

## **STEM Resources for Parents , Educators, and Students**

### **Resources for Parents and Educators**

#### **The Ultimate STEM Guide for Kids**

<http://www.mastersindatascience.org/blog/the-ultimate-stem-guide-for-kids-239-cool-sites-about-science-technology-engineering-and-math/>

This website offers tons of resources for kids interested in STEM regarding challenges and contests, interesting websites, awards, career resources, games, government initiatives, and more!

#### **Arbor Scientific**

<http://www.arborsci.com/>

Physics and Physical Science Teacher Supplies – The “Cool Stuff” your students love!

#### **Change the Equation**

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

Change the Equation aligns corporate efforts in science, technology, engineering and math (STEM) education to ensure that they add up to real, measurable growth in the achievement and STEM fluency of our nation’s young people. Their goals are to foster great teaching, inspired learners, and a committed nation.

#### **Chemistryland**

<http://www.chemistryland.com/CHM107Lab/index.html>

This website has great ideas for fun “magic” lab experiments

#### **Engineering Supply Store**

<http://www.engineeredu.com/store/>

Engineering Supplies from Posters and DVDs to laboratory kits, and more!

#### **Multiplication.com**

<http://www.multiplication.com/index.htm>

This website is packed with various types of games, classroom material, teaching aids, resources, tests, and help and support. Great for teachers, parents, and students.

#### **NAE Grand Challenge K12 Partners Program**

<http://www.grandchallengek12.org/>

The National Academy of Engineering has identified 14 Grand Challenges for the 21st century. The NAE GC K12 Partners Program is the way the Grand Challenges are integrated into the lives of K12 students and teachers.

#### **TeachEngineering: Resources for K-12**

<http://teachengineering.org/>

The *TeachEngineering* digital library provides teacher-tested, standards-based engineering content for K-12 teachers to use in science and math classrooms.

## **Resources for Students**

### **Alice.org**

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

Alice is a 3D computer programming website for students. It provides software to teach students basic programming and animation in an easy and fun atmosphere.

### **Autodesk**

<http://students.autodesk.com/>

Autodesk is the leading company in Computer Aided Design in engineering and software. This page has resources for students and teachers, for software support, careers, and other areas of the company background.

### **Catch the Science Bug**

<http://sciencebug.org/>

The Catch the Science Bug Foundation, Inc is a traveling program for students in New England that includes this website and a PBS TV program. The website has fun games, backyard science investigations, a library, and information about being a scientist.

### **Design Squad**

<http://pbskids.org/designsquad/index.html>

Design Squad is a high-energy engineering competition TV series by WHGH Boston. The website has links to activities, projects, games, and videos; as well as resources for parents, teachers, and Girl Scouts.

### **Discover Engineering**

<http://www.discoverengineering.org>

Discover Engineering-the careers and companies at the leading edge, and games, activities, interesting facts, and videos all for students to learn more about engineering.

### **Earth Science Week**

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

This website is all about Earth Science Week, with information for students of all ages and teachers. It has projects, ways to get involved, photo contests, career advice, handbooks, and many other resources for everyone.

### **eGFI-Engineering, Go For It!**

<http://www.egfi-k12.org/>

This interactive website includes the online version of the magazine, information about engineering careers, student blogs, scholarships, K-12 Outreach programs, news, advice, and much, much more!

### **Engineering Matters!**

<http://nestemnet.org/index.htm>

STEM Matters has games, quizzes, virtual tours, articles, libraries, and events for kids, as well as awesome ideas and resources for teachers, families, and industry.

### **Exploratorium Digital Library**

<http://www.exploratorium.edu/educate/dl.html>

An online resource and video library for hundreds of topics in math and science.

### **The FunWorks-For Careers You Never Knew Existed**

<http://thefunworks.edc.org/SPT--homegraphic.php>

This Web site is about careers. Not just the interesting ones other people have, but the ones YOU can have.

### **IEEE**

<http://www.ieee.org/about/index.html>

The Institute of Electrical and Electronics Engineers, or IEEE, is the largest professional society dedicated to advancing technological innovation and excellence for the benefit of humanity. They provide educational and career resources, conferences, and news updates.

### **Kid's Science Challenge**

<http://www.kidsciencechallenge.com/#/home>

The Challenge is a contest for students in 3<sup>rd</sup> through 6<sup>th</sup> grade. You or your team can win several different prizes! The entrants work with a real scientist to solve their submitted problem.

### **MATHCOUNTS**

<http://mathcounts.org/>

MATHCOUNTS is a national enrichment, club and competition program that promotes middle school mathematics achievement through grassroots involvement in every U.S. state and territory. This site allows to you join the club and competition, and try some fun and challenging math problems.

### **MathMovesU**

<http://www.mathmovesu.com/>

MathMovesU, by Raytheon, for middle school students, combines math and kids' hobbies, like sports, music, fashion, and travel. Students can create their own character, play math games, learn fun facts, and participate in polls. There are also resources for parents and teachers.

