

Instructions:

1. Place the plastic bottle or paper towel on the tray.
 2. Measure 1 teaspoon of baking soda and carefully pour it into the balloon using a funnel.
 3. Measure 2 tablespoons of vinegar and pour it into the bottle.
 4. Gently stretch the balloon's opening over the top of the bottle, ensuring it is secure, but do not let the baking soda fall in yet.
 5. Lift the balloon so the baking soda falls into the vinegar.
 6. Watch the reaction and observe how the balloon inflates!
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Observations:

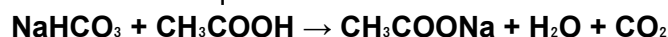
What did you see, hear, or feel during the experiment?

Write your observations below:

The Science:

This is a chemical reaction between baking soda (sodium bicarbonate) and vinegar (acetic acid). The reaction produces **carbon dioxide gas (CO₂)**, which inflates the balloon!

The chemical equation for this reaction is:



Questions:

1. **Reactants:** What are the two substances (reactants) that you mixed together?

2. **Products:** What gas was produced that inflated the balloon?

3. Would using more baking soda or vinegar inflate the balloon more? Why?

4. What state of matter (solid, liquid, or gas) are the products of this reaction?

5. What happens to the baking soda after the reaction is complete?

Fun Fact:

The carbon dioxide gas produced in this reaction is the same gas that makes soda fizzy and that we exhale when we breathe out!

Cleanup:

1. Carefully remove the balloon and tie it off, or let the gas out slowly.
2. Pour the mixture down the sink.
3. Wash your hands and tools.