

STEM Resources

<i>Organization</i>	<i>Program</i>	<i>Description</i>
Bakken Museum TheBakken.org	Static Electricity Workshops (Grades 1-8)	The Bakken Museum’s experienced science educators are available to bring outreach workshops designed to teach audiences in a way that is entertaining and fun to any classroom. Outreach workshops accommodate groups of up to 60 students.
	Outreach Science Theater - Shocking News About Your Heart (Grades 1-12)	Assist teachers in integrating science and the arts into their curriculum. Led by a group a science educators with extensive theater and dance training, this outreach opportunity provides a unique science learning experience to students. Science theater performances are ideal for audiences of up to 300 students. (45 minute performance)
	Field trips	Bakken Museum workshop and a guided tour of the museum exhibits (grades 1-6) OR Bakken Museum workshop and a Pavek Museum of Broadcasting workshop (grades 4-6)
Bell Museum of Natural History www.bellmuseum.umn.edu/ExploraDome http://bellmuseum.org/education_programs.htm	ExploraDome Portable Planetarium	Brings the whole universe into the classroom delivered underneath a 25 foot diameter dome. Program and supporting curriculum are tailored to your group’s age and interest. You can schedule up to ten classes within the school day, with up to 35 students per class. The recommended length is 30-45 minutes.
	Classroom Programs	Add some punch to your lesson plans with a 1 or 2 hour in-classroom program by the Bell Museum's science education staff. Before our visit, we'll work with you to develop a program that fits your lesson plan and that meet state and national science education standards. Then, we'll provide everything for a highly interactive and unforgettable science experience for you and your students.

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Bell Museum, continued	Residency Programs	Bell Museum classroom residencies provide long-term learning opportunities and a chance for students to work with University of Minnesota scientists and museum professionals. Over several weeks and regular visits by our teaching staff, we introduce you and your class to animals, museum collections, displays, scientific equipment and more.
Best Prep bestprep.org	eMentors	Connects students with volunteer professionals through email. Students develop professional writing skills and learn about the relationship between classroom learning and future career skills.
Boy Scout Base Camp explorebasecamp.org	Space Shuttle Simulator	Programs may include team building, environmental education, outdoor skills, or space shuttle simulator experiences.
Engineering is Elementary (EiE) www.mos.org/eie	Engineering & Technology Lessons	Through a hands-on engineering design challenge, students work in teams to apply their knowledge of science and mathematics. EiE units are associated with particular science topics, rather than specific grade levels. However, each unit is generally targeted at either Advanced (grades 3-5) or Basic (grades 1-2) elementary school students. Developed by the Boston Museum of Science.
High Tech Kids hightechkids.org	FIRST Lego League	A team-based, hands-on after school program of three to ten kids, ages 9-14. Starts in Sep. and have tournaments in Nov./Dec. 1) Teams design, build and program autonomous LEGO robots. 2) Teams conduct research to solve a real world problem, develop an innovative solution and share their work at the competition and within their communities.
	MN Renewable Energy Challenge	A challenge in which teams construct small wind turbines with the goal of creating something both efficient and elegant. The build season starts in Feb and culminates with a Challenge Day in early May. Grades 4 -12.

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<p>Math Masters mathmastersmn.org</p>	<p>Competition for individuals and teams</p>	<p>The program challenges 5th & 6th grade students to use critical thinking skills and problem-solving abilities in mathematics, while recognizing academic effort and achievement.</p>
<p>Medtronic Foundation medtronic community-ed-science-matters</p>	<p>Free book: Science Matters</p>	<p>Science Matters, a free 16-page family science guide designed to spark exploration, discovery and learning in STEM (science, technology, engineering and math) subjects. Content is intended for both adults and kids, with activities and subjects primarily geared to 4th-, 5th- and 6th-graders.</p>
<p>Minnesota Academy of Science mnmas.org</p>	<p>State Science & Engineering Fair</p>	<p>The State Science & Engineering Fair is an annual event that showcases Minnesota's best and brightest students in the fields of Science, Technology, Engineering & Math. It is the culmination of Regional MN Fairs occurring throughout the state. Participants in the State Science & Engineering Fair are in Junior or Senior High.</p>
<p>Minnesota Center for Engineering & Manufacturing Excellence (MNCEME) mnceme.org</p>	<p>Project Lead The Way (PLTW) mnpltw.org</p>	<p>PLTW has developed a curriculum of courses that introduce students to the scope, rigor, and discipline of engineering and engineering technology. Currently for High School & Middle School; may be expanding to Elementary.</p>
<p>Minnesota Destination ImagiNation mndi.org</p>	<p>Destination ImagiNation Challenge</p>	<p>Teams of up to seven members solve one of six different Challenges, which they perform in front of appraisers at tournaments. Challenges involve unique hands-on experiences in the sciences, technology, mechanics, engineering, theater, improvisation, goal setting, time and budget management, team building, and leadership.</p>
<p>Minnesota High Tech Association (MHTA)</p>	<p>Getstem-mn.com</p>	<p>Teachers use the website to post ASKs for community assistance in having materials donated to their classroom, guest presentations, volunteers for field trips and much more. Local businesses use getSTEM to OFFER their K-12 outreach programs that teachers may incorporate into their classroom.</p>

