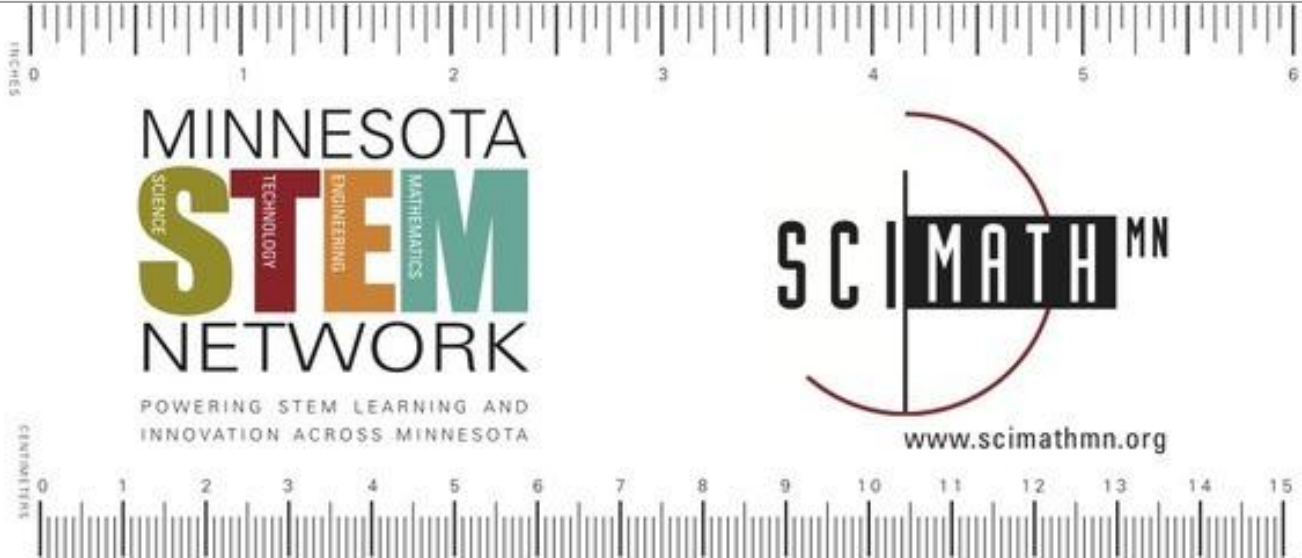# Winter 2014 Newsletter

Science - Technology - Engineering - Mathematics

See more below about:
Early Bird Registration open for the 5th Annual MN STEM Network Conference
Tuesday, April 15, 2014

Upcoming Policymaker Briefing

Winter Social Hour, Thursday, February 27

Regional Network Updates

Requests for Proposals
5th Annual STEM Conference

Northeast Region hosted 2nd annual meeting

New Clearinghouse of Teacher Professional Development

Letter from the Executive Director of SciMathMN

SciMathMN is fortunate to have a dedicated group of longstanding board members that have spent countless hours to ensure our organization fulfills its mission. At the same time, we've seen a surge of new board members this past year that has brought new ideas and energy to our collective cause. These new board members include:

- David Belasko, ATK
- Deb Besser, University of St. Thomas – Center for Pre-Collegiate Engineering Education
- Ryan Johnson, Fredrikson & Byron
- Ellen Kroehler, Thomson Reuters
- Jamice Obianyo, Ecolab
- Gillian Roerhig, University of Minnesota – STEM Center
- Betsy Stretch, Minneapolis Public Schools
- Christine Turner, Honeywell
- Hui-Hui Wang, University of Minnesota – STEM Center and UM Extension 4H Programs

Please join me in saluting the entire board of SciMathMN for advancing STEM education!

SciMathMN is a non-profit, statewide education and business coalition advocating for quality pre-K-16 science, technology, engineering, and mathematics education based on research, national standards and effective practices

.

Major initiatives include policymaker briefings, the [STEM Teacher Center](#) online resource and the Minnesota STEM Network.

The Minnesota STEM Network is an outreach

Please mark your calendar for our exciting spring events—the policymaker briefing on Tuesday, March 4th and our annual conference on Tuesday, April 15th. Thanks to those attendees of past annual conferences who participated in our survey on benefits from our annual conference. We are looking forward to this year's conference program rich in shared expertise and networking opportunities.

