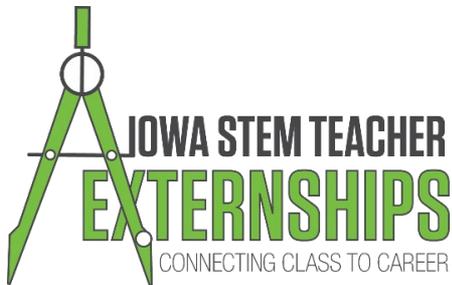


2020 Iowa STEM Teacher Externships

Externship Descriptions and Quotes



Hunter Hamilton

Iowa DNR at Big Marsh

Parkersburg, IA



This summer Hunter worked for the Wildlife Division of the DNR at the Big Marsh Wildlife Management area in Parkersburg. His main jobs were to help create habitat and food plots for wildlife and assist with banding waterfowl such as geese and wood ducks. He also got the opportunity to work with research projects that associated with the DNR such as wood turtle and sandhill crane monitoring. He learned many new things about wildlife management and conservation and developed many ideas to integrate practical and authentic applications to the classroom.



"I feel like within my first year of teaching, I didn't give students enough time to come to the conclusion or solution on their own. This upcoming year, I would like to work on providing more situations for my students to use critical thinking within the classroom. With these situations, it will not only work on this skill, but also engage students with the activity."

--Hunter Hamilton, ag science teacher at Gladbrook-Reinbeck High School

Megan Hamm

Iowa DNR at George Wyth Park

Waterloo, IA



[Experience summary presentation](#)

Megan spent her summer collecting data, which included creating different types of surveys for the park guests and using the data from these surveys to gain a better understanding park usage. They will also use this data to improve different aspects of the park from upgrading current areas, running park programs, and overall improvement of the park. Another project she was tasked with was updating the bird observation blind at the park. Guests will be able to learn more about birds in Iowa, and get to observe and identify different birds found at the park.



"I have noticed in my classroom if labs don't go directly as planned, some of my students really struggle with problem solving to fix it, or make it better... I want to make sure I am bringing in more opportunities into my classroom where my students will have to problem solve and collaborate with others. I feel like I have tried to do this in my classroom, but after my experience here and seeing how we problem solve daily, I want to be more purposeful and incorporate it even more into my classroom."

--Megan Hamm, science teacher at Denver High School

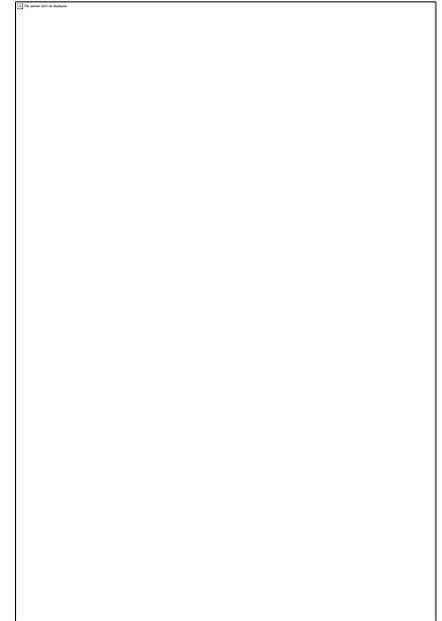
Erin Hogan

Black Hawk County Conservation at Hartman Reserve

Cedar Falls, IA



Erin had the opportunity to participate in a variety of fun and interesting activities this summer. She helped the naturalists test water for pH, Nitrate, Nitrites, O₂, Phosphate, and temperature in a location where an endangered species was discovered. For most of her time she helped plan, set up, and deliver science programs to children of all ages. She also created virtual activities on social media, and helped other county park entities with their daily tasks such as clean up storm damage, bundle firewood for campers, etc.



"In my classroom I try to emphasize communication, not only with other students or lab partners but with me as well. I try to treat them as an employer would by expecting them to contact me when they are going to be absent or when they are having issues or difficulties in their life (school and personal) that might prevent them from getting their work done on time or in a high-quality fashion. "

--Erin Hogan, science teacher at East High School in Waterloo

Kelsy Knebel

UNI Tallgrass Prairie Center

Cedar Falls, IA



Tallgrass Prairie
CENTER

UNIVERSITY OF NORTHERN IOWA

www.tallgrassprairiecenter.org

This summer, Kelsy has been working with the Plant Materials Program Manager at the UNI-TPC. The Plant Materials Program helps support a native seed supply for roadsides and other restoration projects across the state. She spends her time planting, weeding, protecting production plots from various critters, distributing nearly 1,000 acres worth of seed, and enjoying the beauty of Iowa's native vegetation.



"This externship experience has really opened my eyes to how skills and concepts dovetail, and also how unintentional perhaps I have been in my past planning to reflect this nature."

--Kelsy Knebel, science teacher at Hoover Middle School in Waterloo

Diane May

Iowa DNR

Manchester, IA



At the Iowa DNR's Manchester Fish Hatchery Diane has been putting her chemistry skills to work in analyzing the dissolved oxygen levels at the Hatchery, and determining how to economically supply the needs of the trout. She also worked on sampling fish populations to check the fish weights, assisted in fish care and monitoring, and completed creel surveys at Bankston Park to assess trout fishing in the creek.



"We can give students practice in many of these (workplace) skills in school settings. Science labs often require multiple students to work together both mentally and physically to accomplish a set of tasks. Likewise unexpected events can challenge them to adapt to new timeframes or to the need to revise and/or redo work that does not meet their expectations. If I incorporate more problem based learning students will have more opportunities to collaborate and strengthen their critical thinking."

--Diane May, science teacher at West Delaware High School in Manchester

Jenna Olson

Jackson County Conservation

Maquoketa, IA

Jenna's main jobs were to help with various naturalist tasks, such as survey prairies, work with animals, organize activities and lessons for school age children to participate with in the center and outdoors in the prairie and wetland area. She also helped to update lessons aligned with science standards and creating other activities for children to help generate interest in the environment and the nature world. These activities helped Jenna to develop many ideas to be used in her classroom that would incorporate project-based learning and creative thinking.



"I feel this externship experience has helped me to gain a better understanding of breaking down the Next Generation Science Standards as I think of ways to extend student learning in a more meaningful and engaging way, along with applying more choice or Depth-of-Knowledge level work as students show evidence of what they are learning."

--Jenna Olson, teacher at Briggs Elementary School in Maquoketa

Alisha Smith

Jones County Conservation

Center Junction, IA



This summer Alisha created an edible trails brochure for edible plants found on the trail, made a family bingo game encouraging the public to explore various sites around Jones County, and worked on the bluebird box project, checking and repairing boxes and updating the website. Additionally Alisha created lesson plans geared towards a partnership between teachers in the county and the conservationists to discover and document the variety of species found at conservation sites throughout the county.



“My experiences this summer will easily connect back to my teaching in the classroom. NGSS is all about using a phenomena to understand science and also applying lessons to real world experiences. I like to use Claim, Evidence, Reasoning assignments (maybe too much) but I feel they are a great way for students to defend what they are finding out as they investigate.”

--Alisha Smith, science teacher at Cascade Jr/Sr High School