



SPARK LABS

SCIENCE IS EVERYWHERE

Hands-on science, made accessible.

Spark Labs helps young people discover that science does not require an expensive laboratory. This packet brings together 24 simple experiment cards using familiar household materials, clear visual steps, and companion videos.

Created for curious students, families, and educators.

KEEP EXPLORING

Scan either code with a phone camera.



CARDS + VIDEOS

sparklabcards.com



INSTAGRAM

[@sparklab_cards](https://www.instagram.com/sparklab_cards)

A NOTE FOR EDUCATORS

Use appropriate adult supervision and review each activity before use.

24 EXPERIMENT CARDS

Self-inflating balloon

First, pour 2 tablespoons of vinegar into a jar of water



Next, pour 2 tablespoons of baking soda into the jar



Quickly cover the top of the jar with a rubber balloon



Watch as the balloon inflates!



Caution! Make sure to do step 3 extra fast!

Color-Changing Cabbage Juice

First, cut your cabbage into small strips, each about an inch long



Next, boil about a cup of these cabbage strips in water for min



Let the mixture in the pot cool, and then strain it into a medium sized cup



Add vinegar or baking soda to the juice, and watch as it changes color!



Color-changing Celery

Start by grabbing two cups of water, two sticks of celery, and food coloring



Add a different color of food dye to each cup, and mix well



Place one stick of celery in each cup, and wait



Watch as the celery slowly changes colors, and pulls in the colored water!



Cloud in a jar

Fill a jar with boiling water from a kettle, making sure to be careful



Next, spray hair spray for around 10 seconds into the jar.



Quickly close the jar tightly, and place around 5 ice cubes on top of the lid



Wait for around a minute, then watch as a cloud forms inside of your jar!



Coke and Mentos

Start with a bottle of Coca-Cola and a pack of mentos



Drop one Mento into the open bottle of Coca-Cola



Let the bottle sit for a few seconds



Watch as it explodes!



Color changing pennies

Start with a bottle of vinegar, some salt, and a couple of pennies



Pour the vinegar into a dish, and then stir it around for a few seconds



Next, add in some baking powder and the pennies, and stir



Watch as your pennies change color, and take a picture of the reaction!



Density Rainbow

Start with about a cup of sugar, a pitcher of water, and some food coloring.



Fill each cup about 3/4 of the way with water, and fill each one with a different amount of sugar



Add a different color of food dye to each cup, with the cup with the lowest amount of sugar being red, and the highest being purple.



Add the water from the cups into a larger cup, starting from the red and ending with the purple.



Watch as the different colors separate and form a Density Rainbow!

Dissolving Eggshells

First, grab a bottle of vinegar and two eggshells, which should be cleaned of any egg whites



Next, fill a cup with vinegar and drop both eggshells into it carefully



The eggshells should start to let off bubbles, which should cloud up the vinegar



After a bit of waiting, you should have some dissolved eggshells!



Eggshell Dissolving

Start with a bottle of vinegar and a raw, unpeeled egg. Make sure the egg isn't boiled



Drop the egg into a bowl filled with the vinegar, and fill it just enough to cover the entire egg



Leave the egg in the bowl overnight and cover it with tinfoil so that the vinegar doesn't evaporate.



Check back in the next morning to find your egg shell-less and bouncy!



Fizzy Ice Cubes

Start by pouring vinegar into an ice tray. Next, wait a few hours for the vinegar to freeze.



Then, pour a few tablespoons of baking soda into a dish, making sure to spread it out.



Next, pour water into the dish with baking soda, making sure to stir the two together

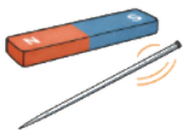


Finally, add the vinegar ice cubes into the dish, and watch as they fizz!

