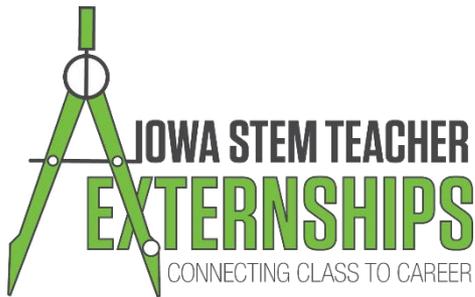


2017 Northeast Iowa STEM Teacher Externships

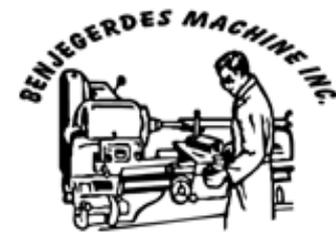
Externship Descriptions and Quotes



Caleb Ferring

Benjegeredes Machine, Inc.

Waukon, IA



During his time at Benjegeredes Machine Inc., Caleb was involved with production welding, helping customers, and fabricating a boat dock along with a large food grade stainless steel project for the local factory in town. Caleb was able to gain confidence towards teaching metals classes through development of welding and metal fabrication skills.



“Going into this upcoming school year I have gained a tremendous amount of confidence towards teaching metals classes for my first time in my teaching career. I have learned something new everyday and I am very thankful for this opportunity.”

-Caleb Ferring, Engineering/Technology Teacher at Waukon High School

Mandy Gleiter

Iowa DNR - George Wyth

Waterloo, IA

Mandy worked at George Wyth State Park this summer. Her first project was to research and design a pollinator area at the park, along with networking, looking for grants, and manual labor on this project. She also helped redesign the kiosk entry area for the park. To have at the kiosk, she worked to have labeled prairie plant species that are found throughout the park for the public's benefit. Furthermore, she helped with two summer camps hosted at George Wyth.



"I increased my networking connections that will hopefully enhance my teaching. I also loved working outside and just seeing what other professions really do with their days. This was a fantastic experience and I plan on doing this again."

-Mandy Gleiter, Life and Physical Science Teacher at Jesup High School

Patricia Green

John Deere Dubuque Works

Dubuque, IA

Patricia was able to work at John Deere Dubuque Works in the Department of Construction and Forestry Division. During her time at Deere, she had two main assignments testing possible new enhancements for equipment. Patricia worked with seasoned electrical engineers, computer programmers and college interns. She not only gained insights into the corporate world, but gained insights into the processes used to develop and enhance John Deere's vehicles.



“ One thing that has stood out to me are all the different personalities and strengths of the individuals working in the research and development department. I am encouraged that each of my students will find a place where they can be a vital part of a business and even though school may not be their forte, there is a place where they can shine!”

-Patricia Green, Computer & Science Teacher at Wahlert Catholic High School

Margaret Hogan

Iowa DNR

Manchester, IA



Part of Margaret's duties included feeding trout, tagging broodstock trout by clipping fins, counting mortos (dead trout in the raceways), weighing trout to get a count of fish per pound of trout, cleaning raceways, and stocking trout at streams in northeast Iowa. The other portion of her duties involved surveying creel at the Swiss Valley Nature Center near Dubuque, Iowa. Margaret would ask anglers questions regarding their just completed fishing experience at Catfish Creek, (which runs through the Swiss Valley Park and is stocked with trout by the DNR).



"This week was a challenge, not because what I am doing is difficult but technology issues hampered progress. This happens a lot in the classroom to many of us as well. I think as educators we typically deal with technical issues with a lot of grace because we always have a backup plan in mind."

-Margaret Hogan, Science Teacher at Beckman Catholic High School

Mike Jensen

Design Mill

Dubuque, IA



Mike's externship with Design Mill Inc. was mainly concerned with developing a procedure to go from 3D laser scans to model VR. In doing this, Mike constructed a render farm, which are very powerful computers, to complete the millions of calculations necessary to create the VR environments wanted for customers. Once the procedure and render farm were complete, Mike concentrated on automating the procedure.



