



Websites

Kindergarten - Push Pull

AfterSchool KidzScience

<http://www.lawrencehallofscience.org/kidsite/collections-2/afterschool-kidzscience/>
K;1st;2nd;3rd;4th;5th

Website Types: Teacher Activities;Teacher Background;Teacher Videos

This webpage offers a range of science kits designed for afterschool programs. These could certainly be used in the general classroom as well. At the bottom of the page is a series of videos on teaching strategies and how to use the kits. Valuable whether you are using the kits or not.

Art Integration: Easy Ideas Combining Science and Art

<https://www.scholastic.com/teachers/collections/teaching-content/strategies-arts-integration/>
K;1st;2nd;3rd;4th;5th

Website Types: Teacher Activities

Site gives 4 great ideas for tying art to your science curriculum.

BBC Science Clip Force and Movement

http://www.bbc.co.uk/schools/scienceclips/ages/6_7/forces_movement.shtml
K;1st;2nd;3rd;4th;5th

Website Types: Student Background;Student Online Activities

Interactive Video on Force and Movement. Don't forget to check out other clips on the site.

California Foundation for Agriculture in the Classroom

<http://www.cfaitc.org>
K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th

Website Types: Teacher Activities;Teacher Background

Resource that connects agriculture to your science curriculum. Simple machines, plants, life cycles, meeting needs, interdisciplinary topics and more. Lessons are split into K-3, 4-6, 7-8, and 9-12. Plus a Teacher Resource Guide. Everything is free to download.

For resources in Spanish: <<http://www.cfaitc.org/spanish/>>

City Technology

<http://www.citytechnology.org/>
K;1st;2nd;3rd;4th;5th

Website Types: Student Background;Student Online Activities;Teacher Activities;Teacher Background

A collaboration of college faculty in Engineering and Education, public elementary teachers and children.

Curiosity Machine

<http://www.curiositymachine.org/>
K;1st;2nd;3rd;4th;5th;6th;7th;8th

Website Types: Student Background;Student Online Activities;Teacher Background

Log in is required, but is free. Students can earn "badges." The Curiosity Machine hosts collection of exciting (and sometimes very challenging) experiments and projects designed for children, along with their parents, to encourage curiosity, creativity and persistence!

1. OBSERVE watch videos of actual engineers and scientists talking to children about the inventions and projects they work on.
2. BUILD get ideas from the videos and create your very own invention.
3. SHARE share your adventure photos and videos, sketches and thinking.

Engineering Adventures

<http://eie.org/engineering-adventures/curriculum-units>

K;1st;2nd;3rd;4th;5th;PK

Website Types: Student Background; Student Online Activities; Teacher Activities; Teacher Background; Student Videos; Engineering Everywhere is a FREE engineering curriculum for elementary level students. Choose from seven units with fun, hands-on engineering design challenges based on real events around the world

Engineering is Elementary Resource Page on Bridges

http://eie.org/sites/default/files/resource/file/lit_br.pdf

K;1st;2nd;3rd;4th;5th

Website Types: Teacher Background

This is a simple page with resources for doing a unit on Bridges

Filling Without Spilling

<http://www.lawrencehallofscience.org/kidsite/portfolio/filling-without-spilling/>

K;1st;2nd;3rd;4th;5th

Website Types: Student Background; Student Online Activities; Teacher Activities

Can you overfill a glass with water and not spill any? "Surface tension" keeps water molecules sticking together. How does soap or salt change that? Count water drops you drip on a penny without spilling, report results online and compare them to other drop-drippers.

Forces Can Push or Pull - Song by Jack Hartmann

https://www.youtube.com/watch?v=E-SnC_WKsCg

K;1st;2nd;3rd;4th;5th

Website Types: Student Videos

Forces Can Push or Pull. Your children will learn the most important science fundamentals about forces in this super catchy science song. This song for kids about forces teaches children that a force either pushes or pulls and forces make things move. The video shows many kid-friendly examples of forces and how they push or pull things in the environment. Children push in their chairs in a classroom, pull in a game of tug-of-war, a kite is pushed by the wind to make it fly, children push and pull playground toys. All of these examples are clearly shown on this video with both audio and video telling the children if the force is a push or pull.

