

South Central STEM Hub Newsletter

**GREATNESS
STEMS
FROM IOWANS**

Drake
UNIVERSITY

SOUTH CENTRAL IOWA REGION GOVERNOR'S STEM ADVISORY COUNCIL

STEM Happens



DMACC STEM Festival Shines

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WILLIAM PENN
UNIVERSITY

REGISTER NOW!

**Teacher/Educator
Make-and-Take Festival**

DATE: January 27

(fizzles, pops, booms, fogs, oozes, boings, spins, etc.)

Where could you step into a virtual reality trailer, drop a parachute from 20 feet, fly a pterosaur glider, and do it all within two hours? DMACC-Ankeny's STEM Festival offered this and so much more.

On October 28, from 6:00-8:00 p.m., DMACC and the SC STEM Hub teamed up to host this hands-on event. With over 600 people filling the FFA Enrichment Center, there was something to pique everyone's interest. "It's just so much fun, talking to kids about science," said Professor David Herzog, Drake University.

Amy Steenhoek, STEM Intermediary Network Coordinator, partnered with the Hub to coordinate the evening. Dr. Kari Henson, Dean of Arts and Sciences, provided campus support. Henson also sits on the SC STEM Hub's Advisory Board.

PARENTAL INVOLVEMENT

Both students and parents benefited from the activities. "I was interested in this combination of subjects, and I knew it would be something my kids would be drawn into," said Marie Gibson, a parent from Johnston.

The event was open to the public, with strong turn out from Ankeny Schools,

Joshua Christian Academy (JCA) and Johnston Schools, all of whom promoted the event internally. Presenters came from the metro area, ISU and Pella. They included high school robotics teams, Blank Park Zoo, The Science Center of Iowa, Boy Scouts, corporate entities like Vermeer, and a variety of others.

"We came to the STEM festival tonight because I wanted to expose my children to lots of things. Maybe it will spark something in them, and they'll want to learn more," said Alycia Green of JCA, who brought her whole family to the event.

Green could barely get her children out of the math area. DMACC's math education department was represented with a buffet of activities that engaged children in math games and challenges. "I knew we'd have to do this last," she said, "because no one would ever want to leave."



DMACC physics students made principles relevant through three hands-on demonstrations. Photo courtesy of DMACC.

TIME: 6:00-8:00PM

WHERE: Penn Activity Center
William Penn University
201 Trueblood Ave.
Oskaloosa, IA

EXHIBITORS/PRESENTERS, please register [here](#).

EDUCATORS*, please register [here](#) to attend.

All **formal** (Pk-12 classroom teachers, etc.) and **informal** (home schools, Scout leaders, etc) **teachers/educators** are invited to participate in William Penn's Make-and-Take STEM Festival.

***NOTE:** *This is not a family festival, but a make-and-take dedicated to all educators with the intent they will be able to replicate these ideas with their own students.*

Sponsored by the SC STEM Hub and William Penn University.

Nominate a STEM Teacher TODAY!

WHY STEM?

At the heart of STEM education is the hope that everyone will have a better understanding of his or her daily world. DMACC's Medical Assisting Department's booth was a prime example of that.

"Kids like looking at the ear and throat pictures," said Debbie Odgaard, Program Chair. "While we hope it gets them interested in this career, we also hope they feel less apprehensive when someone in the doctor's office uses the equipment on them."

WHAT'S NEXT?

The SC STEM Hub will host more festivals this spring, including:

- January 27 -- Teachers/Educators Only -- Make-and-Take at William Penn University. Formal/informal educators register [HERE](#).
- March 30 -- Tama Community Event, more info soon
- April 16 -- Drake University Community Event, more info soon
- TBD -- Indian Hills Community College, Ottumwa
- TBD -- Central College, Pella

For more information, please email Sarah Derry/Lisa Morlock at scstemhub@drake.edu.



Inspired Teacher Award

Do you know a STEM teacher who goes above and beyond?

