STEM Action Center FY20 At-A-Glance

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Unleashing Curiosity

305,694+
Student Experiences

- Math Personalized Learning
- Innovation Incubator Grants
- Computing Partnerships
- Elementary STEM Show
- STEM Fest
- STEM in Motion

Connecting Community

- 85+ Districts & Charters
- 250+ Community Partners
- 10+ Government Agencies
- 9+ Higher Education Partners

Building Capacity

12,604+
STEM Professional Learning opportunities
For teachers, facilitators, and administrators statewide

Adapting & Innovating

- 157 STEM kits distributed
- 10+ new distance learning programs
- $70K supporting COVID-19 relief

> stem.utah.gov

Utah Department of Heritage & Arts
Utah STEM Action Center
Small dollar amounts can have huge impacts given directly to people with great ideas.

Funding allowed underrepresented students from around the state to participate in STEM competitions.

28 students experimented with pulleys, inclined planes, levers, sparking a love of science for an entire first grade classroom.

Alliance for Innovative Education doubled the number of girls participating in STEM programming in a rural community.

Quick Facts:
- 208 Ideas Funded
- 33,057 Students
- 156 Schools Impacted
- 29 Organizations Supported

Participating in two STEM competitions made students three times more likely to want a STEM job*.

*International Journal of Science Education
Supporting STEM in Utah
The Utah STEM Foundation works to support a STEM-competitive workforce through collaborations with industry and community partners to increase engagement and industry alignment for STEM education.

Foundation Funding Priorities:

Workforce
Students will thrive in STEM and contribute to Utah’s workforce

Girls
We will work to close the gender gap in STEM fields

Innovation
We will use creativity and innovation to solve challenging problems

Social Justice
We will provide Utah communities with equitable access to STEM opportunities

Company Support During COVID-19
The Utah STEM Foundation has worked with several industry partners to donate over $70,000 in personal protective equipment (PPE), 3D Printers, and operational assistance to Arts and Humanities non-profit organizations during the pandemic.

In-Kind Highlight: New STEM Hub
MHTN Architects contributed several hundred hours and other in-kind contributions designing the new STEM AC offices, including the Innovation Hub.

R&O Construction contributed nearly $40,000 in in-kind work for the Innovation Hub.
STEM in Motion (SIM) is a mobile education program that works with schools and communities across Utah to provide hands-on learning and inspire the next generation of STEM leaders.

**Quick Facts**
- 6,171 students impacted
- 47 schools visited
- 17 school districts
- 10 new STEM kits

**Equity & Access**
- 91% of teachers said their visit introduced students to new material
- 60% Title I Schools
- 40% schools in rural Utah

**Student Impact**
- 75% of students reported an increased interest in STEM after the SIM experience
Percentage of teachers who reported positive impacts:

- **90%** ability to target instruction using data
- **91%** ability to engage equitably with students
- **90%** STEM content knowledge

**STUDENT OUTCOMES**

Teachers reported increases in students’ ability to:

- communicate
- collaborate
- think critically
- think creatively
- be self-directed learners
- solve real world problems

**QUICK FACTS**

- **10,519** teacher and administrator participants
- **68** locally designed STEM professional learning plans
- **53** multi-year projects, showing long term commitment and teacher buy-in

> stem.utah.gov
Over three years, students who used math software were **consistently more likely to be proficient in math** than similar students with no access to STEM AC approved math software.*

Teacher and administrator commitment, support, and feedback averaged from three years of survey information.

- 80% of teachers agreed the software **increased their instructional effectiveness**.
- 95% of teachers agreed the software **helped students strengthen important skills**.
- 95% of administrators agreed the software **had a positive impact on students’ math performance**.
- 71% of teachers agreed the math software **increased their satisfaction with their job**.

**The K-12 Mathematics Personalized Learning program provides resources to LEAs and schools through a competitive grant process to support the use of mathematics software that is individualized, self-adapting, engaging, and provides frequent feedback while addressing core standards in math. The Utah Education Policy Center, a research center at the University of Utah, provides external evaluation for the program.**

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*Programs assess students’ understanding of math and provide personalized content, adaptively targeting knowledge gaps and providing immediate feedback. Of the six providers on the approved vendor list (AVL), two programs had sufficient data for longitudinal analysis.*
The Computing Partnerships program helps identify gaps in, and provide solutions for, computing opportunities for students and teachers in Utah.

**Teacher Outcomes**

- Teachers reported increases in their ability to:
  - provide equitable opportunities in computing
  - develop project-based teaching strategies
  - use technology to enhance student learning

**Quick Facts**

- 32,260 students impacted
- 1,847 teacher participants
- 350 new class sections
- 59% of projects in rural Utah

Percentage of teachers reporting positive student impacts:

- 99% confidence in ability to use computers
- 90% technical skills related to computing
- 93% value of computing in careers

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