SUPPLIES YOU WILL NEED FOR THE EXPERIMENT:

Plastic water bottle, emptied

1 Large Balloon

White Vinegar

Baking Soda

Small Funnel

Spoon

TIP: Before starting the experiment, you will want to stretch out the balloon to make it more loose and easier to inflate.

Step 1- Pour 1-2 spoonfuls of baking soda into the opening of the balloon, using a funnel. You'll need to shake it a bit to get it down into the base of the balloon.

Step 2- Use the funnel again and pour some vinegar into the plastic bottle until it is about an inch or two deep. Exact amounts do not matter.

Step 3- Carefully stretch the opening of the balloon around the mouth of the bottle leaving it hanging down until you are ready for the reaction.

TIP: Don't let any of the soda dump into the bottle while attaching it.

Step 4- When you are ready to see the chemical reaction happen, lift up the balloon allowing the baking soda to fall down into the bottle.

This is when the fun starts! Baking soda and vinegar create an awesome chemical reaction. The gas from combining the two will cause the balloon to inflate. It's impressive. The more gas there is created, the larger the balloon will get.

Your kids, if they are anything like mine, will beg to do it again, then 10 more times! This is really a perfect science project for kids to try on their own.

If you do repeat it, you will need fresh vinegar in the bottle. Once a reaction happens, it is not quite so strong the second time through. The balloon does not usually inflate again unless the vinegar is fresh. My kids were amazed and wanted to do it again and again and again. Stock up on baking soda and vinegar if you are planning this one! Luckily they are both quite inexpensive.
(It's a good thing they are both so cheap!)

THE SCIENCE BEHIND IT: WHY DOES BAKING SODA REACT WITH VINEGAR?

When the vinegar and baking soda combine there is a reaction between an acid and a base. Vinegar is the acid and baking soda is the base. This reaction between the two causes a gas called carbon dioxide to bubble and foam. This gas having nowhere else to go, expands the balloon making the self-inflating balloon happen.