

South Central STEM Hub Newsletter

**GREATNESS
STEMS
FROM IOWANS**

Drake
UNIVERSITY

SOUTH CENTRAL IOWA REGION GOVERNOR'S STEM ADVISORY COUNCIL

STEM Happens



Drake women to lead MWM Coaches Mentoring Challenge: athletic director Sandy Hatfield Clubb, senior Elizabeth Heap, Lt. Gov. Kim Reynolds, senior Kyndal Clark and women's basketball coach Jennie Baranczyk.

In This Issue

[Drake Coaches Lead Mentoring Effort](#)

[DMACC-Ankeny STEM Festival](#)

[Hoover's STEM Successes](#)

[Inspiring STEM: Kim Wayne](#)

[Iowa Competes on PISA](#)

[Upcoming Events](#)

[MWM--Become a Volunteer](#)

[I AM STEM: Lauren Goodes](#)

[Jewels Academy STEM Program](#)

[Check out STEM Materials](#)

[Vermeer's Manufacturing Day](#)

[Submit Your STEM Event](#)

[Active Learning Nominations](#)

[Hub Support Update](#)



Sandy Hatfield Clubb with Lt. Gov Kim Reynolds and STEM Connector CEO Edie Fraser at Iowa's MWM press conference.

Become a Mentor!

Drake Takes Leadership Role in Million Women Mentors Goal

"For every 100 females in college, 21 major in a STEM field and only three continue in a STEM career," said Jana Rieker, vice president of sales and marketing at Bankers Trust.

Statistics like that inspired Lt. Governor Kim Reynolds to announce her leadership in finding STEM mentors for one million young American women, ages 14-24. She pledged 5,000 Iowans, both men and women, to the Million Women Mentors (MWM) program. Iowa is only state so far with a statewide model.

Reynolds notes her first mentor was her father. He farmed and worked his way up to supervisor for John Deere. "When I see young women participate in STEM and how energized they are," says Reynolds, "I think that I could have been a scientist, too."

Reynolds also announced that Rieker and Mike Ralston will co-chair the initiative. Mentors don't have to be in STEM careers, as most careers use technology and math in some way. She notes that Iowa girls "get to make the decision" on which career path they take, "but they're going to have all the resources they need to make that decision."

In addition, she unveiled the Coaches Mentoring Challenge, designed for basketball coaches from across Iowa to collaborate in recruiting mentors for females interested in STEM careers. Drake's women's basketball coach Jennie Baranczyk will lead the endeavor.

They've already recruited two Drake senior basketball players to help: Elizabeth Heap and Kyndal Clark. The team already participates in 1000 hours of community service each year. "I like giving back," said Clark. "Our coach has already built community service into the program. One of the things that's fortunate about Drake is the push to be out serving the community. We want to be role models to younger girls"

Both are committed to fitting mentoring into their already busy schedules. "If it's important, you'll make the time," says Heap.

Perhaps you can make the time, too. Please visit www.mwmia.org for more information on how to get involved.

Q: Why does Drake Athletic Director Sandy Hatfield Clubb make time to mentor?

A: "Mentoring plays a huge role in anybody's success, especially for girls and women. **As someone who has been in that space before**, having role models has been so important. I like extending the audience of this idea by including a sport. Middle school and high school girls look up college players. **There's power in the jersey**. I want to reach out to our fan base for this important initiative."

Need a mentor/volunteer? Click [here](#).

To become a mentor, click [here](#).

To learn more about this national initiative, click [here](#).