"My experience at Design Mill was incredible. I learned and observed a lot of applicable skills that I can pass on to my students. I found the most impactful to be the interpersonal communication skills and the ability to multitask on multiple projects."

-Mike Jensen, Industrial Technology Teacher at Dubuque Senior High School

Ashley Johansson

National Mississippi River Museum & Aquarium
Dubuque, IA

Ashley's big project was to help NMRMA obtain school contracts to utilize the on-site and outreach programming they have to offer. These programs offer ease for teachers and administrators, in knowing grade level standards are being covered while giving students an opportunity they may not typically get in a regular classroom. Other assignments included planning and leading summer camps for kindergarten through fifth grade students.



“My favorite part of my externship was being able to help the river museum ignite a good future for impacting area students. I can't wait to see if lining up the programs that the museum offers helps get more students to the museum, or to utilize their resources. I hope that the museum and aquarium does turn into a great resource place for students and teachers.”

-Ashley Johansson, Life Science Teacher at Mazzuchelli Middle School

Roger Poling

John Deere Dubuque Works

Dubuque, IA



At John Deere this summer, one of Roger's projects involved helping to organize a clearinghouse of training modules of operator certification. Also, he helped to organize onboarding information for new hires and interns. His second project was with the Safety and Compliance area of the Construction and Forestry division. He analyzed John Deere Operator Manuals for consistency from machine to machine, and then benchmarking them to John Deere Competitors to ensure that John Deere customers are getting the correct safety and operation instructions.



“The ability for our students to work either one-on-one with other students, or in groups, is critical to success in the workplace. John Deere has set up their work groups in very unique pods, allowing for both individualized tasks, as well as efficient group conversations.”

-Roger Poling, Computers Teacher at Dubuque Hempstead High School

Melisa Reilly

Iowa DNR- George Wyth

Waterloo, IA



Melisa worked at George Wyth State Park for her externship this summer. The first project involved researching and designing a pollinator area at the park. This project also involved networking, looking for grants, and manual labor. The second project Melisa was able to work on involved redesigning the kiosk entry area for the park, where they hoped to have labeled prairie plant species that are found throughout the park.



"[This Externship] took me out of my comfort zone and was a great learning experience. It also makes me wonder if I would be able to take on a project with my classes that could carry over from one year to the next."

-Melisa Reilly, Life Science Teacher at Waterloo West High School

Dave Ricketts

Iowa National Guard Aviation Unit

Waterloo, IA



Dave's primary job was to assist in maintenance operations, including avionic systems diagnostics (electronics), mechanical systems maintenance (flight controls and power transfer systems), aircraft skin maintenance (sheet metal and composite materials), non-destructive testing (checking metal parts for damage without destroying them), engine maintenance, and miscellaneous equipment inspections (night vision goggles inspection).



“Aside from the traditional recruiter visits to the schools, the National Guard is pushing to get students out of classrooms, and to their facilities, to experience hands on activities involving STEM/CTE. That’s where myself and our schools come in.”

-Dave Ricketts, Engineering/Technology Teacher at Denver Community Schools

Elizabeth Siepker

Iowa DNR - Decorah Hatchery

Decorah, IA



During this externship, Liz Siepker worked collaboratively with Iowa DNR personnel and Friends of the Decorah Fish Hatchery to create new interpretive displays and update pre-existing displays at the fish hatchery. Liz picked a total of ten displays to focus on as her initial goal over the course of her externship, in which she researched information, found pictures, and organized content to provide answers to visitors. The content of the displays included the trout life cycle, life histories of brook, brown and rainbow trout, economics of raising trout, habitat, water quality, karst topography, stocking and spawning trout.



"I'm really not a history buff but do find information interesting about the area. It's almost like a puzzle to me, trying to figure out how all the pieces go together to create a cohesive storyline! There are transcripts dating back to when Native Americans were settled in the area which I find fascinating."

-Elizabeth Siepker, Physical Science Teacher at Crestwood High School

Stacey Snyder

Iowa DNR - Big Marsh

Parkersburg, IA

Stacey's experience was at the DNR- Sweet Marsh Wildlife Unit. Throughout her experience, her job was to offer assistance in day-to-day management of the areas in the 7 county area maintained by this segment of the Iowa DNR. This included hands-on management, attending meetings, and assisting with special projects including banding birds for the USFWS.



