Home science experiments for kids

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Home science experiments for kids use things from the kitchen: baking soda and vinegar for a fizzy volcano, cornstarch for oobleck, salt and oil for a lava lamp. Each one has picture steps, its materials, a time and a line on the science behind it. Every experiment is free, with no sign-up.

Experiments with things from the kitchen

- Project: Elephant Toothpaste · Minutes: 15 · Grades: 2nd–8th · What it shows: Yeast splits peroxide into water and oxygen super fast, and soap catches the oxygen as foam.
- Project: Stretchy Slime · Minutes: 25 · Grades: 3rd–8th · What it shows: The activator links glue's long chains into a net, so runny glue turns into stretchy slime.
- Project: Oobleck · Minutes: 10 · Grades: K–8th · What it shows: Oobleck goes hard when you push it fast and runny when you go slow.
- Project: Fizzy Volcano · Minutes: 15 · Grades: K–8th · What it shows: Baking soda and vinegar make a gas, and soap turns the gas into foamy lava.
- Project: Salt Lava Lamp · Minutes: 15 · Grades: K–8th · What it shows: Oil floats on water, and salt can drag it down for a ride.
- Project: Magic Milk · Minutes: 10 · Grades: K–8th · What it shows: Soap grabs fat, and as it races across the milk the colours ride along.
- Project: Rain Cloud in a Jar · Minutes: 10 · Grades: K–8th · What it shows: A cloud holds water until it gets too heavy, and then it rains.
- Project: Walking Water Rainbow · Minutes: 15 · Grades: K–8th · What it shows: Water can climb up through tiny gaps, even uphill.
- Project: Giant Bubbles · Minutes: 20 · Grades: K–8th · What it shows: Soap makes water stretchy enough to wrap around air.
- Project: Soda Geyser · Minutes: 15 · Grades: 2nd–8th · What it shows: Gas hiding in soda rushes out all at once when it finds rough places to make bubbles.
- Project: Secret Message · Minutes: 15 · Grades: K–8th · What it shows: Some colours change when they meet a base, like baking soda.

Recipes that are experiments

- Recipe: Butter in a Jar · Minutes: 15 · Ages: 5 to 9 · What it teaches: Shaking smashes the tiny blobs of fat in cream together until they stick into one big lump of butter, and the watery buttermilk is left over.
- Recipe: Ice Cream in a Bag · Minutes: 15 · Ages: 5 to 9 · What it teaches: Salt makes ice melt a little, and the melting soaks up heat, so salty ice gets colder than plain ice and freezes the cream.

- Recipe: Homemade Soda · Minutes: 5 · Ages: 5 to 9 · What it teaches: The bubbles are carbon dioxide gas squeezed into the water, and stirring hard lets it escape, so stir slowly.

More science

- Activity: STEM projects · What kind: Explore · What a child does: Builds and experiments with things from the recycling and the kitchen. · Ages: 6 and up
- Activity: Science fair projects · What kind: Explore · What a child does: Forty projects with a question, a test and what to write down. · Ages: 8 and up
- Activity: Space · What kind: Explore · What a child does: The planets in order, and what each world is like. · Ages: 6 and up
- Activity: The Body · What kind: Explore · What a child does: Tap the skin, muscles, bones, heart and organs to see what each does. · Ages: 6 and up

Every experiment lists its materials and tools first, and a grown-up helps with anything hot or sharp. Everything here is free through the end of 2026, with no ads, no sign-up and nothing to download.

Questions parents ask

What are good science experiments for kids to do at home?

Slime, oobleck, a fizzy volcano and a salt lava lamp use baking soda, vinegar, salt, oil and cornstarch. Each one has picture steps and a line on the science behind it.

What do we need for these experiments?

Mostly things from the kitchen cupboard. Each project page lists its materials and tools, and says what can be swapped.

What ages are they for?

About 5 to 12. The Grades and Ages columns say which each one fits, and younger children can do it with a grown-up.

Are these experiments free?

Yes. Everything here is free through the end of 2026, with no ads, no sign-up and nothing to download.

Free at peabody.kids/home-science-experiments-for-kids