Is it sticky like clay in play-dough? Is it like mushy like mashed potatoes?
8. Explain that while they are busy with the next activity, you are going to hide the duck and fleece for a game of hide and seek later. Show them these items and ask them to predict which one will be easier to find? Why? If they don't use the word camouflage, ask for it.



Field Investigation Procedure, *continued*

9. Before you leave them, provide chaperons with Ziploc bags of felt, wax paper, sandpaper, and paint samples. Instruct them to lead their small groups in finding matching colors and textures in the prairie. Encourage them to spread out and walk off-trail. While they are busy, go hide the decoy and fleece near the trail. When you return, float from small group to small group to provide assistance and to encourage active searching. Why might plants have different textures?
10. Gather everyone together for a few more quick activities:
 - SIGHT: Lie down in the prairie and look up at the sky. Which way is the wind blowing? How can they tell?
 - TOUCH: Feel the prairie under your entire body. How does it feel? Roll down a hill for a total body and sensory prairie experience!
11. Spread out and walk back to the trail. Give students boundaries and invite them to use their eyes to search for the duck and fleece, hands behind their backs, no talking, pointing, or touching the when found. After everyone passes by both, find out how many found students found each item. Ask an adult to stand near each item and let them

look again. Discuss which item is camouflaged and why a mother duck needs to be camouflaged in the prairie? (to hide her nest/eggs from predators).

Reflection

12. Sit together as a whole class and share what they smelled, saw, heard, and felt. Answer the questions that students generated as recorded in your journal. Ask them what they discovered today on the prairie that they never knew before. (This is the L part of the KWL model – what did they learn? Past students have discovered respectful behavior, kinds of animals, plants and habitats, smells, and colors in the prairie.) Ask them what they think about the prairie -- is it a special place, and if so, why? (Past students who thought the prairie was special gave these reasons: animals live on the prairie, you can see the moon during the day, and milkweed grows in the prairie.)
13. Thank them for coming and for being kind to the prairie! Collect materials from chaperons. Invite them to come back or explore another prairie near their home.

Vocabulary
prairie, soil, habitat,
texture, senses,
question





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. Prairie Wetlands Learning Center staff make every effort to make your travel worthwhile despite the weather and prepare indoor, age-appropriate activities. Prairie Wetlands Learning Center staff welcome your 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 find living and non-living things and use their senses to make discoveries about the prairie.
- Tour the exhibit area and watch prairie wetlands videos with the objective of finding living and non-living things and making discoveries about the prairie.
- Read *All the Colors of the Earth* by Sheila Hamanaka. Which colors described in the book can they see in the prairie? Which are camouflaged and which are not?

Teacher-Led Extensions and Assessment

Try these activities at school to extend your visit.

School Connection

- Demonstrate the concept of camouflage using multi-colored pasta noodles placed in the mowed grass of the school yard. Count how many yellow, red, and green noodles are collected. Which colors are easiest and hardest to find? Why?
- Ask students to make a Venn diagram and use words or pictures of animals and plants found in the prairie.
- Invite students to draw a picture of the prairie that shows two animals and two plants plus water, soil, and sky..
- Ask students to point to and name the five senses. Which one did they not use at the prairie? What did they discover with the four senses they did use? Did they use one the most?
- Take a walk to the M-State campus and Legacy Prairie or another prairie near your school. Compare and contrast it with the prairie at the Prairie Wetlands Learning Center.

Prairie Wetlands Learning Center Connection

- Borrow the “Tallgrass Prairie Discovery Trunk” from the Prairie Wetlands Learning Center. It contains a foam bison costume, felt storyboard, books, videos, posters, and many other items. Please call the Prairie Wetlands Learning Center for availability, 218-998-4480.

Neighborhood Connection

- Fergus Falls is the first Prairie City USA in the country. Invite families to find and visit a city park that has prairie plants, such as Adams Park, Grotto Park, Godel Park, Ferber Park, and others.



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

2019 Minnesota Academic Standards in Science

This lesson helps support the following state academic standards in science.

Strand 1 Exploring phenomena or engineering problems

Substrand 1.2 Planning and carrying out investigations

Standard 1.2.1 Students will be able to design and conduct investigations in the classroom, laboratory, and/or field to test students' ideas and questions, and will organize and collect data to provide evidence to support claims the students make about phenomena.

