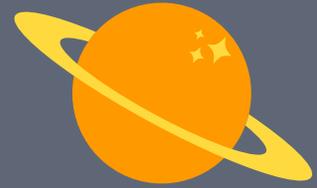




LIBRARIES

# Rockets

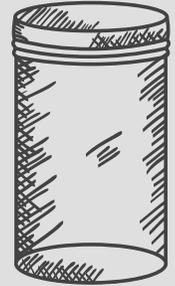


## Alka-Seltzer Bottle Rockets

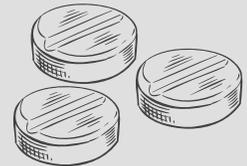
You can create a tiny **rocket launch** using a film canister, a bit of water, and an Alka-Seltzer tablet! **How does this work?** First, let's consider how real space-bound rockets operate. Rockets go up because of **thrust** (or push) that is caused by a build-up of **pressure** from burning fuel. The pressure escaping out the bottom of the rocket pushes the rocket up into the air. This is an example of **Newton's Third Law of Motion**: "Every action has an equal and opposite reaction." The gaseous fuel escaping out of the rocket is the action, which causes the rocket to move in the opposite direction (up) as a reaction.

In this experiment, the film canister is the rocket, and the water and tablet are the fuel. Alka-Seltzer (an effervescent antacid tablet) is made of citric acid and sodium bicarbonate which **dissolve** in water, releasing many **carbon dioxide gas bubbles**. The gas fills the canister, causing pressure to build, until finally the weakest point of the canister (the lid) pops off allowing the gas to come rushing out. **Lift off!**

## Kit contents:



plastic film canister



Alka-Seltzer tablets

# ALKA-SELTZER BOTTLE ROCKETS



**1** Fill the film canister a little less than half-way with water.

**2** Drop in one Alka-Seltzer tablet. Quickly pop the lid on the canister and set it upside-down on an even surface.

**3** Stand back! Move away from the canister to watch your rocket blast off.

**4** What did you notice? Adjust variables like the amount of water and Alka-Seltzer to see how high your rocket can fly.

Use this space to record your results.



## SAFETY WARNING!

- Flying rockets can cause injury if they hit the face/eyes.
- Alka-Seltzer is not safe to eat for children under 12. Contact Poison Control if ingested: (800) 222-1222.



Tip: use paper, tape, and other supplies to take your rocket's design to the next level!

Find more Alka-Seltzer experiments at [www.alkaseltzer.com/original/science-experiments](http://www.alkaseltzer.com/original/science-experiments)