SCIENCE BUDDIES

Science Buddies Kit Club

Brought to you by:

THE ALLERGAN FOUNDATION

Science Buddies Kit Club

The Science Buddies Kit Club is brought to you by a generous grant from *(insert donor name and corporate responsibility message*). Participating classrooms may select up to 30 kits from this catalogue and place an order through the teacher by *(insert due date for school).* All kits are funded through a grant from (sponsor) and will be delivered directly to your school. Additional product information, including step-by-step instructions and support, are available online at www.sciencebuddies.org/kit-club.

For every classroom that participates in the Science Buddies Kit Club, the teacher will also receive a Science Buddies kit for use in the classroom, designed to bring hands-on inquiry to classroom instruction.

What are Science Project Kits?

Science Buddies kits are designed by scientists to provide fun, hands-on science explorations with just the right level of guidance. Covering a wide range of science topics, these kits are perfect for home or school.

Science Buddies kits offer:

- **Convenience:** supplies delivered to your classroom
- **Confidence:** the right supplies to complete your science project
- **Support:** easy-to-follow, online instructions guide you through each project
- **Fun:** a unique, hands-on experience that fuels learning, and is also a lot of fun!

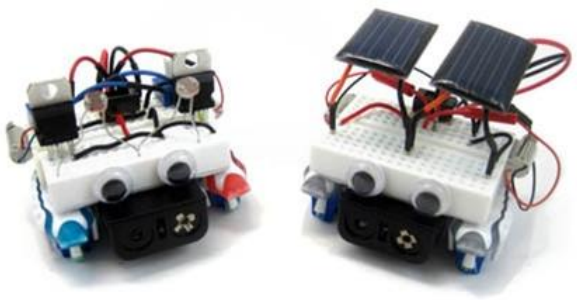
About Science Buddies

Science Buddies is an award-winning 501(c)3 nonprofit that empowers K-12 students, parents, and teachers to quickly and easily find free project ideas and help in all areas of science from physics to food science and Omusic to microbiology.

Science Buddies mission is to help students from all walks of life to build their literacy in science and technology so they can become productive and engaged citizens in the 21st century.

"Science Buddies is a great resource both for project ideas and application of the needed supplies. The intimidation factor of completing a science fair project was totally eliminated by your website!"

Robotics



Advanced Bristlebot Kit

Intermediate – Easy

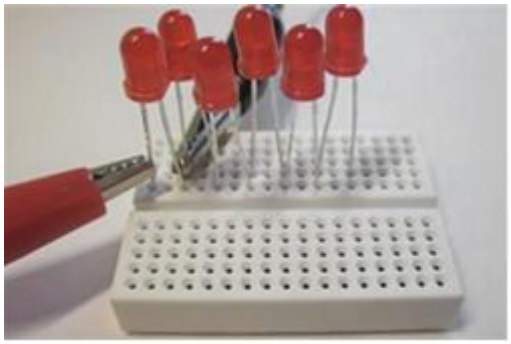
Move beyond Move beyond basic brushbots and bristlebots with our Advanced Bristlebot kit! This kit takes you to the next level of robot building as you explore either a solar-powered robot **or** the use of sensors to control robot behavior.

Bristlebot Kit

Beginner – Easy

Build three different kinds of wiggling, wobbling robots for a fun introduction to robotics! You will build simple electrical circuits that bring your robots to life, using vibrational motion to propel them.

Physics and Electricity



Shaking Up Some Energy

Intermediate – Medium

Build your own mini, motion powered generator! Have you ever wondered what it takes to create electricity? This kit provides a straightforward and fun introduction to the science of how magnetic fields can be used to

Ping Pong Catapult

Intermediate – Easy

With this rubber-band powered catapult you'll send ping pong balls flying through the air to learn about physics and math. Unlike most wooden catapults, this catapult allows you to easily reproduce a precise launch angle, and measure the amount of force applied to a projectile.

Physics and Electricity

Basic Circuits Kit

Beginner - Easy

The Basic Circuits Kit brings a unique twist to learning about electricity by focusing on circuits and conductivity. You'll get a hands-on introduction to building a simple circuit, creating your own dimmer switch, learning about conductors, and more!

Build a Gauss Rifle

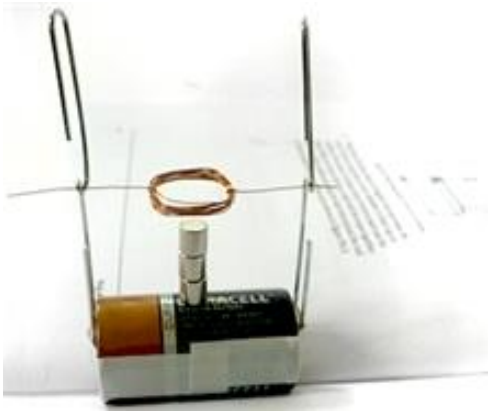
Intermediate – Medium

Playing with magnets is irresistible, and it can also be a great learning moment. How many magnets will it take to launch a ball bearing, and how far will it fly? This kit provides a fun way to learn basic physics concepts.

Build Your Own Crystal Radio

Intermediate – Medium

The classic crystal radio kit made even better with easy to understand instructions, solder-free building, and an amplifier as an alternative for full sound! You will learn the basic circuit elements required for receiving radio signals, and you will be able to listen to AM radio.