Benchmark 0L.1.2.1.2 Make observations of plants and animals to compare the diversity of life in different habitats. (P: 3, CC: 1, CI: LS4) *Emphasis is on the diversity of living things in a variety of different habitats and patterns across those habitats.*

Strand 2 Looking at data and empirical evidence to understand phenomena or solve problems

Substrand 2.1 Analyzing and interpreting data

Standard 2.1.1 Students will be able to represent observations and data in order to recognize patterns in the data, the meaning of those patterns, and possible relationships between variables.

Benchmark 0P.2.1.1.1 Sort objects in terms of natural/human-made, color, size, shape, and texture, then communicate the reasoning for the sorting system. (P: 4, CC: 2, CI: PS1) *Emphasis is on using observations to describe patterns and/or relationships in the natural and designed world in order to answer scientific questions and solve problems.*

Standard 2.1.1 Students will be able to represent observations and data in order to recognize patterns in the data, the meaning of those patterns, and possible relationships between variables.

Benchmark 0E.2.1.1.2 Make daily and seasonal observations of local weather conditions to describe patterns over time.** (P: 4, CC: 1, CI: ESS2) *Examples of qualitative observations may include descriptions of the weather (such as sunny, cloudy, rainy, and warm).*



2010 Minnesota Academic Standards in Language Arts

This lesson helps support the following state academic standards in language arts.

Strand SPEAKING, VIEWING, LISTENING, AND MEDIA LITERACY

Substrand 8 Speaking, Viewing, Listening, and Media Literacy K-5

Standard 1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

Benchmark 0.8.1.1 Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

- a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).
- b. Continue a conversation through multiple exchanges.
- d. Follow basic oral directions.

Standard 2 Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

Benchmark 0.8.2.2 Confirm understanding of a text read aloud or information presented orally or through other media (e.g., poems, rhymes, songs) by asking and answering questions about key details and requesting clarification if something is not understood.

Standard 3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Benchmark 0.8.3.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

Standard 4 Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

Benchmark 0.8.4.4 Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.

Standard 6 Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Benchmark 0.8.6.6 Speak audibly and express thoughts, feelings, and ideas clearly, and respond to poems, rhymes, and songs.

Strand LANGUAGE

Substrand 10 Language K-5

Standard 1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Benchmark 0.10.1.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

- d. Understand and use question words (interrogatives) (e.g. who what where when why)



Language Arts Standards, *continued*

Standard 5 Demonstrate understanding of figurative language, word relationships and nuances in word meanings.

Benchmark 0.10.5.5 With guidance and support from adults, explore word relationships and nuances in word meanings to develop word consciousness.

- a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.
- c. Identify real-life connections between words and their use (e.g., note places at school that are colorful).

Standard 6 Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Benchmark 0.10.6.6 Use words and phrases acquired through conversations, reading and being read to, and responding to texts

Resources and References

Books for Children

- *All the Colors of the Earth* by Sheila Hamanaka
- *Animals in Camouflage* by Phyllis Limbacher Tildes
- *Have You Seen My Duckling?* By Nancy Tafuri
- *How to Hide a Butterfly and Other Insects* by Ruth Heller
- *In the Tall, Tall Grass* by Denise Fleming
- *Mouse in a Meadow* by John Himmelman
- *My Five Senses* by Margaret Miller
- *Summer Coat, Winter Coat, the Story of a Snowshoe Hare* by Doe Boyle
- *The Five Senses* by Nuria Roca
- *The Listening Walk* by Paul Showers (also available in Spanish: *Los sonidos a mi alrededor*)



Resources and References, *continued*

Books and Web Sites for Adults

- *Natural Wonders: A Guide to Early Childhood for Environmental Educators* by the Minnesota Early Childhood Environmental Education Consortium, Marcie Oltman, editor.
- *Nature for the Very Young: A Handbook of Indoor and Outdoor Activities* by Marcia Bowden.
- *Sharing Nature with Children* by Joseph Cornell.
- Biomes of Minnesota on the Department of Natural Resources website
- Prairie Wetlands Learning Center on the U.S Fish and Wildlife website
- Tallgrass Prairie information on the Campsilos website

Credits

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