

# Exploding Sandwich Bags!

## Makes 1 Exploding Sandwich Bag:

1. Measure out  $\frac{1}{2}$  cup of vinegar.
2. Hold the bag open and have someone pour the vinegar in.
3. Measure out 1 tablespoon of corn starch and add it to the bag.
4. Seal the bag tightly and shake it until the vinegar and corn starch are mixed completely.
5. Take 1 sheet of paper towel and pour 2 tablespoons of baking soda onto it.
6. Twist up the paper towel into a little packet to hold the baking soda.
7. Take the baggie of liquid and the packet of baking soda over to the sheet of plastic on the ground!
8. Open up a corner of the baggie just big enough to fit the packet inside.
9. Put the packet inside and VERY QUICKLY seal the bag tightly. Give it a quick shake and then STEP BACK!!
10. Watch it pop!

# What's going on??

"When you mix vinegar and baking soda, a chemical reaction takes place producing a gas called carbon dioxide (CO<sub>2</sub>). If you really want to impress your friends, use the chemical names for each of the ingredients. Acetic acid (that's vinegar) plus sodium bicarbonate (baking soda) produces carbon dioxide gas and water. The bag puffs up because the carbon dioxide gas takes up lots of space, eventually filling the bag. If there's more gas than the bag can hold... KABOOM! If you're lucky, the zipper-lock seal will bust open, but the bag will not break. Now you can reuse the bag to make another CO<sub>2</sub> sandwich. Wrapping the baking soda in tissue paper or separating the substances in bags is a clever way of slowing down the reaction."

- From Steve Spangler Science