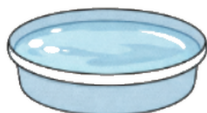


Homemade Compass

First, rub one side of a magnet on a needle for 1-2 minutes



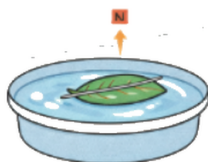
Once the needle is magnetized, prepare a dish of water



Place a leaf in the dish, and place the needle on top



Watch as the needle moves to point North!



Invisible Ink

First, use lemon juice on a Q-tip to write a message on a piece of paper



Next, wait for the lemon juice to dry and the message to disappear



Then, blow hot air on the paper with a hair dryer



Watch as the message reappears!



Homemade Lava Lamp

Start with a bottle of oil and a bottle of water



Fill a new container 3/4 of the way with water and 1/4 of the way with oil



Add food coloring to the new bottle, and you should see that it only mixes with the water



Add in an Alka Seltzer, and watch your Lava Lamp start to bubble!



Moving Water

First, take out three different colors of food dye, three cups of water, and two paper towels



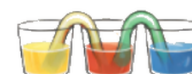
Next, pour one color of dye into each of the cups, making sure not to add too much dye



Roll two paper towels into tubes, and place them so that they touch the bottoms of two cups



Watch as the water moves across the paper towels from one cup to the others!



Mysterious Spinach

First, boil a pot of spinach for a few minutes, making sure to break up large pieces



Next, pour some of the liquid into a cup and let it cool for a bit



Then, place a magnet on the side of the cup, so that it is touching it



Watch as small iron particles get attracted to the magnet!



Homemade Oobleck

First, start with a bottle of water and a container of corn starch.



Next, mix the corn starch into a jar filled with the water.



As the mixture starts to thicken, add a food coloring of your choice



Keep mixing until you have your very own Oobleck!



Homemade Pop Rocks

Start with a bottle of water and some granulated sugar



Heat up the water, then pour it in a cup and mix in 4 spoons of sugar



Drop a wooden stick into the water and leave it there overnight.



In the morning, you should be left with a stick covered in delicious sugar crystals!



Rising Water

Start with a plate or small bowl filled with water, make sure the water is clean



Next, light a candle in the water, and grab a cup large enough to cover it



Carefully cover the candle with the cup, making sure to avoid touching the flame



Watch as the water touching the candle inside of the cup rises!



Seeing a Gas

Start with a can of soda, a balloon, and a glass of lime juice



Shake up the soda and open it, placing the balloon on top to trap the escaping air



Without letting the air escape, use a straw to transfer the gas from the balloon to the glass



Watch as the carbon dioxide from the soda reacts with the lime juice in the glass!



Shiny Pennies

First, grab 4 pennies, a bottle of vinegar, and some salt



Next, mix the salt and vinegar in a plate or bowl of water



Then, carefully place all four pennies face down in the solution



Watch as your pennies start to sparkle! Flip them over to clean both sides



Colorful Skittles

First, grab a bag of skittles, the bigger the better



Next, grab a cup or pitcher of water, preferably warm



Arrange the skittles in a circle around a plate, and then pour in the water



Watch as the skittles turn into a beautiful rainbow of colors



Homemade Slime

Start with borax, glue, some water, and some food coloring if you want it



Add the water to a bowl with the glue, and stir



As you stir, slowly add borax until the consistency resembles that of slime



You can add food coloring or glitter if you want, and continue to mix with your hands



Static Electricity Butterflies

First, cut out 1-2 butterflies out of paper, keeping them about 5 inches long



Next, rub a balloon on your hair for about 30-40 seconds, rubbing in the same direction



Lay out the butterflies on a flat surface, like a table or floor



Pass the balloon over the butterflies, and watch as their wings flutter!



Baking Soda and Vinegar Volcano

First, take out a spoon of baking soda, and a bottle of vinegar, and a cup or volcano



Add around 1 cup of vinegar into your volcano or cup



Then add the spoon of baking soda into the volcano. You can also add food coloring for a different color explosion!



Watch as your volcano erupts and creates a beautiful explosion!

