

# TOMORROW STEMS FROM IOWA

GOVERNOR'S STEM ADVISORY COUNCIL  
NORTH CENTRAL IOWA STEM REGION

## North Central STEM Region February 2024

### PreK-12 Educators May Apply for STEM Scale-Up Programs

**2024-25 SCALE-UP PROGRAM MENU!**

- All About Balance
- FUSE Studio - Innovate
- Spatial Vis
- Artificial Intelligence for K-12 Educators
- Investigating Everyday Phenomena
- Storytime STEM-packs
- Blackbird Code
- Making Innovative STEM Connections
- Teachley Math
- Derivita 6-12 Math Courseware
- Positive Physics, Chemistry+
- Turing Tumble
- Exploring and Connecting to Iowa's Agriculture
- Robo Wunderkind

The Iowa STEM Advisory Council selects some of the state and nation's high-quality programs and offers them to Iowa PreK-12 educators through the STEM Scale-Up Program. Each year, the STEM Council equips thousands of educators with STEM programs that inspire nearly 100,000 youth.

**PreK-12 educators from the following organizations may apply:**

- Public and private PreK-12 schools
- Childcare centers
- County conservation offices
- Libraries
- County extension offices
- Home school associations
- Other formal and informal youth organizations who deliver STEM education programming for PreK-12 youth.

This year, the STEM Council will be utilizing a new application platform at **www.iowagrants.gov**. To help traffic flow for new registrants; Create a user account TODAY through: **IowaGrants.gov**

**Creating an account:** It may take up to **72 hours to activate** your account.

NOTE: If you already have an account through iowagrants.gov there is no need to do it again.

Each Program Provider will be hosting at least one 20-30 minute informational webinar for educators to learn about their respective program. The Scale-Up Program menu for the 2024-2025 academic year includes the following fourteen programs:

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## All About Balance

Watch your children become more curious and engaged as they actively explore the role of balance within the world of objects, and with their own bodies.

- **Grade Level:** PK-2
- **Contact:** Beth VanMeeteren, University of Northern Iowa, Iowa Regents' Center for Early Developmental Education  
Beth.VanMeeteren@uni.edu
- **Website:** <https://regentsctr.uni.edu/>
- **Fact Sheet**

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## Blackbird Code

A collection of online curricula that teaches math or science through the lens of coding. Students write real, text-based programs which bring to life the core concepts they are learning.

- **Grade Level:** 6-12
- **Contact:** Ness Blackbird, Blackbird Code, [ness@blackbird.com](mailto:ness@blackbird.com)

- **Website:** <https://blackbirdcode.com>
  - **Fact Sheet**
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## Derivita Math

Platform maximizes the impact of your current math curriculum and increases student engagement in math.

- **Grade Level:** 6-12
  - **Contact:** Doug Sovde, Derivita, [doug.sovde@derivita.com](mailto:doug.sovde@derivita.com)
  - **Website:** <https://www.derivita.com/getting-started-onboarding>
  - **Fact Sheet**
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## Exploring and Connecting to Iowa's Agriculture

Exploring and Connecting to Iowa's Agriculture is a two-day professional development workshop that engages educators with agriculture professionals and classroom curriculum.

- **Grade Level:** 2-8
  - **Contact:** Cathryn Carney, Iowa Agriculture Literacy Foundation, [ccarney@iowaagliteracy.org](mailto:ccarney@iowaagliteracy.org)
  - **Website:** <https://www.iowaagliteracy.org/>
  - **Fact Sheet**
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## FUSE Studio

FUSE creates onramps to deeper STEAM engagement and encourages STEAM exploration through an innovative, challenge-based approach and studio-like environment.

- **Grade Level:** 4-12
  - **Contact:** Reed Stevens, Northwestern University, [reed-stevens@northwestern.edu](mailto:reed-stevens@northwestern.edu)
  - **Website:** <https://www.fusestudio.net/>
  - **Fact Sheet**
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## Investigating Everyday Phenomena

A program designed to captivate young minds while demystifying real-world phenomena.

- **Grade Level:** K-5
  - **Contact:** Valerie Cole, hand2mind, Inc., vcole@hand2mind.com
  - **Website:** <https://www.hand2mind.com/iowascaleup>
  - **Fact Sheet**
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## Making Innovative STEM Connections

This lesson design framework focuses around the idea that making and tinkering are ways to engage student's minds and build conceptual understanding around academic content.

