Grow, Create, & Innovate: The STEAM-Powered Art

Grade Levels
K-8

Educational Setting
Both in school and/or out of school (Integration is flexible, allowing use as a whole or in parts.)

Informational Webinar(s)
Jan. 22, 3:30 p.m.
REGISTER HERE

Recordings on Iowa STEM's Website

Award Provides
- Maker Cart (fully assembled)
- Reaction Game
- Operation Game
- DNA Modeling
- Building an Automata
- Micro:Bit 10 pack x 3
- 3Doodlers EDU Start+ 12 Pack
- What Will You Create? Activity Book
- MakeyMakey Literacy Kit: 12 pack x 2

2025-26 STEM Scale-Up Program Summary

The Grow, Create, & Innovate program integrates STEM and the arts to enhance students' critical thinking and problem-solving skills. The program originated to address the need for engaging, hands-on learning. It aligns with CCSS, NGSS, ISTE, and CSTA standards and has earned STEM.org Authentication for its excellence in STEM education. Students engage in standards-aligned activities such as:

- Reaction Game explores physics and chemistry through interactive play
- Operation Game combines logic with mechanical design
- DNA Modeling merges biology with creative visualization
- Building an Automata integrates engineering with artistic design.

These activities foster creativity and exploration while demonstrating the connection between STEM and the arts, preparing students for careers that require technical skills, and inspiring creative problem-solving. By emphasizing integration, the program ensures students develop real-world skills through meaningful, interdisciplinary learning.

The program integrates standards, delivers engaging future-ready learning experiences, and tailors to diverse student needs including gifted learners. With a proven track record in over 80 schools, this program empowers educators to inspire innovation and creativity in the classroom using award-winning tools and strategies.

Requirements to Implement the Program

- Educators must attend the initial two day in-person training to receive materials.
- Student implementation is flexible, ranging 4-9 weeks if an average of 45 minutes is spent on lessons.
- Original kit serves 24-40 students. Additional activity replenishment kits can be added each serving 40 students.
- Educator(s) must participate in the STEM Council Scale-Up Educator Survey.



Additional Cost(s) to Awardee During Award Period
None

Approximate Sustainability Cost(s) After Award Period
Only refill materials for the Maker Cart and 3D filament as needed, cost ranges from $200 to $500 per activity.

Website
makermaven.net/

Video
share.synthesia.io/dfa35ee0-d582-4d6c-aef8-601d7e2091d9

Social media
Facebook
@makermaven

X
@maker_maven

LinkedIn,
Maker Maven

YouTube:
@makermaven1724

Iowa Standards Alignment

Science Standards: The DNA Modeling activity supports Iowa Science Standard 4-LS1-1 by helping students explore genetic concepts and biological structures. Students build physical models of DNA, applying scientific inquiry to understand genetics and molecular biology.

Mathematics Standards: The Reaction Game integrates Iowa Math Standard 2.OA.A.1 by involving students in calculations related to reaction times and scoring. They use addition and subtraction to solve problems and analyze data, linking mathematical operations with experimental outcomes.

21st Century Skills: All of the projects integrate Iowa 21st Century Standards 21.3-5.TL.1 by engaging students in creating innovative, media-rich projects that integrate art, engineering, and science concepts. Through collaborative and individual activities, students use technology to design original products, identify patterns, solve problems, and share their ideas using models, simulations, and creative tools.

See full standards alignment here.

Professional Development

Session One: A two-day in person on a weekday in July/August. The Makey Makey, Microbits, and the 3Doodler pens will be disbursed during this session. Once the educator has completed this training, the remaining materials will be shipped to their location.

Session Two: Between November 1, 2025 and February 15, 2026, participants will attend a follow-up virtual support session to ensure effective implementation and address any additional questions/needs. Each educator will schedule a one-on-one virtual meeting with a dedicated support specialist.

Duration:
Two days of required in-person training (Session One).

15 to 30 minutes of one-on-one virtual session (Session Two).

Date(s):
In-person workshops (session one) will be scheduled during the weeks of July 28 and Aug. 4, 2025.

Virtual learning sessions (session two) will be scheduled between Nov. 1, 2025 and Feb. 15, 2026.

Location:
We plan to offer at least one in-person workshop in each STEM region pending the number of awards in each region.

To Learn More or To Apply: educate.iowa.gov/STEM/ScaleUp