Forces Can Push or Pull will help children clearly see how forces move things all around them. After seeing this song and video in force, teachers and parents can extend learning about science by observing all different movements in their home and school environment and decide it's a push and pull.

From Windmills to Whirligigs

<http://www.smm.org/sln/vollis/>

K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th

Website Types: Student Background; Teacher Activities

Books, photographs, activity ideas and lots of stuff related to Vollis. Wheeling and Whirling Around, Mirandy and Brother Wind, bearings, wind power, pinwheels, shoebox, pop bottle whirler, photo album, Constructions for Kids, Signs and Wonders, pneumatic motion machines, From Windmills to Whirligigs.

How Stuff Works

<http://www.howstuffworks.com>

K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th

Website Types: Student Background; Student Online Activities; Teacher Activities; Teacher Background

A great place to learn about the way all kinds of things function in the world. Learn about everything from guitars, to cruise missiles, to engines, to weather, to the cells in your own body. For parents, see "Homestuff" for great at-home learning activities.

HowToSmile.org

<http://howtosmile.org/>

K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th

Website Types: Teacher Activities;Teacher Background;Teacher Videos

Are you looking for new ways to teach kids about math and science? Do you want activities that meet you where you live, whether your “classroom” is an active volcano, the shark tank at the local aquarium, or your own kitchen table? You’ve come to the right place. SMILE is collecting the best educational materials on the web and creating learning activities, tools, and services – all designed especially for those who teach school-aged kids in non-classroom settings. We are a group of science museums dedicated to bringing science, technology, engineering, and math (STEM) out of the academic cloister and into the wider world. Our organizations are resource hubs for educational programs that involve people of all ages and backgrounds. Together we’re gathering the best STEM education materials from the web, and encouraging educators to both use and contribute to the growing collection

Kindergarten Force & Motion

<https://s3.wp.wsu.edu/uploads/sites/731/2015/04/Kindergarten-Force-Motion-Lessons.pdf>

K

Website Types: Teacher Activities

Opens a PDF. Lesson ideas for push and pull with suggested questions to inspire inquiry,

National Science Digital Library

<http://nsdl.org/>

K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th

Website Types: Student Online Activities;Teacher Activities;Teacher Background

This website is a huge resource for finding activity ideas, videos, photos and news about science and technology. They have a section specifically devoted to K-12 teachers.

Outdoor Pendulum Activities

<http://www.scholastic.com/teachers/lesson-plan/outdoor-activitiesgames-pendulum-play>

K;1st;2nd;3rd;4th;5th;PK

Website Types: Teacher Activities

Nice description of how to make a large pendulum with every day materials. Lesson ideas for younger and older students.

Parachute Drop

<http://www.lawrencehalloffscience.org/kidsite/portfolio/parachute-drop/>

K;1st;2nd;3rd;4th;5th

Website Types: Student Background;Student Online Activities;Teacher Activities

Skydivers rely on parachutes to carry them safely to Earth. Test materials like wax paper, a thin plastic bag, and a coffee filter to make and drop mini-parachutes. Which material makes the slowest drop? Enter results online and find out what other experimenters discovered.

Paso Partners Bilingual Instruction

<http://www.sedl.org/scimath/pasopartners/>

K;1st;2nd;3rd;4th;5th

Website Types: Teacher Activities;Teacher Background

The resource is designed to help elementary school teachers organize their classrooms and instructional activities in order to increase achievement of Hispanic primary-grade children whose first language is not English. The guides offer a curriculum plan, instructional strategies and activities, suggested teacher and student materials, and assessment procedures. Bilingual lessons on Five Senses, Spiders, Dinosaurs, Plants & Seeds, Human Body, Health, Oceans, Weather, Matter, Sun & Stars, Sound, Simple Machines.

PBS Design Squad

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

K;1st;2nd;3rd;4th;5th;6th;7th;8th

Website Types: Student Background;Student Online Activities;Teacher Activities;Student Videos

This website has activities for kids to do. Design Challenges, videos and more.

