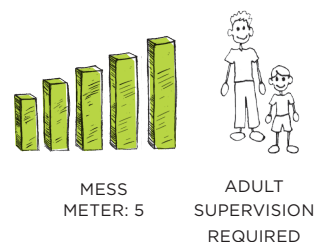


Exploding Baggies



PREP TIME: 5 MINUTES
EXPERIMENT DURATION: 2 MINUTES

Supplies Needed

- ½ cup (80 ml) white vinegar
- 1 zipper-lock bag
- 10 drops of food coloring (optional)
- Clothespin
- 2 tablespoons (28 g) baking soda

Science Question:

What takes up more space, a solid and a liquid, or a gas?

Combine a solid and a liquid to see if the resulting chemical reaction is bigger than the components by themselves.

The Experiment

Pour the vinegar into the bag and add a few drops of food coloring. Twist the plastic above the liquid, and hold the twist secure with a clothespin. Now, above the clothespin, add the baking soda and close the bag's zipper.

Take off the clothespin and let the vinegar drop into the bag. Shake it and watch the reaction!

The Outcome

The bag blows up like a balloon.

Why It Worked

When baking soda and vinegar mix together, it causes a reaction that creates gas. Gas molecules take up more space than the liquid and the solid do, which is why the bag expands.

Tip

Do this in an easy-to-clean location. We suggest outside with a hose handy—or maybe in the bathtub!