

Balloon Blow Up

<u>The Action</u>	A simple way to show your students how a gas is made, and how it can be used to blow up a balloon.
<u>Grade Level</u>	Grade 3 – Properties of Matter Grade 4 – Forms of Energy Grade 5 – Heat
<u>Materials</u>	Tall, narrow-necked bottle Small plastic funnel Balloon 2 teaspoons of baking soda $\frac{1}{4}$ cup of vinegar Toothpick or stir stick Teaspoon Measuring cup Sink or pan to work in
<u>Instructions</u>	Clean out a bottle and make sure you can fit a balloon over the top of your bottle. Put the funnel over the mouth of the bottle and pour the baking soda into the funnel. Work the baking soda down into the bottle using a toothpick. Put the bottle into a pan or sink. Get ready to move quickly with the balloon. Pour the vinegar through the funnel into the bottle. As soon as the vinegar is in the bottle, remove the funnel and slide the balloon onto the bottle. Hold the balloon in place so it does not slip off the bottle or leak. Watch what happens to the balloon.
<u>Safety</u>	If the students are doing this experiment a plastic bottle may be safer. Baking soda and vinegar are not harmful but it is not advised to ingest them.
<u>Hints</u>	Find a balloon that has a big enough hole to fit over the opening of the bottle. If you are slow on getting the balloon on the bottle you may need to add more baking soda and vinegar to restart the reaction. The more ingredients you use, the more gas you will make therefore you can make your balloon blow up larger.

Note that in a small bottle, using a fair amount of ingredients the reaction will cause some foaming over the top. Put the balloon on even if this occurs.

Science
Principle

Carbon dioxide (CO₂) gas is released when the baking soda and vinegar combine and react. When the balloon is placed over the mouth of the bottle this gas fills the balloon.