

September 2018

SC STEM Hub Newsletter



Connecting SC Regional STEM



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Calendar: Calendar of Events

Hashtag: #STEMinYourWorld

A poster for the Innovation Fund. It has a green border decorated with various STEM icons like gears, lightbulbs, and DNA helices. The text on the poster includes:

**GREATNESS
STEMS
FROM IOWANS**

Seeking new ideas for future Scale-Ups!

**Innovation
fund**

Apply today if you have a PreK-12 program that would improve STEM education across the state!

- Open September 4, 2018 – October 8, 2018
- Awards from \$500 – \$10,000
- Details: <https://www.iowastem.gov/tags/innovation-fund>

You're invited: STEM Festivals

DMACC-Ankeny STEM Fest

WHEN: Monday October 22, 2018

TIME: 6-8 pm

SET-UP: 5 pm

WHERE: FFA Enrichment Center

CLICK TO REGISTER:

- [Exhibitors/volunteers](#)
- [Attendees](#)

Seeking Future Scale-Ups Innovation Fund

CLICK HERE TO BEGIN:
Applications due October 8, 2018

The Iowa STEM Council is launching a statewide Innovation Fund, a financial resource available to organizations with ideas for innovative STEM programs that show promise as a future Scale-Up. The Iowa STEM Council invites applications for ideas that will have an impact upon Iowans locally, regionally, and potentially statewide.

Awards will range from a minimum of \$500 up to a maximum of \$10,000 per award. Applicants must provide a 10% cash match. All programs funded must be completed within one calendar year of the award date with a final report due at the end of the award period.

Organizations eligible to apply for the STEM Innovation Fund are Iowa's public and private educational institutions, home school associations, area education associations, and Iowa-registered non-profits.

More information about the application can be found [here](#). Contact Kristine Bullock at kristine-bullock@uiowa.edu with questions.



Appanoose Co. STEM Fest

DATE: Saturday, October 27, 2018

TIME: 10:00am-1:00 pm

SET-UP: 8:30am

ADDRESS: Howar Jr. High, Centerville

CLICK TO REGISTER: [EXHIBITORS](#)

(No registration is necessary to attend)



NEW Program: Computer Science is Elementary

The Iowa Governor's STEM Advisory Council recently announced a new project to launch six innovative computer science elementary schools.

Applications Open Soon

In January 2019, the STEM Council will issue requests for proposals and will announce the awards in spring 2019. Currently, the **Computer Science is Elementary Advisory Group** is designing the criteria to select public and nonpublic elementary school awardees.

Six high-poverty schools will be competitively selected to transform existing buildings with engaging computer science instruction. This will create more opportunity for their students, including real-life work experiences with area employers. It also will establish a network of computer science expertise as a resource for all public and non-public elementary schools across the state.

Funding

Gary Scholten, executive vice president and chief digital and information officer at Principal Financial Group, is leading corporate engagement and support for the project. The campaign is working to raise \$450,000 from the private sector by December 2018: \$50,000 one-time planning grants for each of the six schools; \$50,000 for Loess Hills Computer Programming School to serve as a blueprint; and \$100,000 for a project manager.

Once the six schools are launched, they will operate with regular school funding like Loess Hills Computer Programming School in Sioux City.

If you have questions, please contact Dr. Sarah Derry at scstemhub@drake.edu.



This photo by Photo Editor Tim Hynd is part of an in-depth article on Loess Hills Elementary by the Sioux City Journal. Click [HERE](#) to read the piece. (Used with permission.)

Pilot School

Loess Hills Computer Science Elementary School in Sioux City is the inspiration for the Computer Science is Elementary project. The district pioneered one of the first computer science elementary schools in the nation in 2015 when Loess Hills started teaching computational thinking and other skills, such as problem solving and teamwork. Loess Hills will serve as a blueprint for the project.

State Standards

The Computer Science is Elementary project will enhance other work to expand computer science, including a \$1 million fund passed by the legislature to prepare Iowa's computer science teacher workforce. This follows a new state law encouraging elementary, middle and high schools to offer high-quality computer science instruction, and the State Board of Education recently adopting statewide voluntary computer science standards.

Meet New Board Member: Dr. Nadilia Gomez



Nadilia Gomez, all photos courtesy of Pioneer.



