

## **The Blast-Off Bottle Rocket**

With a few supplies and a good dose of science, you can make your own rocket right in your backyard or local park. (Be sure that you have permission to launch your rocket. Don't get in trouble!)

### **WHAT YOU'LL NEED**

A parent or trusted adult to help you out

Paint, cardboard, construction paper, or any crafting supplies you'd like to use to decorate your rocket!

An empty plastic bottle (2 liters or 500 ml)

4 pencils

Duct tape

Goggles

$\frac{1}{3}$  cup vinegar

1 teaspoon baking soda

$\frac{1}{2}$  sheet paper towel

A cork that fits the mouth of the bottle you're using

### **INSTRUCTIONS**

- 1** First, gather up your crafting supplies and decorate your bottle to make it spaceworthy.
- 2** Next, secure the 4 pencils to the plastic bottle with duct tape as shown on the next page. Make sure your rocket can stand on the

4 pencils when you flip it over. This will be your launching pad.

3 Now put on your goggles. It's time for science! With your parent or trusted adult on hand, carefully pour the vinegar into the bottle.

4 Next, place the baking soda in the middle of the half sheet of paper towel. Roll the paper towel into a ball with the baking soda inside. Make sure the ball is small enough to fit inside the mouth of the bottle.

5 Now, here's the tricky part! Drop the baking soda ball into the bottle, then immediately plug the mouth of the bottle with the cork. You'll have less than 30 seconds to do this, so move fast! (FYI, when vinegar and baking soda mix, the two react and produce carbon dioxide—giving you an explosive reaction!)

6 Flip over the bottle, get out of the way, and watch your rocket soar through the air!

