

Navigate Program – STEM Resources

Below is a comprehensive list of websites and resources that STEM instructors and teachers can use in their classroom. This information has been provided by Stem School - <http://www.stemschooldr.com/stem-websites-resources/>.

Science

[25 Best Inventions of 2014](#) – A great site to help show STEM products being put into the markets.

[Campus Ties](#) – Collaborated between Michigan State University, Iowa State University, and Mississippi State University, campus Ties gamifies STEM learning for college and college bound students. Learners work with bite-sized lessons created by trusted experts. Campus Ties has built-in assessments and upon completion of courses learners receive micro-certificates that can be displayed in their portfolios.

[Carter Emmart](#) – This is a TED talk on space and demonstrates a 3D approach to seeing beyond our solar system.

[CLEAN](#) – Climate Energy & Awareness Network – A collection of 600+ free, ready-to-use resources rigorously reviewed by educators and scientists.

[Discovery Education Of the People: Space Day 2015](#) – Take a tour inside NASA's Goddard Space Flight Center and meet the scientists and engineers working on some of our nation's space programs.

[Elementary School STEM focus](#) – Look no more if you are in this area. Free STEM Integrated Lessons for Elementary and middle students.

[Energy.gov](#) – Here one can pull down energy literacy videos.

More Energy Lesson Plans – From Energy.gov this is a compilation of energy videos.

[Exxon Mobil: Let's Solve it](#) – This site is loaded with a wealth of information such as Math and Science that focuses on STEM and much more. Included in this website are areas such the Sally Ride Science Academy, the Bernard Harris Summer Science Camp. Information on grants is also shown as well.

[Mars Activities](#) – Another great product from NASA (in PDF Format)

[MIT – STEM](#) – Included in this program is a summer camp, mentoring program and professional development.

[NASA – Digital Learning Network \(DLN\)](#) – DLN provides video and guest speakers who are experts in their respective fields to talk about how they use STEM in their careers. It is a free website with great options. Guest speakers can be set on your time through video conferencing from anywhere in the United States.

[NASA – Neon](#) – Neon is a federal program designed in conjunction from NASA and Penn State University that concentrates on lesson plans, technology advancement, space exploration and much more! It is another free website where an educator can network with colleagues from many careers and connections.

[NASA Wavelength](#) – For Earth and Space Science Education.

[National Science Board](#) – National Science Board site provides educators with the national action plan for STEM education and a list of educational opportunities for teachers and students.

[The National Science Digital Library \(NSDL\)](#) – The NSDL is the nation's online library for education and research in Science, Technology, Engineering, and Mathematics (STEM).

[National Science Foundation \(NSF\)](#) – NSF Resources for STEM Education breaks down the information into four domains: Teacher Development, Instructional Materials, Assessment and Research Syntheses.

[Ohio Energy](#) – Another [#energy](#) site for students and teachers.

[PhET](#) – Free on-line physics, chemistry, biology, Earth science and math applications interactive site.

[Planetarium](#) – Explore the stars and planets from your web browser. (Also a chrome extension).

[Save On Energy](#) (Thanks Caroline!)- An animated guide to the science of electricity.

[Save On Energy](#) (Thanks Caroline!) – This site shows an animated guide to how batteries work.

[Science Fair Projects](#) – A good collection of ideas / resources.

[Science4us](#) – Free Elementary Science Resources for STEM teachers

[Singing Scientific](#) – A great way to incorporate art into STEM concepts. The focus here is weather climate change integrated into art.

[Snowstorm caught on video](#) – The video shows an aerial footage of the incoming storm from Buffalo that dumped several feet. Great for showing weather and technology in action.

[Sophisticated medicine](#) – a story about a female doctor who inspires to bridge many STEM concepts.

[STEM City PHL](#) – They're developing the next generation of STEM professionals in Philadelphia.

[STEM Education Coalition](#) – The Science, Technology, Engineering, and Mathematics (STEM) Education Coalition works to support STEM programs for teachers and students at the U. S. Department of Education, the National Science Foundation, and other agencies that offer STEM related programs. Some useful parts include the statistics in the resources tab, and legislative information.

[Switch Zoo Animal](#) – Great way for students to learn the differences in animals & also compare them in a unique way.

