



BALLOON BLOW UP

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a CHOKING HAZARD. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- Baking Soda
- Vinegar
- Balloon
- Empty 2 Liter Bottle

INSTRUCTIONS

STEP 1: Fill the empty 2 liter bottle half of the way with vinegar. Describe and classify the vinegar by its observable properties.

STEP 2: Fill the balloon with baking soda. Describe and classify the baking soda by its observable properties.

STEP 3: Carefully stretch the open end of the balloon around the neck of the 2 liter bottle.

STEP 4: Dump the baking soda, inside the balloon, into the 2 liter bottle, and observe. Did mixing the two substances result in a new substance?

EXPLANATION

When the baking soda is mixed with the vinegar, a chemical reaction happens, which creates carbon dioxide gas. The carbon dioxide gas inflates the balloon, causing the balloon to expand.



SCIENCE BACKGROUND

Matter is anything that has mass and takes up space. Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. Measurements of a variety of properties can be used to identify materials. When two or more different substances are mixed, a new substance with different properties may form. This is considered a chemical reaction, which is a change that results in one or more new substances. A physical reaction does not result in a new substance.

I CAN STATEMENT

- ✓ I can plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- ✓ I can conduct an investigation to determine whether the mixing of two or more substances results in a new substance.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

2 – Structure and Properties of Matter | Patterns
5 – Structure and Properties of Matter | Cause and Effect