

STEM YouTube Channels

The Brain Scoop:

<https://www.youtube.com/user/thebrainscoop>

Run by Emily, Chief Curiosity Correspondent of The Field Museum in Chicago and former volunteer of the University of Montana Zoological Museum. Emily takes your weirdest biological science questions, and provides answers in fun, informative videos.

Crash Course:

<https://www.youtube.com/user/crashcourse/featured>

Run by Hank Green of the Vlogbrothers, this channel is exactly what it sounds like. Educational and informational videos on physics, philosophy, games, economics, U.S. government and politics, astronomy, anatomy & physiology, world history, biology, literature, ecology, chemistry, psychology, and U.S. history.

Also check out:

Crash Course Kids

GoldieBlox:

<https://www.youtube.com/user/goldieblox/videos>

This channel has everything from DIY hacks to creative engineering inventions, but what we'd recommend most is Simone Gertz's Scrappy Robots playlist!

It's Okay to be Smart:

<https://www.youtube.com/user/itsokaytobesmart>

This channel is all about science, the amazing universe we live in, and the pleasure of finding things out.

Sci Show:

<https://www.youtube.com/user/scishow>

SciShow explores the unexpected. Seven days a week, Hank Green, Michael Aranda, and Olivia Gordon delve into the scientific subjects that defy our expectations and make us even more curious!

Also check out:

Sci Show Kids

Sci Show Psych

Sci Show Space

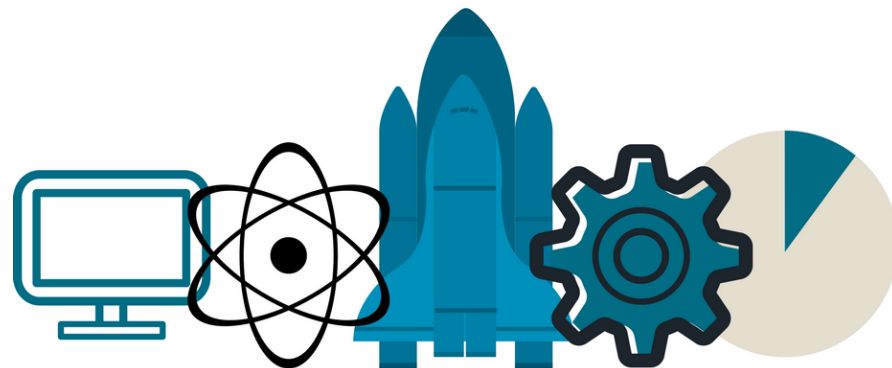
Smarter Every Day:

<https://www.youtube.com/user/destinws2>

This channel explores the world and answers our most basic questions about it using science.

STEM Resource Guide

Your Guide to STEM related resources in our library, in our community, and on the web!



Visit the Community Library of DeWitt & Jamesville or search the online catalog at: www.CLDandJ.org

STEM Resources in Our Collection

Arduino Starter Kit

Arduino is a micro-computer, a small computer which allows for many different activities, including learning about code, programming, and electronics!

The Starter Kit is a great way to get started with Arduino. The Starter Kit includes the components you need to make 15 fun projects following the step-by-step tutorials on the Project Book. Starting the basics of electronics, to more complex projects, the kit will help you control the physical world with sensor and actuators. This kit needs a computer to use as well as the free Arduino, Python, and Processing software.



Snap Circuits Pro

Make learning electronics easy and fun! This set of building blocks with snaps enables young experimenters to build different electrical and electronic circuits. Set includes more than 75 parts—switch blocks, lamp blocks, battery blocks, and different length wire blocks, to mention a few, in different colors and numbered for easy identification. Also includes instructions for 500 projects.

