

How Much Gas Does Your Favorite Beverage Produce?

Grade Level: 6th to 8th; **Type:** Chemistry

Objective:

This project examines which beverages produce more gas.

Research Questions:

- Which beverages release the most gas?
- How does the gas released by beverages affect your stomach?

Some beverages release more gas into your stomach than others. How much gas is produced by your favorite beverages?

Materials:

- Plastic bottles
- Balloons
- Vinegar
- Heating pad
- Variety of beverages (water, soda, juice, milk)
- Measuring tools

Experimental Procedure:

1. Pour an equal amount of each beverage into separate plastic bottles.
2. Mix a couple teaspoons of vinegar into each beverage. The vinegar will represent your stomach's acid.
3. Blow-up and release the air in a balloon for each bottle. This will stretch the balloons so they are more easily inflated.
4. Stretch the open end of a balloon over the opening of each bottle.
5. Place the bottles on a warm heating pad.
6. Observe the balloons at different intervals as the liquids begin to heat.
7. Which liquids have inflated balloons? Which balloons are inflated more than the other balloons? How is the inflation of each balloon related to the amount of gas produced by the liquid?

Terms/Concepts: gas; phases of matter; Which liquid beverages release the largest amount of gas?