"I'm thankful for researchers who help us understand these little seen wonders in Iowa and thankful for STEM Externship program that put me in this spot of opportunity."

-Stacy Snyder, Life Science Teacher at Orange Elementary

Loren Thalacker

Iowa DNR- Big Marsh

Parkersburg, IA



Loren assisted the Big Marsh Wildlife Management area by managing cropland and grazing areas to attract waterfowl and other wildlife during migration. Loren learned about uncommon and endangered species in Iowa, such as the Wood Turtle and the Massasauga Rattlesnake. She also assisted with banding of geese and mourning doves. Banding helps the state estimate population sizes and hunting limits of these animals.

“A thing I noticed this week was the power of teamwork and good leadership! There was a huge coordination of efforts to get this whole endeavor going and it wouldn't have been possible without everyone working together. This is a good time to use my favorite phrase of all time... Teamwork makes the dream work!”

-Loren Thalacker, Science Teacher at Waterloo Community Schools

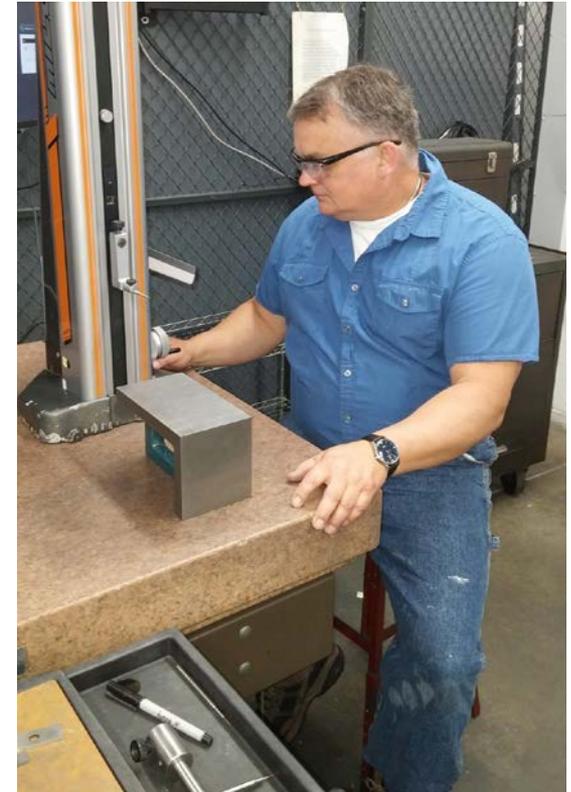
Glen Unwin

Geater Machining and Mfg.

Independence, IA



Glen's externship took place at Geater Machining and Manufacturing (GMM). During his externship, he focused on CNC machining and exposure to Mastercam 2017. Glen ran Hass vertical milling machines which created parts for a large global avionics client and utilized Mastercam to create aluminum soft jaws for his school's manual milling machine. |

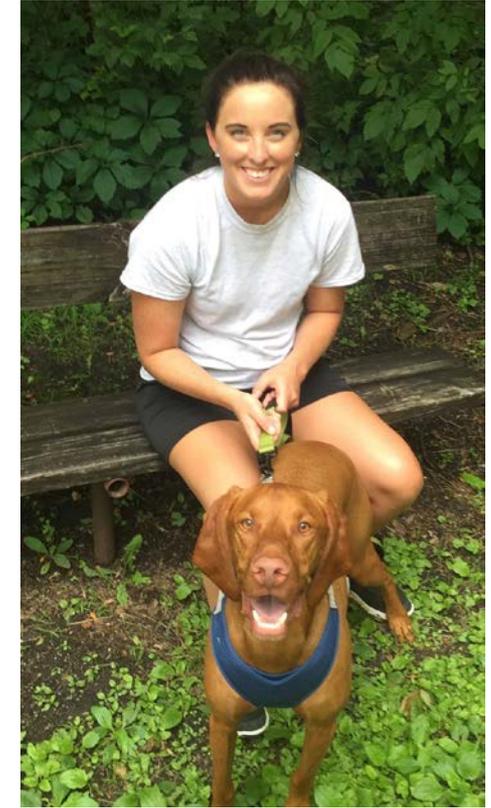


"The largest take away I have this week from my externship at Geater Machining and Mfg. are the 21st century skill sets possessed by the GMM machinists. The machinist are extremely dedicated employees to providing GMM clients with the best possible product in a timely manner." -Glen Unwin, Industrial Technology Teacher at East Buchanan High School

