

# BALLOON BLOW-UP SCIENCE EXPERIMENT

## Materials

Small Bottle

Vinegar

Balloon

Funnel

Baking Soda

Teaspoon

## Instructions

1. Pour the vinegar into the bottle til it is about a quarter full.
2. Then insert another funnel into the mouth of the balloon. One at a time put two teaspoons of baking soda into the funnel so it falls into the balloon. Then remove the balloon from the funnel.
3. Next, put the balloon over to the top of the bottle, holding the balloon slightly to the side so the baking soda doesn't go straight in the bottle – that bit comes next!
4. Once the balloon is securely over the top of the bottle hold the bottle, lift the end of the balloon allowing the baking soda to drop into the bottle.
5. Watch in amazement as the balloon magically inflates!



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## How Does the Balloon Blow-up Science Experiment Work?

When baking soda (a base) and vinegar (an acid) are mixed together they create a chemical reaction that results in the formation of carbon dioxide gas.

Gases do not have a specific shape or volume, rather they expand rapidly filling their container. Gases expand rapidly because their particles move at high speeds in all directions.

As the carbon dioxide gas fills the bottle, it has nowhere else to go so it begins to fill the balloon. As the carbon dioxide gas fills the balloon, the balloon inflates. The more gas that is created, the larger the balloon will inflate.

The baking soda and vinegar chemical reaction will continue to inflate the balloon as long as there is still baking soda and vinegar to react. Once the reaction between baking soda and vinegar has stopped, the balloon will slowly begin to deflate.

An **acid** is a substance that tastes bitter, reacts with metals and carbonates, and turns blue litmus paper red.

A **base** is a substance that tastes bitter, feels slippery, and turns red litmus paper blue.

**What else could you try?** What would happen if you used another acid like lemon juice instead of the vinegar? Would it react the same with the baking soda?

## ANOTHER EXPERIMENT

Have you ever tried putting a mint mento into a bottle of coke?!

Drink a bit of the coke we gave you (or pour it out) then put one of the mentos in the bottle.

**Top tip:** Stand back quick and do this one outside!!!!

Also we don't recommend drinking the coke after the meneto has been in it (minty coke tastes yucky!)

## MORE GREAT EXPERIMENTS & SCIENCE FACTS CAN BE FOUND

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