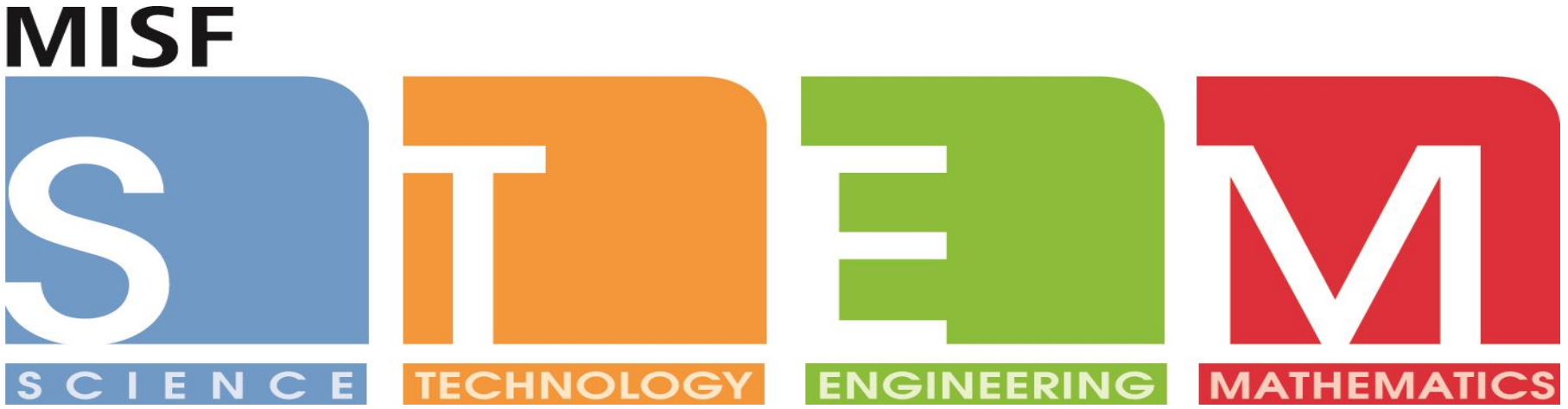

MISF STEM PROGRAM

The MISF STEM Program was built on the foundation of the MISF Math & Science Education Initiative that was introduced in the 2004-05 school year. The STEM Program has grown and changed to reflect the changing structure of MISF and the expansion of membership to include K-8 schools in 2010.

Since 2008-09 the MISF STEM Program's purpose has been to strengthen and enhance the teaching of STEM subjects at MISF member schools by:

- Providing teacher professional development,
- Providing financial support for new STEM program and curriculum development through the STEM Grant Program,
- Providing access to community STEM resources, and
- Providing opportunities for acquisition of classroom resources through special donor programs.

MISF STEM Advisory Committee

Greg Chamberlain, Committee Chair, Xcel Energy

Patty Born-Selly, Hamline University

Jennifer Krieger, Holy Spirit School

Mark Lamps, Pentair Equipment Protection

Deborah Besser, University of St. Thomas

Kelly Meyer, Science Museum of Minnesota

Sumita Mitra, Mitra Chemical Consulting & 3M (Retired)

Doug Paulson, Minnesota Department of Education

K. Benjamin Richter, 3M

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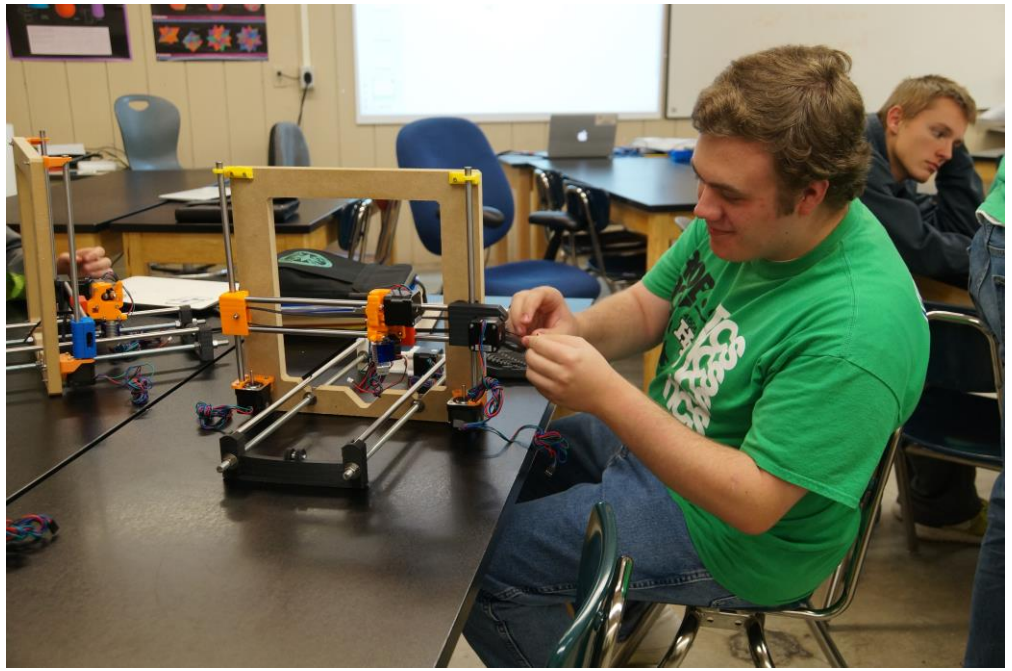
STEM Grant Program

