# SODA ROCKETS ACTIVITY

#### Introduction

Have you seen NASA launch a rocket before? Although NASA's rockets are much bigger and take more materials, we can make our own rockets too!

Try using vinegar and baking soda to launch your own miniature rocket!

## **Learning Objectives**

- 1. Create a basic understanding of chemical reactions.
- 2. Understand what components are reacting to make the rocket launch.

#### **Materials**

- 1. 2L soda bottle
- 2. Decorations for bottle (ex. Construction paper, paint, sharpies)
- 3. 1-2 tablespoons of baking soda
- 4. 1-2 cups of vinegar
- 5. Cork (to cover opening of soda bottle)
- 6. Legos, Cardboard, or Popsicle Sticks (This will be for Step 3 you can switch these out for whatever you have available!)
- 7. Paper towels

# Step-by-Step

- 1. Unscrew the cap of the soda bottle. Discard the cap, you won't need it!
- 2. Decorate the bottle however you like to customize your rocket! Note: The opening of the bottle will be facing downward, so decorate the other side as the top of your rocket!
- 3. Use materials such as legos or popsicle sticks to build a launch pad! This

- should be in somewhat of a cube shape to hold your rocket so that the opening is facing downward.
- 4. Pour the vinegar into the bottle.
- 5. Cut the paper towel into a medium-small square shape. Scoop a big spoonful of baking soda onto the middle of the paper towel, and fold the paper towel so that the baking soda is secured inside. Tuck the paper towel into the opening of the bottle. Be careful not to let the vinegar touch the paper towel or baking soda during this part!
- 6. Make sure you're outside from this step onward!
- 7. Insert the wine cork into the bottle opening.
- 8. Moving very quickly, turn the bottle upside down and place it on the launch pad.
- 9. Run away to a safe distance away from the rocket and watch it shoot into the air!

### Conclusion Os

1. What do you think would happen if you add MORE baking soda?

2. What do you think would happen if you add LESS baking soda?