



Neal Smith National Wildlife Refuge

School visits to the Prairie Learning Center (PLC):

Mission: Study Neal Smith NWR and use the Iowa prairie ecosystem as an integrating and motivating context in each related curricular area to engage school children at all grade levels in real world, field-based learning experiences.

Goals:

All student visits and developing school partnerships will include:

1. A search for *wonder*
2. Nature journals
3. A place-based curriculum, focused on studying the land and wildlife at Neal Smith NWR, while highlighting global connections when appropriate
4. Integrated Phenology study, tracking changes overtime
5. Studying and modeling past and present naturalists (e.g. Rachel Carson, Aldo Leopold, Byrd Baylor, Ernest Seton, Lewis and Clark) as a pathway to exploration
6. Inviting all school children, teachers, and chaperones to become naturalists, or people who always ask wonder questions and make discoveries about the environment
7. Developing the skills of critical thinking, problem solving, teamwork, stewardship, and citizenship
8. Connecting 1st American and early settlement history when appropriate

Guiding principles:

- The main subject of any school group visit to PLC should be the tallgrass prairie ecosystem. The prairie and the life in it should be the main focus of all activities.
- A minimum of materials and objects will be required for all activities; realizing that materials and equipment distract from field study.
- This document and enclosed lessons should be continually reviewed and adapted as Neal Smith NWR and environmental education evolve.



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Fall Units

"I am beginning to learn that it is the sweet, simple things of life which are the real ones after all." - Laura Ingalls Wilder

Second Grade:



1. The Prairie Food Cupboard:

Objective: The once abstract concept of food chains comes to life for learners to witness and observe firsthand in the prairie.

During a teacher-led discussion, students define food chain. The field leader has a few students pretend play that they are the sun, plant and insect and has them act out a food chain for the rest of the class. Next, students make predictions about possible food chains they may find in the prairie. Following, students split up into small groups with field leaders and dig in the soil, search through plants, and watch the sky to develop simple food chains based on their observations. Students reflect by comparing their predictions to their findings about food chains on the prairie.

2. Let's Sketch on the Prairie:

Objective: Using excerpts by Laura Ingalls Wilder as an example, students practice using written words to describe the prairie.

While listening to a description of the prairie in The Little House on the Prairie by Laura Ingalls Wilder, students draw a picture of what they are hearing. Afterwards, they go outside and visit two to three locations on the prairie to practice writing their own description of the prairie. They will then share their writings with a partner and have that partner draw the prairie as they read and vice versus so the partner may have a turn. As a class, students come together and discuss which aspects of writing and drawing were easy and which ones were more challenging.

3. 1st Americans on the Prairie:

Objective: Using KWL approach, students learn about 1st American culture and their relationship with bison.

Students are asked what they already know about 1st American culture and their relationship with bison, and what they would like to know. In order to answer some of their questions, students learn about and listen to readings by Charles Alexander Eastman, a native Santee Sioux Indian, naturalist, illustrator, and writer who lived during the mid 1800s. Next, students role- play and imagine that they are 1st Americans hunting and using bison. Students are divided into small groups and each group is given a different bison bone to take with them onto the prairie. By exploring the prairie through the eyes of 1st Americans, students seek answers to their questions and determine the best ways to use their bison bones and bison in general on the prairie. They will record their discoveries in their journals and share their ideas with classmates.



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Spring Units

Nature holds all the answers - go outside and ask some questions - open your heart and listen to the response! ~Amethyst Wyldfyre

Second Grade:

1. Burrow Investigation:

Objective: Students conduct field investigation on a burrowing prairie animal (i.e. 13 lined ground squirrel, pocket gopher, and if possible, the badger).

Students conduct a prairie animal field investigation based upon their own questions. A field leader uses pictures and field guides to introduce students to burrowing prairie animals. Based on their knowledge, students ask questions about burrowing animals that they can discover on the prairie. They observe, collect and record data that will help them answer their investigative question. Later, they reflect and compare and contrast the adaptations of burrowing animals using a Venn-Diagram.

2. Prairie Animal Adaptations (Harvestmen vs. Spiders):

Objective: Students discover unique animal adaptations by asking questions, observing, and comparing Harvestmen to Spiders.

Students share what they already know about Harvestmen and Spiders. Using a Venn Diagram, the instructor categorizes their answers based on the differences and similarities there are between Harvestmen and Spiders.

Based on their prior knowledge, students work in groups and ask "I wonder" questions about Harvestmen and Spiders. In the field, students search for Spiders and Harvestmen and use pictures and words to collect and record data that will help them find answers to their questions. After the field study, students return to the class' original Venn Diagram and make necessary corrections and add to it based on their discoveries. Students write concluding statements about how Harvestmen and Spiders are similar and different.

3. Prairie Hike and Investigation:

Objective: Students use sketches and written words to answer the question, "What is a prairie?" Students describe living and non-living things found within a prairie habitat.

Students do a basic prairie investigation using simple journal entries. They divide their nature journal into sections and label each section "plants", "animals", "soil", and "discoveries". First, students record the temperature, sky, and wind on the prairie. They list plants, animals, or signs of animals they find in the prairie. They sit quietly by themselves and sketch the prairie and try to include as many labels and words as possible. Later, students come together to use their journals to create a class list of discoveries related to the prairie. Based upon the living and non-living things they discovered, students work together to write a concluding definition of prairie.