Peter Lindstrom
Executive Director

Policymaker Briefing
Tuesday, March 4, 5:00 - 8:00
James B. Woulfe Alumni Hall
Anderson Student Center
University of St. Thomas, St. Paul campus
2115 Summit Avenue, St. Paul, 55105

SciMathMN's annual policymaker briefing will feature former Mayor R.T. Rybak, executive director of [Generation Next](#). This broad partnership of organizations and leaders from across the Twin Cities represents local schools and government, community organizations and programs, businesses, higher education and philanthropy – all dedicated to educational excellence and narrowing the achievement gap.

Additionally, a bipartisan panel of state legislators will discuss STEM education policy:
• Rep. Paul Marquart, chair of the House Education Finance Committee;
• Senator Charles Wiger, chair of the Senate E-12 Finance Division; and
• Senator Carla Nelson, ranking minority member of the Senate Education Policy Committee

initiative of SciMathMN which
- increases engagement in education
- builds community among stakeholders
- promotes STEM
- shares practices and resources and
- improves communications.

Learn more about the network at

MN STEM Network

New Clearinghouse of Teacher Professional Developm ent Opportuni ties

SciMathMN is gathering information on teacher professional development opportunities in Minnesota in 2014. If your program, institution, or company presents programming for teachers to enhance their knowledge of STEM or awareness of STEM in the Minnesota economy, please provide information via this link. Results will be listed in a directory on scimathmn.org.
Link to webform.

Calendar Highlights

DiscoverE
Engineers Week
February 16 - 22, 2014

2014 Theme: Let's Make a Difference

Who should attend? STEM educators, administrators, researchers, publishers and instructional material providers, STEM professionals, and anyone interested in the future of STEM education.

Networking and refreshments begin at 5pm. Program: 6 - 8pm.
Link to free registration.

SciMathMN thanks the University of St. Thomas and 3M for their sponsorship of the Policymaker Briefing.

Join Us for the Winter Social Hour

Thursday, February 27, 2014, 4:30 - 6:30
Robbinsdale School of Engineering and Arts
1751 Kelly Drive, Golden Valley, MN 55427 [map]

The Society of Women Engineers Minnesota Section is delighted to bring this year's Spark Slime Speed on February 16 from 1-4pm at the The Science Museum of Minnesota.
This is the 8th annual event to kick-off National Engineers Week.

This year, engineers from around the Twin Cities and volunteers from the Science Museum will help young visitors with up to 5 experiments. Youth can earn a certificate of completion if they complete all the experiments provided in addition to taking home most of the things they make.

For more information on Engineers Week programs, visit www.discovere.org.

Come and meet others who are passionate about STEM. Learn about what's going on in the STEM community. Get engaged with the MN STEM Network. Find out how the Robbinsdale School of Engineering and Arts is using imagination, inspiration and innovation to change the world one idea at a time.

The School of Engineering and Arts (SEA) is a K-5 elementary school rooted in the STEAM philosophy. The school is just in its second year of operation and has an enrollment of 445 students.

SEA integrates STEM with Arts in all aspects of the students' day, working in multiple forms of art including digital media art, drawing, architecture, sculpting, graphic design, and visual art.

Unique to SEA is the Engineering Exploration Lab, which offers space for messy experiential learning with hands-on and student discovery based activities.

Register Here

Early Bird Registration Now Open -- 5th Annual STEM Network Conference
Tuesday, April 15th, 9:00 - 3:30
Continuing Education and Conference Center
1890 Buford Avenue, on the St. Paul Campus of the University of Minnesota

Mark your calendars for Tuesday, April 15 for the 5th annual conference of the Minnesota STEM Network, sponsored by SciMathMN and Boston Scientific. Networking will begin at 9am and the conference program will take place from 10am to 3:30 pm. Early bird registration is available now until March 14th.

The conference will feature sessions on exemplary STEM teaching and learning and cross-sector collaborations; a keynote speaker; networking time; and a forum on current topics in STEM education and workforce development.

Tech Fest @ NHCC
Tuesday, February 18
5:30 - 10:00pm
North Hennepin Community College
7411 Eighty-Fifth Avenue North

Brooklyn Park, MN 55445

[North Hennepin's Tech Fest](#) will inspire local high school and college students toward high-tech, high-demand, high-paying careers. Activities during NHCC's Tech Fest will include an innovative product, a local business, and an NHCC education program related to that field.

