

ALKA SELTZER BOAT

This experiment introduces you to Newton's Third Law of Motion: for every action, there is an equal and opposite reaction.

INSTRUCTIONS:

STEP 1: Place the bottle cap upside down in the water. Make sure it floats.

STEP 2: Place your antacid tablet into the floating cap.

STEP 3: Using a spoon or eyedropper, add a few drops of water to the cap.

STEP 4: Ready, Set, Go! Watch as the bubbles propel it forward across the water.

Materials

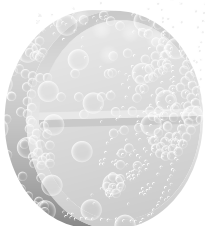
Alka seltzer tablet
Bowl of water
Eyedropper
Bottle cap

THE SCIENCE

When the Alka-Seltzer tablet comes into contact with water, a chemical reaction occurs, producing carbon dioxide gas.

The carbon dioxide gas produced by the reaction creates bubbles that escape from the tablet. As the gas is released, it may cause the cap to wobble or even spin, depending on how evenly the bubbles are released from the tablet. Since carbon dioxide is less dense than water, the gas rises, further pushing the cap around in the water.

This experiment is a fun way to explore both physical and chemical concepts in a simple, visually engaging way!





Alka Seltzer Boat

Use this worksheet to process and evaluate your observations.



Can you predict what will happen to the cap when you add water?

What happened to the cap when you added water?

Experiment with different boat shapes, such as using cups, bottle caps, or folded paper boats.

Use different-sized pieces of Alka-Seltzer tablets. Does a larger piece propel the boat faster or farther?

What did you learn from this experiment?
