



Summer 2013 Newsletter



Science - Technology - Engineering - Mathematics

See more below about:

STEM Day at the State Fair Exhibitors

2013 MN STEM Network Annual Conference Outcomes

Midwest STEM Forum

Cradle to Career Initiative

Medtronic STEM Diversity Forum

3M Teachers Workshop

STEM Day at the State Fair - Thursday, August 22nd

STEM Day at the State Fair promises to present another great day full of family fun on opening day of the Minnesota State Fair.

The 2013 STEM Day is growing beyond the bounds of Carousel Park. Be sure to see the exhibitors along Dan Patch Avenue west of Martha's Cookies. Extra large venues will be located there including the mobile labs of St. Cloud State University and cars designed and built by students participating in the super high-mileage competition.

Please see this year's exhibitors and stage performers in the article in the left column.

SciMathMN and STEM Day participating organizations thank our sponsors for making STEM Day possible.

*University of St.
Thomas Engineering
Education Fall courses*

SciTechsperience Internships

**Dates for 2013
Statewide Tour of
Manufacturing**

**SciMathMN is a
non-profit,
statewide
education and
business coalition
advocating for
quality K-12
science,
mathematics and
technology
education based
on research,
national
standards and
effective**



practices.

**Major initiatives
include
policymaker
briefings, the
[STEM Teacher](#)**

STEM Day at the State Fair is
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Thanks also to the 2013 STEM Day committee: Co-chairs - Tim Barrett, MHTA; Cheryl Moeller, High Tech Kids; Dennis Harvey, MTS Corporation. Committee members - Ron Bennett; Jim Field, MN Independent School Forum; Anne Hornickel, University of Minnesota; Peter Lindstrom, SciMathMN; Julie Michener, St. Catherine University; Doug Paulson, MN Dept. of Education; Michelle Ponsolle, MN Independent School Forum; Anika Taylor, The Bakken Museum; Carolyn Williams, St. Cloud State University.

St. Catherine University Hosted the Fourth Annual Minnesota STEM Network Annual Conference

The fourth annual conference of the Minnesota STEM Network was held on May 15th at St. Catherine University in St. Paul. Over 160 attendees of this year's conference enjoyed an outstanding keynote by Dr. Linda Rosen, CEO of Change the Equation. She portrayed Minnesota's position in STEM education in multiple dimensions compared to other states.

Thirty-five breakout sessions featured exemplary STEM programming and collaborations across sectors, with the



Center online resource and the Minnesota STEM Network.

The Minnesota STEM Network strengthens collaborations among business, education, civic and community leaders to increase the appeal of science, technology, engineering, and mathematics and communicates its importance to Minnesota's future; promotes opportunities for students and their families to engage in high-quality STEM experiences; and fosters continuous improvements in STEM teaching and learning.

[MN STEM Network](#)

STEM Diversity Forum
Tuesday, August 13
12:00 - 5:00pm

purpose of sharing strategies and great practices with colleagues across the state.

Our conference reached a new dimension this year by offering the SciMath update, keynote speaker, and 20 of the 35 breakout sessions via live webcast. These recordings will be available on the SciMathMN website later this fall once the site is upgraded.

SciMathMN greatly appreciates that this annual conference was co-sponsored by [St. Catherine University](#), its [National Center for STEM Elementary Education](#), [Boston Scientific](#), and [University of St. Thomas Center for Pre-Collegiate Engineering Education](#).



Minnesota STEM Network participated in the Midwest STEM Forum, held June 10-11 in Des Moines

Ten state STEM networks participated in one and a half day conference in June to learn from one another's efforts in coordinating statewide STEM networks and related statewide STEM education initiatives.



Participating states included Indiana, Illinois, Wisconsin, Minnesota,

Medtronic World Headquarters, Fridley

The Medtronic is hosting its first STEM Diversity Forum, featuring STEM diversity leaders from professional engineering societies, academia, and high tech companies. Panel discussions will address partnerships and best practices by universities and high tech companies toward building a diverse workforce and leadership.

The forum will build awareness of STEM diversity efforts and offer opportunities to network, collaborate and increase impact. Its audience will include company employee resource groups and affinity groups, academic and industry diversity leaders, and others interested in the topic.

RSVP

to: <http://medtronicguides.com>
eventbrite.com. Light refreshments will be provided.



Medtronic

Iowa, North Dakota, South Dakota, Nebraska, Missouri, and Kansas. The Iowa Governor's STEM Advisory Council organized the event and the World Food Prize Institute hosted the meeting in Des Moines.

Each state STEM network or representative from their state presented a brief summary of activity as well as current challenges they are addressing. Business leaders from Iowa and Minnesota described their leadership in promoting and supporting STEM education.

Anne Hornickel presented on behalf of the Minnesota STEM Network. Marilee Grant of Boston Scientific (pictured left) and Caryn Mohr of the Wilder Foundation (pictured right)



presented the Cradle to Career initiative on metrics being developed for Minnesota Compass with support from Boston Scientific. (See separate article.) Of particular interest from presentations by other states:

- ACT's expressed interest in working with states to provide them summaries of STEM interest and proficiency data
- [Illinois Pathways Initiative](#)
- [Iowa STEM Education Roadmap](#) strategic plan
- Wisconsin has developed a similar strategic plan called [Wisconsin STEM: Navigators to the Future](#)
- Iowa's program conducted research into public awareness STEM education issues and attitudes. Between July and September 2012, they conducted phone interviews with 2010 adults from the general adult population, parents of 4 - 11 year-olds and parents of 12 - 19 year-olds. Concerning awareness of the STEM acronym, 26% of Iowa's adult population know the acronym, but 65% are aware of the focus on science, technology, engineering and mathematics education

More specific information on the meeting is available at the [Iowa STEM website](#). The Forum anticipates meeting annually. Thanks to Jeffrey Weld, executive director of the [Iowa Governor's STEM Advisory Council](#), Lieutenant Governor Kim Reynolds, and Kari Jastorff of Iowa STEM.

