

South Central STEM Hub Newsletter

**GREATNESS
STEMS
FROM IOWANS**

Drake
UNIVERSITY

SOUTH CENTRAL IOWA REGION GOVERNOR'S STEM ADVISORY COUNCIL

Ottumwa's iExplore Festival



Photo Collage of Indian Hill's Community College iExplore Festival

Over 20 organizations hosted hands-on STEM activities at the festival. "I'm here to share my enjoyment of science," said Gavin Warnock of Warnock Arts. "And to show that science can be beautiful."

Over 300 presenters and attendees flood

Ottumwa's i-Explore Festival

Where can you learn how to create a microscope out of your iPhone or see germs living on your hands? Ottumwa's iExplore Festival! Sponsored by the SC STEM Hub of the Iowa Governor's STEM Advisory Council, Indian Hills Community College hosted the event on March 11 from 5:00-7:00 pm.

Festival attendees came from all over south-central Iowa. Stephanie Lukavsky, a Sigourney teacher, brought a bus load of 6th, 7th and 8th graders. "This event

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Bondurant-Farrar's Donovan Hill received a grant for A World in Motion. TAG students work on fuel cell cars in the photo above.

Apply Now!

2014-15 Scale-Ups

The following programs were selected as scale-ups for the 2014-15 school year. Any educator, from Scout group to school districts may apply for these grants.

The DEADLINE is MAY 2, 2014!

1. A World in Motion
2. CASE
3. Defined STEM
4. Engineering is Elementary
5. FIRST Tech Challenge
6. HyperStream
7. KidWind Renewable Energy

is an excellent opportunity for the kids. They are loving it, and the presenters are wonderful."

Presenters included college professors, post-secondary students, and high school groups. Kim Mitchell, Centerville High School's FBLA adviser, brought their award-winning robotics team to demonstrate some of their HyperStream activities. "My kids get to show off what they're doing with green screen technology. It's so good for the program when younger students see older students participating in STEM activities."

Pella's Central College hosts the next iExplore Festival. Click [HERE](#) for more information and registration!



In this tug-of-war, students learn the properties of rubber.

STEM Happens



As part of HyperStream's service project, the group hosted a metro-area technology conference, complete with keynotes and breakout sessions. Anna Shapiro helped with the event, "A lot of people seemed to really like the conference. It encouraged students to take charge of their own learning."

Waukee High School's STEM Champion Michelle Hill

Michelle Hill's secrets to success might be her gift of organization and encouragement of student-leadership. With over 60 participants in Waukee High

8. SCI Pint Size Science
9. Project Lead the Way: Engineering
10. Project Lead the Way: Gateway

Click [HERE](#) for project information.

Click [HERE](#) for an application.

Pella's iExplore Festival
Central College
April 1, 2014
6:00-8:00 PM



Click [HERE](#) to register!

Interact with STEM booths and displays at this family-friendly event.

Please contact Sarah Derry at scstemhub@drake.edu with questions

**Reminder for 2013-2014
Scale Up Recipients:
Evaluation
Forms Needed
by May 16**

School's award-winning Hyperstream program, Hill's door is always open for work time and guidance.

"The students come up with incredible ideas," says Hill. "You just can't do these types of projects in the classroom. To see students produce work that's beneficial and useful is just invaluable to their future."

Each Thursday, students work on multimedia projects, community service, cyber defense and gaming. SC STEM Hub grant money was used to purchase equipment.

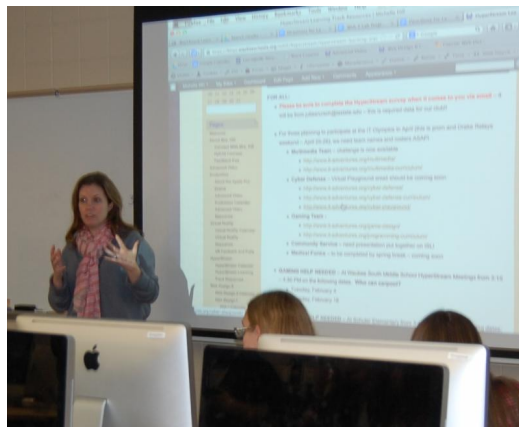
Sophomore Hannah Hoth says her favorite part is using her creativity and learning new programs. "I want to be a graphic designer when I grow up, so this is good experience."

Hill also credits much of the team's success to their dedicated community mentor. John Deere's Matt Poush has volunteered for the last seven years and coordinates the cyber defense team. "I started with the pilot project and just kept coming," says Poush.



"Some after school activities feel like another class," says Junior Jacob Paisley, "but Ms. Hill encourages us to solve our own problems."

Junior Jacob Paisley says, "I like that we're sort of on our own. Ms. Hill has created a great environment. We make our own successes here."



Hill presents the challenges of the day before student leaders take over. "This room has become a work place for anyone looking into their technology interest," says Hill.



Gina Laidlow models Engineering is Elementary's Pinball Project with her Monroe Elementary students. Laidlow received a STEM grant that included materials and training.

Q: Why go to such trouble for a report
A: The State needs data to continue funding best practices. By reporting your school's information, you may be helping all Iowa students gain more access to STEM programming.

Please take a moment to complete these 3 Scale-Up Monitoring activities

For a link to the 3 activities included, click [HERE!](#)

- 1.) teacher/leader survey,
- 2.) compiled student participant list
- 3.) student surveys.

