

WHAT IS THE IOWA STEM TEACHER EXTERNSHIPS PROGRAM?

The Iowa STEM Teacher Externships Program aims to build bridges between Iowa's workplaces and STEM educators across the state by equipping them to work at local businesses, organizations and other workplaces alongside knowledgeable and skilled employees during the summer.

Since the program launched in 2009, almost **700** Teacher Externs have worked at **more than 200** Iowa workplaces, building long-lasting school-business partnerships across Iowa that provide educators with the ability to improve student STEM experiences and career knowledge as well as:



Connect the STEM Externship experience directly to classroom content and 21st Century Skills identified in the Iowa Core Curriculum.



Support the local workforce by providing students with STEM career information about business and industry in their community.



Provide STEM teachers with an income boost and three graduate credits while seeing and using the latest real-world applications in a workplace environment.



Match educated and skilled STEM teachers as participants and contributors to a workplace's needs.



Create lasting partnerships between business and industry and local schools.



Gain publicity through the program's promotion, officially recognizing the workplace's commitment to STEM education and economic development in Iowa.

APPLY TODAY

Teachers: www.IowaSTEM.org/Externships/Apply

Hosts: www.IowaSTEM.org/Externships-host-commitment

STEM TEACHERS

We Will Match You

Our program coordinators will match qualified STEM teacher applicants to local partnering Workplace Hosts based on the STEM teacher's interests and skills, as well as the partnering Host's needs. Previous business or industry experience is not required. The Workplace Host will provide on-the-job training to prepare STEM teachers for the tasks and assignments of that specific experience.

You Get Paid

STEM teacher Externs earn a stipend of up to \$5,000 that includes 200-240 hours at the Host site plus two paid professional development days, utilizing the latest real-world applications specific to the subject they teach.

Time Commitment

Iowa STEM Teacher Externships operate over approximately six, full-time weeks in the summer. The Workplace Host and STEM Teacher Extern negotiate a flexible work schedule to complete 200-240 hours at the Workplace Host site.

Graduate Credit

STEM Teacher Externs earn three hours of graduate credit through the University of Northern Iowa's Continuing Education program for their participation and completion of assignments during the Iowa STEM Teacher Externship. These assignments help identify content and 21st Century Skills of the Iowa Core Curriculum applied and found in the workplace and ways to incorporate the workplace in the classroom.

Post-Externship: Significantly more STEM teachers reported a stronger ability to...



advise students about STEM job opportunities.



use inquiry instruction.



supervise student research projects.

A majority of STEM Teacher Externs agree that Iowa STEM Teacher Externships are more valuable than any other professional development they have participated in.

WORKPLACE HOSTS

Proven Value

Workplace Hosts have the opportunity to work with some of Iowa's most talented STEM educators. By opening the door to a STEM Teacher Extern, Hosts help build a partnership that will enhance the workplace and the community's future workforce. STEM Teacher Externs have worked on high-level workplace projects in a variety of industries and organizations in Iowa. From working with a continuous improvement expert in surgical units at a regional hospital to mussel diving, to water quality monitoring and mapping machine efficiencies at major manufacturing businesses, STEM Teacher Externs can offer uncommon expertise and save Hosts time and

Workplace Host Expectations

Iowa STEM Teacher Externships are full-time professional development experiences that operate during six weeks in the summer. The Host will identify a hands-on project that contributes to an organization's bottom line. A flexible work schedule may be negotiated between the Workplace Hosts and STEM Teacher Externs. STEM Teacher Externs must devote 200-240 hours at the Workplace Host site to complete the experience.

Hosts are encouraged to cost-share the expense of the STEM Teacher Extern through a tax-deductible donation for up to half the cost which is \$3,000. The Iowa STEM Teacher Externships Program provides a stipend to STEM teachers for the time and services provided, but the sustainability of the program depends on you. This cost share will be discussed in the early stages of becoming an extern host.

A Qualified Match

Our program coordinators match qualified STEM teacher applicants to Hosts in the communities in which they teach based on the STEM teacher applicant's interests and skills as well as the Host's needs. Coordinators will help arrange an introductory meeting in the spring to work out details for the summer.

Most employers monetized the value of an extern between

\$2.5K-\$10K



WATCH ONLINE

For an inside look at Iowa STEM Teacher Externships, watch the videos at:
www.IowaSTEM.org/Externships/

WHAT DO STEM TEACHER EXTERNS DO?

1. Grant Housman, Pleasant Valley High School Industrial Technology Teacher

Grant worked on a manufacturing engineering team that designed an assembly line for a combine during his externship with **John Deere Harvester Works**. Some of his main duties included updating operator instructions with the correct tool information, designing multiple fixtures to hold sub-assemblies before they are put onto the main assembly and performing safety work orders.

2. Katherine Carman, Urbandale High School Chemistry/Physics Teacher

As an extern for **Polk County Conservation**, Katherine primarily focused on supporting and preparing for the Biological and Habitat biannual assessments, supporting physical/chemical data collection and streamlining the data analysis process to establish baseline data. She collected and utilized water quality data to generate bimonthly updates to the Environmental Protection Agency as part of a nationwide water quality monitoring database. The long-term goal of the project is to protect Iowa's waterways to ensure safe, clean water for recreation throughout

3. James Mills, Nevada High School STEM Teacher

During his externship experience at **Workiva**, James worked with the Site Reliability Engineering (SRE) team that supports the infrastructure that Workiva's cloud-based service, Wdesk, is built upon. He tackled support tickets that involved computer programming to ensure the back-end of Wdesk ran smoothly.

4. Terri Cuttell, Spencer High School Mathematics Teacher

Terri was a extern at **Rosenboom Machine & Tooling** and helped develop standard work for specific hydraulic cylinders being produced in a specific area of the plant. Standard work is a plan to be followed in production that will allow any worker coming into that area to produce a quality product efficiently.



The Iowa Governor's STEM Advisory Council

The STEM Council's mission is increasing interest and achievement in STEM studies and careers through partnerships engaging PreK-12 students, parents, educators, employers, non-profits, policy leaders and others. The Council provides opportunities that inspire Iowa's young people to become innovative, enterprising contributors to our future workforce and the quality of life in our communities.

PARTNERS

The Workplace Hosts featured below is a small portion of nearly 200 Iowa STEM Teacher Externships Program partners. For a complete list, visit www.iowaSTEM.org/Externships.



214 East Bartlett Hall | University of Northern Iowa Cedar Falls, IA 50614-0298

Telephone: 319-273-2959 | Fax: 319-273-2779

Questions? Email: Externships@IowaSTEM.org

www.iowaSTEM.org/Externships

Iowa STEM Teacher Externships, a program of the Iowa Governor's STEM Advisory Council, is supported through state-appropriated funds, investments by Iowa business and industry partners and the Iowa Department of Natural Resources (DNR) Resource Enhancement and Protection Conservation Education Program (REAP-CEP) Grant #21-13 for STEM Teacher Externships with Environmental and Conservation Professionals.