



## STEM Innovator

**GRADE LEVELS:** 6-12

### EDUCATIONAL

**SETTING:** In school and/or out of school

### Award Provides:

- A two-day, in-person interactive workshop to learn how to infuse STEM Innovation into any class
- 12 hours of follow-up implementation
- Optional weekly virtual support sessions
- Access the STEM Innovator® Portfolio to use with your students
- Student Engagement with Business and Industry (SEBI) curriculum toolkit
- Room and board during in-person workshop
- Educator Stipend: \$420 (\$240 for summer workshop, \$180 for fall follow-up implementation)

### Additional Cost(s) to Awardee in 2023-2024:

- Transportation to and from onsite workshop
- Graduate credit option: Up to 2 graduate credits at \$149/credit

### Approximate Sustainability Cost After Award Period:

- STEM Innovator® Portfolio license and Student Engagement with Business and Industry (SEBI) curriculum toolkit (Annual license fee \$300/educator)

### 2023-2024 STEM Scale-Up Program Summary:

STEM Innovator® is a University of Iowa program created to increase all K-12 students' success in learning STEM and pursuing STEM careers. The STEM Innovator® Portfolio (Portfolio) is a STEM project-based learning platform and workforce readiness, credentialing, and assessment tool for middle and high school students. The Portfolio provides an app-based virtual platform for students to document STEM competencies as they innovate solutions to everyday problems and collaborate with peers and business and industry partners.

The Portfolio documents and tracks team project advancement while facilitating authentic mentorship by educators, peers, and industry experts. The Portfolio assists educators and industry partners in meeting Iowa's critical need to develop a STEM workforce and college-ready students capable of growing Iowa's economy. The problem-based learning (PBL) approach is facilitated with the Portfolio and the accompanying Students Engaging Business and Industry (SEBI) curriculum toolkit. Across the state, educators and industry partners seek an efficient, cost-effective, research-based platform for students to receive feedback, collect artifacts over time, assess STEM workforce and college readiness skills, and identify and document core curriculum standard competencies. The STEM Innovator® Portfolio Tool is the educational technology solution to meet these needs for any educators interested in project-based learning across the state of Iowa.

- Transform your classroom into a fun and meaningful hub of innovation
- Obtain resources to elevate student project-based learning experiences
- Enhance your connections with business and industry
- Document and measure students' STEM workforce readiness skills and mindsets
- Provide students with a unique STEM strengths profile to optimize learning
- Meet Iowa STEM curriculum standards with authentic work and assessments
- Provide a pathway for STEM workforce credentialing of high school students through University of Iowa college credit

### Essential Skills and Mindsets:

- ✓ Adaptable
- ✓ Problem Solver
- ✓ Grit
- ✓ Responsible
- ✓ Confidence
- ✓ Analyzer
- ✓ Communicator
- ✓ Executor
- ✓ Risk Taker
- ✓ Empathy
- ✓ Investigator
- ✓ Teamwork
- ✓ Creative Thinker
- ✓ Designer
- ✓ Cultural Competence

### Requirements to Implement the Program:

- 1.) Educators must participate in a two-day, in-person summer workshop (16 hours), and 1.5 days (12 hours) of curriculum implementation and virtual mentorship. Educators are invited to attend optional weekly virtual support sessions held throughout the 23-24 school year.
- 2.) Educator(s) must complete the STEM Council Scale-Up Educator Survey.

**Website:**

<https://jacobsoninstitute.org/stem-innovator/portfolio-tool>

**Videos:**

Portfolio Overview

- <https://www.youtube.com/watch?v=iNfyziNw0Fk>

Classroom in Action

- [North St. Paul St Overview](#)

Community in Action

- [Muscatine Community School District](#)

**Social Media:**

- Facebook: <https://www.facebook.com/JacobsonInstitute/>

- Twitter: <https://twitter.com/STEMInnovator>

**In the Media:**

- [Linn-Mar Venture Academics](#)
- [Newton High School Fledge Program](#)
- [St. Theresa's -Dioceses of Des Moines](#)
- [STEM for ALL](#)
- [Kirkwood Regional Center](#)
- [Charles City-New Hampton](#)
- [United States Patent Office partners with STEM Innovator](#)

**Iowa Standards Alignment:**

Iowa 21st Century Skills: a) HS/6-8 Technology Literacy (21.9-12.TL.3) b) Employability Skills: Cultural Communication (21.6-8ES.1,21.9-12ES.1), Roles and Adaptability (21.6-8ES.2, 21.9-12ES.2), Innovative Designer (4a, 4d)

Science Iowa Core: Design problem with sufficient precision to ensure a successful solution (MSETS1-A, HSETS1-A), Engineering, Technology, Application of Standards HS-ETS1-3, Science and Engineering Practices (also NGSS) Asking Questions and Defining Problems, Engaging in Argument from Evidence, Obtaining, Evaluating, and Communicating Information

Iowa Core Mathematics: Standards for Mathematical Practices: Sense of Problem (MP1), Arguments and Critiques (MP3) Statistics (8.SP.A.4, N-Q.A.1)

**Professional Development:**

**Duration:** Two-day, in-person summer workshop (16 hours), and 1.5 days (12 hours) of follow-up implementation. Optional weekly virtual support sessions held throughout the 23-24 school year.

**Date(s):**

- July 18-19, 2023 - Iowa City
- July 25-26, 2023 - Des Moines
- Virtual sessions will occur between September 2023 and May 2024.

**Location:** In-person workshops will be held at The University of Iowa and other locations across Iowa as demand dictates (minimum 20 educators).

**Photos:****ENGAGES STUDENTS WITH BUSINESS AND INDUSTRY**

"Employers are interested in helping develop the future workforce. The STEM Innovator® Portfolio Tool provides an online platform to engage with students anytime, anywhere to provide critical feedback as they solve real-world problems."

Dr. Brian Lindsay, Pulmonologist

**CAPTURES STUDENTS' WORKFORCE READINESS SKILLS**

"The Portfolio Tool not only allowed me to measure student growth over time, but also allowed students to take ownership in their growth by reflecting on data."

Amanda Soloman, Science Teacher

**HELPS STUDENTS MAKE DATA DRIVEN DECISIONS**

"In my AP computer science class, we use the STEM Innovator® Portfolio Tool to work with community partners to solve a real-life problem that they have by creating an app."

Krystle Stehno, Math Teacher

**STEM Scale-Up Program Application Link:** [www.iowaSTEM.org/Scale-Up-Application](http://www.iowaSTEM.org/Scale-Up-Application)