

BROWNIE BADGES TO DO AT HOME



Home Scientist

By paying careful attention during experiments, scientists learn new things—even if they’ve done the test before. That means you don’t have to grow up to be a scientist. You’re a scientist every time you do an experiment! In this badge, find out where science has been hiding in your own home.

Steps

1. Be a kitchen chemist
2. Create static electricity
3. Dive into density
4. Make something bubble up
5. Play with science

Purpose

When I’ve earned this badge, I’ll be able to see the science all around me.

To earn this badge, please complete one option per step.

STEPS	BADGE REQUIREMENTS	OPTION 1	OPTION 2	OPTION 3
Step 1	Be a kitchen chemist.	Make a salad dressing. Research salad dressing recipes online.	Grow rock candy. Research how to grow your own rock candy online.	Make your own ice cream. Research how to make ice cream online.
Step 2	Create static electricity.	Follow the balloon leader. Blow up a balloon and tie the end. Rub it on your hair. Then hold it close to a Ping-Pong ball. When you move the balloon, watch the science magic. Find out why it happened here.	Make pepper dance. Pour some salt and pepper on a sheet of paper. Blow up a balloon and tie it, and then rub it on your hair. Hold it over the salt and pepper and watch a dance. Find out why it happened here.	Bend water. Turn on a faucet in a very thin stream. Rub a plastic comb very quickly on a sweater. Then bring the teeth of the comb near the water about 3-4 inches below the faucet. Watch closely as the water bends towards the comb. Find out why it happened here.
Step 3	Dive into density.	Egg in salt water. Mix 4 tablespoons of salt and 1 cup of water. Add a few drops of food coloring. Mix to dissolve the salt. Then slowly pour the remaining cup of plain water down the side of the glass. Carefully lower the egg into the glass. Can you make the egg float in the middle of the glass? Find out more here.	Dancing raisins. Pour a can of lemon-lime soda (like Sprite or 7-UP) into a tall glass. Drop 6 to 7 raisins into the soda. Find out more here.	Lemons vs. limes. Fill a deep container with water. Add the lemon and lime. Which one floats? Find out more here.

Step 4	Make something bubble up.	<p>Make a soda geyser! Take the top off the soda bottle and set the bottle on the ground somewhere outside with nothing else around. Open a package of Mentos candy, and stick them along a piece of tape so you can drop them into the soda at once. When you are ready to make the drop, be ready to run and stand back. What happens? A soda geyser will erupt because of the carbon dioxide gas created by the rapid reaction between the candy and soda.</p>	<p>Make film-canister rockets! Fill the film canister half-full with water. Cut the Alka Seltzer tablet into 4 pieces, then drop the pieces into the canister, and snap on the lid. Stand back now and time the reaction! What happens? The carbon dioxide created by the reaction in the canister should pop the top off the canister.</p>	<p>Blow up a balloon without using your breath! Take one spoon, add 2 tablespoons of vinegar into a clean empty plastic bottle. Ask an adult to hold open the mouth of a balloon. Then pour 1 teaspoon of baking soda into the balloon. The stretch the balloon's opening over the mouth of the bottle. Make sure the baking soda inside the balloon falls into the vinegar. What happens? The baking soda and vinegar create carbon dioxide when they mix. There is not enough room inside the bottle for the extra gas, so it expands into the balloon, blowing it up!</p>
Step 5	Play with science.	<p>Giant bubbles. Make your own bubble blower. Cut a long piece of string and thread it through two plastic straws. Tie the ends of the string together, and then slide the knot into the middle of the one straw. You can adjust the blower size by making the length of string shorter or longer before tying ends. Pour 1 cup of dishwashing soap, 1/2 cup of light colored corn syrup, and 4 cups of water into a large plastic tub and mix together. Dip your blower into the tub. Holding the straws, slowly spin around.</p>	<p>Homemade Silly Putty. Look up slime recipes and make your own at home.</p>	<p>Make dinosaur snot. In a mixing bowl, mix 1 and 1/2 cups of cornstarch and 1 cup of water together. Add a few drops of yellow and green food coloring to the mixture. Use your hands to make sure it has really combined.</p>