The MISF STEM grant Program supports the development of new and/or revised teaching practices and learning opportunities in STEM-related subjects that will improve students' academic achievement and increase students' interest in post-secondary STEM education and career.



STEM Grant Program

Previously called the STEM Mini-Grant Program, in 2013-2014 the grants were divided into 3 main areas:

- Innovation grants – for projects that develop authentic integrated STEM learning opportunities in an engineering design or scientific discovery framework. The maximum Innovation grant is $7,500
- Starter Grants – for member schools that have not received a MISF STEM Grant to acquire and integrate STEM curricula or educational materials into their existing curriculum. The maximum starter grant is $1,500.
- Sustainability Grants – for prior STEM Grant awardees to support implementation of a previously funded project for a new group of students. The maximum sustainability grant is 20% of the original grant amount.

STEM Grant Program

Since the STEM Grant Program was created in 2008-09:

- Total Dollar Amount awarded - $666,579
- Total No. of Grants Awarded – 12**7**

At this year's Minnesota Private and Independent Education Awards event 33 additional grants will be awarded totaling $129,476.

STEM Education Conference

MISF conducts an annual one-day teacher professional development conference in STEM education open to all private and independent schools in Minnesota. The goals of the Seminar are to:

- Increase understanding on the part of attendees of STEM teaching methods and best practices, and
- Increase understanding on the part of attendees of how to develop rigorous, relevant and replicable student engagement projects in STEM

STEM Education Conference

The Conference agenda includes:

- Keynote address presented by a high profile STEM professional
- Breakout Sessions that highlight opportunities to try new hands-on activities and technologies and to learn new teaching methods and strategies to foster integrated STEM learning.
- Sponsor Exhibitors who support this signature professional development event by showcasing the products and services they offer the STEM education community.
- Clock hour certificates are provided helping teachers fulfill their ongoing continuing education requirements.

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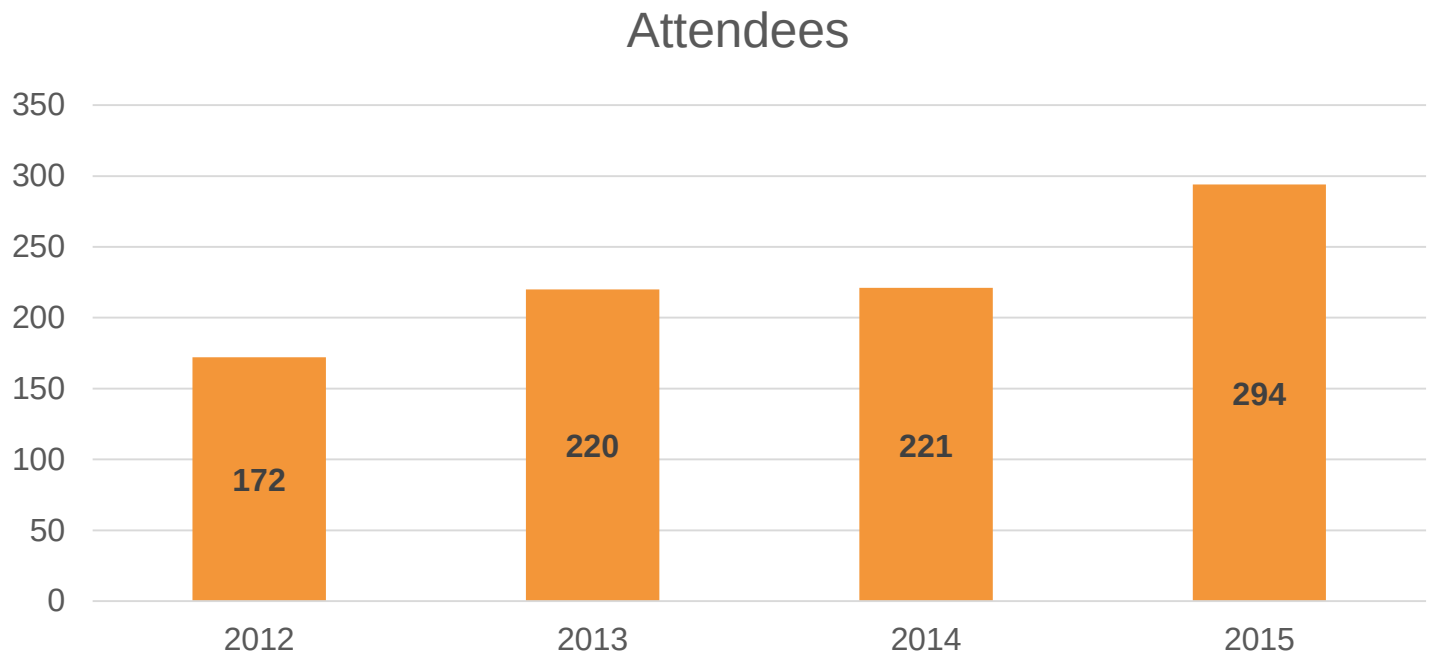
STEM Education Conference



