Making Innovative STEM Connections

GRADE LEVELS:
PreK-8

Educational Setting:
Both in school and out of school.

Award Provides:
- Two full days of Professional Development
- Maker kit with materials to activate youth experiences including a variety of materials for a classroom of 20
- Educator stipend/sub-pay available ($120/day) to attend professional development
- Travel stipend available ($50) to attend professional development
- Lodging stipend available ($100) for overnight stay

Additional Cost(s) to Awardee in 2024-2025:
- Opportunity for teacher license/graduate credit.

Approximate Sustainability Cost After Award Period:
- Annual consumable replacement costs do not exceed $200

2024-2025 STEM Scale-Up Program Summary:

Making Innovative STEM Connections (MISC) is designed to empower teachers to cultivate engaging, purposeful and successful extensions of their already developed curriculum. The making philosophy directs students to use their hands in conjunction with their minds to produce meaningful learning outcomes.

MISC includes a review of pedagogy, ideation around classroom connections, exploration of materials, and exposure to tools and equipment found in makerspaces. Included in the program are lesson-design prompts designed to develop STEM principles and enhance those already existing in classrooms by using maker materials to develop workplace readiness skills. This lesson design framework focuses on the idea that making and tinkering are ways to engage student's minds and build conceptual understanding around academic content.

MISC PD launches with a two day in person training to focus on the history, supporting research, and pedagogy related to making. In person training includes hands-on experience-based learning about the kit materials, curriculum alignment/implementation tools, safety guidelines, and strategies for inspiring the maker mentality.

MISC shows educators how to bring structure and guidance to making activities. Teachers learn how to infuse "making" into existing curriculum using inquiry-based methods to create learning experiences unique to each classroom and each student. In doing this, teachers become makers of their own curriculum and classroom activities, improving student understanding and achievement.

Awardees will be able to select from the kit options listed below:

Making Innovative STEM Connections kit options	
Science and Circuits	Pocket Lab Sensor 10 pk with accessories, electronics, and paper circuit kits
Mini Makers	Sphero Indi Class Pack, 2 Strawbees STEAM Classroom Packs, 2 3DUX Design kits with accessories
Robots and Coding	12 Root Robots, class pack of microcontroller inventor kits

Requirements to Implement the Program:
- Educator(s) must participate in two consecutive days of training at the Science Center of Iowa.
- The Science and Circuits kit as well as Robots and Coding kit have materials that require a computer or internet capable device.
- Educator(s) must participate in the STEM Council Scale-Up Educator Survey.

Website:
https://www.sciowa.org/education/professional-development/educators/making-stem-connections/

Videos:
- https://www.youtube.com/watch?v=sRLWF332Dpg

Social Media:
- X: @sciowamakers
- Facebook: SCI Making STEM Connections

Informational Webinar(s):

Jan 23 1:00 pm
https://us06web.zoom.us/j/85664092786?pwd=h1oNaL0LeKgUYHz1KV3xZ9vGUa2W0u.1
password: 387966

Jan 25 4:30 pm
https://us06web.zoom.us/j/85448838477?pwd=Z2SbsOii3bZaw0LUZwCx67p0OXjUzM.1
password: 607407

Iowa Standards Alignment:

K-12 Computer Science Framework
- Algorithms and Programming
- Data and Analysis
- Impacts of Computing

NGSS
- ETS1: Engineering and Design
- ETS2: Links Among Engineering, Technology, Science and Society
- PS1: Matter and its interactions

Iowa's Academic Standards
- Literacy Skills
- Math Skills
- Social Studies Skills
- 21st Century Skills

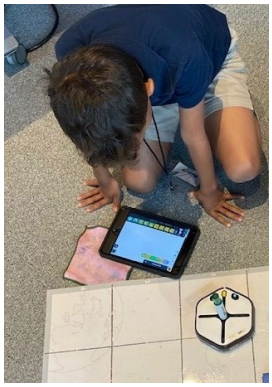
Professional Development:
Awardees can select *one* of the six training sessions. All sessions will be held at the Science Center of Iowa in Des Moines.

Duration: 2 days

Date(s): July 15-16, July 22-23, July 25-26, July 29-30, August 5-6, or September 12-13

Location: Science Center of Iowa's Innovation Lab, 401 W. MLK Jr. Pkwy, Des Moines

Photos:

SCIENCE CENTER OF IOWA
MAKING
INNOVATIVE STEM CONNECTIONS

STEM Scale-Up Program Application Link: www.IowaSTEM.org/Scale-Up-Application