Nominations are open for the STEM Education Award for Inspired Teaching sponsored by Kemin Industries. This award will celebrate educators whose leadership and dedication to STEM in Iowa increases students' interest and awareness in science, technology, engineering and mathematics.

One teacher from each of Iowa's six STEM regions will receive a **\$1,500 award along with an additional \$1,500 to be used in their classroom.**

Deadline for submissions is December 12, and winners will be announced March 2015.

Nominate a STEM teacher today at stemaward.fluidreview.com



Mad Science brought their popular program to the festival. Perhaps most well-known for after-school programming, the group also offers library and special event demonstrations. Photo courtesy of DMACC.

I AM STEM!



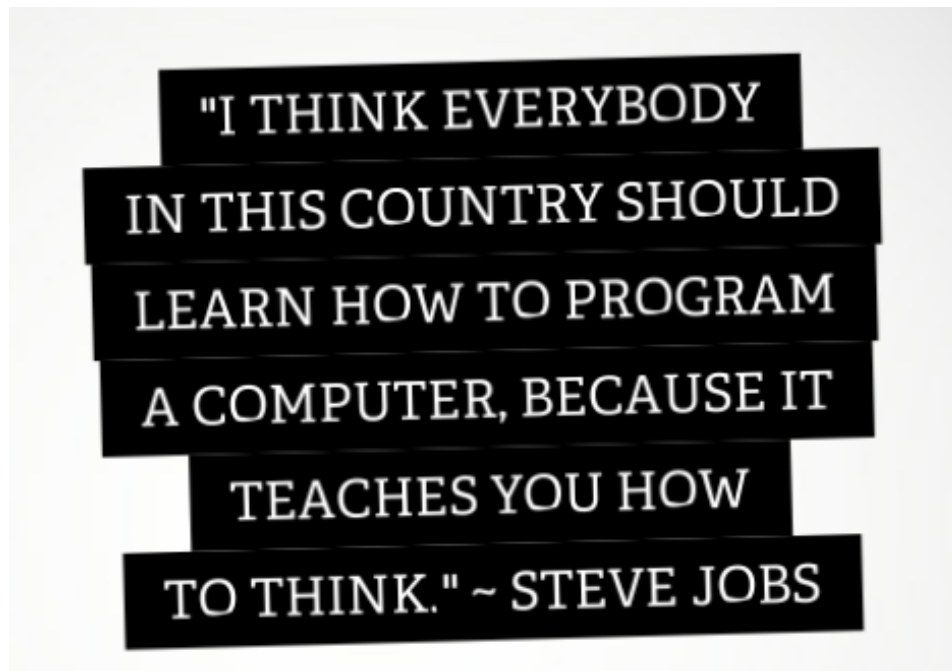
Ethan Gonzalez Builds a Bright Future!

Ethan Gonzalez is proof that STEM Champions come in all sizes. At 11-years-old, Ethan attends Heritage Christian Academy. He had straight A's last semester and received the President's academic award.

One of his connections to STEM involves his love of Legos. A member of the Iowa Lego Users Group, one of his projects was featured in *Brick Journal*, a national magazine for Lego enthusiasts, and he was a contributor to a large Lego build at the Science Center of Iowa.

This past August, Ethan won a first place blue ribbon at the Iowa State Fair for building a Lego model of the State Fair.

When Ethan grows up, he hopes to become an inventor, engineer,



Celebrate the new global language: computer code

Participate in Code Iowa

Apply [HERE](#) today!

What is CODE IOWA?

Code Iowa works in partnership with Code.org's Hour of Code, which is an opportunity for every K-8 student to try Computer Science for one hour during Computer Science Education Week from December 8 to December 14, 2014. The national campaign comes after Code.org analyzed statistics that show by 2020, only 400,000 Computer Science graduates will be available to fill more than 1.4 million computing jobs in the nation. That's a \$500 billion opportunity up for grabs!