Statewide Tour of Manufacturing

The Dream It Do It campaign will host the third annual Statewide Tour of Manufacturing on October 24 - 26. Last year over 50 companies and community colleges held open houses during the tour. For updates on participating manufacturers visit the [Statewide Tour of Manufacturing](#) website.

Please promote this event to your audiences and through your communications and social media.



Presenters at the 2013 STEM Day

Exhibitors:

- The Exploradome of the Bell Museum of Natural History

New Resource for STEM Data to Launch in Fall, 2013

Cradle to Career Initiative, a project of Boston Scientific and the Wilder Foundation

Data on key indicators along Minnesota's STEM cradle-to-career continuum will be available on a new STEM section of Minnesota Compass in fall 2013. Data will be provided in user-friendly formats and accessible through an interactive visual of Minnesota's STEM cradle-to-career continuum. Minnesota Compass is a community indicators project of Wilder Research. The new STEM section is being developed with funding from Boston Scientific and input from a diverse group of STEM stakeholders including many members of the Minnesota STEM Network.

In spring 2013, more than 70 STEM stakeholders convened to provide input on potential indicators and a research-based framework for monitoring the STEM cradle-to-career continuum. Committee members reflected a variety of sectors, including early childhood, K-12, post-secondary, informal education, business, policy, research, foundations, metro, outstate, and other sectors.

Wilder Research is in the process of finalizing the framework based on committee input, compiling data and resources, and developing the new section of the Minnesota Compass website.

Look for announcement of the site's launch in the fall. For more information on this project, contact [Caryn Mohr](#), Wilder Research, or [Marilee Grant](#), Boston Scientific.



Measuring progress.
Inspiring action.

mncompass.org

- MTS Corporation
- 3M Visiting Wizards
- High Tech Kids/ KidWind
- Emerson Process Mgmt
- MN Future City Competition/MATHCOUNTS
- FIRST Tech Challenge/FIRST Robotics
- Science Guy – Bill Kuhl/MN - Space Grant Consortium
- MN State High School Math League
- STARBASE Minnesota
- Boston Scientific
- U of MN Extension 4-H
- Minnesota Zoo
- Cedar Park School
- Farnsworth Aerospace Magnet School-Johnson High School/ AirSpace MN
- South Central College
- MN High Tech Association
- Shattuck-St. Mary's School
- MSU- Mankato
- St. Cloud State University
- Duluth Children's Museum
- Project Lead the Way
- ATK
- Twin City Public Television
- U of MN STEM Education Center
- The Works
- St. Cloud State University Mobile Labs
- MTEEA Super Mileage Vehicles
- U of MN GOFIRST
- Alliance for Women in Media of Minnesota

Stage Performers:
 Univ. of MN Physics Force
 Univ. of MN Chemistry fraternity, The Bakken Museum

Minnesota Students win First Place in the Skills USA National Competition in Kansas City

Austin Cash, Hunter Black and Brady Roden representing Technical High School of St. Cloud won First Place in the SkillsUSA Engineering Technology/Design contest last month. They qualified to travel to the national competition by winning the state title last March.

Alex Mahronic of Alexandria Technical College won First Place in CNC Milling at the College/Post-secondary level. Congratulations to these national champions!



Fall Engineering Education Course for Teachers University of St. Thomas, St. Paul campus

Interested in learning more about the "E" in STEM? Enroll now in the fall session of Fundamentals of Engineering at University of St. Thomas. This practical course provides a broad engineering experience and includes the following topics: electronics, machine design, manufacturing engineering, computer programming, thermodynamics, statics, fluids and mechanics of materials. The class will include hands-on activities, links to academic standards (including Next Generation Science Standards) and discussion of the current/historical importance of the topics. For more information contact [Deb Besser](#). [Link to application](#).



3M Teachers Workshop for Elementary and Middle School Teachers

**Friday, October 4, 3:00
- 6:30pm 3M
Headquarters,
Maplewood**

The 3M Teachers Workshop is geared for elementary and middle school teachers from MN and WI. The goal is to share how science is fun and generate excitement for science in the classroom. The Wizards present themselves as role models for fun science careers and give teachers fun "make-n-take" science activities that might be applicable in their classrooms.

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and LinkedIn**

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the latest in STEM news
and events.

[MNSTEM group](#)



SciTechperience

STEM college students gain valuable work experience through MHTA's SciTechperience

The Minnesota High Tech Association (MHTA) has developed SciTechperience, a statewide, paid internship program that connects college students in STEM fields to hands-on opportunities in small- and medium-sized Minnesota companies. MHTA was recently awarded increased funding from the State that, over the next two years, doubles the number of annual internships it can support. SciTechperience will place 100 students in 2014 and 125 in 2015.

A new application process will launch in October for the 2014 year, as well as increased outreach with student groups, particularly with women and minority STEM students, and spreading the word about this opportunity to small and medium-sized companies across Minnesota.

Carla Pulles, a Bioproducts and Biosystems major at the University, is pictured at right with Margaret Anderson Kelliher, President & CEO of MHTA, and State Representative Kurt

Aspen



Zellers. Carla interned at Research in 2012 and 2013.

If you are interested in learning more about how to participate in SciTechperience, please contact Becky Siekmeier at beckys@mhta.org or visit the [SciTechperience website](#).



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www.scimathmn.org
Email: info@scimathmn.org

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SciMathMN
c/o Humphrey School of Public Affairs
130 Humphrey School, 301 19th Avenue South
Minneapolis, Minnesota 55455
US



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