South Central STEM Hub Newsletter

GREATNESS STEMS FROM IOWANS | **Drake UNIVERSITY**

SOUTH CENTRAL IOWA REGION GOVERNOR'S STEM ADVISORY COUNCIL

STEM Happens

SE Polk's Spring Creek Wins Code Iowa Award

Congratulations to SE Polk's Spring Creek 6th Grade Building for being chosen as Google's Code Iowa award-winning school in the SC STEM Hub's region! The award, a partnership between Google, Code.org, and the Iowa Governor's STEM Advisory Council, comes a grant of $4,000 for the school to use on new technology. TAG teacher Suzanne Kurth applied for and coordinated the school-wide award.

TAG teacher Suzanne Kurth accepted the award from Dr. Sarah Derry, SC STEM Hub Manager.

"This event started three years ago," said Kurth. "I thought it would be something great to bring to the whole school, and it's kind of blown up from there."

Every sixth grader at Spring Creek had the opportunity to participate during the week-long coding event from December 7-11. Kurth has always enjoyed incorporating technology into her life and the classroom. This year, she's even started an after school coding club.

"Hour of Code gives students the opportunity to program and gets them excited about the possibilities of the future," said Kurth. "I hope they'll continue down this path."

Representative Steve Olson was on hand to celebrate the award. He even worked on coding during the hour.

"Our kids are the best resources we have," said Olson. "It's a global economy, and we're in competition to maintain our status and ability to make global decisions. Market-wise, technology and innovation are where it's at."

Representative Steve Olson incorporates technology daily. "Lots of documents that used to be print access are now online. It's also how I get the most up-to-date current events."

Sixth grade student Charly, self-professed theater buff, has enjoyed her experiences. "I coded last year and really loved it. Every time you go on to the website, you learn something new."

Got a Great Scale-Up Story? Share It!

Manager: Dr. Sarah Derry

We're looking for 2015-16 Scale-Up stories. Invite us to your classroom or event so we can share your success via this newsletter, social media or website.

Why share? It gets your school some positive press, gives other educators ideas for future STEM pursuits and it's fun!

To set up a visit, please email Lisa Morlock (newsletter editor) at lisa.morlock@drake.edu.

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Check out our calendar!

Remember to send us your STEM events and news, too! We can help you promote your event.

Code Iowa aligns to district-wide
Tech Focus

Thanks to Channel 13 for interviewing Grace on the event.

For some students, coding was a new experience. Grace, who likes technology in general, was one such student. "It's kind of hard figuring out some of the program," she noted. Christian, also new to coding, added, "Every program brings up a video to show you how to begin and play."

Sixth grader Noah is at the opposite end of the coding spectrum. He's self-taught and working on his own game. He'd like to be an architect when he grows up. "I really like to design structures on the computer," said Noah.

SE Polk is working on a thoughtfully structured K-12 technology access and integration plan.

Principal Scott Bauer said the entire building supported Kurth's efforts. "Coding is not just for TAG kids, it's for all kids. We forget there are still families out there who don't have access to technology at home." Bauer even tried his hand at coding during the week, adding. "The hard part is having to stop."

Christian and Jac (at right) work through the Hour of Code. "I like that it gives you a challenge and that you have to think about a way to solve it," said Jac.

Charly, top left, says she'll consider future computer classes because "this program is so encouraging." * Noah, top center, likes text-based games. "I was just bored one day and came up with an idea for a game." In order to survive Noah's game, the hero must escape a house, outwit a troll and procure needed items.

SE Polk 6th graders Grace and Charly collaborate on Grace's game. Feedback is essential to creating a better product, and collaboration is one of the district's important 4Cs.

As SE Polk's technology integration coordinator, Jamie Fath's job is to make sure students are ready for future digital challenges.

"As a district, we've been integrating more code. That's where jobs are headed, and we want our students to be successful throughout life," she says. "Code Iowa is helping do that."

The district focuses on the 4 Cs of technology:

- Creating
- Communicating
- Critical Thinking
- Collaborating

Part of her job is ensuring parents are computer literate, also. The district recently hosted a parents' Coding and Literacy night. Between 150-200 people came for the educational event.

"We want students to focus on using technology in a purposeful way," she noted, "not just being in front of it."

If you're looking for resources as a teacher or parent and aren't sure where to begin, Fath recommends Common Sense Media. The site contains reviews, ratings and tips on how to get the most productive technology experiences. Visit https://www.commonsensemedia.org/ to learn more.

ASAP Rings in the Spirit with Roxanne!

Team ASAP is a regular exhibitor at the Hub's local STEM festivals. To learn more about this service endeavor, please click HERE for a Des Moines Register article.

Central Iowa High School FIRST Robotics Competition Team ASAP raised money for the local Salvation Army chapter in an unusual way on Saturday, December 19.

Team ASAP's robot, Jingle Bell Roxanne, rang bells and entertained visitors outside the Scheels sporting goods store at Jordan Creek Mall. Robotics team members answered questions about the team, FRC, and Roxanne.