[TIPS \(Teacher Industrial Partners' Scheme\)](#) – Science CPD 4 Sci Educators – an incredible way to add life to Science.

[Travel By Drone](#) – A really cool site for science and geography teachers to tie in land, eco systems, etc.

[Virginia's Share the Skies](#) is the nation's first statewide program enabling students to study astronomy during the day using research-grade telescopes. Students use the Internet to access and control telescopes in western Australia and study the night sky of the Southern Hemisphere.

[Volcanic Explosion](#) – Witness a volcanic explosion as it happens off the coast of New Guinea.

Technology

[3 Tech Ninjas](#) – A website of three expert techies that provides a ton of resources from flipped classrooms to QR codes.

[3D Cad Files](#) – Free and accessible. Look at this site to see the differences.

[3D Gallery Walk](#) – Upload the pics and videos you want to emphasize and it turns into an instant gallery walk.

[40 STEM apps](#) – The name says it all for kids.

[Apple iPads usage](#) – From Apple, this site lists several popular apps that will make critical thinkers out of your students.

[Class Badges](#) – Award badges for all different learning experiences.

[Bouncy Ball](#) – Great for classroom management; the balls bounce based on level of noise in the classroom.

[Book Creator](#) – How to create a book with the microphone.

[Brainshark](#) – myBrainshark is one of the best educational websites that allows students to add a voice over to Word documents, Powerpoint presentations, videos and photo albums- or to simply produce podcasts.

[Calculators for Kids!](#) – various calculators available for students to focus on the product rather than the process.

[California Institute of Technology](#) – Animations of Earth quakes, tectonic shifts and more!

[Capzles.com](#) – This site provides users another way to present work. Similar to Prezi but definitely different. A perfect example that it could be used for is in a timeline.

[Coggle it](#) – Great for mind mapping and brainstorming.

[Classtools-Connect Four](#) – A game to review key terms/vocabulary and the connections between them.

[Free Technology for Teachers](#) – From iPads to apps, this site is great for educators who want to add more to their lessons.

[Free Tools Challenge](#) – This site has 26 tools that are great for students, educators, bloggers, and more.

[GetKahoot](#) – A neat way to make a game with 1-1 technology and assess understanding of material. Best of all it's free! Very similar to poll everywhere.

[Google for Education](#) – Brings a whole new dimension of teaching and learning through Google.

[Highlighter for PDF](#) – Synopsis is a new way to highlight pdfs in apps. Great for critical thinking.

[Haiku Deck](#) – A new way to make presentations come to life...best of all it's now Power point!

[HsTry:](#) – Create interactive timelines.

[Intel](#) – One of the best websites that provide curriculum, lessons, and scientific inquiry. It also focuses on problem solving, critical thinking in fields such as computers and engineering.

[Lockheed Martin](#) – Lockheed Martin's STEM Education Outreach is devoted to making a difference in the

classroom. Be sure to check out the STEM Portfolio and the Engineers in the Classroom tabs!

[Lucidpress](#) – It can make posters, flyers, newsletters, magazines, ebooks, presentations, and basically anything else you want.

[MashMe](#) – Turns You Into An Animated Character automatically

[Manufacturing Stories](#) – Users are provided multiple examples of how manufacturing coincides with STEM on a consistent basis.

[Microsoft](#) – This PDF contains valuable information from Microsoft that gives validation to support the STEM initiative. Enclosed in the document is information on other Microsoft-STEM related materials such as Microsoft IT, the Washington STEM initiative and Microsoft Math Partnerships.

[Online Collaboration Tools](#) – From Google to finding apps for higher level thinking, this is a site for you!

[Padlet](#) – Padlet, possibly the easiest way to create and collaborate in the world.

[PBS Stem Teacher's STEM Education](#) – Over 4000 lesson plans available for teachers.

[Postermywall](#) – PosterMyWall is an incredible educational technology for creating artistic, and high quality posters, photo calendars, collages or photo cards that can be easily shared online or printed out.

[Screencastomatic](#) – Screencast-o-matic is a fantastic screen recorder that allows its users to capture anything happening on the screen along with voice and video from webcam for upto 15 minutes in the recorders' free version.

[Stratasys 3D Printing Curriculum](#) – Here is a great and innovative way to integrate 3D printing into STEM lessons.