- **Grade Level:** PK-8
  - **Contact:** Robert Burnett, Science Center of Iowa, rob.burnett@sciowa.org
  - **Website:** <https://www.sciowa.org/education/professional-development/educators/making-stem-connections/>
  - **Fact Sheet**
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## Positive Physics, Chemistry, Physical Science, Biology, Environmental Science & Engineering

An engaging, online lesson and problem bank. The site was designed to be accessible to students on any level from basic to AP.

- **Grade Level:** 6-12
  - **Contact:** Jack Replinger, Positive Physics, jack@positivephysics.org
  - **Website:** [www.positivephysics.org/](http://www.positivephysics.org/)
  - **Fact Sheet**
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## Robo Wunderkind STEM Program

Offers easy-to-use building blocks and a series of age-appropriate coding apps that develop computational thinking skills and spark a curiosity for STEAM in young learners.

- **Grade Level:** K-5
- **Contact:** Jamie Guidry, Robo Wunderkind, Inc., jamie@robowunderkind.com
- **Website:** <https://www.robowunderkind.com/us/home>

- **Fact Sheet**
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## Spatial Vis: The First Step in Design for Engineering and Technology

A tool to teach freehand sketching and improve students' spatial skills.

- **Grade Level:** 6-12
  - **Contact:** Lelli Van Den Einde, eGrove Education, Inc.,  
lelli@egrove.education
  - **Website:** <https://egrove.education/>
  - **Fact Sheet**
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## Turing Tumble

A revolutionary STEM game that teaches how computers work at a fundamental level. Students build marble-powered, mechanical computers to solve a series of structured logic puzzles using their own hands instead of a screen.

- **Grade Level:** 3-12
  - **Contact:** Anna Riechers, Upper Story, [anna.riechers@upperstory.com](mailto:anna.riechers@upperstory.com)
  - **Website:** <https://upperstory.com/>
  - **Fact Sheet**
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## Timeline

January 8 - Application opens  
February 28 - Application closes  
April 8 - Awardees notified  
July 1, 2024 thru May 31, 2025 - Implementation

Please contact Mauree Haage at [mhaage@iastate.edu](mailto:mhaage@iastate.edu) if you have any questions about the programs or the application process.

Visit <https://iowastem.org/Scale-Up-Application> for further information.

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**ISU High School Coding Competition**

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IOWA STATE UNIVERSITY  
Department of Computer Science

2024 IOWA  
HIGH SCHOOL  
PROGRAMMING  
COMPETITION

APRIL 27, 2024

FOR MORE INFORMATION AND TO  
LEARN HOW TO REGISTER, GO TO  
[CS.IASTATE.EDU/HSC](http://CS.IASTATE.EDU/HSC)  
OR EMAIL [CSDEPT@IASTATE.EDU](mailto:CSDEPT@IASTATE.EDU)

Iowa State University Department of Computer Science seeks teams to complete in the FIRST EVER High School Coding Contest!

- Up to 3 students/computer=team
- Solve 10+ problems in 4hrs
- Registration due March 27
- Info: **2024 High School Programming Contest**



**TOMORROW  
STEMS  
FROM IOWA**  
IOWA'S STEM ADVISORY COUNCIL

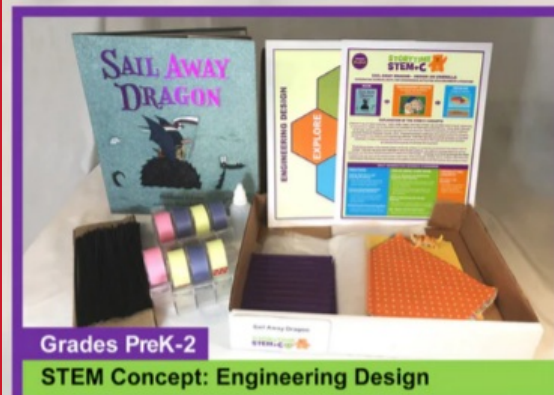
# IOWA STEM TEACHER **EXTERNSHIPS** 2024 PROGRAM

**A majority of STEM Teacher Externs agree that Iowa STEM Teacher Externships are more valuable than any other professional development they have participated in.**

- Build long-lasting school-business partnerships
- Improve student STEM experiences and career knowledge
- Experience a different workplace setting for 6 weeks
- Earn a stipend up to \$5,000 and three graduate credits
- Use the latest real world applications in a workplace setting