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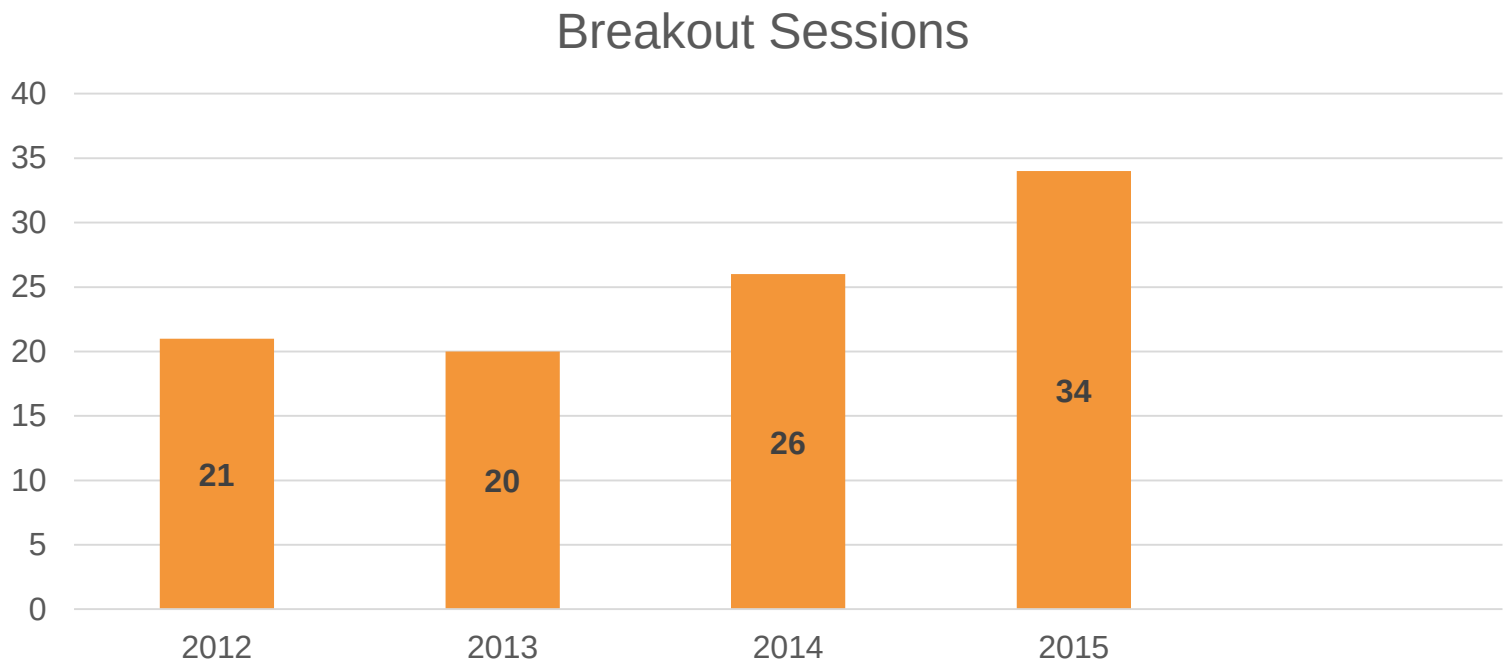
STEM Education Conference