[The Simple Dollar Student Budget Guide](#) – Creating a budget early in your college career can help you avoid the struggles many students face as they graduate and face their debts for the first time. While the word "budget"

often conjures images of a restricted life void of any fun or excitement, that doesn't have to be the case. In practice, a budget is nothing more than a plan created to track your spending and make the most of the dollars you earn.

[Team Maker](#) A simple random team generator that lets you create teams quickly and easily.

[The Teacher's Guides To Technology And Learning](#) – Sites to help teachers use new technologies from Twitter to Google glasses.

[Ted Talks for Youth](#) – Centered topics for kids by kids.

Engineering

[ASME](#) – The ASME.org Community is a social space where you can connect with your colleagues stay up to date on the latest mechanical engineering news, and share your thoughts on industry topics. This link directs you specifically to K-12 Education resources.

[AUVSI](#) – Unmanned Aerial Vehicle hub for a wealth of information.

[Discover Engineering](#) – Whether you are a volunteer, partner or parent, this site assists students gather more information about engineering.

[National Society of Black Engineers](#) – A good site to help promote and encourage more minorities into the Engineering Field.

[NAE Grand Challenges](#) – for [#Engineering](#) – website to promote Engineering from network to challenges.

Mathematics

[Coin Flip](#) – A great way to combine probability and coding.

[Ted Ed](#) – for Educators to build a lesson.

[Top 100 for Learning 2014](#) – Name says it all. Great resource for finding new ways to teach material.

[Voxer](#) – a new way to use your voice with groups to message, walkie-talkie for team communication.

[Who to follow on Twitter?](#) – This site provides students and teachers alike the people who are the leaders in the new millennial.

[Zaption](#) – Turn online videos into interactive learning experiences that engage students and deepen understanding.

[Robotics Database](#) – Whether you are looking for a ground, water or aerial vehicle, I recommend you stop here first.

[STEM is Elementary](#) – Scaled down lessons for elementary teachers to use in their classes. Some good engineering projects are here.

[STEMNET](#) – STEMNET (Science Technology Engineering and Mathematics Network) premise is to focus on STEM related topics in Great Britain. Here you can register as an ambassador and share / exchange.

[NEA's 10 Best STEM Resources](#) — Multiple sources here to use! Emphasizes curriculum and professional development.

[Tinkercad](#): a free, easy-to-learn online software to create and print 3D models.

[CreditRepair.com](#) – (From Lindsay!) – who wanted to share with everyone Learning About Money. This is a resources built for kids.

[Google Maps Gallery](#) – Has the opportunity to tie in latitude and Longitude with Math and Social Studies. Also great for Science.

[Math Coaches Corner](#) – Great Math site that includes a blog and other useful resources.

[MIT Blossoms](#) – Videos for high school courses for Math and Science. Great tie in to a lesson.

[Money Resource Guide](#) – an excellent way to tie in STEM is through money and finance

[Rapping Math & Science Lessons](#) – A good way to hook students into a lesson for math and science.

[Siemen's STEM Academy](#) – This site provides users with other top-notch STEM websites and organizations

devoted in the STEM field. It is a one-stop site that hosts a plethora of useful information and tools.

[Sphero Education](#): Core lessons and STEM challenges give kids a fun crash course in coding while sharpening their skills in math & science.

[The STEM Directories](#) – A unique site that focuses on STEM information in the United Kingdom. Lessons can be converted to the United States and matched to your curriculum and lessons.

[Top 100 Tools for Learning](#) – Results of the 8th Annual Survey or Learning Tools for 2014.

[100+ STEM Websites & Webtools for Educators](#) – 100+ STEM websites & Webtools for Teachers – great site for multiple subjects to integrate

Other STEM Subject / Ideas / Organizations

[10 Totally Terrific Current Event Resources](#) – The site speaks for itself. Need a reason to tie in a lesson? Use these resources.

[The American Council of STEM Educators](#) – A site dedicated to improving the quality of STEM Education across the US.

[Arizona STEM Network](#) – For educators, business advocates and also a site for tools 4 teachers

[Arizona STEM Resources](#) – These links contain state-specific resources for teachers/districts. The list is composed of state leadership organizations, professional development connections, ties to K-16 outreach organizations and both formal and informal STEM programs. The links provide schools/districts with programs to shape the type and scope of STEM program they want to implement.

