

Science at Home Guide

Online and Interactive Science Resources for All Ages

This guide will help you assist your student in grades K-12 learning science concepts, and practicing and strengthening science skills at home. Below is a list of websites (with grade ranges) and a brief description of the contents of the site. Click on the image below each description to go to that website!

The Exploratorium (K-12) - The Exploratorium is the website arm of the San Francisco Exploratorium. This site offers hands-on experiences that will help teach children about basic, and more complex, scientific principles. It covers subjects from many disciplines of science from biology and earth science to astronomy. The site also has a parent and teacher section that will provide free resources to help you plan and incorporate its interactive material to boost your child's learning. <https://www.exploratorium.edu/>



Edheads (K-12) - Edheads is widely considered one of the best science websites for interactive learning for children. It has a large collection of interactive science-related activities that will keep children entertained whilst also expanding their minds. According to its website, its aim is to: "bridge the gap between education and work, thus empowering today's students to pursue fulfilling, productive careers in science, technology, engineering, and mathematics."

<https://edheads.org/>



Science Kids (K-8) – Science Kids is another interactive learning website that focuses on teaching children the wonders of science. The site has a great variety of interactive science games covering subjects from living things to physical processes and everything in between. The great thing about this site's content is that it educates young minds and helps them put that knowledge to practical use. One particularly useful game will have your child design and build a virtual electrical circuit. Each subject comes in modules then subdivided into subcategories. <http://www.sciencekids.co.nz/>

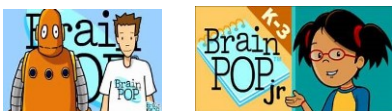


National Geographic Kids' (K-12) - National Geographic Kids' site is broken down into helpful subcategories for ease of navigating your child's learning. Each section contains extensive and informative write-ups on different animals from lions to whales supported with world class National Geographic footage. This site includes a large collection of videos, interactive activities, and fun games that will keep children of all ages engaged for hours on end. Each section also includes memory games, quizzes, and activities to reinforce learning by applying new found knowledge.

<https://kids.nationalgeographic.com/>



BrainPOP (K-12) – BrainPOP is a great site for interactive science learning and is very well designed to boot. It is a very active site for young students with a myriad of animations, movies, and short interactive quizzes. It covers topics like cellular life and genetics, ecology and behavior, forces of nature, our fragile environment, scientific inquiry, paleontology and anthropology, and even interactive coding lessons. Young aspiring scientist are bound to find something that will spark their interest. <https://www.brainpop.com/> and <https://jr.brainpop.com/>



PhET Interactive Simulations (Jr. High/High School) - PhET Interactive Simulations is a real gem of an interactive and fun science-related website. Built and run by the University of Boulder, Colorado it has a vast collection of simulators covering most topics with physics from circuits to waves to quantum mechanics. It also has some materials covering Earth Science, chemistry and life sciences to a lesser extent. <https://phet.colorado.edu/>



Wonderville (K-12) - Wonderville is another great science-related website packed with interactive activities for children. According to the website "Wonderville makes learning science fun for kids. We help teachers teach and students learn. Used in 170 countries, our awarding-winning STEM content helps create lifelong learners." In addition to fun and entertaining games it also has a very good blog for the more curious children who want to go deeper into a subject. <https://wonderville.org/> (This site has a subscription costs)



Citizen Science (Grades 3 – 12) - The National Geographic Society supports research, exploration, and conservation in every part of the globe every year. Attention is focused on key projects that emphasize science, technology, and storytelling to help protect species-at-risk, better understand human history and culture, and conserve some of our planet's last wild places. Many science related sources (citizenscience.gov, Scientific American, NOAA, NASA, EPA) have their own Citizen Science opportunities.

<https://www.nationalgeographic.org/idea/citizen-science-projects/> and <https://www.citizenscience.gov/#>



Zooniverse (K-12) - The Zooniverse is the world's largest and most popular platform for people-powered research. This research is made possible by volunteers — more than a million people around the world who come together to assist professional researchers. The goal is to enable research that would not be possible, or practical, otherwise. Zooniverse research results in new discoveries, datasets useful to the wider research community, and many publications.

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



Crash Course Kids (Grades 5 – 12) - This bi-weekly show from the producers of Crash Course is all about grade school science. Join host Sabrina Cruz every Tuesday and Thursday for new uploads. This series begins with 5th grade science, delving into Earth Science, Physical Science, Biology, Geography, Engineering, and Astronomy.

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



Bill Nye the Science Guy (K – 12) – A collection of Bill Nye videos containing a variety of science topics and concepts. Classic Science Videos on youtube (free).

https://www.youtube.com/playlist?list=PL_zuNdsXRcfMThB81edcSxSYQqG_41JMg



Elementary Science

Science! Kids (K – 8) – Enjoy fun science experiments designed for children while learning more about science and technology with experts from Orlando Science Center. <https://pbskids.org/> and <https://www.pbs.org/show/science-kids/>



Little Bins for Little Hands (K-8) – A collection of inexpensive and easy-to-do science experiments and STEM challenges to get the juices flowing, keep the kids thinking, and best of all learning.

<https://littlebinsforlittlehands.com/>



Secondary Science

Design Squad is a PBS reality television series geared towards middle and high-school children, where contestants design whimsical machines in order to win an Intel college scholarship worth \$10,000. The show is produced by WGBH and won a Peabody Award in 2007 "for 'designing' an outstanding program to interest young people in careers related to engineering. <https://pbskids.org/designsquad>



HHMI's (High School) - HHMI's BioInteractive website is full of great 3-D interactive, virtual labs, and printable activities. Materials are engaging and interesting for science-buffs of all ages. Famed for their award-winning virtual labs and high-quality informative videos the site also includes "Click & Learn" activities that include embedded video clips and animations - stop points and assessments to check whose been paying attention. <https://www.biointeractive.org/>



Annenberg Learner Interactives (Jr. High/High School) - [Annenberg Learner Interactives](https://www.learner.org/subject/science/) include a variety of science-related topics full of easy-to-understand graphics and other content, including a collection of interactive lessons that cover big ideas like the Earth's structure to plate tectonics. The site also covers subjects and helps to make topics come alive for young student, including interactive games and lessons. <https://www.learner.org/subject/science/>



Interesting/Fun STEM

Mark Rober YouTube Channel (Jr. High/High School, some Elementary) – Former NASA scientist Mark Rober is an American YouTuber, engineer and inventor. Known for his YouTube videos on popular science, do-it-yourself gadgets and creative ideas, several of his videos have gone viral, including a digital Halloween costume, and a trap for package thieves that releases a fountain of ultra-fine glitter. <https://www.youtube.com/user/onemeeliondollars/featured>

