MINNESOTA STEM NETWORK

POWERING STEM LEARNING AND
INNOVATION ACROSS MINNESOTA

AN INITIATIVE OF SCI MATH MN

▶ THE MINNESOTA STEM NETWORK,

an initiative of SciMathMN, is a community of stakehold-ers advancing science, technology, engineering, and math-ematics (STEM) in education, workforce development and community engagement. Formed in 2010, the network brings together individuals and organizations across many sectors who are share an investment in STEM:

- ◆ Business leaders
- ◆ Healthcare leaders
- ◆ Higher education leaders
- ◆ PreK - 12 teachers and administrators
- ◆ Informal educators
- ◆ STEM Professionals

- ◆ Leaders of STEM nonprofit organizations
- ◆ Community leaders
- ◆ Policy makers, workforce development professionals, and legislators
- ◆ Parents and students

By articulating and aligning strategies, and effectively commu-nicating the value of STEM, the Network is committed to power-ing STEM learning and innovation across Minnesota.

MISSION
The Minnesota STEM Network strengthens collaborations among business, education, civic, and community leaders to increase the appeal of science, technology, engineering, and mathematics and communicate 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.

VISION
Minnesotans will actively engage in science, technology, engineering, and mathematics as a means toward lifelong learning, informed civic engagement, and a vibrant economy.

▶ NETWORK GOALS

Working toward this vision, the goals of the Network are to:

1. Build awareness and excitement for STEM and public appreciation of its importance to Minnesota's future.
2. Increase engagement and collaboration across sectors leveraging com-mon interests in STEM education.
3. Promote effective STEM teaching and learning.
4. Close the STEM achievement gap among Minnesota K-16 students.
5. Increase the number of students selecting STEM as a career oppor-tunity, especially by women and underrepresented minorities.

▶ STRATEGIES

In order to achieve its goals, the Minnesota STEM Network will:

1. Develop key messages for promoting STEM to students, parents, and community leaders and encourage network participants to communi-cate them to their audiences.
2. Share research, innovations, and best practices in STEM education.
3. Promote and inventory high quality teacher professional development opportunities across the state.
4. Develop and maintain a public portal inventorying formal and informal STEM learning opportunities, associating them to career pathways in higher education and employment.
5. Facilitate the formation of community and regional networks in Minne-sota in order to customize Network activities to the needs and assets of different geographic regions.
6. Facilitate initiatives to improve STEM learning, such as encouraging business and industry to provide more real world learning opportunities for students and teachers.
7. Serve as a resource for STEM funders and organizations seeking STEM funding.
8. Communicate and collaborate with STEM networks and alliances in other states in order to improve STEM learning in Minnesota and throughout the United States.

▶ DESIGN PRINCIPLES

These principles describe values underlying our collective action:

1. STEM learning opportunities will be available to all Minnesotans regard-less of income, gender, ethnicity, or geographic region.
2. Formal and informal learning opportunities will integrate science, tech-nology, engineering, and mathematics with each other and with the arts, humanities, and other disciplines.

▶ PERFORMANCE MEASURES

The Minnesota STEM Network will assess its progress using the following measures:

For Learners

1 Student results on statewide mathematics and science tests, as well as results on national and international assessments.
2 Participation rates of female students and students of color in STEM disciplines in post-secondary education, and entry-level employment.
3 Participation of learners in informal science education opportunities, including engineering/design competitions, robotics and environmental learning programs.
4 Percentage of female employees and people of color in leadership positions in STEM businesses within Minnesota.

For the Network

1 A database and communications network will be established across sectors.
2 Best practices will be shared across the network through network communications and meetings including quality fairs.
3 Underserved communities as well as STEM pathways within regions will be identified for the STEM Alliance and communities at large.
4 Alliance networks with local leadership will be established in geographic regions of Minnesota.
5 Increased engagement of individuals from business and industry in education and more public/private partnerships in support of active STEM learning.
6 Proportion of pre-K-12 schools and classes engaged in active learning and real world examples.
7 Increased outreach by colleges and universities to build teachers' STEM knowledge and students' interest in STEM disciplines and careers.
8 More positive attitudes of students and parents toward STEM education and STEM career opportunities

▶ 2014 – 2015 LEADERSHIP TEAM

SciMathMN Board Members

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STARBASE Minnesota

MINNESOTA STEM NETWORK IN PARTNERSHIP WITH:

3M ◆ ATK ◆ Bakken Museum ◆ Boston Scientific ◆ Ecolab ◆ Enbridge ◆ Essentia Health ◆ H.B. Fuller

Iron Mining Association of MN ◆ LHB Corp. ◆ MN Association of Secondary School Principals

MN Center for Engineering and Manufacturing Excellence ◆ MN Compass ◆ MN Council of Teachers of Mathematics

MN Dept. of Education ◆ MN High Tech Association ◆ MN Independent School Forum ◆ MN Power ◆ MN Science Teachers Association

MN State Colleges and Universities ◆ MN Technology and Engineering Educators Association ◆ Northeast MN Office of Job Training

Rochester Area Math Science Partnership ◆ St. Catherine University ◆ St. Jude Medical ◆ Science Museum of Minnesota

STARBASE MN ◆ Twin Cities Public Television ◆ University of Minnesota ◆ University of St. Thomas

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