

South Central STEM Hub Newsletter



science | technology | engineering | mathematics

South Central STEM Region at Drake University

STEM Happens

STEM at the Iowa State Fair: Robots, Rockets, and Ridiculously Large Insects

STEM descended upon the Iowa State Fair with a free, hands-on festival celebrating science, technology, engineering and mathematics. Here are some of the highlights:



Is it magic? No it's science! Joe Schwanebeck from the Science Center of Iowa demos a ketchup-packet cartesian diver

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Meet the new SC STEM Hub Manager, Dr. Sarah Derry



A native Iowan, Sarah earned a B.S. In Genetics from Iowa State University and a Ph.D. in Biology from the University of Iowa. She worked in transgenic analysis at DuPont Pioneer in Johnston, and taught physics, chemistry, and biology in a low-income, urban high school in Texas. Most recently, she served as the SC STEM Associate Manager.

Sarah assumed manager duties on July 1, 2013 and is thrilled to serve in this new capacity.



STEM Gem Dr. Albert Wiggins blows fair-goers away (not up) with the power of chemistry



Close encounters with our insect friends from Iowa State University's Traveling Insect Zoo

STEM Scale-Up Professional Development in full swing.

Camp in a Can

Scientific inquiry is more fun than

The previous manager, Dr. Kris Kilibarda, returned to her position as education department chair and associate professor of education at Central College. Kris was granted a one year leave-of-absence in July 2012 to kick-start the STEM initiative. She continues to be a great champion for Iowa STEM.



The entire South Central Iowa Region has been awarded Defined STEM as a scale-up program.

This online resource provides common core standards-aligned performance tasks, literacy tasks, and real-world video to enable students see the relevance of what they are learning.

Defined STEM is available to formal and non-formal educators in South Central Iowa. Contact Brad Furber (brad_furber@definedlearning.com) to obtain your unique login and start using this resource that the SC Hub purchased for you!



Applications for Redesigned



Kirkendall Library staff is all smiles doing the "Honey Bee Hula"

going summer camp with Camp in a Can. South Central Iowa educators from libraries, after school programs, and home school programs focused on the experience of inquiry without being a content expert. Participants danced the "Honey Bee Hula" to communicate, and made "Frog Eggs" (who knew colloids could be so delicious?). With a little content knowledge and a lot of fun, these educators built confidence in teaching natural science.

Hyperstream

Hyperstream clubs create strong

business mentoring partnerships. With technology professionals and educator leaders, students collaborate to create technology-based projects. Clubs compete at IT-Adventures in the spring, choosing projects in robotics, game design, cyber defense, or multimedia. This student-guided approach helps students to realize how technology can help them pursue their interests. Involving technology professionals in club leadership exposes students a breadth of technology careers.



Returning tech professionals and teacher champions share best practices at Hyperstream training.

Iowa STEM Scale-Up Professional Development Schedule

Governor's STEM Initiative Year 1: A strong start, with plenty of work ahead

Assessment of STEM Council programs is a collaborative effort of evaluation centers at Iowa's three public universities - the Center for Social and Behavioral Research (CSBR) at the University of Northern Iowa, the Research Institute for Studies in Education (RISE) at Iowa State University, and Iowa Testing Program (ITP) at the University of Iowa. The collaborative has issued their first year report [Iowa STEM Monitoring Project 2012-2013 Summary Report](#).



Major findings of the first-year assessment provide plenty to build upon. For example:

- All twelve of the 2012-13 exemplary programs scaled up across

STEM Learning Environments are due August 30, 2013.

Spread the word about your STEM Back-to-School EVENTS!



Add them to the South Central STEM [Calendar!](#)

[Submit your STEM event here!](#)

Are you on fire for STEM?



Be a role model. Share your STEM skills and story in your community.

Want to share your STEM skills and story in your community? Go to the [SC STEM Hub website](#) and click "Find a Scale-Up near you!" for the list of

Iowa through the new STEM Network were found to increase student interest (89 percent of students reported more interest in at least one STEM subject after having participated).

- A steady decline is observed in the interest of Iowa youth in general when it comes to STEM topics and STEM careers, from elementary to middle school to high school.
- Ninety-four percent of surveyed Iowans believe that science and technology are making our lives better.
- The Iowa Assessment mathematics and science scores of participants in STEM Council programs were considerably stronger than the scores of young Iowans in general (an encouraging association though evaluators point out insufficient information to conclude causation).

schools awarded '13-'14 Scale-Up programs. Contact a school in your community to see how you can help. You will also find a calendar of STEM events, and other ways to get involved!



The Council's co-chair, Lieutenant Governor Kim Reynolds greeted the findings with cautious optimism, "The fine work of the assessment team boosts the morale of the hundreds of professionals across the State who are working hard to implement the Council's vision," she said, "while at the same time we're reminded of the haves and have nots in Iowa when it comes to STEM who we owe our very best effort moving forward."

Council co-chair Mary Andringa, President and CEO of Vermeer Corporation, said "Data-driven decision making informed by objective measures will keep us on the front edge."



Drake University opens Sprout: The Des Moines Urban Youth Garden

This outdoor classroom was designed for use in environmental education, service-learning experiences, and community outreach. The space has capacity for 50 children or 30 adults and may be reserved by Drake faculty, staff, and

students to support learning, reflection, and community engagement. Check out [Sprout](#) for more information about the garden, sponsors, and some delicious recipes.

Events

Don't miss these upcoming STEM events!

- Sept 6 [Defined STEM PD](#), Des Moines
- Sept 20 [STEM Teacher Educators' Conference](#), Des Moines
- Sept 23 [Carolina STEM PD](#), Johnston
- Sept 24 [Carolina STEM PD](#), Johnston
- Sept 25 [Carolina STEM PD](#), Ottumwa
- Sept 28-28 [Midwest Environmental Ed. Conference](#), Coralville
- Oct 1 [A World in Motion PD](#), Des Moines
- Oct 1 [STEM Active Learning Conference](#), Johnston
- Oct 23 [ICTM-ISTS Fall Conference](#), Des Moines

Oct 29 [Lecture by Neil deGrasse Tyson](#), Des Moines
Nov 4-5 [ISCA \(School Counselors\) Conference](#), Des Moines
Nov 8-10 [Environmental Issues Instruction](#), Pleasant Hill

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