



GET LEARNING

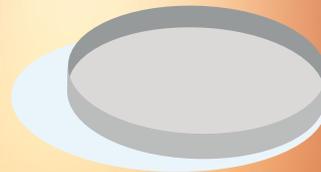


15 MINUTES



PREPARATION  
NEEDED

# IT'S ROCKET SCIENCE



## AIM

Become rocket scientists for the evening. Build and launch your own film canister rockets to fly off into space. Link with British Science Week.

## WHAT YOU'LL NEED

- 35mm Plastic Film Canister & Lid
- Fizzing Antacid Tablets (such as Alka-Seltzer)
- Water
- Safety Goggles

# GET LEARNING: IT'S ROCKET SCIENCE

THEME: STEM (SCIENCE, TECH, ENGINEERING & MATHS)



## LEADER PREPARATION

You'll need to get hold of 35mm film canisters. Some photo developing shops may be able to let you have these for free. If not, then they can be found online at a small cost.

A leader should try this experiment beforehand, so they know how it works and can ensure they are aware of all safety precautions.



## GETTING INTO THE ACTIVITY

- 1 Head outside and place your safety goggles on.
- 2 Place a teaspoon (5ml) of water into the film canister.
- 3 Break the tablet in half.  
**Steps 4 and 5 are to be completed quickly.**
- 4 Drop the tablet into the water, firmly place the lid back onto the canister.
- 5 Quickly place the canister on the floor upside down with the lid touching the floor. **STEP BACK** a few metres.
- 6 After roughly 10 seconds, the canister should launch into the air. If this doesn't happen, please wait at least 30 seconds, as there may be a delayed reaction.



### HOW IT WORKS

- When you add the tablet to the water, it starts to dissolve (break up) the tablet.
- This process creates a gas called carbon dioxide.
- As the lid is closed on the canister, the gas can't get out. This means the gas is trapped, creating something called pressure.
- As more gas builds up inside the canister, the pressure increases.
- Then suddenly – bang! The canister can't hold it anymore, and the rocket shoots up in to the air.



## IDEAS TO TAKE THIS FURTHER...

Once you have created your own mini rockets, head back inside and get creative by designing your own dream rockets on paper. What shape will they be? How will they be launched? What colours and decorations will be on the side?



## KEEPING EVERYONE SAFE

Ensure this activity has a high level of leader supervision. Only one rocket should be launched at a time, with direct supervision from a leader.