Team ASAP is a group of more than 15 students from area schools, including Urbandale, Roosevelt, Johnston, Dallas-Center Grimes, Ankeny, North, as well as home-school students. Each year as part of the FIRST Robotics Competition, Team ASAP constructs a robot to complete a specific challenge for the year, as well as engaging in community outreach events including STEM festivals and this one.

You're invited to the 2016
IHCC STEM Festival

WHERE: Indian Hills CC
RHEC Building
Ottumwa, IA

DATE: February 23, 2016

TIME: 5:00-7:00 p.m.
SET-UP: 4:00 p.m.

REGISTER here
to EXHIBIT/VOLUNTEER!

REGISTER here to ATTEND!

Last year's festival featured over 27 interactive, hands-on exhibits.
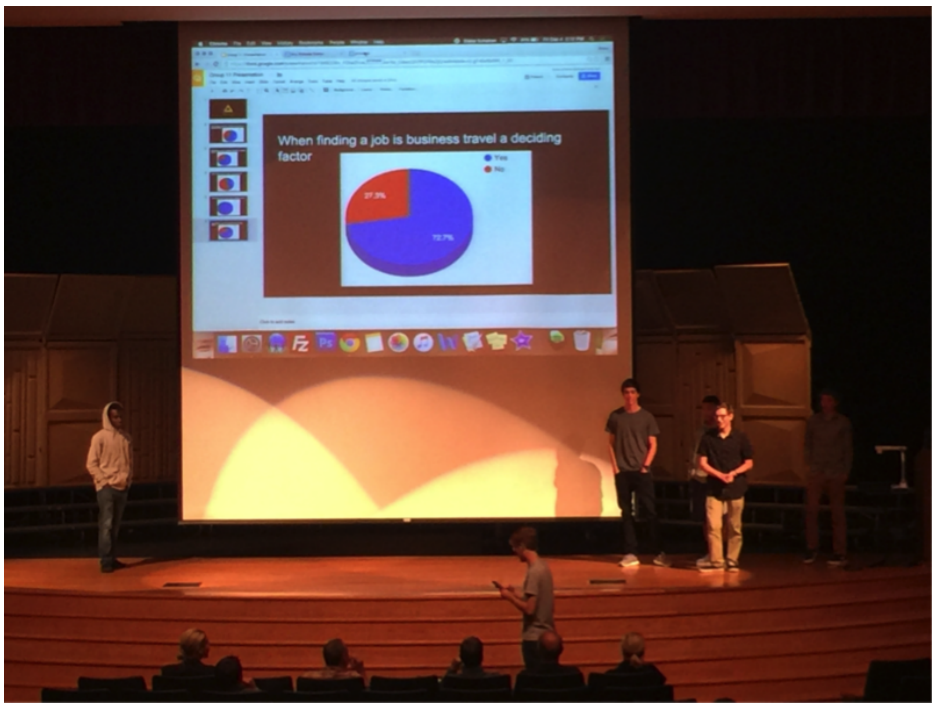
DCG Introduces Collaborative CodeJam Event

Photo courtesy of Ben Chadwick.

The Dallas Center-Grimes HyperStream Program hosted DCG CodeJam on December 4, 2015. This event celebrated the cooperative efforts of multiple fall elective courses, including 94 students from Graphic Design, Entrepreneurship, Programming, Sports Entertainment and Marketing and Website Development. The purpose was to bring students together for a one-day event, using their combined skills to plan, produce, evaluate, revise, and present a product all in an eight hour period.

This past fall, the HyperStream Team worked diligently to expand the implementation of business partner project-based learning experiences, making them available to more DCG students through this CodeJam event.

Students who participated not only displayed the characteristics of the Universal Constructs (critical thinking, complex communication, creativity, collaboration, flexibility, adaptability, productivity, and accountability), but also demonstrated enthusiasm and pride in their work as they take on a challenge so large that it can only be completed within the time frame through collaboration, effective communication, and time management skills.

With the HyperStream-Principal partnership, DCG is able to offer up-to-date career guidance, authentic workplace experiences, teacher training, and curriculum advising partnerships with the business members. DCG envisions growing this program, inviting the other schools involved in Principal Financial Group's HyperStream Consortium.

Photo courtesy of Ben Chadwick.

Planning is in the works to pilot a smaller project in a cross-district capacity involving only one class, Multimedia, before next fall's DCGCodeJam. This project will take place in the spring and involve the Multimedia courses between DCG and Ankeny, with potential involvement from Waukee.

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DCG's Hyperstream program was seeded with an Iowa Governor's STEM Advisory Council Scale-Up Award two years ago. It is a continuing initiative with the purpose of partnering students with business professionals from Principal Financial Group to serve as mentors, coaches, and active participants. We are proud to share how Mr. Chadwick, his students, and their partners at Principal Financial Group have leveraged their Scale-Up Award and grown the program!

