

## Making Innovative STEM Connections

<p><b>GRADE LEVELS:</b> PreK-8</p> <p><b>Educational Setting:</b> Both in school and out of school.</p> <p><b>Award Provides:</b></p> <ul style="list-style-type: none"> <li>● Two full days of Professional Development</li> <li>● Maker kit with materials to activate youth experiences including a variety of materials for a classroom of 20</li> <li>● Educator stipend/sub-pay available (\$120/day) to attend professional development</li> <li>● Travel stipend available (\$50) to attend professional development</li> <li>● Lodging stipend available (\$100) for overnight stay</li> </ul> <p><b>Additional Cost(s) to Awardee in 2024-2025:</b></p> <ul style="list-style-type: none"> <li>● Opportunity for teacher license/graduate credit.</li> </ul> <p><b>Approximate Sustainability Cost After Award Period:</b></p> <ul style="list-style-type: none"> <li>● Annual consumable replacement costs do not exceed \$200</li> </ul>	<p><b>2024-2025 STEM Scale-Up Program Summary:</b>  <i>Making Innovative STEM Connections (MISC)</i> 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.</p> <p><i>MISC</i> 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.</p> <p><i>MISC</i> 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.</p> <p><i>MISC</i> 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.</p> <p>Awardees will be able to select from the kit options listed below:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #ADD8E6;"> <th style="padding: 5px;">Making Innovative STEM Connections kit options</th> <th style="padding: 5px;"></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Science and Circuits</td> <td style="padding: 5px;">Pocket Lab Sensor 10 pk with accessories, electronics, and paper circuit kits</td> </tr> <tr> <td style="padding: 5px;">Mini Makers</td> <td style="padding: 5px;">Sphero Indi Class Pack, 2 Strawbees STEAM Classroom Packs, 2 3DUX Design kits with accessories</td> </tr> <tr> <td style="padding: 5px;">Robots and Coding</td> <td style="padding: 5px;">12 Root Robots, class pack of microcontroller inventor kits</td> </tr> </tbody> </table> <p><b>Requirements to Implement the Program:</b></p> <ul style="list-style-type: none"> <li>● Educator(s) must participate in two consecutive days of training at the Science Center of Iowa.</li> <li>● The Science and Circuits kit as well as Robots and Coding kit have materials that require a computer or internet capable device.</li> <li>● Educator(s) must participate in the STEM Council Scale-Up Educator Survey.</li> </ul>	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
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**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

Iowa's Academic Standards

Literacy Skills  
 Math Skills  
 Social Studies Skills  
 21st Century Skills

**Professional Development:**

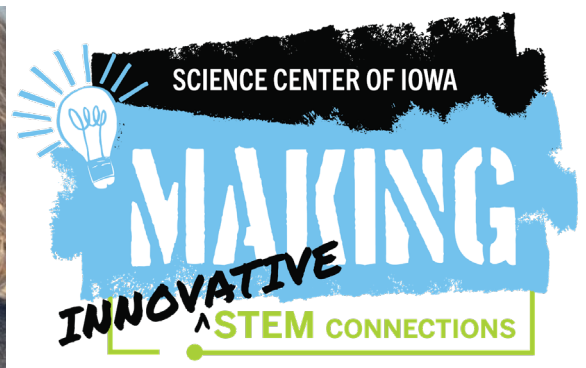
Awardees can select one of the six training sessions. All sessions will be held at the Science Center of Iowa in Des Moines.

**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:**



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