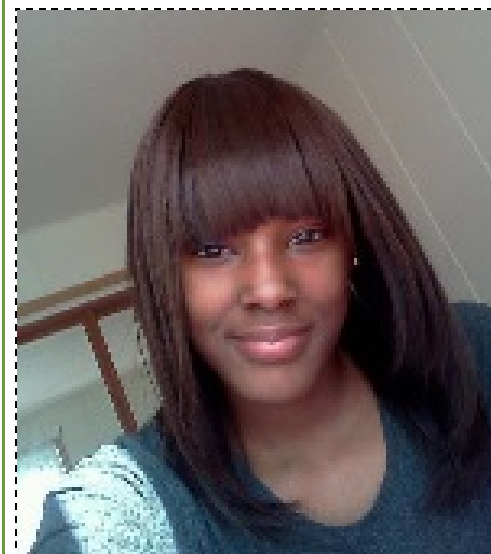


I AM STEM



The Million Women Mentors leadership team consists of representatives from business and industry, education, the student population and government. "STEM is a driving force behind economic growth, stability and educational success," said Reynolds during the press conference. "That's why we're creating an environment in Iowa that prepares all of our students with the necessary skills to compete in a global knowledge-based economy."

Mark your calendars now!
DMACC-Ankeny STEM Festival



**Meet Jewels Academy's
Lauren Goodes**

Lauren Goodes, a Valley High School senior, is very interested in STEM education. From her digital graphics class to math and science courses, Goodes is constantly seeking academic challenges. "I enjoy technology," says Goodes, "because it's constantly changing and anything is possible." But perhaps her true passion lies in STEM education for girls.

Last year, she completed a research paper that looked at the low numbers of women in STEM careers and offered ideas on how to keep K-12 girls engaged in STEM over time. She found that girls and women in STEM often faced a gender bias or lack of confidence when considering these careers.

DMACC-Ankeny STEM Festival



Helping People, Changing the World



STEM
The Science Area Community College

- **FREE**
- **Hands-on!**
- **Family-friendly**

Register at:
scstemhub.drake.edu

October 28, 2014

6:00-8:00pm

DMACC—Ankeny Campus

Science • Technology • Engineering • Math

To register, visit: scstemhub@drake.edu
Sponsored by Drake's SC STEM Hub

GREATNESS
STEMS
FROM IOWANS

"If a woman, or anybody, wants to pursue a career in STEM, she or he should do whatever it takes," advises Goodes. "STEM careers provide an opportunity to be a part of an innovation that could change someone's life."

Besides her work in STEM, Goodes is a youth council member of the NAACP and serves as a youth advocate on the board of Jewels Academy. Goodes hopes to attend Drake University, majoring in business and eventually getting a degree in law.

Her goal is to become a family lawyer, but it seems her heart will stay with STEM. "I will continue to be a part of Jewels Academy," she says, "to support and mentor young girls in STEM."

*** Register [HERE](#) to attend! (walk-ins welcome) ***
*** Want to host a booth? Click [HERE](#)! ***

WHEN: October 28, 2014

TIME: 6-8 PM

LOCATION: FFA Enrichment Center Atrium at DMACC Ankeny

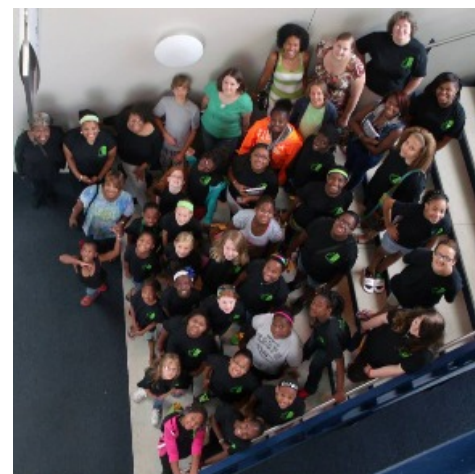
AUDIENCE: Free, family-friendly fun; open to the public.

Presenters from business and industry, high schools and colleges, and student and professional groups will feature interactive booths.

Join the fun for great learning activities, hands-on demonstrations, giveaways and make-and-takes.

Hosted by DMACC's Ankeny Campus and the SC STEM Hub.