[Buck Institute of Education](#) – Multiple subject and STEM integration

[California STEM Learning Network](#) – CSLNet's mission is to help California prepare the nation's most STEM-capable graduates.

[Center for Integrative STEM Education](#) – One of my favorite sites. In conjunction with the National Institute of Aerospace (NIA).

[Connect Innovate UK](#) – From the United Kingdom, another great STEM resource.

[Educational Psychology](#) – 20 Things Educators Need To Know About How Students Learn.

[FAA](#) – Here there are multiple resources for users to use for aviation related lessons and activities.

[Find a Mentor](#) – Here you can find a manufacturing mentor in your area that ties in professions with STEM.

[The Fletcher School](#) – has great googleapps for education as well as iPad info & is designed for special needs students.

[Fort Drum RISE – Rural Initiative for STEM](#)

[Excellence](#) – a compilation of useful sites for multiple subjects with some grant sources.

[ICTEvangelist](#) – Mark Anderson's website devoted to creativity and innovation for all 21st Century users. Tons

of info, and sites to utilize from learning and teaching to leadership. I highly recommend that you visit this site if you have not done so already.

[K-12 STEM Curriculum](#) – These links contain the best open source K-12 curricular resources currently available including STEM units and individual lessons.

[Library of Congress](#) – Tons of lessons and resources for STEM (Technology – currently). Can be separated by state, and grade.

[The Ultimate STEM Guide for Kids: 239 Cool Sites About Science, Technology, Engineering and Math](#) – The best compiled STEM Site that I have seen by far.

[MA STEM Initiative](#) – A plethora of sites devoted to Massachusetts and the North East part of the United States.

[Maryland STEM Site](#) – Maryland’s version of STEM and implantation in their state.

[MIT Blossoms](#) – BLOSSOMS video lessons are enriching students’ learning experiences in high school classrooms from Brooklyn to Beirut to Bangalore. Our Video Library contains over 100 math and science lessons, all freely available to teachers as streaming video and Internet downloads and as DVDs and videotapes.

[National STEM Centre](#) – from UK, this site provides users another resource to access.

[National STEM Resources](#) – These links contain nationally acclaimed STEM organizations, research data and targeted strategies to assist teachers/districts with implementing programs with a comprehensive design approach. Schools and organizations may use these links to research existing programs in order to determine how to best create, add or enhance a STEM program at their site.

[North Carolina STEM Center](#) – Strategies that Engage the Mind. There are multiple resources at this site.

[Open Colleges](#) – The leading online education provider in Australia. We offer distance learning courses that are

both flexible and affordable. Also, check out our blog for learning and teaching resources.

[PBS STEM Education Resource Center](#) – Tons of activities and lessons here.

[Sesame Street STEM](#) – A great place to help introduce STEM concepts to young children.

[STEM S3 – The Center for Elementary Mathematics and Science Education](#) – Everything from defining a STEM school to what a STEM school should do. One of the best sites I’ve seen to define STEM and how it should be implemented. Funded from the NSF on a national study.

[STEM Development in the military](#) – Multiple projects listed here.

[STEM is Elementary](#) – This site is designed to help users become familiar with understanding STEM and its integration into the pre-K – 6 curriculum.

[STEMgeo.com](#) – The STEM One-Stop-Shop where the U.S. STEM Challenge will be Solved – Together.

[STEMFinity](#) – Free K-12 STEM Resources.

[STEM Jobs](#) – A website exclusively for finding out the stem related jobs to the colleges that produce them.

[Teacher Tools for the Critical Skills Classroom](#) – from Antioch University, tools for the Critical Skills Classroom is a supplemental resource for teachers, designed to be used in association with the Level I and II Critical Skills Coaching Kit.

[Top STEM Careers](#) – This site provides the top 100 STEM Careers from 2008-2018 and best of all, it gives more insight as to some of their careers with interactive websites.

[US Dept of Education \(STEM\)](#) – A site dedicated from the US government for STEM.

[Video Resources](#) – These links contain a variety of STEM videos focusing on the need for STEM, video-based content and professional development.