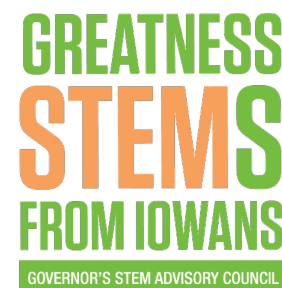
Code Iowa partners with this effort to generate interest and participation by teachers, school districts, parents and students in Iowa with hopes of establishing a continued interest to incorporate Computer Science in Iowa schools' curricula.

Prizes:

professional Lego designer, or architect. "Being involved with Legos has many links to all these careers," says Ethan. "I love the creativity."

He offers this advice to others who are interested in STEM activities: "You can always achieve more if you believe in yourself. And you should always give it your best try."

With academic ability, architectural talent and a positive attitude, Ethan is sure to reach all of his goals.



2015-16 Scale-Up Update

Are you already planning ahead for the next Scale-Up? So are we!

While all funding is based on legislative approval, here's the tentative timeline:

- The **current 10 Scale-Up**

One lucky school will win \$10,000 from Code.org based on a plan to participate in the Hour of Code week. THEN, at least 5 more schools (one in each of our STEM regions that did not win the Code.org award), will win \$4,000 each for technology purchases once they complete the Hour of Code.

Deadline:

November 14! (no costs to the school)

Application:

Apply [HERE](#) now!

Stay tuned:

As the creators of Code Iowa, the Governor's STEM Advisory Council will host six FREE K-5 Computer Science workshops (one per Iowa STEM region) in Spring 2015. Workshops will include additional professional development in the Code.org K-5 Computer Science Curriculum, leveraging the ways in which educators can integrate Computer Science and coding basics into their classrooms.

For more info, visit www.code.org or www.iowastem.gov/codeiowa

Download this [Code Iowa Flyer \(PDF\)](#) and pass it around your school today

Inspiring STEM

The lesson of a lifetime! Waukee's CAPS Program

Very rarely do adults wish they were back in high school, but, after seeing this innovative program, some might reconsider.

This year, the Waukee School District offered a career-based learning experience called CAPS (Center for Advanced Professional Studies). The program features five professional strands, including Financial and Insurance; Business, Technology and Communications; Engineering; Human Services; and Bioscience and Value-Added Agriculture.

One of the most successful partnerships is with Shive Hattery, which falls under the Engineering

Providers will move forward as 2015-16 options.

- **Now- Dec. 12, 2015:** Scale-Up Providers may apply to be part of Iowa's STEM program.
- **January-February 2015:** Applications for Scale-Ups Open.
- **March 2015:** Scale-Up Awards announced.
- **Summer-Fall 2015:** Scale-Up training.



Be a Volunteer!

Q: Why does Will, 7th grade, volunteer for STEM?

A: I think it's a fun way to spend time. It's getting kids into science, and it's just a good program.

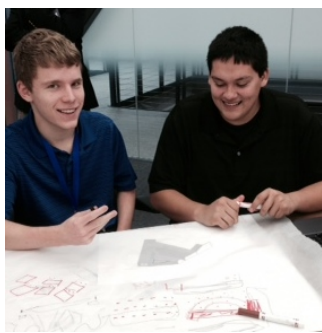
Get involved today! How?

- Become a [Million Women Mentor](#) participant.
- Help at a STEM Festival.

strand.

"I signed up for this program so that I could see what engineering was like and get into a real work space," said Logan, senior. "It's something unique for a college resume."

While class varies each day, often there's about 30 minutes of meeting time, followed by 1-2 hours of work time. Students work on three to four projects at a time, using industry-based technology, like Inventor. Grades are based on their professionalism, research skills, and design work. The goal is to prepare the class to thoughtfully chose their future career, establish industry connections and work on real-world projects.