If you have any questions, please email Sarah Derry/Lisa Morlock at:



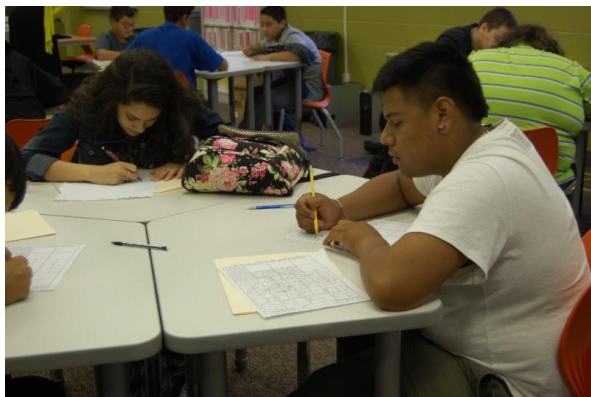
**Young Emerging
Scientists Program**

scstemhub@drake.edu.



Room 2095: Eric Hall, left, and Maureen Griffin meet in one of several work areas. The room is perfect for brainstorming, partner work, personal technology use, project meetings, video conferencing and large group work.

Hoover High School Celebrates New STEM Classrooms



Hoover PLTW students work at tables that reconfigure

"This is my passion," said Maureen Griffin about Hoover's STEM Academy. This fall, Griffin and the Hoover High School community saw their STEM vision become a reality.

Hoover was one of four schools who applied for and received \$50,000 from Iowa Governor's Council STEM Initiative. Des Moines Superintendent Tom Ahart

for Girls

Des Moines' Jewels Academy is now taking applications for their Young Emerging Scientists program for girls. All applications due by Sept. 30!

WHERE: DMACC Urban Campus

DATES: October 11 and October 18

WHEN: 9:30 a.m. - 12:30 p.m.

FEE: \$20 for one for both days

DETAILS: A light lunch provided.

Register [HERE!](#)

Jewels Academy is dedicated to working with girls from all diversity and socio-economic backgrounds.

Hub Materials for Check Out

several different ways. "It's really satisfying to see students who go on to engineering programs," said Chris Knee, PLTW instructor.

In a gala hosted at Hoover on September 17, students, teachers, administrators, parents, community members and special guests celebrated their success. "Hoover has started attracting the best teachers," said Ahart during the celebration's presentation. "The kids are responding beautifully...It's the best thing to do for students, and that is what Hoover is about."

Bouncing Chairs and More

The funding and energy has initiated updates in four crucial areas of the building: a PLTW classroom, industrial engineering workshop and ELL math room. But the majority of money and design effort has gone into room 2095. The room features four screens, whiteboard tables, Zenergy Ball chairs, relaxed work areas, tall counters and stools, an interactive whiteboard, a discussion island and much more.

Griffin knows state of the art rooms and technology offer advantageous learning environments. "I want for every kid who walks through Hoover to have the best possible success." With an STEM champion like Griffin and many others who support her vision, Hoover students are sure to have more incredible opportunities.

What's so great about room 2095?

One Room: Two Views

A Student's Perspective: Sophomore Colby Williams' AP Chemistry class is one of many that sometimes meets in room 2095. The room is perfect for group communication and individual work. "Just walking in the door makes it easier to learn," says Williams. "You feel comfortable and energized."

The quality of small group and individual projects have



Alexandra Casey, right, teaches ELL Algebra, Geometry and AP Statistics from a newly renovated STEM room. Students can access 20 revolved tablets, a whiteboard table, a tall island for individualized help and more.



Colby Williams is part



Grace uses one of the SC STEM Hub's Samsung Tablets for Drake's App Camp. Teachers may check out up to 30 tablets for classroom use.

Come check us out! The SC STEM Hub has a library. Materials may be borrowed for 1-6 weeks, depending on the item. They can be picked up and returned to Drake University's School of Education. Please replace any consumables you use. You're also responsible for any damaged items. Some kits require teacher training.

