

# What is CO<sub>2</sub>?

## Make carbon dioxide – it's a BLAST!

Name: \_\_\_\_\_



### You will need

- A film canister
- Vinegar
- Bicarbonate of soda (also known as baking soda)
- Teaspoon
- Safety glasses
- Paper towel



**WARNING:** Safety first! Please wear safety goggles to prevent any vinegar or bicarb splashing into your eyes. This experiment should be done under adult supervision



### What to do

1. Put on the safety glasses.
2. Take the lid off the film canister. Before adding the ingredients, practice putting the lid on the canister and placing it upside down.  
*(The best way to do this is to get a partner to hold the body of the canister and for you to use both hands to close the lid. Quickly and firmly press the lid completely on the canister. Place the canister - lid down - on a level surface and stand back).*
3. Pour a small amount of vinegar into the body of the canister.
4. Using the teaspoon place enough bicarbonate of soda to fill the dip in the lid.
5. Get a partner to hold the body of the canister, and use both hands to press the lid down as practiced above. Quickly and firmly press the lid completely on. Place the canister (lid down) on a level surface and **stand back**.

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### Questions

1. Write or draw what happens to the canister.

1. How high do you think the canister went into the air? \_\_\_\_\_m



### What's happening?

When vinegar and bicarbonate of soda mix together, there is a fast chemical reaction. There are several products that come from this reaction including energy and CO<sub>2</sub>.

The CO<sub>2</sub> gas building in the canister is what pops the lid off. As more and more CO<sub>2</sub> is produced, the bits of carbon dioxide (called molecules) are squashed together and begin to push, or apply a force, on all the inside surfaces of the canister, including the lid.

The CO<sub>2</sub> gas pushes down on the lid, but because it is sitting on the plate, it cannot go anywhere when it pops. The CO<sub>2</sub> is also pushing on the inside base of the canister (the top of your rocket) and this pushes the base into the air.