This article is courtesy of DCG's Ben Chadwick. If you would like more information on starting a program like this, please contact Chadwick at bchadwick@dcgschools.com.
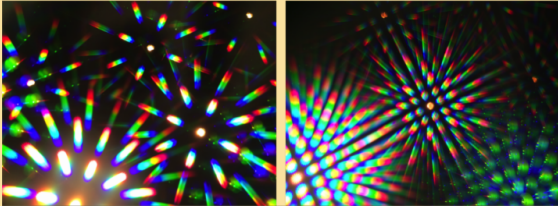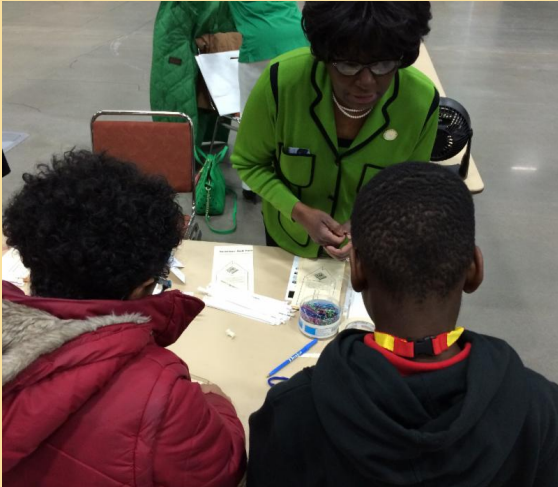
Business Hosts Sought for Summer 2016 Externships

A Look Back at
2015 STEM

From the I'll Make Me a World STEM Festival last January to December's Spring Creek Google/Code Iowa award, 2015 was a very good year. Take a look back at a few of the memories.

If you missed a newsletter, please click HERE to visit our archives.

Teacher externs Olivia Palmer (left) and Talor Hubbard (right) worked with David Jahn (center) from the City of Des Moines. Their special project involved research with the Emerald Ash Borer.

Real World Externships provides educators with the experience to steer students towards mathematics, science and technology related fields by working side-by-side with knowledgeable and skilled employees at the local business level.

The benefits of this unique school/business alliance include:

- Create lasting partnerships between businesses/ industries and local schools.
- Match talented, educated and skilled teachers as participants and contributors to your business needs.
- Give students real-world career information about businesses and industries right here in Iowa, creating a future work force in the area.
- Gain publicity through the program's promotion of this business/industry partnership with schools, officially recognizing your commitment to education in Iowa.

Proven value:
Externs have worked on high-level business projects in a variety of industries across the state. From working with a continuous improvement expert in surgical units at a regional hospital, to mussel diving and water quality monitoring, to mapping machine efficiencies at a major advanced-manufacturing business, externs can offer uncommon expertise and save host sites time and money.

Time commitment:
Externships typically run from June through July with a standard 40-hour work week for five to six weeks.

Learn more:

- Read excerpts from Teacher Externship **blog**.
- Check out the Externship **website**.
- Businesses - Complete an **interest form** to host Summer 2016 Teacher Externs.
- Teachers - **Apply** for 2016 Summer Externship.
- Email **info@iowaSTEM.gov** for more information.

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Article courtesy of NC STEM Hub.

Events

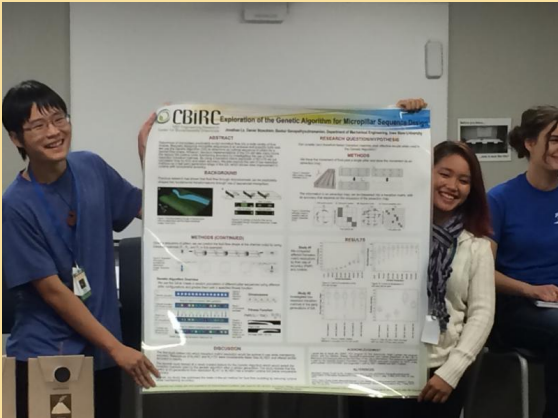**Add these dates to your calendar!**

January 11 -- Register Exploring Iowa's Natural Resources
January 16-17 -- State FLL Competition, ISU
January 26 -- SC STEM Hub Advisory Board Meeting
January 28 -- IAA Day at the Capital
January 31 -- Excellence in Teaching Science Award
　　　　　　　Nominations Due

February 3 -- Iowa's Geological Resources Workshop
February 4 -- Blank Park Zoo Speaker Series--Peter Knights
February 6 -- Jewels Academy Math Camp
February 22 -- SC STEM Hub Advisory Board Meeting
February 23 -- IHCC-Ottumwa STEM Festival

March 3 -- Blank Park Zoo Speaker Series--Wally VanSickle
March 31 -- ISU's Taking the Road Less Traveled

April 7 -- Blank Park Zoo Speaker Series--James Pease
April 14 -- Drake-Des Moines STEM Festival

Spread the word about STEM EVENTS in your community!

Visit the South Central STEM Calendar to get details on these events and see LOTS more!

To submit your STEM event, click here!

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