Click [HERE](#) for our inventory list.

Questions? Email Sarah Derry at: scstemhub@drake.edu

improved. "You have the opportunity to Skype with someone who works in a lab everyday," says Williams. "It's great for research assignments."

of Hoover's STEM Academy.

It's changing the ways students learn, too. "The whole school has been transforming into a student-centered learning environment, more like college," she says. "You have to find answers yourself and go ask for help when you need it. It's challenging in lots of ways."

A Teacher's Perspective: Tiffany Roby knows a lot about STEM education. She got her undergraduate degree, master's in teaching, and doctorate in instructional leadership from Drake University. Currently, she teaches chemistry and AP chemistry at Hoover, where she often uses room 2095.

Roby divides her time between a traditional chemistry lab and the new classroom. "For research days, we're in there all the time," says Roby. "Students work on pre-labs and problem-solving. They're all engaged."

Not only does the space change how students learn, but it also changes how teachers teach. "Students arrive at a project in many different ways," says Roby. "Using the various learning areas of this room helps remind me of best practices. You have to keep an open mind and be willing to take some risks."

Inspiring STEM

SC STEM Hub's Advisory Board Member Kim Wayne

Kim Wayne does it all! By day, this SC STEM Hub Advisory Council member works as the CIP Regional Manager at Siegwark. Her job is to deploy Lean and Six Sigma, which are methodologies that enable manufacturers to make a product with less waste and as quickly as possible. By night, she devotes countless hours to community endeavors. She is the founder and executive director of Jewels Academy, which is an organization that hosts STEM workshops for girls.

"I am interested in STEM education

Vermeer®



Vermeer Hosts Manufacturing Day

DATE: Oct. 3, 2014

LOCATION Vermeer in Pella, IA

Vermeer is looking forward to Manufacturing Day on Friday afternoon, October 3, with the goal of expanding general knowledge of manufacturing and the varied skill sets and careers involved.

They are focusing on 6th and 9th graders from area school district communities that have the highest numbers of Vermeer team members, as well as their community leaders.

The open house style event will include booths representing approximately 20 areas of the business. Each representative will be able to speak to his or her unique role and skill set, how

because I understand the positive impact it can have on our community," says Wayne.

Her interest in STEM began early with the support of her family. "My parents made sure that I had various experiences even as a child," said Wayne. "I preferred chemistry sets over dolls. I was very inquisitive."

Wayne explored STEM classes during middle school and high school. Before entering college, she intended to study pharmacy, but changed her mind. She wanted to take up engineering.

"My mentor, who was also my trigonometry teacher, tutored me an entire summer in preparation for a math entrance exam that I had to take in order to be considered for the engineering track," said Wayne. Thanks to those efforts, she obtained her chemical engineering degree.

Wayne now serves as a role model to the countless girls who seek out Jewels Academy programs. She has this advice for young people: "Prepare, prepare, prepare! Start planning early. Seek out what you like to do and incorporate STEM into it. Your opportunities are endless!"



Both having a mentor and being a mentor have played important roles in Wayne's life.

STEM Results

Iowa schools score in top 10 on international test

Select Students Take PISA

Six hand-selected Iowa schools took part in the Organization for Economic Cooperation and Development's (OECD) 2013 PISA test. The high schools include two from the SC STEM Hub's region, Pella and Adel-DeSoto-Minburn, as well as Ames, Cedar Rapids Washington, Cedar Rapids Kennedy and Decorah.

it impacts the world, and offer a hands-on activity or question that will complement that discussion and/or highlight a related STEM concept.

Students will be encouraged to track their progress through the areas with a scavenger hunt. Plant tours will also be available through a pre-event registration for students most interested in the production environment.

Questions? Please contact:

Teri Vos

Public Relations Manager

terivos@vermeer.com

Spread the word about STEM EVENTS in your community!