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<p>Minnesota Technology and Engineering Educators Association</p> <p>http://www.mteea.net/supermileage/smhome.htm</p> <p>https://www.youtube.com/watch?v=9ToegdL5mp8&feature=youtu.be</p>	<p>27th Annual Supermileage Challenge</p> <p>Monday & Tuesday, May 11th & 12th , 2015.</p>	<p>The objective of the competition is to provide a challenge of classroom learning experiences together with your ingenuity and teamwork to produce the most fuel efficient vehicle.</p>
<p>Science Museum of Minnesota</p> <p>http://www.smm.org/</p>	<p>Assembly programs</p>	<p>Get your students revved up on science! Our presenters will dazzle and inspire them with awesome science demonstrations in an interactive, large-group assembly format. Various programs for age groups K-7. Approx 50-minute assemblies, a maximum of 300 students per assembly with an optimal size of 200 or fewer.</p>
	<p>Residencies</p>	<p>Give your students the opportunity to spend some up-close time with our professional educators. They'll come to your school for a day, a week, or longer!</p> <p>Your students will solve fascinating challenges, use intriguing scientific equipment, learn distinctive and interesting science content, and get enthusiastic about science. A standard week-long residency for a school of 500-600 students includes two assemblies and 48 fifty-minute time slots for class sessions.</p>
	<p>Field trips</p>	<p>Visit the exhibits, Omnitheater, and the Theatre and Demonstration programs. See planning options on website.</p>
<p>University of Minnesota College of Science and Engineering</p>	<p>Physics Force http://www.physics.umn.edu/outreach/pforce/</p> <p>Physics Force: The Upcoming Generation</p>	<p>Physics Force, a group of wild and crazy physicists who use highly visual and entertaining stunts to teach the elements of their science. Physics Force has annual shows in January at Northrop Auditorium as well as appearing at many other venues. Grades: K – 12. Contact: bresnahan@physics.umn.edu</p> <p>A shorter version of the popular "Physics Force", performed by physics undergraduates. Perfect for smaller</p>

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		science fairs, classrooms, assemblies. Grades: K – 12. Contact: Jon Anderson
University of Minnesota College of Science and Engineering, continued Chemistry Dept. Outreach http://www.chem.umn.edu/outreach/OutreachCC.html	Chemists in the Classroom	A standard program consists of a one hour presentation by a minimum of two college students followed by a question and answer session. No special facilities are required; all supplies are provided by the University of Minnesota and there is no cost for the program. Grades: K – 12. Contact: Ken Leopold
UofM K-12 Programs http://cse.umn.edu/k12/index.php	Various outreach programs from the College of Science & Engineering	Classroom visits and field trips offered by the UofM. In addition, many of the CSE departments offer outreach programs upon request (http://cse.umn.edu/deptsmajors/depts/index.php).
"Dr. Inspiration" Tommy Watson tawatson.com	Group speaking	Tommy Watson has an incredible personal story of growing up in poverty and overcoming obstacles. He is a former Gopher football player and elementary school principal. Topics of expertise: Leadership & Organizational Change; Youth and Education Issues; Motivation & Expectations; Diversity.
The Works TheWorks.org	Family STEM night	Give families an evening of science and engineering fun! 2 hour event with 10 hands-on activities. The Works provides 2 experts & all materials. Requires 10+ classrooms plus 12-20 volunteers.
	STEM workshops	Customize workshop to enhance your curriculum and delight your students with hands-on engineering experience.
	Excellence in Elementary Engineering Education (E4) conference	A full day professional development conference featuring a hands-on engineering extravaganza, keynote speech, and 35 breakout sessions from master educators focusing on the why, what, and how of teaching elementary engineering.