

**LESSON: Prairie Explorers GRADE: K TIME: 45 minutes****SUMMARY:**

Students hike the trails in one line. They practice using their senses to *observe* and *describe* the plants and animals of the prairie. 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 learn to name their five sense. As a result, students *describe* what they discovered about the prairie by using each one.

OBJECTIVES: Iowa Core**Science****From Molecules to Organisms: Structures and Processes**

- **K-LS1-1** Use observations to describe patterns of what plants and animals (including humans) need to survive.

Literacy**Speaking and Listening:**

- **SL.K.1.** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
- **SL.K.2.** Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
- **SL.K.6.** Speak audibly and express thoughts, feelings, and ideas clearly.

MATERIALS & RESOURCES:

- *In the Tall, Tall Grass* by Denise Fleming
- Data Collection Sheet (one per group)
- Pencil (one per group)
- Clip board (one per group)



PRESENTATION:

In the classroom, welcome students, teachers, and chaperones to Neal Smith National Wildlife Refuge. Remind them of your name. Explain to students that today, they will be learning about the prairie. Have the students say the word with you to practice pronunciation. Explain to students that today, they will take a short hike to observe, interact, and describe the prairie using each of their senses. Work with students to name all five senses. Remind them to save their sense of taste for lunch!

DIRECTIONS:

1. Make sure students know that everyone will stay in line, with their adult. Be sure to stay on the trail and practice being calm and quiet naturalists.
2. Inform chaperones of their role. Chaperones and staff should assist with keeping students in line and focused. They may be asked to help pass out or collect items as well.
3. Head outside and inform students that they will first practice using their sense of touch to find different textures on the prairie. Pass out one pompom ball to each child. Ask them to find something fuzzy, that feels like their pompom. Give them 15 seconds or so to search, then tell them to “freeze!” Ask them to share what they found. Collect the pom poms.
 - What else can students feel? (Wind on their cheeks, warm or cool air?) Ask students to reach down and touch the soil, how does it feel (wet, dry, scratchy, or smooth)?
4. Next practice using the sense of sight by telling students the story of a dream you once had. In the dream, you were driving to the prairie, and saw a huge rainbow over it. The rainbow broke into millions of tiny pieces of color, and they all fell into the prairie, leaving bits of color everywhere.



5. Ask kids if they think the prairie includes all the colors of the rainbow? Give each one a different colored square of paper. Give them 30 seconds or so to find something in the prairie that matches their paper. Freeze! Switch colors with a friend, and take another 30 seconds. Then share what you discovered with your friend. Did you find the same thing, or different?
 - How many different colors do they see? Different shades of one color? What else can they see before them?
6. Now practice using the sense of smell. Pick a few seed heads from a gray headed coneflower, and crush them in your hand. Have chaperons help sprinkle some into each child's hands. Tell them rub their hands together and smell this scent of the prairie. They can take the scent with them all day long this way!
 - Do you think other plants have different smells too? Rub leaves and seed heads to find out. What do they smell like? (pizza, peppermint, lemon)
7. Explore the sense of hearing. Have students stand shoulder to shoulder along the trail, facing the building. Tell them we are practicing hearing the prairie, but we have to be very quiet. We will use the veil of silence to help us listen/keep quiet. Demonstrate how you lower the veil of silence (hold your hand above your head and lower it slowly over your mouth). When it gets to your mouth, you are silent until it raises up again.
8. Practice using the veil of silence with students. Then have them listen for 10 seconds, and count on their fingers how many different sounds they hear. When you raise the veil again, ask them to share what they heard.
 - Wind is a bonus – you can experience it with 3 senses! Feel it, hear it, see it swaying plants.



9. Walk back to the building as you 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. 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).

“Like the Animals Move” –

Let’s all move like animals move...

Crickets jump and we can too...JUMP! JUMP! JUMP!

Let’s all move like animals move...

Birds fly and we can too... FLY! FLY! FLY! [flap arms]

Let’s all move like animals move...

Gophers dig and we can too... DIG! DIG! DIG! [make digging motion through the air]

Repeat with different prairie animals and actions

10. Have students name all the senses we used. How did we use them? What did we discover about the prairie by using each one? Remind them that they may use their five senses wherever they go. How do animals (humans are animals) use their sense of sight, hearing, touch, smell, and taste to stay alive on the prairie?

Examples-

- Animals use sight or smell to find water. Is water necessary to survival of animals. How is this the same or different with plants? Do plants use senses? How do they find water?
- Animals use taste to decide what to eat. Is food necessary to survival? How is this the same or different with plants? Do plants use senses? How do they find food?
- What senses do animals use to stay safe? What senses do young humans use? Do you look for danger? Do you listen? What other senses do you and the animals of the prairie use to survive?



BACKGROUND INFORMATION:

Tallgrass prairie is a fire-dependent ecosystem distinguished by tall grasses (up to 10 feet tall), and deep, rich soils. It is characterized by tall grasses and few trees. Tallgrass prairie once covered parts of 14 states in the Midwest, including about 85% of Iowa. Today, less than 0.1% of the original tallgrass prairie remains in Iowa. Tallgrass prairie plants have extremely deep roots, reaching up to 12 feet below the surface. These roots created the rich soil that is now valued as crop land. The deep roots hold the soil, preventing erosion where prairie plants have become established.

Some common grasses of the tallgrass prairie include big bluestem, Indian grass, switchgrass, and little bluestem. But prairies are much more than just grasses. A diverse variety of forbs, or wildflowers, are vital parts of the tallgrass prairie, too. During the growing season, each flush of bloom tends to be taller than the previously blooming species.

Neal Smith National Wildlife Refuge (NWR) is a reconstructed (or replanted) prairie for the most part, more than 200 species of prairie plants have been seeded into former farm fields. After planting, invasive plants may be mowed or sprayed with herbicides to prevent their spread. Prairie plantings are burned to invigorate the growth of fire-adapted prairie plants and to control the plants that aren't adapted to fire, and therefore don't belong on the prairie.