North Hennepin
Community College

Professional Training & Development

Tech Fest @ The Works
Saturday, February 22 at The Works
9740 Grand Avenue
Bloomington,
MN 55420

Celebrate National Engineers Week at [The Works' Tech Fest](#), the Twin Cities' biggest family engineering event. Tech Fest features hands-on activities and demonstrations from The Works and science and engineering partners from all over the Twin Cities, it's their messiest, most electrifying event of the year!

The afternoon plenary session will feature informal discussions on Current Challenges in Advancing STEM Education and Workforce Development, via an open space technology format. In this format, topics are proposed in advance by registered attendees. The forum offers multiple topics per round and two rounds of discussions. Attendees engage in a discussion as long as interested, and then move to another discussion topic.

Examples include: *How can we stimulate more project-based learning through collaboration across sectors? How can we encourage more volunteerism among STEM professionals? How can parents be engaged most effectively in STEM events?*

Our 5th annual conference offers four opportunities to share your work and expertise. See separate article below on proposing sessions and discussion topics.

An early bird registration rate of $59 is open now through March 14. Regular registration will be open through the day of the conference at a rate of $79. Registration includes the conference, meals, and parking on a nearby surface lot.

[Link to conference registration](#)

SciMathMN again thanks Boston Scientific for its ongoing support for the MN STEM Network conference.

Boston Scientific

Regional STEM Network Updates

Northeast—The leadership team of the Northeast Region presented "Strategies for Advancing STEM in Northeast Minnesota" to the 2nd annual gathering of the regional network on November 14, 2013. Seventy-five stakeholders discussed and selected actions to work toward four success markers. The leadership team refined the four success markers from input gathered at the first regional meeting held in November, 2012. See full article below. Contacts: [Moe Benda](#), [Donald Hoag](#) and

the Works

Get Schooled with Bill Nye the Science Guy
Sunday, February 23
1 - 3pm
Mall of America Rotunda

Bill Nye the Science Guy is at it again! Join Sophia.org and Bill Nye for an afternoon full of mind-blowing science demonstrations. Stop by and have some fun for the whole family and watch the Science Guy in action!
Link to event
Link to registration

STEM Portal on Minnesota Compass

An online portal for Minnesota STEM data and resources is now available on the website of Minnesota Compass, a community indicators project led by Wilder Research. Sponsored by Boston Scientific, the STEM section aims to answer:
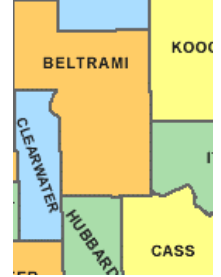
• How does Minnesota fare on key measures of STEM success from PreK-mid career?
• What are best practices for supporting these measures?
• Are we making progress over time?

Michelle Ufford.

Northwest—A group of stakeholders associated with a University of Minnesota Extension regional sustainability partnership are now considering a network in the Thief River Falls, Crookston, and East Grand Forks region. This network would collaborate with Grand Forks in the North Dakota STEM Network. Contact: Linda Kingery
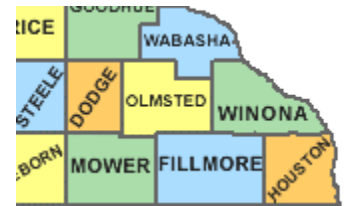
Headwaters—An initial gathering for STEM stakeholders in the Bemidji/Cass Lake region will gather on Thursday, March 27. The meeting will be held at the Beltrami Electric Co-op community meeting room, 4111 Technology Dr NW, Bemidji, from 4 to 6pm. Light refreshments will be served. The meeting is open to anyone in the Bemidji area with an interest in STEM. The initial meeting is intended to gather stakeholders to form a regional network to advance STEM. Future meetings will build on information gathered during this meeting with a larger goal of active participation within the Minnesota STEM Network. Contact: Susan Joy, Annette Drewes

West Central—An ad hoc committee is developing a fuller list of stakeholders with plans to develop a leadership team and a regional calendar and communications centered in Fargo/Moorhead, also in collaboration with North Dakota STEM Network. Contacts: Doug Dean or Matt Craig.

Southeast—The Rochester Area Chamber of Commerce and the Rochester Area Math Science Partnership are collaborating to initiate STEM Stewards in the Southeast region. The initial meeting took place in November.

The next Rochester area STEM Stewards meeting will take place on Wednesday, February 19, from 8:00-9:30 am. This quarterly meeting is for champions of STEM careers, programs, education & partnerships. The purpose is to stay informed on the latest news, programs, legislative activities, statewide efforts and resources related to STEM education and to connect with other like-minded organizations to effect real change in STEM preparations.

