Spring 2016 Newsletter

MINNESOTA STEM NETWORK

POWERING STEM LEARNING AND INNOVATION ACROSS MINNESOTA

AN INITIATIVE OF SCIMATH MN

Engaging stakeholders from the broader community to advance quality STEM education for all learners

Science - Technology - Engineering - Mathematics

Letter from the SciMathMN Executive Director

Our 7th annual conference, Powering STEM Learning with Computational Thinking, was a great success. The keynote speech by Sarah Young of the Utah Office of Education excited the crowd as she walked through the value of computer science for all students and steps to get there. You can find her PowerPoint on the SciMathMN website linked later in this newsletter.

The new federal education Every Student Succeeds Act (ESSA) has important funding challenges and opportunities for STEM education. A number of streams of funding were combined into block grants to be made to states. The key decisions on how the block-granted monies are used will made at the state level. Currently Congress and the White House are negotiating the level of appropriations in the different areas of ESSA. There's more on ESSA later in the newsletter.

As we engage on those issues we are already starting the planning for the best day of the summer, STEM Day at the Minnesota State Fair! On Thursday, August 25th STEM education providers will take over Carousel Park for a fun day engaging parents and most importantly youth in educational opportunities across science, technology, engineering, and mathematics. If you are interested in exhibiting at STEM Day, please see the application link in the article on STEM Day.

Jim Davnie
Executive Director
SciMathMN

Highlights from Minnesota STEM Network Conference
Powering STEM Learning with Computational Thinking
April 5, 2016

The Minnesota STEM Network convened its 7th annual conference on April 5th with a focus on computational thinking and its influential role in developing students' 21st century skills. Over 165 attendees participated in the conference.

Sarah Reeves-Young, STEM Liaison for the Utah State Office of Education and STEM Action Center, delivered a keynote entitled, "How #CSforALL Becomes#CSforMySTUDENTS--Building Partnerships and Scaling Computer Science for the State." She described partnerships with code.org and industry leaders to provide training for teachers. She also emphasized an equity focused approach underscoring access for all is about building that value into the planning. Her powerpoint slides can be found at www.scimathmn.org.

The conference held 12 breakout sessions. One breakout session by teachers and administrators in the Rosemount Apple Valley Eagan District focused on how computational thinking skills are integrated throughout elementary, middle, and high school curriculum.

Others sessions such as "From Consumers to Creators--Coding in the Elementary" engaged educators from the classroom and afterschool settings in "unplugged" activities that called for problem solving through ordered steps.

Thanks to our sponsor, 3M, represented here by Matt Ladhoff of 3M Gives, who introduced keynote speaker Sarah Reeves-Young.

Calendar Highlights

Mini-Maker Faire
Saturday, May 14
State Fairgrounds
Article at right.

Coding in the Classroom
May 16, 2016
TIES Event Center
Codingintheclassroom
mn.weebly.com

New Directions in IT
Education: A Faculty and
Industry Conference
May 19 & 20, 2016
North Hennepin Community
College, Brooklyn Park, MN

AdvanceIT MN invites industry professionals and academic leaders to convene and explore emerging employer needs at the 2nd Annual New Directions in IT Education conference.

Follow us on Twitter and LinkedIn

Follow @MNSTEMNetwork for the latest in STEM news and events.

Post announcements on MN STEM Network group on

Post and Find STEM Programming at www.mn-stem.com

Thanks also to our presenting partners for the 2016 conference:

Transition from No Child Left Behind to Every Student Succeeds Act

Overview of Implementation of New Law in Minnesota

The Every Student Succeeds Act (ESSA) is the most recent version of the Elementary and Secondary Education Act, and will replace No Child Left Behind (NCLB). NCLB has been in place since 2002. As the NCLB requirements are phased out, and the ESSA requirements are phased in, some of the NCLB requirements are carried forward. In some areas, the requirements have been modified, and in other areas, states have been given some flexibility in determining how to implement the requirements. The MN Dept. of Education is preparing the Minnesota plan throughout 2016.

For more information on what changes will be implemented and the timeline for the development of Minnesota's plan, read more on the scimathmn.org website.

Regional Network Update
Northeast Minnesota

The leadership team of the Northeast Region is working toward its 4th regional meeting anticipated for fall 2016. They are now planning a STEM program inventory for the region. Attendees of the half-day meeting will discuss outcomes of the inventory and access to STEM programming in rural Northeast MN with Congressman Rick Nolan in a setting similar to a town hall forum.

For more information, contact Moe Benda or Nancy Litman, co-chairs of the regional network.