**NASA**-Several helpful links and programs created by NASA,

#### **Beginners Guide to Aerodynamics:**

<http://www.grc.nasa.gov/WWW/K-12/airplane/index.html>

#### **Eyes on the Earth 3D:**

<http://climate.jpl.nasa.gov/Eyes/index.html>

#### **MESSENGER: MErcury Surface, Space ENvironment, GEochemistry, and Ranging:**

<http://messenger.jhuapl.edu/>

#### **NASA Quest:**

<http://quest.nasa.gov/index.html>

#### **SciJinks:**

<http://scijinks.jpl.nasa.gov/index>

### **The Space Place:**

<http://spaceplace.nasa.gov/en/kids/>

### **The Ruler Game**

<http://www.rickyspears.com/rulergame/index.html>

This is a game for students to learn how to read a ruler and test their skills.

### **Science Buddies**

[http://www.sciencebuddies.org/science-fair-projects/science\\_project\\_ideas.php](http://www.sciencebuddies.org/science-fair-projects/science_project_ideas.php)

Free Science Fair project ideas, answers, and tools.

### **SPARK by iRobot**

<http://spark.irobot.com/index.php>

Starter Programs for the Advancement of Robotics Knowledge by iRobot has programs, education resources, and cool stuff for students, teachers, and parents.

### **Team America Rocketry Challenge**

<http://rocketcontest.org/>

The Team America Rocketry Challenge (TARC) is the world's largest rocket contest, sponsored by the Aerospace Industries Association (AIA) and the National Association of Rocketry (NAR). The top 100 teams, based on local qualification flights, are invited to Washington, DC in May for the national finals. Prizes include \$60,000 in cash and scholarships split between the top 10 finishers.

### **Whyville**

<http://www.whyville.net/smmk/nice>

Whyville's millions of registered "citizens" come from all over to learn, create, and have fun together. Whyville is their world. Whyville has places to go, things to do, and of course, people to see. Whyville has its own newspaper, its own Senators, its own beach, museum, City Hall and town square, its own suburbia, and even its own economy - citizens earn "clams" by playing educational games. And much, much, much more!

### **WolframAlpha Search Engine**

<http://www.wolframalpha.com/>

This is a "computational knowledge engine" able to search and calculate thousands of topics and problems.

### **Girls**

#### **EducatingJane.com**

<http://www.educatingjane.com>

EducatingJane.com is a national site for girls, their parents and educators dedicated to helping girls grow with self-esteem, self-awareness, and involvement in the world. EducatingJane.com searches for programs on the Internet and provides ideas for additional programs that encourage girls to take risks and master physical, intellectual and emotional challenges. Major programs address math and science education, media literacy, economic literacy, adolescent health, leadership and sports participation.

### **Engineer Girl!**

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

Engineer Girl! encourages and assists girls in becoming engineers. They have cool links and fun facts, profiles of women engineers, articles about real-life engineering projects, and help and direction for engineering careers (even covering what classes to take in high school!).

### **EngineerYourLife.org,**

<http://www.engineeryourlife.org>

Introduces high school girls to young women engineers who emphasized how varied and creative engineering can be and what a difference engineers make in the lives of others.

### **Girls for a Change**

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

This website empowers girls to create social change.

### **GirlsGoTech**

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

This is a program of the Girl Scouts which promotes girls' interests in science, technology, and math.

### **Girls Inc.**

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

A national youth organization that offers educational programs to girls, particularly those in high-risk, underserved areas. Its major programs include math and science education and media literacy

### **Girlstart**

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

Girlstart is a non-profit organization created to empower girls to excel in math, science, and technology. Girlstart offers a variety of educational formats designed for girls, adults, and families through after-school programs, workshop series, summer camps, Expanding Your Horizons, and free community events. All Girlstart programs share a common theme of hands-on exploration of science, math, and technology in a fun and girl-friendly environment. These programs are held at the Girlstart Tech Center and in Austin-area schools.

### **Sally Ride Science**

<https://sallyridescience.com/>

Founded by former astronaut Sally Ride, Sally Ride Science encourages girls in technology, science, and mathematics. The program offers a variety of resources, including camps and community festivals.

### **iWASwondering.org**

<http://www.iwaswondering.org/index.php>

The Web site [iWASwondering.org](http://www.iwaswondering.org) is a project of the National Academy of Sciences intended to showcase the accomplishments of contemporary women in science and to highlight for young people the varied and intriguing careers of some of today's most prominent scientists. The website offers biographies of scientists, a place to ask real scientists questions, a time line of scientific events, and lots of games for girls!

### **National Women's History Project**

<http://www.nwhp.org>

If you are looking for posters, videos, or books that "write women back into history," this is the resource center for you. They offer a wide selection of technology and science resources.

**Society of Women Engineers**-good descriptions of engineering

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

### **Techbridge**

[www.techbridgegirls.org](http://www.techbridgegirls.org)

Techbridge encourages girls in technology, science and engineering through multi-faceted programs. They offer after-school and summer programs with hands-on projects, career exploration opportunities, and academic and career guidance.

**Tech-Savvy: Educating Girls in the New Computer Age.**

<http://www.aauw.org>

This reference by the American Association of University Women takes a thoughtful look at girls' participation in technology and raises legitimate concerns about the computer culture.

### **Websites for Girls and Young Women**

[http://userpages.umbc.edu/~korenman/wmst/links\\_girls.html](http://userpages.umbc.edu/~korenman/wmst/links_girls.html)

A list of websites that focus on girls' and/or young women's interests and resources

## **High School**

### **Sloan Career Cornerstone Center**

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

Offers descriptions of different careers in engineering and profiles of the typical day of an engineer.