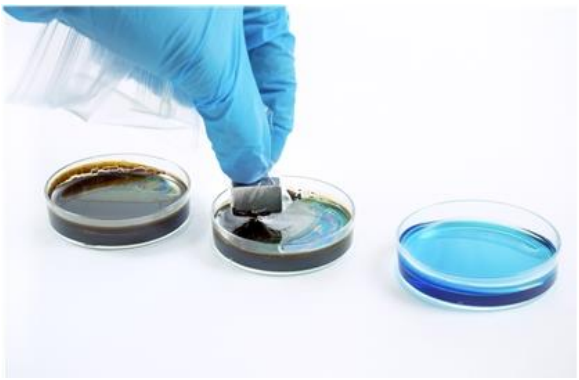


Electric Motor and Generator

Intermediate – Medium

There is no better way to learn about motors and generators than by building them. With this kit you can build a simple electric motor and learn how varying the magnets impacts performance, or build a generator and see how many LED's it can power.

Physics and Electricity

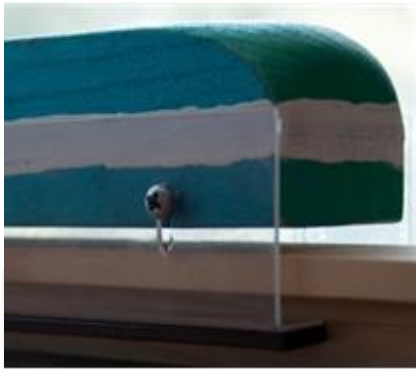


Squishy Circuits Kit
Beginner – Easy

Mix up special sculpting dough and make fun creations with light-up LED accents! Three playful projects provide easy to follow instructions to learn about simple, series, and parallel circuits.

Ferrofluid Nanotechnology Kit
Intermediate – Medium

nology clean up ocean oil exploration of the possibilities of logy. Use this kit to discover how posed of magnetic nanoparticles, can be used to collect and manipulate oil from a water sample



Sensors Kit
Intermediate – Medium

Have you ever wondered ho such as your cell phone or vi controller, know how to resp touch or other external cond the sensors, and with this kit and test your own electronic "sensing" devices.

Magic Bullet Train
Beginner – Easy

Build your own mag lev train and experiment to see how large a load the train can carry. At the intersection of science and model making, this kit serves as a fun introduction to physics with magnets and magnetic levitation.

Physics and Electricity

Microbial Fuel Cell

Intermediate - Hard

Generating electricity from mud? It's a *dirty* little secret, but it's true! Check out this promising form of alternative energy with our Microbial Fuel Cell kit. Pack the kit's vessel with mud, align the anodes and cathodes and sit back and wait for the bacteria in the mud to make electricity!

Chemistry

Spherification Kit

Intermediate – Easy

Combining flavor, fun, and chemistry, our spherification kit is a great and tasty introduction to food science! The kit contains food-grade versions of three chemicals used in molecular gastronomy recipes to turn liquids and semi-solids (like juice and yogurt) into tasty spheres that pop in your mouth.

Rainbow Fire

Advanced – Easy

A hands-on way to explore the atomic composition of chemical compounds! Using a simple flame test you will observe the color of light produced when various metal compounds are burned. This kit provides you with four different chemicals that can safely be burned.

Chemistry

Calorimeter Kit

Advanced – Easy

Have you ever wondered how nutritionists measure the Calories in a certain food? With a little math and a device called a calorimeter, you can compare the amount of energy stored in your favorite snacks. This kit provides you with the key supplies to build a simple, double can calorimeter.

Candy Chromatography Kit

Intermediate – Easy

What dyes make an M&M's® candy orange or a Skittles® candy red? Do all blue candy coatings use the same color dyes? Is black ink really black? Use this fun and easy chromatography kit to explore the hidden colors in dyes all around you!

Chemistry of Ice Cream Making

Advanced – Easy

If you have ever made ice cream, you know that salt is a key to getting homemade ice cream to freeze—discover why with this chemistry kit! With this kit and a bit of salt and sugar from your kitchen, you'll be ready to explore how the freezing point of water can be changed.

Copper & Iron Test

Intermediate – Medium

Explore the "magic" of chemistry with color-changing chemical reactions you can see! Just right for a budding chemist or environmental scientist, this kit allows you to explore the levels of copper and iron in water systems.

Chemistry

Electrolyte Challenge

Advanced – Easy

Build an electrolyte sensor and experiment to see if sports drinks really do provide more electrolytes than other beverages. You can even use what you learn to create your own hydrating beverage!

Crime Scene Chemistry

Intermediate – Easy

Discover what it is like to be a forensic chemist with this hands-on kit! Following the scenario and instructions set out in the Crime Scene Chemistry project, you will perform a series of tests to identify an unknown substance discovered in the kitchen of a critically ill elderly lady.

Solar-Powered Water Desalination

Intermediate - Hard

Ocean water is too salty to drink. But a process called desalination can turn seawater into fresh water that people *can* drink. With this environmental science kit, you will make a solar desalination device that uses a power source that is free—the sun!

Sugar Metabolism Kit

Intermediate – Medium

The Sugar Metabolism Kit provides a hands-on introduction to biochemistry and the nutritional impact of sugars. You'll get to recreate the chemical processes that the human body uses to metabolize sugar, and explore the link between sugars and serious health problems such as diabetes.

Biology

How are Antibodies Used for Blood Typing

Intermediate - Easy

Discover what it is like to work in a real clinical laboratory with this hands-on biochemistry kit! With this kit, you can learn about basic human biology like antibodies and blood types while exploring how biochemical assays can give doctors critical information.