

STEM Resources

Engineering, Computer Science, and Physics

Alice

Alice is an open-source block-based coding program, where people can create animations and program simple games.

Recommended for middle school and older.

Badge connection: Coding for Good and Digital Game Design badges

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

Design Squad

Hands-on STEM activities including some of the mechanical engineering badges.

All ages.

Badge connection: Mechanical Engineering badges.

<https://pbskids.org/designsquad>

Engineer Girl

Engineering activities and information.

Aimed at middle school but may be appropriate for other ages.

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

Mouse

Coding platform with tutorials for projects for kids.

All ages.

<https://projects.mouse.org/>

Scratch

Coding platform for kids that includes simple animations and games.

Recommended for ages 8-16.

<https://scratch.mit.edu/>

Scratch Jr

Simplified version of Scratch for younger kids.

Recommended for ages 5-7.

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



Try Engineering

Interactive games for kids, resources for teachers and parents.

All ages.

<https://tryengineering.org/students/>

Chemistry and Biosciences

Go Science Girls

Science experiments, broken down by age, along with other science education resources.

Designed for ages 1-9.

Badge connection: Home Scientist badge

<https://gosciencegirls.com/>

National Institutes of Health STEM Resources

Links to resources and activities for teaching STEM.

All ages.

<https://science.education.nih.gov/>

Ocean Discovery Badges

Marine science badges from New Jersey that are still available to earn. IP is for Cadette and older.

Brownies and older.

Badge connection: Ocean Discover Legacy Badges.

<https://useresourceswisely.com/2018/04/19/oceanography-ocean-discovery-badge/>

Science Fun

Assorted science experiments.

All ages.

Badge connection: Home Scientist badge

<https://www.sciencefun.org/kidszone/experiments/>



Astronomy

Harvard Microobservatory

Remote observing landing page through multiple telescopes.

All ages.

Badge connection: Space Science badges

<https://mo-www.cfa.harvard.edu/MicroObservatory/>

In The Sky

Online planetarium and night sky guide.

All ages.

Badge connection: Space Science badges

<https://in-the-sky.org/>

NASA Solar System Ambassadors Directory

Find a NASA-approved volunteer to help with your troop's astronomy activities.

All ages.

Badge connection: Space Science badges or STEM Careers badges.

<https://solarsystem.nasa.gov/solar-system-ambassadors/directory/>

Stellarium

Online planetarium.

All ages.

Badge connection: Space Science badges

<https://stellarium-web.org/>

Citizen Science

Get the Kids Outside - Citizen Science

Learn more about Citizen Science, including links to project sources.

All ages.

Journey connection: Think Like a Citizen Scientist Journey.

<https://getthekidsoutside.com/citizen-science-for-kids/>



Globe at Night

Citizen science for light pollution.

All ages.

Badge or Journey connection: Space Science badges, Think Like a Citizen Scientist Journey

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

Sci Girls

Science activities accompanying TV episodes. Also has citizen science information.

Designed for middle school.

Journey connection: Think Like a Citizen Scientist Journey

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

SciStarter

Citizen Science projects to complete the Think Like a Citizen Scientist Journey. Choose from projects all over the country and world.

All ages.

Journey connection: Think Like a Citizen Scientist Journey

<https://scistarter.com/girlscouts/info>

Mixed and Interdisciplinary

Carnegie STEM Girls

Fun STEM activities designed to get girls and teens involved in STEM.

All ages.

<https://carnegiestemgirls.org/stem-activities/activities/>

Exploratorium

STEM activities in a variety of fields, as well as social science and history.

All ages.

<https://www.exploratorium.edu/explore>

NASA Jet Propulsion Laboratory

Assorted STEM activities to do at home.

All ages.

Badge or Journey connection: Space Science badges

<https://www.jpl.nasa.gov/edu/learn/>



NASA STEM Engagement

Various space science and STEM activities for families, teachers, and student resources.

All ages.

<https://www.nasa.gov/stem/foreducators/informal/index.html>

NISE Network Activities

National Informal Science Education Network, includes resources aimed at museums and informal science educators.

All ages.

Badge or Journey connection: multiple

<https://www.nisenet.org/browse-topic>

Science Buddies

Assorted STEM Experiments

All Ages

Badge or Journey connection: Home Scientist, Mechanical Engineering badges

<https://www.sciencebuddies.org/stem-activities>



Miscellaneous

Connected Girls (National Girls Collaborative)

Listing of different STEM events and opportunities for girls.

All ages.

<https://ngcproject.org/about/initiatives/connected-girls>

If/Then Collection

Assorted videos from real women in STEM.

All ages.

Badge or Journey connection: STEM Careers badges

<https://www.ifthencollection.org/search>

Science Near Me

Science activities around the US.

All ages.

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

Skype a Scientist

Schedule a time to meet with a STEM professional.

All ages.

<https://www.skypeascientist.com/>

STEM Trading Cards at Home

Collection of STEM activities as well as STEM trading cards and posters.

All ages.

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

Women in Science (NASA)

Information on women in science, modern and historical.

All ages.

<https://chandra.si.edu/women/>

