



AEROSPACE ENGINEERING | BOTTLE ROCKET

Description

SKILL LEVEL: ADVANCED

In this craft, you will be using principles of aerospace engineering to build and launch a bottle rocket! This activity will work great when done either in groups or as a class. Teacher or adult supervision may be required.

How does it work? The rocket works because of a chemical reaction between the vinegar and baking soda. When these two substances react, it creates carbon dioxide gas. Since the bottle is sealed with a cork the carbon dioxide can't escape, building up pressure in the bottle. When enough pressure is created the cork is pushed out of the bottle. All of the gas can now escape, making the rocket launch high in the air!



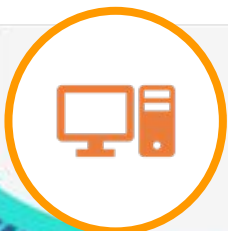
Materials Needed

- Empty water bottle
- White vinegar
- Baking soda
- Paper towel torn into a small square
- Cork
- Three pencils
- Duct tape



Directions

1. Tape the pencils to the bottle to form a launch base
2. Fill the bottle $\frac{1}{4}$ full with vinegar
3. Pour $\frac{1}{2}$ tsp baking soda onto the paper towel square
4. Roll up the paper towel and twist the ends shut
5. Push the paper towel into the bottle and close with the cork
6. Turn the bottle upside down and step back!



[Video Instructions](#)