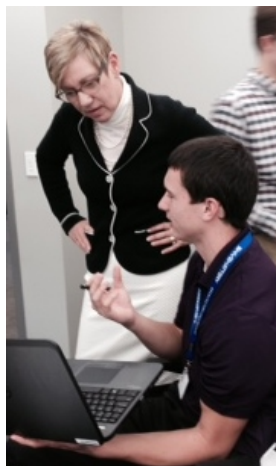
One of many projects this class works on includes plans for the new \$22 million CAPS building, Waukee's newest addition.

"This experience is more challenging than a typical class," said Steele, junior. "It takes more time, but it's all worth it. If I don't learn it in class instruction, I can ask my teacher. If Mr. Bormann doesn't know, I can walk next door and ask an architect."

Joe Bormann, their instructor, gives this advice to school districts looking to replicate this program: "This started in the community We're always thinking how we can best serve our students. You can't let the dollar dictate every decision. This program says we value students and their

perspective."

For more information on Waukee's CAPS Program, please click [here](#).



To be accepted into the program, a student must write an application, secure transportation, have a 2-3 hour window of time during the school day and agree to follow the rules and dress code of the business.

- Find your local school and help in a classroom.
- Apply to serve on a [Regional or State Board](#).



Bondurant-Farrar's Donovan Hill works with his class on their Fuel Cell Cars, just one of the many extra kits available for check out through the Hub.

SC STEM Hub Library Inventory

Need STEM materials for your students, check out our Hub inventory! Materials available for 1-6 weeks. Please replace all consumable items. Must be able to visit Drake's campus for pick-up and return.

[Click here for a list of available items.](#)



Introducing the 2014-15 SC STEM Hub's Advisory Board Members

Thank you to our 2014-15 South Central Hub Advisory Board Members. They're dedicated to making quality STEM education available to all Iowa students. Service includes both big-picture planning and hands-on assistance.

Congratulations to Karen Pattison, who is the newly-elected Board President! And many thanks to Dr. Jan McMahon, Dean of Drake's School of

Education, for serving as the grant's principal investigator.

Look for more individual interviews in future newsletters. Until then, here's a current list of members:

- Mary Bontrager - Greater Des Moines Partnership (Cumming, IA)
- John Chai - Des Moines Schools (Norwalk, IA)
- Joan Corbin - School Board (Pella, IA)
- Tej Dhawan - Start Up City (Grimes, IA)
- Katherine Harrington - Business Publication Corporation (West Des Moines, IA)
- Dr. Kari Hensen - Des Moines Area Community College (Ankeny, IA)
- Dr. Rodney Henshaw - Drake University Library (Des Moines, IA)
- Mary Madison - West Des Moines, IA
- Karen Pattison - County Extension and Outreach (Garden Grove, IA)
- Rosemary Peck - Great Prairie AEA (Mt. Pleasant, IA)
- Dr. Steven Sieck - Grinnell College (Grinnell, IA)
- Stacey Singleton - Johnston Council (Johnston, IA)
- Kimberly Wayne - Siegwark (Des Moines, IA)
- Becky Wigeland - National Balloon Museum (Indianola, Iowa)

Events

Add these dates to your calendar!

Nov. 14 -- Code Iowa Applications DUE!

Nov. 20 -- Visit STEM's booth at IASB Convention, Des Moines

Nov. 21 -- Meals with Mentors Dinner

Nov. 24 -- SC Advisory Board Meeting, DMACC--Ankeny

Dec. 8-12 -- Code Iowa Week

Dec. 12 -- All Scale-Up Provider Applications DUE!

Dec. 12 -- Inspired Teaching Award Nominations DUE!

Jan. 27 -- SC Advisory Board Meeting, Grinnell

Jan. 27 -- William Penn Make-and-Take Teacher Festival

Feb. 6-7 -- Iowa Conservation Winter Workshop

March 30 -- Tama Community STEM Festival

April 16 -- Drake STEM Festival

June 15 CASE Training, TBA

Spread the word about STEM EVENTS in your community!

Visit the [South Central STEM Calendar](#)

[To submit your STEM event, click here!](#)

[Forward this email](#)



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