

Cork Rocket



What you need:

- Baking soda
- Teaspoon
- Paper towel
- Measuring cup
- Water
- Vinegar
- Large plastic soda bottle
- Colored ribbon
- Cork to fit bottle mouth
- Tape



This experiment is best performed outdoors where there is ample space.

What you do:

- Step 1:** Place one teaspoon of baking soda onto a sheet of paper towel. Roll up the sheet and twist the ends of the paper towel so that you have a little package of baking soda.
- Step 2:** Use the measuring cup to pour $\frac{1}{2}$ cup of water and $\frac{1}{2}$ cup vinegar into the plastic bottle.
- Step 3:** Tape some short pieces of ribbon onto the top of the cork. Wrap tape around the side of the cork to ensure it fits snugly into the bottle mouth.
- Step 4:** Ask an adult to find a safe outdoor location to launch your cork rocket. Verify no people or windows may be hit by your rocket!
- Step 5:** Set the bottle on the ground, drop the package of baking soda inside the bottle and cap it with your cork. It should be securely in place but not too tight.
- Step 6:** Move back at least 3m (9') and watch the launch!

Step 1:



Step 2:



Step 3:



Step 5:



What's going on:

You used pressure to launch your cork rocket! The cork rocket launched because of a chemical reaction. Mixing vinegar and baking soda makes carbon dioxide gas. Gas takes up a lot of space. The cork trapped the gas inside the bottle and the pressure built up until it forced the cork to pop off the top.

Now try this:

What can you add to the cork rocket to make it fly better? What can you add to make it land better?

