



Physical Science Projects for Early Learners

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Kids are explorers by nature, and love to learn about the world around them. Take full advantage of your early learner's natural curiosity by experimenting states of matter and chemical reactions. Not only will your child build early STEM skills and knowledge, but most importantly, both you and your little learner will have a lot of fun!



Let's explore easy physical science activities for kids that can be done at home using common household ingredients!

Turn a Penny Green!

Introduce the concept of oxidation by taking an ordinary penny, and turning it green!

How it Works:

Pennies are made up of a mixture of chemicals, but the top surface is usually copper. Exposure to air causes pennies to dull over time. Vinegar helps speed up the process of

corrosion by allowing the copper in the penny to react to oxygen in the air. This turns the penny a bluish or green color!

What you'll need:

- 3 or 4 newer or shiny pennies
- Paper towels
- Small bowl
- White vinegar

What to do:

Take a paper towel sheet and fold it so it fits inside the bowl. Place the pennies inside the bowl, on top of the paper towel. Pour the vinegar over the pennies making sure the paper towel is completely saturated. Watch and wait!

Let your child know that pennies won't turn green immediately. Leave the bowl out on the counter for 3-4 days. Each day, help your child record his or her observations, and make predictions for the following day. Over time, your little scientist will notice the pennies turning color! Check out our latest collection of engaging [physical science worksheets](#) to support your little scientist's natural curiosity!



Making Soda to Explore States of Matter

This quick and easy physical science activity for kids will allow your child to [discover states of matter](#), as they take a solid and a liquid to form a gas!

How it Works:

By taking an acidic liquid like orange juice, the acid in the juice reacts with baking soda to form gaseous bubbles. This is like the carbonation found in most colas. Your child will be fascinated as they take a liquid and a solid, and make it react to create a gas!

What you'll need:

- Orange juice
- A large plastic cup
- Baking soda
- A spoon

What to do:

Pour about a cup of orange juice into the cup. Using the spoon, mix in a teaspoon of baking soda- feel free to eyeball the amount based on the size of your spoon. With the same spoon, mix it up, but just a little!

Wait a few seconds, and your child will notice the bubbles forming on top of the orange juice. Explain to your little learner that baking soda is a solid, and the juice is a liquid, but the chemical reaction makes a gas that is inside the bubbles! Assist your child in making a prediction about the type of gas it might be, and go on to explain that carbonated sodas contain bubbles with carbon dioxide. If your child would like, have a taste! It's not exactly like orange soda, but it's close!



Let's Take Water for a Walk

Did you know that water can walk? This experiment will introduce mini scientists to the science of capillary action.

How it works:

Capillary action is a science rule that states that liquids will flow into spaces despite the opposing force of gravity. In this experiment, water will travel up through the paper towel and fill into the next cup thanks to capillary action!

What you'll need:

- 3 glasses or jars of the same size
- Paper towels

- Food coloring
- Water

What to do:

Fill two of the glasses with water; the glasses should be mostly full. Help your child choose two colors, and use food coloring to tint the water in each glass. Cut a sheet of paper towels in half, and fold lengthwise (Select-a-size paper towels work best for this!). Position the glasses in a row, so the empty glass is in the middle. Submerge one end of the paper towel in the first glass, with the other end in the empty glass. Do the same to the third glass; fold one end of the paper towel in the glass, with the other end in the empty glass.

Sit back and watch!

You should be able to see results begin within minutes! Soon, you'll notice the empty glass filling with water, and all three glasses will have the same amount of water when the experiment is finished. For extra fun, choose food colors that will mix to form a new color for an art lesson, as an added bonus!

The above physical science experiments are just a start, and the sky is the limit! Use these activities to inspire your child, and ignite a new passion for science using the natural wonders of chemistry! Read more about [fun physics experiments](#) to keep your child engaged about the physical world.