Gomez flying a crop drone. Drones scan fields for careful crop applications.



Utilizing technology via her cell phone, Gomez conducts crop research.

Dr. Nadilia Gomez is a Senior Research Scientist at DuPont Pioneer. She's part of a team that develops digital solutions to help increase productivity, profitability and sustainability in farming operations.

Gomez spends much of her time interacting with farmers and agronomists, trying to understand the challenges they face as they manage their crops. She helps identify opportunities where new technological solutions can be of assistance. She also spends time working with software development teams, creating and testing software tools that can help farmers and agronomists.

"My job is very fulfilling because it offers something different and new to explore every day," says Gomez.

Gomez works in a very collaborative, innovative and customer-focused space where science and technology come hand-in-hand with new business opportunities to help farmers worldwide. "It's a job that neither I (nor my teachers and professors) would have imagined I'd be doing with a PhD in Plant Breeding and Genetics," she adds.

On STEM Education

Gomez's interest in STEM education transcends her job. She sees how STEM helps people to understand themselves and the world around them much more fully. She knows STEM is more than scientific concepts—it's about understanding the fundamental principles of scientific experimentation.

Looking at the big picture, Gomez sees the concepts of scientific experimentation radiate into other aspects of life. "I believe the iterative process of trial and error," she notes, "so deeply embedded in many aspects of STEM, can help us overcome personal challenges."

In her own WORDS...

Dr. Nadilia Gomez had such great words of wisdom, that we wanted you to hear them directly from her.

A Defining Moment

One of the most influential characters in my life was my 4th grade teacher. At that formative age, I was already very aware that my classmates didn't share my love of Science. This tension was particularly obvious whenever my questions on how algae reproduce and why rainbows are arched would delay the beginning of recess.

My 4th grade teacher fostered my curiosity and creativity with extra activities and projects while at the same time ensuring the class was a safe environment for me to ask questions. I know preparing all those extra projects was time-consuming, but the dedication my teacher exhibited made a huge difference in my life.

If my role in the STEM Advisory board can help more teachers be as successful as my 4th grade teacher, I'll be half as good as him.

On Making Choices

Collect experiences as you would

She believes STEM education should prepare the future citizens of the world to contribute to solving the most critical problems of humanity through scientific discoveries and personal development.

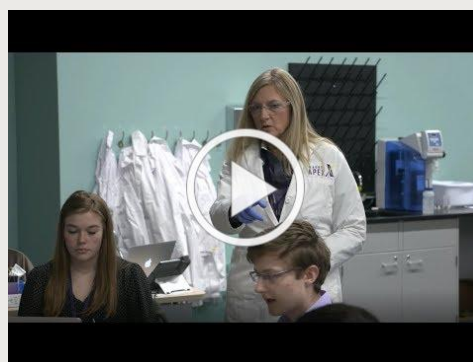
"Think of how many of the world's most important discoveries came after years of failed attempts," she points out.

Through that failure comes resilience and progress--with STEM and most things in life.

collect precious gems or points on a video game. The biggest barrier to personal success is believing you must make the RIGHT choice.

What if there is more than one right answer? If you take one decision and you decide it's not right for you, you can make another choice and go in a different direction.

Be curious. Be bold. Be kind--to others and to yourself. Be the version of YOU, you are meant to be.



Press the arrow above to watch this inspiring video about Showalter's classroom

Nominate the STEM Teacher in Your Life

Click to nominate--due October 9!

Administrators, teachers, counselors, parents, students and other STEM advocates are invited to nominate an inspirational science, technology, engineering or mathematics teacher for the I.O.W.A. STEM Teacher Award, sponsored by Kemin Industries and the Iowa Governor's STEM Advisory Council.

This award is dedicated to honoring one teacher from each of the six STEM regions for their contributions and dedication to STEM education in Iowa. Each recipient will receive \$1,500, as well as another \$1,500 to be used in their classroom.

Click to nominate! Application open until October 9, 2018.

Celebrating Showalter's Contribution to STEM

Looking for back-to-school inspiration, we checked in with Dr. Holly Showalter, who received the regional I.O.W.A. STEM Teacher Award last year. She teaches Medical and Bioscience Research at Waukee APEX. Here's a quick Q&A with the good doctor:

Q: What things are your students working on right now?