Student Spaceflight Experiments Program -
Mission 11 to the International Space Station

Audience: School Districts Serving Grades 5-12, Informal Education Institutions, Colleges and Universities

Inquiry Deadline: May 27, 2016

The National Center for Earth and Space Science Education announces Mission 11 to the International Space Station. This opportunity gives students across a community

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the International Space Station. This opportunity gives students across a community the ability to design and propose real experiments to fly in low-Earth orbit on the International Space Station (ISS). One experiment in each community will be selected to fly to ISS. Mission 11 is open to school districts serving grades 5-12, informal education organizations and 2- and 4-year colleges. Interested communities must inquire about the program no later than May 27, 2016.

Contact: Dr. Jeff Goldstein, 301-395-0770

TPT Opens Two New Opportunities with SciGirls Programming

After a successful pilot year, TPT is now recruiting schools for Year 2 of SciGirls Strategies: Gender Equitable Teaching Practices in Career & Technical Education (CTE) for High School Girls. With funding from the National Science Foundation, SciGirls Strategies is a professional development and research initiative to recruit and retain more girls in CTE/STEM pathways, especially computing, engineering, and manufacturing. Read more on the SciMathMN site.

Energy Education for Educators (E3) Workshops
Hosted by the Minnesota Energy Center

The Minnesota Energy Center consists of 10 colleges in the Minnesota State Colleges and Univerisities system working together to provide energy education across Minnesota. Approximately 40 academic programs are offered through this group of colleges. These programs are developed and managed in partnership with a wide variety of energy industry businesses and corporations. The entire partnership is focused on preparing the best educated workforce in an effort to build and maintain the energy industries both now and in the future. For more information, visit energycareersminnesota.com.

The center offers free two-day energy education for educators workshops in the latter half of June at locations across the state. These workshops are best suited for high school teachers of science, agriculture, math & industrial technology. Link to details and registration information.

ZooMS Workshops for Educators
Minnesota Zoo

Three-Day Institute
August 15 -17, 2016
Time: 9:00am - 3:00pm
Grades: K-12 Educators
Fee: $50/person (Includes breakfast and lunch)
CEUs: Eighteen (18) available

This institute will engage teachers in utilizing animals and the Zoo as a tool to integrate engineering concepts into their curriculum, based on MN State Science Standards. Sessions will focus on Engineering BY animals, engineering FROM animals, and engineering FOR animals through activities, presentations and behind-the-scenes experiences.

ZooMS Institute 2.0
August 18, 2016
Time: 9:00am - 3:00pm
Grades: K-12 Educators

SAVE the DATE
Minnesota STEM   Call to Action Forum

October 6-7, 2016
MN Dept. of Education Conference Center Roseville

The Aerospace Industries Association in partnership with AirSpace Minnesota and the Aerospace States Association will host a forum to advance innovation and collaboration in STEM education and prepare the

STEM education and prepare the next generation aviation, space and defense workforce.

Link to registration.

Fee: $25/person (Includes breakfast and lunch)
CEUs: Six (6) available

ZooMS 2.0 will expand attendees' zoo knowledge of authentic STEM work with presentations from Minnesota Zoo field biologists and conservationists. Attendees will engage in STEM integrated lessons and become better equipped to challenge students to be engineers for conservation.

2016-17 ZooMS Design Challenge
The design challenge for 2016-17 and the free design challenge workshop date this fall will be announced in May 2016. For more information, visit www.mnzoo.org/STEM or email questions to STEM@mnzoo.org.

2nd Annual Minneapolis - St. Paul Mini-Maker Faire
Saturday, May 14
MN State Fairgrounds

Join in the fun at the 2nd annual Minneapolis/St. Paul Mini-Maker Faire.

New at the Faire this year are:

- more and bigger installations and projects including a trolly, a giant cube experience, and drone racing
- Maker Mercantile: stock up on DIY kits, books, and other maker gadgets and gear
- Expanded Education Day on Friday, May 13. More than 1,000 area 7th graders will get a sneak-peek at the Maker Faire.

STEM Day at the State Fair
Exhibitor Applications Now Open

Join in the fun on Opening Day of the Minnesota State Fair by exhibiting at STEM Day. About 30 exhibitors fill Carousel Park near the ramp to the Grandstand on opening day. Through activities and conversations with families, exhibitors convey that STEM is fun, challenging, and important to Minnesota.

The exhibitor application is found at scimathmn.org/mnstemnet.

Deadline for submission is May 16th.
Questions? Contact stemday@scimathmn.org.

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