

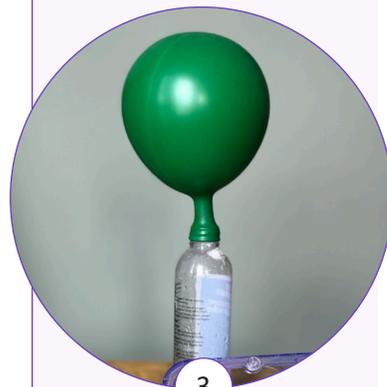


Here is a new way to blow up balloons for your next party! Kids will enjoy investigating elasticity and how gases move from areas of high pressure to areas of low pressure.

BALLOON BLOW UP!

What you need:

What to do:



Safety glasses, 1/2 cup of vinegar, 1 tbsp. baking soda, 1 11-inch balloon, aluminum foil pan, 500 ml plastic bottle, wet and dry funnel (Image 1)

1. Put on your safety glasses and wear them for the entire experiment. (Image 2)
2. Place the wet funnel into the top of the bottle. Carefully pour in the ½ cup of vinegar.
3. Using your fingers, gently stretch the mouth of the balloon to make it easier to blow up. Insert the dry funnel into the mouth of the balloon. Add the baking soda into the balloon.
4. Without spilling any of the baking soda, stretch the mouth of the balloon over the top of the bottle, letting the balloon lay down at the side. Ask a partner to hold the mouth of the balloon securely on the bottle.
5. Pull the balloon upright so that the baking soda inside the balloon pours into the bottle and mixes with the vinegar.
6. Watch what happens! (Image 3)

What is happening?

We know that one way to tell if a chemical reaction is happening is if a gas is made. But wait, aren't gases invisible? How are we supposed to see that a gas is being made?

This is where the balloon comes in. When the baking soda and vinegar mix together, a lot of fizzing and bubbling occurs. This is because carbon dioxide – the same gas we breathe out – is being made during the chemical reaction. The gas rises as it is made and tries to escape through the top of the bottle. Because the balloon is sealed around the mouth of the bottle, the gas is trapped inside, causing the balloon to expand in order to make room for the increasing gas, blowing up the balloon!

The balloon can expand because it is made of rubber or latex which possesses a physical property called elasticity. When you inflate a balloon, it stretches to contain the increasing pressure inside a balloon. The balloon helps us to “see” the gas being made by the chemical reaction in the bottle!