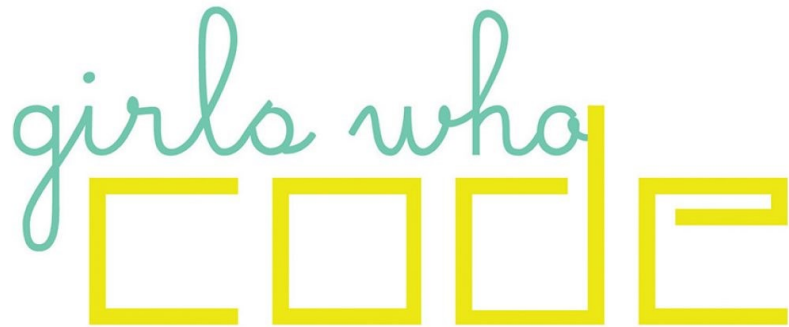


Hour of Code: Events hosted to encourage an hour (or more) of code for people of all levels of learning and for kids of all ages.

Hack Upstate: Hosts local hackathons “hack·a·thon (noun) -- an event in which computer programmers, hardware engineers and others involved in product development, including graphic designers, interface designers and project managers, collaborate intensively on software and hardware projects over a short period of time.”

Tech4Kidz: Organization for kids based out of Manlius, NY that offers classes locally for about \$120 each.

OpenHack Syracuse: Geared more towards adults but still a good resource for local tech meetups and events. Look on meetup.com for upcoming meetings.



Girls Who Code: This is a free club for all skill levels (beginner to advanced), 2 hours per week after school during school year or on weekends, for 6-12th grade girls. These clubs are active at:

Hal Welsh East Area Family YMCA
200 Towne Drive, Fayetteville, NY
(315) 637-2025

East Syracuse-Minoa Central High School
6400 Fremont Rd, East Syracuse, NY
(315) 434-3300

North Side Learning Center
501 Park Street, Syracuse, NY
(315) 378-4825

Onondaga Free Library
4840 West Seneca Turnpike, Syracuse, NY
(315) 492-1727

Apple iPad Air

On our iPads we have a wide variety of educational apps for students in the STEM (science, technology, engineering, and math) content areas. The apps are designed to help kids learn in a fun and hands-on way.



Whether they are examining a human brain or combating an evil mastermind by solving equations they will gain skills that will last into the future.

Makey Makey Kits

Makey Makey is an invention kit for the 21st century. Turn everyday objects into touchpads and combine them with a computer and the internet.



It's a simple and fun Invention Kit for Beginners and Experts doing art, engineering, and everything in between. Anything that conducts electricity! Visit makeymakey.com/howto.php for more information and resources.

Ozobot Starter Kit

The Starter Pack includes all the necessary tools to ignite the imaginations of children, inspiring and teaching them the bold basics of coding. Whatever your child can imagine, the tiny robot can do. Learning how to control Ozobot is easy through color codes with just regular paper and four primary color markers.



For Adults:

freeCodeCamp.com: Offers free tutorials in web development, JavaScript, and more. Create an account to track your progress. Complete projects and code for non-profit organizations!



[Lynda.com](https://www.lynda.com): Access video courses on coding, web design, and more with your library card. Earn certificates of completion.

[Codecademy.com](https://www.codecademy.com): Create an account and access interactive, hands-on tutorials on HTML and CSS, as well as programming languages like Python, Java, JavaScript, C++, and more.

[Stackoverflow.com](https://stackoverflow.com): Resource for coders of all levels where you can ask questions, search for answers, and help others by answering questions.

[GitHub.com](https://github.com): Community to publish code and work collaboratively on projects.



[Kaggle.com](https://www.kaggle.com): Free online resource to complete coding projects and submit them for competitions. Also a resource for datasets.

For Kids:

[Code.org](https://code.org): Lessons based on grade and projects to make your own game apps. For grades K-12.

[Scratch.mit.edu](https://scratch.mit.edu): Programming language designed for kids aged 8-16 to learn to code and easily create projects like games and stories.



[Tynker.com](https://www.tynker.com): Whether your child is interested in modding Minecraft, commanding drones, or developing games, Tynker's interest-based learning paths will support them at every step.

[Hourofcode.com/us/beyond](https://hourofcode.com/us/beyond): Beyond an Hour of Code contains online tutorials and local coding classes.

For Everyone:

[Instructables.com](https://www.instructables.com): A website specializing in user-created and uploaded do-it-yourself projects.

[Tinkercad.com](https://www.tinkercad.com): Tinkercad is used by designers, hobbyists, teachers, and kids, to design 3D toys, prototypes, home decor, Minecraft models, jewelry, and more.