



STEM Resources

For Educators

MN STEM Teacher Center - Frameworks for MN Math and Science Standards

This award-winning website hosts frameworks for each of Minnesota's K-12 mathematics and science standards. Each framework includes the following aspects to assist in successfully delivering the standard. This resource provides background on a wide range of mathematics and science topics.

www.scimathmn.org/stemtc

Try Engineering

Free searchable engineering lesson plans and career resources sponsored by IEEE/IBM/NYHS.

<http://tryengineering.org/>

Teach Engineering

Free searchable engineering curriculum sponsored by NSF.

<https://www.teachengineering.org/>

getSTEM

Just Ask/Just Offer makes the connection between education and business through STEM. Ask for what you need. Locate STEM ambassadors who might visit programs.

www.getstem-mn.com

Engage Engineering

The overarching goal of ENGAGE is to increase the capacity of engineering schools to retain undergraduate students by facilitating the implementation of three research-based strategies to improve student day-to-day classroom and educational experience. This is aimed at undergraduates, but the excellent examples of everyday engineering can give K-12 educators ideas for relevant examples.

www.engageengineering.org

ITEEA (International Technology and Engineering Educators Association)

Engineering by Design is ITEEA's series of pre-engineering courses. The International Technology and Engineering Educators Association's STEM Center for Teaching and Learning™ has developed the only standards-based national model for Grades K-12 that delivers technological literacy in a STEM context. The model, Engineering by Design™, is built on the Common Core State Standards (High School / Middle School), Next Generation Science Standards (K-12), Standards for Technological Literacy (ITEEA); Principles and Standards for School Mathematics (NCTM); and Project 2061, Benchmarks for Science Literacy (AAAS). Additionally, the Program K-12 has been mapped to the National Academy of Engineering's Grand Challenges for Engineering.

<http://www.iteea.org/EbD/ebd.htm>

For Administrators

Minnesota Compass

Various sections, but especially the STEM Feature in Education Section. By tracking and analyzing trends in areas that affect our quality of life, Compass gives everyone in our state – policymakers, business and community leaders, and concerned individuals who live and work here – a common foundation to act on issues to improve our communities.

www.mncompass.org

Change the Equation

Vital Signs offer the most comprehensive and up-to-date picture of STEM in your state—the demand for and supply of STEM skills, what states expect of students, students' access to learning opportunities, and school resources.

STEMtistics is a by-the-numbers resource to help you make the case for STEM education. *STEMworks* is your go-to resource for finding and investing in the nation's leading STEM education programs.

<http://www.changetheequation.org/>

Change the Conversation, National Academy of Engineering

The goal of this website is to promote broad implementation by the engineering community of the findings and recommendations presented in the 2008 NAE report, *Changing the Conversation: Messages for Improving Public Understanding of Engineering*.

www.engineeringmessages.org

Why So Few? Women in Science, Technology, Engineering and Mathematics, American Association of University Women

Why So Few? Women in Science, Technology, Engineering, and Mathematics presents in-depth yet accessible profiles of eight key research findings that point to environmental and social barriers — including stereotypes, gender bias, and the climate of science and engineering departments in colleges and universities — that continue to block women's progress in STEM. The report includes statistics on girls' and women's achievement and participation in STEM and offers new ideas to more fully open STEM to girls and women.

<http://www.aauw.org/research/why-so-few/>

National Girls Collaborative Project

The NGCP brings together organizations throughout the U.S. that are committed to informing and encouraging girls to pursue STEM careers.

www.ngcproject.org

STEM Resources

For Youth and Families

MN-STEM

This website links youth and families with Minnesota's world of STEM.

www.mn-stem.com

Sparticl

Sparticl is a new web and mobile service for teens, a collection of the very best the web has to offer in science, technology, engineering, and math or STEM. Sparticl includes answers to science questions, images, videos, games, and hands-on activities, all curated by a team of experts.

www.sparticl.org

Engineer Your Life

A guide to engineering for high school girls

www.engineeryourlife.org

Engineer Girl

A guide to engineering for middle school girls.

www.engineergirl.org

SciGirls

SciGirls is a PBS show half-hour for kids ages 8-12 that showcases bright, curious real tween girls putting science and engineering to work in their everyday lives. The website offers projects, friends, rewards and links to local clubs

<http://pbskids.org/scigirls/>

NASA.gov

Student tab contains news, activities, images, and social media aimed at students.

<http://www.nasa.gov/audience/forstudents/>