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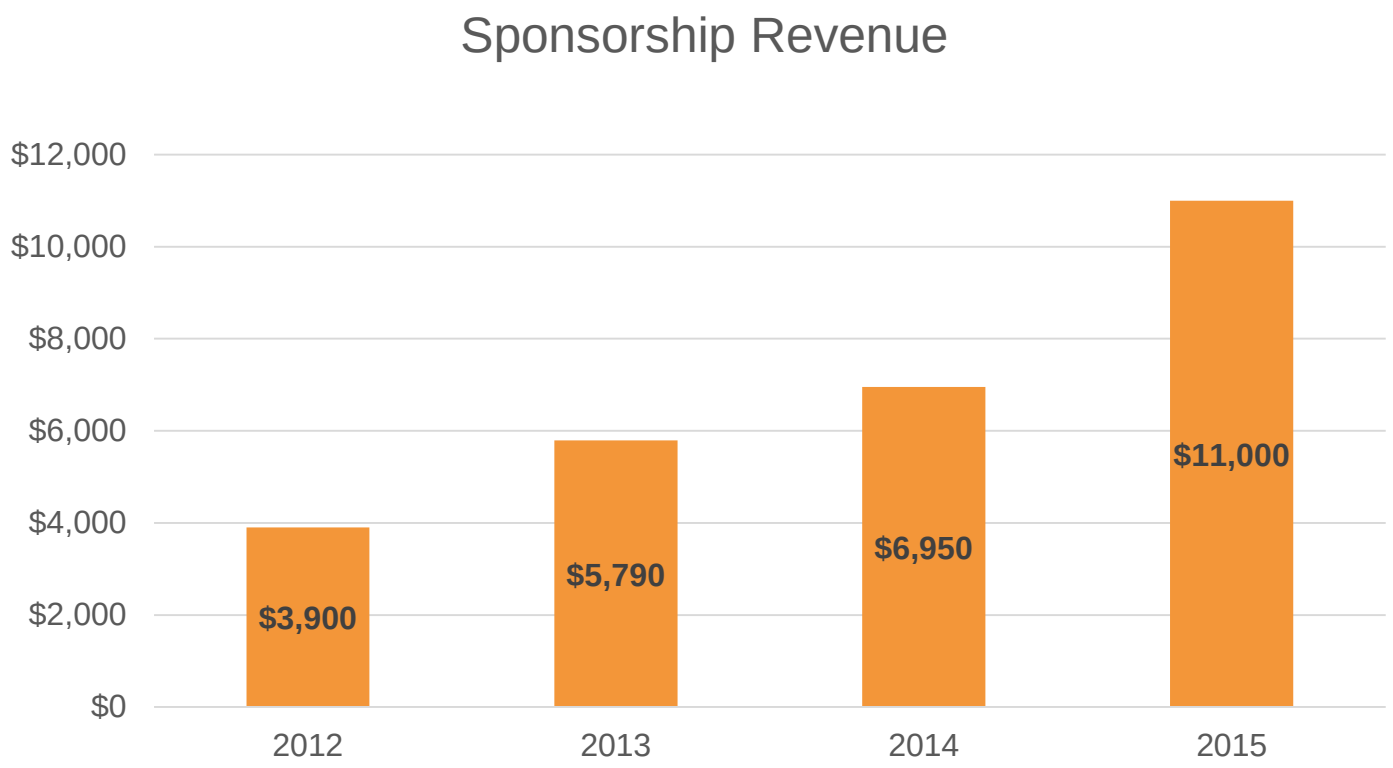
STEM Education Conference



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STEM Program Sponsors

3M

Xcel Energy℠

CORPORATE CITIZENSHIP

FOUNDATION

The Schott Foundation

STEM Education Conference

Post Event Survey

A post event survey is included in each attendee's STEM conference packet. In 2015, 233 out of 294 attendees completed the survey, rating the conference 3.41 out of a possible 5 points with 97.7% stating they would likely attend a future conference.

Attendee Survey Comments

"I hope to include more of the engineering design process into the classroom and work more on collaboration."

"I feel more comfortable and confident in STEM and being able to explain the benefits to parents."

"Encouraged to look for many resources and change teaching methods from primarily lecture/Q&A to investigative. More collaboration outside our school."

SCIENCE HOUSE

Since 2008, MISF has served as the “School District” of record to enable MISF member schools to use the Science Museum of Minnesota’s Science House resources.

- Unlimited check-out of instructional, hands-on, STEM materials. Their collection is valued at $500,000. The most popular items include electronic snap kits, large collection of skulls, anatomical models, and dissecting microscopes.
- After-school workshops.
- Informal consultation with Science Museum Professional Development Staff.
- Discounted customized professional development institutes.
- Use of Science House for small planning meetings.
- Free parking during Science House open hours.
- Monthly e-newsletter and invitations to Science House members-only events

Q & A