Lacey Wolter

Dubuque County Conservation

Peosta, IA



This summer, Lacey worked with the Naturalists at the Dubuque County Conservation. Lacey spent the first portion of her externship geo-tagging monuments, memorials, and significant items at the 17 county parks, giving her a chance to explore the county parks and truly gain insight into what these parks have to offer. She also created an orienteering course at White Water Canyon, so that students and adults can travel out and use the course for recreation. Lastly, Lacey assisted the naturalists in aligning their programs to standards.

“This externship has been a tremendous experience for me and will most definitely have an impact on my students. I have learned so much about conservation, but the thing that is the greatest resource is the naturalists themselves. I love making connections with professionals in my area.”

-Lacey Wolter, Science Teacher at Cascade Jr/Sr High School

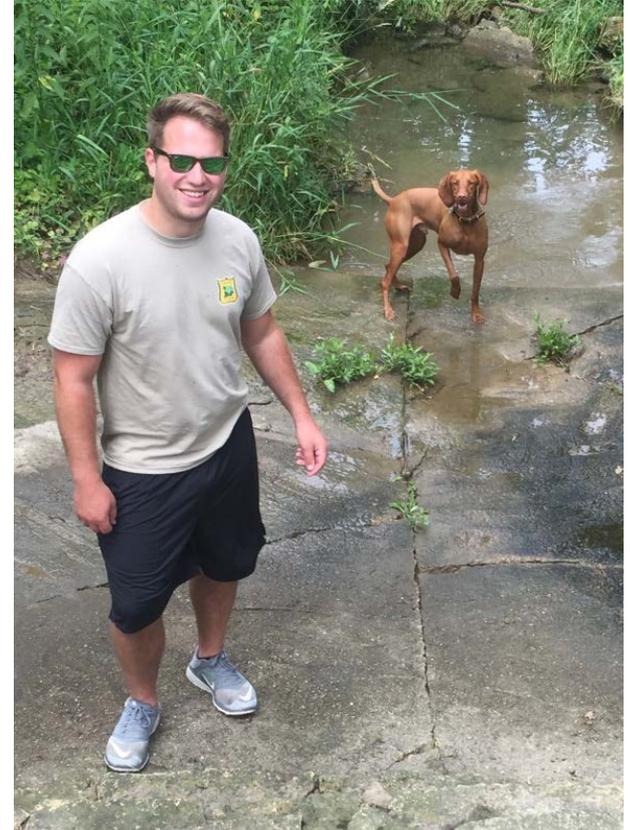
Kyle Wolter

Dubuque County Conservation

Peosta, IA



Kyle's duties at the Dubuque Conservation Board included geotagging memorials on the 26 miles of the Heritage Trail as well as various other parks in Dubuque County. Kyle was also involved in various camps at the Swiss Valley Preserve. These camps offered programs that included kayaking, archery, zip lining, slacklining. The majority his time was spent inputting coordinates of memorials, walking the trails and trapping small mammals to record population of animal and plant species.



"It's important for students to be exposed to various ways in which 21st century skills can be used. Students can benefit from tasks that include critical thinking, collaboration, communication and technology."

-Kyle Wolter, teacher at Eleanor Roosevelt Middle School

William Zak

Doerfer

Waverly, IA



At Doerfer, William assisted with the further advancement of our Quality Management System. William's main focus was on documentation within different departments and assisting document owners in the creation, revision and implementation of procedures, work instructions, forms, etc. The work he did ensured consistent and accurate information which will be an integral part of successfully achieving certification.



"The most impactful part of my Externship was the people and connections that I made. I enjoyed learning about my host and appreciated the time they invested in taking on a teacher extern."

-William Zak, Industrial Technology Teacher at Union Middle School