Location: Southeast Service Cooperative, Wood Lake Meeting Center - 210 Wood Lake Dr SE, Rochester, MN. Please RSVP if planning to

attend. Contacts: Jessi Strinmoen, Richard Bogovich

Congressional STEM Competition
February 1 - March 30, 2014

John Kline, representing Minnesota's 2nd District in the U.S. House of Representatives is hosting a new competition for high school students in the 2nd District. The theme of this year's competition is computer science.

High school students are asked to develop a software application "app" on a platform of their choice for judging. The competition period opens February 1, 2014 and closes March 30, 2014. Once the competition period opens, students are able to register online and begin submitting their entries. In April, a group of STEM advisors will help Representative Kline select a winner from the 2nd District which will be featured on the official House of Representative's website.

STEM Network Conference Requests for Proposals

Our fifth annual conference offers four opportunities to share your work and expertise with others. Please consider preparing one or more short submissions via the links below.

1)   **Proposals for exemplary practices** will be selected for two breakout session periods according to the theme of Enhancing Engagement in STEM Teaching and Learning. A proposal should exemplify how the program or collaboration addresses one of the five goals of the Network (see form). Sessions are intended to present a concise overview of program including summary of measurable impact, cost, and in-kind contribution. The leadership team will review proposals based on criteria of replicability, sustainability, affordability, and evidence of measurable impact.
Link to session proposal on exemplary practices.
Deadline: Monday, March 3rd. Proposers will be informed by March 12th.

2)   The **afternoon forum** on Current Challenges in Advancing STEM Education and Workforce Development will offer multiple opportunities for in-depth informal discussions on topics that pose current challenges to you and fellow STEM stakeholders. The forum is arranged for flow; attendees choose a topic to begin, and then move among topics during the round. Two rounds of 4 to 7 discussion topics will be offered.
Link to forum proposal and more information.
Deadline: Monday, March 24th. Proposers will be informed by April 5th.

3)   At the initial **networking hour**, attendees may share a great idea that potentially could go viral with a little exposure. Ideas should be related to the theme of Enhancing Engagement in STEM Teaching and Learning. The great idea does not need to have any evidence that it is truly a great idea.
Link to proposing a table topic.
Deadline: Monday, March 24th. Proposers will be informed by April 5th.

4)   **Exhibitors** may have a table in the lobby throughout the day.
Link to exhibitor form.
Deadline: Monday, March 24th.

Minnesota's 2nd congressional district covers the south Twin Cities metro area and contains all of Scott, Dakota, Goodhue, and Wabasha counties.

Northeast Region Hosted 2nd Annual Meeting

The leadership team for the Northeast region hosted the second annual regional meeting on November 14, 2013 in Duluth. Jeff Maas of the Duluth Children's Museum presented an overview of the of the leadership team's activity since the first regional meeting in November 2012. The work resulted in a booklet, "Strategies for Advancing STEM in Northeast Minnesota," which

summarizes goals, a needs assessment, and strategies for advancing STEM education and workforce development. The needs assessment was largely informed by the new STEM portal on MN Compass.

The keynote speaker, Caryn Mohr, formerly of Wilder Research and lead developer of the STEM portal on MN Compass, presented the STEM portal data for Northeast MN: student proficiency in math and science; STEM engagement in and outside the classroom; and workforce opportunities in Northeast Minnesota.

Leadership team members then presented the four success markers and related actions. Attendees of the regional meeting chose strategic actions to begin collective action. More information on the success markers and strategic actions is available on the Northeast Region page.

The leadership team is now pursuing grant support to develop a relational data base to house a regional program inventory, workshops and events to foster more project-based learning, and workshops on increasing access to underserved groups. The inventory format will be made available to other regions.

Thanks to the sponsors of the 2nd annual meeting: Minnesota Power Foundation, Enbridge, Essentia Health, Minnesota Iron Mining Association, Northeast Minnesota Office of Job Training, and LHB Corp., with additional support from the University of Minnesota.

SciTechsperience

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

The Minnesota High Tech Association (MHTA) has developed SciTechsperience, 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. SciTechsperience 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 Zellers. Carla interned at Aspen Research in 2012 and 2013.

If you are interested in learning more about how to participate in SciTechsperience, please contact Becky Siekmeier or visit the SciTechsperience website.