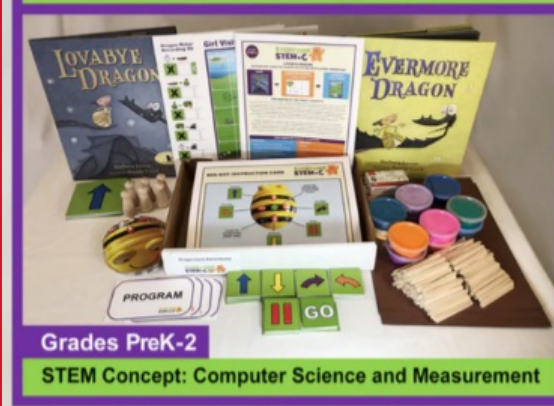
**For more information or to apply today visit  
[IowaSTEM.org/Externships](https://IowaSTEM.org/Externships)**

## STEM Checkout Library



Grades PreK-2

STEM Concept: Engineering Design



Grades PreK-2

STEM Concept: Computer Science and Measurement



Storytime STEM-Packs and several former STEM Scale-Up kits are now available for checkout. These packs are a great hands on, creative way for students to learn more about various STEM concepts.

Learn more about available kits here:

[Stem Pack Checkout Information](#)

Request a kit here: [Check-Out Form](#)

## STEM Challenge Cards

### PLAY DOUGH ANIMAL CHALLENGE

**Materials to Gather:** Hair conditioner (1/2 cup), Corn Starch(1 cup), Sparkles or food coloring.

**Directions:**

Place cornstarch in a large bowl. Mix in the hair conditioner with your hands until it becomes smooth and pliable. Add a drop or two of the food coloring, or colored sparkles for variation. Add additional hair conditioner when needed to remain soft.

**Animal Challenge:** Shape your play dough into various animals. How many can you make? Take a picture or video, and post to the NC STEM Region Facebook page!

\*Note - This recipe is not edible! don't eat the play dough!



**GREATNESS  
STEMS  
FROM IOWANS**  
GOVERNOR'S STEM ADVISORY COUNCIL  
NORTH CENTRAL IOWA STEM REGION



In addition to our checkout library, we have STEM Challenge Cards available by request. Each card has an easy to prepare STEM challenge for when you're looking for an activity to either supplement content or for students to do during transitional times in the classroom. In addition to the cards, some materials can be requested as well, though many are found easily at home.

To look at the challenge options and request any, click here:  
**STEM Challenge Card Checkout Check-Out Form**

## BOONE FAMILY STEM FESTIVAL



Saturday,  
April 6th  
9:00 am - Noon

DMACC  
Boone Campus

Free Family Event!  
Fun, Hands-On STEM Activities



## OSAGE S.T.E.A.M. FESTIVAL

**WHERE:**  
Osage, Iowa  
Osage Middle/ High School  
820 Sawyer Drive

**WHEN:**  
**MARCH 14, 2024**  
**Time: 5-8 PM**

*Walking Tacos,  
Lemonade, Cookies  
provided by  
FIRST CITIZENS!*

Scan this QR Code  
to see what is coming!

# You're Invited to the NORTH IOWA STEM FESTIVAL

4-7PM | April 17, 2024 | North Iowa Area Community College Gym

The goals of the *STEM Festival* are to promote, inspire and engage youth in Science, Technology, Engineering and Mathematics activities and to introduce children and parents to STEM careers.



Experience hands-on STEM activities provided by local businesses and organizations:

- Learn about the science of fermentation while making pizza dough
- Measure ingredients to make smoothies with a bike blender
- Test out a 3D Scanner and Printer
- Encounter live animals and learn about environmental education
- Design your perfect bedroom or house
- Spark your curiosity through an electrifying exploration of electric circuits!
- Handle fiber optics and learn about fusion
- Identify architectural elements and build with blocks
- And more!

**Join us for a night of fun, interactive, hands-on learning  
for kindergarten-6th grade students!**



## Upcoming Events!

- February 29 - STEM Scale-Up Deadline
- March 14 - Osage STEAM Family Night (5-8 PM)
- April 1 - STEM Summit
- April 6 - Boone STEM Festival (9-11 AM)
- April 10 - Iowa Classrooms + Workplaces Summit
- April 17 - North Iowa STEM Festival (4:30-7:30 PM)
- April 17 - STEM Festival in Mason City

***Know of other STEM events in North Central Iowa? Email us at:  
ncstem@iastate.edu***

## Connect with us!

**NC Regional Manager:**

Mauree Haage

**Website:** <https://ncstemhub.iastate.edu>

**Email:** [ncstem@iastate.edu](mailto:ncstem@iastate.edu)

**Phone:** 515-294-0645

**Address:**

NC STEM Hub  
Extension 4-H Building  
1259 Stange Road  
Ames, IA 50011



North Central STEM Network | Extension 4-H Youth Building, Iowa State University, 1259  
Stange Rd,  
Ames, IA 50011-1002

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