A: We are working on getting some projects started with a local business doing R&D application work. The work is under a non-disclosure agreement, so I cannot give the details, but the science projects are in the area of biology, plant chemistry and molecular biology!

Past award winners include:

2018 -- Dr. Holly Showalter, Waukee APEX

2017 -- Heather Anderson, Grant-Ragan Elementary

2016 -- Ryan Lensing, Dowling High School

2015 -- Kacia Cain, Central Campus

Work with a Teacher! Seeking Externship Hosts

The STEM Teacher Externship Program continues to grow with more than 150 workplace partners participating in the program since 2009. Iowa STEM seeks hosts for Summer 2019.

Workplaces interested in hosting a summer extern can complete an interest form located [HERE](#).

For more information about the Iowa Teacher Externship Program, please contact Externships@IowaSTEM.gov or click [HERE](#) to visit the webpage.

Q: How did the award impact your classroom?

A: We had an APEX partner donate funds to purchase a biological safety cabinet (BSC) level II for cell culture work and the \$1500 STEM award to the school also went to pay for it. We are in the process of getting it installed and certified to get more projects going in the area of cancer cell culture with Des Moines University and Drake University.

Q: What advice do you have for teachers?

A: What I tell new teachers is to tell students that you want to see them after they leave high school and to keep in touch. Maybe not every year, but it is good to hear back from them as they continue their life journey. If you start off the semester or year doing that, you set the stage for building long term relationships.



Above: The World Food Prize Youth Institute, one of the newest Seal of Approval winners, hosts their student leaders at an annual event. Dr. Sarah Derry (right). Students are selected through a competitive process. Read more about the program [HERE](#).

Congratulations to SC Seal of Approval Recipients

The STEM Council's **Seal of Approval** recognizes the support of non-Council programs and events. It celebrates the efforts across all community partners in providing PreK-12 students with an educational advantage.

Scale-Up Updates

2018-19 Training Wraps Up

Click [HERE](#) to see for the latest Scale-Up training dates occurring around the state. If you received a Scale-Up for this year and have not attended professional development for it, please contact the Hub right away.

Tell Your Story!

We'd love to see your Scale-Up in action and write a story about it for an upcoming newsletter.

Why participate?

- It helps other educators make decisions for their own classrooms.
- It helps legislators and private investors see the value of their investment.
- It puts a happy story out into the world.

To schedule a visit, click [HERE!](#)

Congratulations to the following South Central Region entities for receiving this important community award:

STEM Volunteers Needed

2018

- World Food Prize Youth Institute
- Facebook Community Boost

2016

- Camp Invention
- Des Moines Student-to-Student Speaker Series
- Coding for Social Good and Beyond
- Ag in the Classroom/Iowa Ag Literacy Foundation
- Wednesday Workshops at the Science Center of Central Iowa
- AAUW Tech Track at Simpson College

For more info and a complete list of Seal of Approval winners, please click here: <https://iowastem.gov/seal>

Consider giving back to the STEM community by volunteering.

- Contact your local school or college.
- **Sign up** for an area festival.
- Be a **STEM mentor**.
- Host or help with **Lego Robotics**.
- Help out at a zoo, science museum, or STEM non-profit, like Jewels, World Food Prize or Pi515.
- Offer a program at your library.
- **Apply** for a STEM board position.
- Hold a workshop for Scouts.

If you have a skill or idea, but are not sure where you might fit, connect with Dr. Sarah Derry, hub manager, scstemhub@drake.edu.

Want more STEM?

Calendar of Events

October 1 -- Future Ready Iowa, Pella
October 6 -- Jewels Fall Workshop
October 8 -- Innovation Fund Application Due
October 9 -- STEM Teacher Nominations Due
October 9 -- SC Regional Board Meeting
October 22 -- DMACC/SC STEM Festival
October 25 -- STEM BEST Announcement
October 25 -- ISU Taking Road Less Traveled
October 27 -- Appanoose Co. STEM Fest

Click here for more events and details. See right column under calendars.

Thank you to the South Central Regional Board Members!

- Creighton Cox
 - Breanne Garrett
 - Nadilia Gomez
 - Mauree Haage*
 - Jonathon Holmen
 - Ronda McCarthy
 - Allison Mohr
 - Tyler Myerholtz
 - Amber Pargmann^
 - Laura Williams
- * co-presidents