PEEP and the Big Wide World

<http://peepandthebigwideworld.com/en/educators/>

K;PK

Website Types: Student Background;Student Online Activities;Teacher Activities;Teacher Background;Student Videos;
The Emmy Award-winning series that teaches science and math to an early childhood audience has an all-new bilingual website in Spanish and English--including an extensive science curriculum and video-based professional development about teaching science to young children. The greatly expanded website features 6 curriculum units in Spanish and English. Each provides three weeks of exploration and features hands-on activities, videos, and book recommendations.

Pendulum Painting

<http://oneinchworld.com/blog/index.php/2011/08/pendulum-painting/>

K;1st;2nd;3rd;4th;5th;PK

Website Types: Teacher Activities

Here's a fun way to integrate art and science. Turn your pendulums into "paint brushes" and make some beautiful art work that can be sent home as presents to the family.

Push and Pull Research Project

<https://thekindergartensmorgasboard.com/2017/03/push-pull-research-project.html>

K

Website Types: Teacher Activities

Blog post for "The Kindergarten Smorgasborg" about a lesson series on Push and Pull. Includes photos and suggestions for the lesson.

Pushing and Pulling - Force, Work and Energy

<https://www.youtube.com/watch?v=vAThuCmwp9I>

K;1st;2nd;3rd

Website Types: Student Videos

This is a small video for kids explaining all about Pushing and Pulling - Force, Work and Energy.

Science for Kids - Physics

<http://www.sciencekids.co.nz/videos/physics.html>

K;1st;2nd;3rd;4th;5th

Website Types: Student Background;Student Online Activities;Teacher Activities;Teacher Background;Student Videos;
The Physics page on Science for Kids has games, experiments, images, videos, facts, lessons and activities on subjects such as electricity, magnetism, force and motion

SMILE Program Physics Lesson Plans

<http://mypages.iit.edu/~smile/physinde.html#p1>

K;1st;2nd;3rd;4th;5th;6th;7th;8th

Website Types: Teacher Activities;Teacher Background

This webpage has over 200 physics lesson plans. All are single concept lesson plans

STEM Activities with Kindergarten (NGSS Forces & Interactions: Pushes & Pulls)

<https://www.youtube.com/watch?v=mKX8EXrcj7Y>

K

Website Types: Teacher Activities;Teacher Videos

YouTube video (2:30 minutes) from David Lee EdTech. Contains summary of the lessons he did with his kindergarten class.

TEACH Engineering

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

K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th;PK

Website Types: Teacher Activities;Teacher Background

The TeachEngineering digital library provides teacher-tested, standards-based engineering content for K-12 teachers to use in science and math classrooms. Engineering lessons connect real-world experiences with curricular content already taught in K-12 classrooms. Mapped to educational content standards, TeachEngineering's comprehensive curricula are hands-on, inexpensive, and relevant to children's daily lives.

Teacher's Guide Forces and Interaction:

<http://www.mccracken.kyschools.us/Downloads/PUSHES%20and%20PULLS%20-K.pdf>

K

Website Types: Teacher Activities

Opens a PDF. Teacher guide for Push and Pull with lesson plans, connections to NGSS, worksheets.

The Secret Life of Machines

<http://www.exploratorium.edu/ronh/SLOM/index.html>

K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th

Website Types: Student Background;Student Online Activities;Teacher Background

Just how does a video recorder work? And how about fax machines, cars, washing machines, electric light, telephones, vacuum cleaners, and refrigerators? You'll find the answers here. We proudly present streaming versions of the TV series 'The Secret Life Of Machines' written by Tim Hunkin, and presented by Tim Hunkin and Rex Garrod.

WatchKnowLearn.org

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

K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th

Website Types: Student Background;Teacher Background;Student Videos;Teacher Videos

This website has free educational videos on all topics (including science) for all age levels. There is specifically a section for younger learners.

YouTube for Teachers

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

K;1st;2nd;3rd;4th;5th;6th;7th;8th;9th;10th;11th;12th

Website Types: Teacher Background;Student Videos;Teacher Videos

YouTube for teachers is designed with playlists for your classroom or search for specific topics.