The Scale-Up Monitoring link will take you to a dedicated site which hosts all the documents, survey instruments, spreadsheets, and links that implementers will need to complete the 3 STEM Scale-Up Monitoring activities. Instructions for each activity are included in the monitoring packet can be accessed at that link as well.

Need help? Please email Sarah Derry at scstemhub@drake.edu.

When a moment molds a mind...
Volunteer for STEM!



"This class is challenging sometimes," says Regan, 7th grader. "We run into some problems. We try to figure them out, but sometimes we have to ask Mr. Hill."

Donovan Hill challenges TAG students



"I think it's better to work on projects like this with a partner," says 8th grader Caleb. "You can bounce ideas off each other."

In Donovan Hill's classroom, it's cool to be smart. He works with Bondurant-Farrar's 7th/8th grade talented and gifted students. Hill constantly seeks new hands-on challenges for his students.

"I think hands-on projects are awesome," says Jenna, 7th grade. "They're easier to understand, and it's so much better to be active than to just sit and listen."

Some might remember a tv show called *MacGyver*, in which the hero used everyday science to save the day. Hill has taken that concept and applied it to a term he calls his classroom MacGyver Challenges. "Everyday is a challenge, and that's good," says Joseph, 8th grader.

This year, Hill received an SC STEM Hub grant for a fuel cell car project from A World in Motion. The unit includes discussions on electricity, friction and molecule separation. Hill also brought in a mentor to talk about the engineering process. With a partner, students are given a fuel cell car kit to construct and comprehend.

"I feel like a lot of people could put this together," says 8th grader Cassie, "but I'm not sure



Kenji Yoshino (pictured above at Ottumwa's iExplore Festival) invented a way to turn an iPhone, iPod or iPad into a microscope. Using a free app he created and \$10 in supplies, you can learn how to make your own by clicking [HERE](#)

STEM needs you!

Whether you have one evening a year or one hour a week, you can be a STEM volunteer.

Visit STEM's calendar or go to the [SC STEM Hub website](#) and click "Find a Scale-Up near you!" for the list of schools awarded '13-'14 Scale-Up programs.

Contact a school in your community to see how you can help.

Register now!



they could understand the technology that makes it work." That's the connection Hill hopes to make in his classroom.

Hill's influence reaches past the TAG program. "Mr. Hill helps me look through high school classes and make good choices," says 8th grader Carson. "He goes above and beyond for all of us."



Dav and Joseph brought an extra motor from home to see how it would change motor consistencies. "Mr. Hill thinks of interesting ways to learn," says Dav, "and lets us do things in creative ways."

A preschool force of nature Norwalk's Leah Cole



Cole holds one of the swing sets her students built. "They're learning science, math and writing skills," she says.

and apply the concept of force to their swing set activity and a past activity they did with a toy slide. In addition, they record results in a simplified lab report.

"They're starting to understand force and some other science concepts," notes Cole. "Others are really doing well with their writing skills by filling out the lab sheet."

Using a box of K'Nex, A World in Motion's curriculum and directions for a toy swing set, Leah Cole teaches four-year-olds the concept of *force*.

"All of the kids really enjoy this project," says Cole. "They respond really well, even though they're at different developmental levels."

Cole, a preschool educator at Norwalk's Oviatt Elementary School, received one of this year's SC STEM Hub grants.

Cole has a talent for taking complicated scientific terms and presenting them in a way her students understand and model. At the end of the lesson many could define

3rd Annual Iowa Statewide STEM Conference

DATE: March 28, 2014
TIME: 8:45 am-4:30 pm
LOCATION: Community Choice Crec
Union Convention Center
Iowa Events Center complex
ADDRESS: 833 5th Avenue
Des Moines, Iowa

To view the whole agenda, click [HERE](#)

To register, click [HERE!](#)

Join the Governor's STEM Advisory Council for the Third Annual Iowa Statewide STEM Conference on March 28 in Des Moines, Iowa.

A profile of the Governor's STEM Advisory Council programs and setting course for the future of STEM in Iowa will be the key components of the day agenda. Iowa's own Ben Milne, founder of Dwolla will keynote.

Educators, business leaders, school administrators, parents, active learning community partners, policy makers and other interested parties are all welcome to join in the conversation about STEM. Registration is free and open to the public. Further information regarding directions, parking, lodging, etc. can be found on the registration site above. Hope to see you there!

**Spread the word about STEM
EVENTS in your community!**

Events

Don't miss these spring events:

Mar 28 [Statewide STEM Conference](#), Des Moines
April 1 [iExplore Festival](#), Pella
April 12 [SCI Girls Coffee and Careers](#), Des Moines
April 18-19 [Blank Park Zoo--Water Wonders](#), Des Moines
April 22 [America's Top Scientist--Grades 5-8](#), Online
April 24-25 [Impact After School Conference](#), Johnston
April 24-25 [Environmental Issues Instruction](#), Mt. Vernon
May 2 [Deadline for LEA Scale-Up Applications](#), Online



Would you like your class or community featured in this newsletter? If so, please email Sarah Derry (pictured above) at scstemhub@drake.edu

**Visit the South Central
STEM Calendar**

To submit your STEM event,
click here!



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