



Erin Sears

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2021 Extern at Neal Smith National Wildlife Refuge

Part I: Overview of Workplace

The Neal Smith National Wildlife Refuge (NSNWR) was established in 1990 with the goal of restoring tallgrass prairie lands by reintroducing native prairie plants, reestablishing habitat for animals, and attracting visitors to the area.

Today, the refuge consists of 6,000 acres of prairie, oak savanna, and sedge meadow in Central Iowa. The refuge's mission is to actively protect, restore, reconstruct, and manage the diverse native ecosystems for future generations.

Part II: Workplace Focus

My role for this externship has been to help the NSNWR Visitor Services staff refine K-5 curriculum and develop resources for outreach to local educators who may want to visit the refuge with students. In turn, I have been learning about the plant and animal life at the refuge and about how Environmental Education works in this setting. My goal is to take what I have learned back to my school to help students gain a greater appreciation for our school prairie.

Part III: Introduce the Project or Problem

I teach third grade at Willowbrook Elementary School in Altoona, Iowa and we are fortunate to have a swath of wet prairie that runs around our school like a ribbon. We have just started to revitalize our school prairie and there is now a greater desire to use the space for outdoor learning.

My goal is that in the 2021-22 school year, our third grade classes will become expert ambassadors to the Willowbrook prairie and begin sharing the knowledge they gain with other grade levels in the school and with families and community members. Eventually, I would like to see the area used for Environmental Education projects of all kinds and as an outdoor classroom for learning.

Potential Prairie Activities:

- layback
- sketching
- mapping (sound, visual, drone)
- plant identification
- phenology/weather data collection
- Monthly BioBlitz
- Creation of a Field Guide

Part IV: Standards, Driving and Essential Questions

What value does our school prairie have to our community? How does the prairie help us? How can we help the prairie?

Standards:

- 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
- 3-LS2-1. Construct an argument that some animals form groups that help members survive.
- 3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.
- 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.
- 3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
- SL.3.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- SL.3.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
- Grade 3-5 21st Century Learning Skills-Employability Skills

Part V: Extern Host Role

The Neal Smith National Wildlife Refuge (NSNWR) is an incredible asset to the community. The NSNWR Park Ranger, Patrick Bryant has already been an invaluable resource for our school prairie through assessing the health of the prairie, helping to develop a beginning guidebook, and recommending next steps in keeping the prairie thriving at our site. I know that we can call on NSNWR staff for information, assistance, and guest teaching in the future.

Part VI: Design Elements Checklist

I believe that this project meets all of the design elements criteria for PBL. We are learning more about our school prairie in order to teach others about prairielands and take informed action to nurture and preserve it in the future. This is an ongoing project designed to meet two goals:

- Provide inquiry opportunities for students in nature
- Inform others about the importance of having accessible natural spaces at schools

End products: engagement with other grade levels, administrators, and community members.