

# POP ROCKET FUN

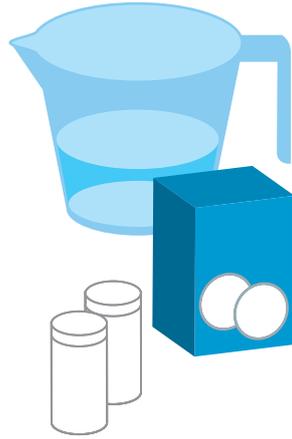
Make a rocket using the power of carbon dioxide

ALKA-SELTZER  
TABLETS

WATER

A SMALL SEALED  
CONTAINER

Film canisters work very well but can be difficult to find. Any small container with a clip-on lid, like a *Play-doh* tub or a small *Tupperware* box, may also work.



## SAFETY

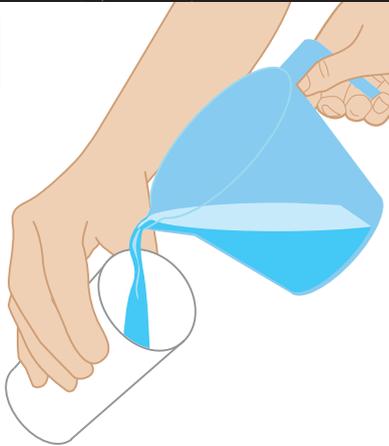
Keep the pop rocket away from your face

If it fails go to off after two minutes, ask an adult to safely remove the lid, holding the container away from their body

Before you begin, put on eye protection like goggles or sunglasses

Go outside and set your container on a flat surface

1



Add a small amount of water to the container

2



If you are using a film canister, take half an Alka-Seltzer tablet. If you are using something bigger, take a full one

Break up the tablet into smaller pieces

3

The next steps have to be done in quick succession:



Add the tablet to the water in the container

4



Immediately put the lid on the container firmly, shake for a second and place it lid-down on the flat surface

5



Stand back quickly and wait a few seconds for the rocket to go off!

## What is happening?

The Alka-Seltzer tablet contains ingredients called citric acid and sodium bicarbonate. When they are added to water, they react to produce carbon dioxide gas. The more gas produced, the more pressure builds inside the container as the gas cannot escape. Eventually, the pressure is so great the gas escapes through the weak point of the container, where the lid meets the body.

When the gas pushes down on the lid, there is an equal and opposite force in the other direction. The force in the other direction pushes the body of the rocket up into the air – just like when we launch a really big rocket!

**Why not...** test different containers to see which ones make the best rocket. You can record all your research and pass them on to your friends.