

## BALLOON BLOW-UP EXPERIMENT HOW CAN WE FILL A BALLOON?



# Explore & Learn with Ada Twist, Scientist!

## Balloon Blow-Up Experiment Instructions

*An adult should conduct the experiment while children predict, observe, and record the results.*

Observation: Blowing up a balloon is hard work!

Question: Is there a different way we could blow up a balloon?

Research: When we blow into a balloon, we are using our breath, which is a type of gas. We breath out carbon dioxide gas.

Hypothesis: We can make carbon dioxide gas another way and use it to blow up a balloon.

Testing time!

### Materials Needed

- A small, clean, clear plastic soda or water bottle (16 oz to 1 liter)
- 2 tablespoons baking soda
- 1/2 cup white vinegar
- A small balloon
- Plastic funnel
- Copies of the Balloon Blow-Up Experiment Lab Sheet

### Steps

1. Fill the balloon with 2 tablespoons of baking soda (use a funnel). Then put the balloon to the side.
2. Pour 1/2 cup of vinegar into a plastic soda or water bottle.
3. Fit the mouth of the balloon over the mouth of the bottle.
4. Hold the balloon upright and gently shake it so that the baking soda falls into the vinegar below.
5. Watch the balloon immediately inflate.

Conclusion: The balloon inflated! We can blow up a balloon another way!

**The Science Says:** When the baking soda mixes with the vinegar, it creates a gas called carbon dioxide. The gas floats up in little bubbles and fills up the balloon.

**Extend the Experiment:** Carbon dioxide is heavier than air. Once the balloon is inflated, have an adult help gently take it off the bottle and tie it off. Blow up a second balloon with your breath. Drop both balloons and see which one hits the ground first!

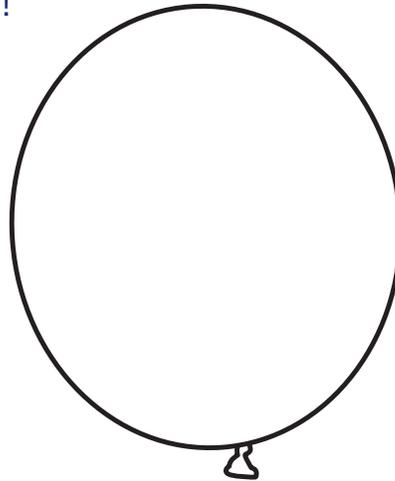
# BALLOON BLOW-UP LAB SHEET

**Question:** Is there a way to blow up a balloon without blowing air into it?

**Hypothesis:** We can make carbon dioxide gas (like what we breathe out) and use it to blow up a balloon!

## Part 1: Let's experiment!

Circle what you think will happen to the balloon.



**Part 2: Let's watch!** What happened?  
Draw a picture of the balloon onto the bottle.