The average American only spends five percent of his or her lifetime in a classroom. That means lots of learning takes place outside of the school day. Help fill that other 95 percent with fun STEM events!

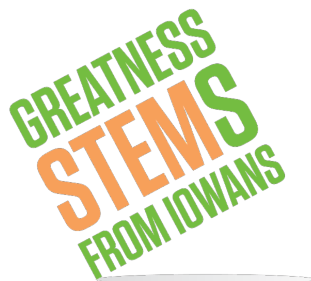
**Visit the South Central
STEM Calendar**

The PISA exam is given every three years and measures how well countries are doing in the areas of science, reading and math. The United States has continually scored low on these tests, possibly due to the democratic nature of the educational system.

To provide a better comparison, some of Iowa's top-rated school districts were invited to participate, thus providing education officials a more accurate comparison of how America's best students compete with the best students from other countries. The opportunity was funded by a grant from The Kern Family Foundation. Their results were listed under Iowa only—not the collective United States. And the scores were surprisingly good.

Measured together, Iowa's six partner schools performed in the top 10 among their international peers. Students scored fifth in reading, ninth in mathematics and fifth in science.

In a recent press release, Lt. Gov. Kim Reynolds, co-chair of the Governor's STEM Advisory Council, said, "I'm extremely pleased by the performance of the six Iowa high schools on the OECD Test for Schools. Their focus on continual improvement is an important lesson as we work to give all Iowa children a world-class education."



Events

Add these dates to your calendar!

Oct 4-5 [Creek Freaks](#), metro area

Oct. 8 EiE Training, Drake

Oct. 9 EiE Training, Heartland AEA, Adel

Oct 9 Pint-Size Science Training, Indianola - Nat. Balloon Mus.

Oct 10 Pint-Size Science Training, SCI-Iowa

Oct 18 Pint-Size Science Training, SCI-Iowa

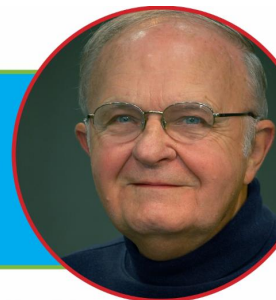
Oct 21-22 [ICTM - ISTS Math Science Conference](#), ISU

Oct 28 STEM Festival, [Ankeny's DMACC Campus](#)

To submit your STEM event, click here!

Nominate an educator today! Active Learning Award

Dr. Robert E. Yager
is an internationally
known champion of
inquiry-based
science education.



The Iowa Children's Museum is proud to present the 3rd annual **Robert E. Yager Active Learning Award**.

Click [HERE](#) to nominate someone. Nominations due October 14, 2014.

The honorees will be selected on October 15th and recognized at this year's Boots & Bling 15th Birthday Bash!

Please help recognize educators who exemplify the best of active learning in their classrooms.

From Sarah Derry...
**Hub Support
Update**

Nov 1 FIRST Tech Challenge Training, Drake - Olmsted Center
June 15 CASE Training, TBA

I wanted to take the opportunity to introduce you to the South Central STEM Hub Associate Manager, Lisa Morlock. Lisa will be your



primary contact for any SC Hub needs while I am on maternity leave this fall - roughly from Oct-December.

Lisa has been with the hub since last November. She is a former school administrator, published STEM children's book author, and the mastermind behind most of the Hub's communications.

She is also well supported by the Drake hub Principal Investigator, Dr. Jan McMahon, our budgets and contracts expert, Senior Grants Accountant Kathy Horner, and the rest of the Drake staff. You will be in excellent hands.

Thank you,
Sarah Derry, SC STEM Hub Manager



[Forward this email](#)



This email was sent to scstemhub@drake.edu by scstemhub@drake.edu | [Update Profile/Email Address](#) | Rapid removal with [SafeUnsubscribe™](#) | [Privacy Policy](#).



SC Iowa STEM | 3206 University Ave | Des Moines | IA | 50311