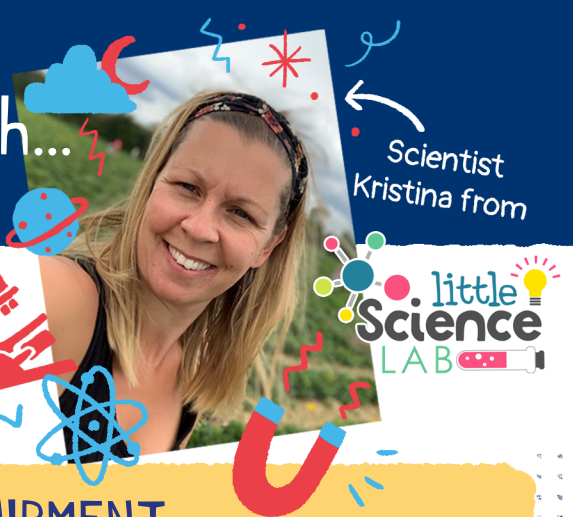




The Science of Flight with...



Scientist Kristina from



Let's explore Newton's third law of motion which states:

Every action has an equal and opposite reaction.

EQUIPMENT

- Watered down paint or water alone
- A pipette or another measuring device
- A film cannister or any other small pot with a push on lid (NOT A SCREW TOP!)
- Alka Seltzer tablet or any other effervescent tablet

In this experiment we will turn a film cannister into a rocket and launch it as high as possible.



METHOD

STEP 1: Using a pipette add approximately 6mls of water or paint to your film cannister.

STEP 2: Take a quarter of the Alka Seltzer tablet and crush into small pieces. Put these pieces into the lid of your pot.

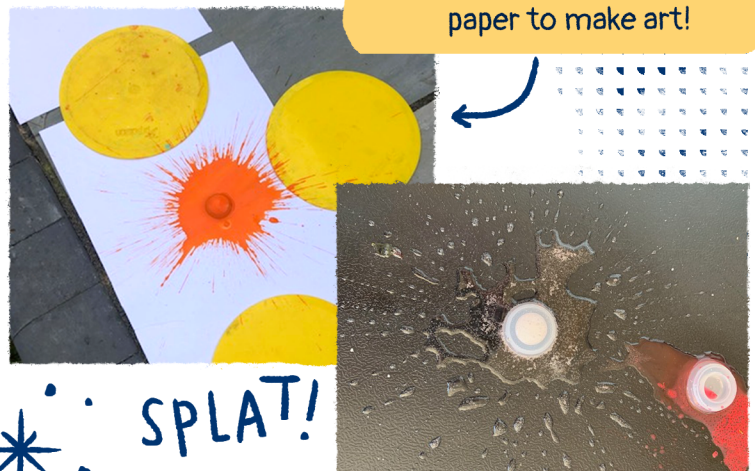
STEP 3: When ready, countdown from 5...4...3...2...1! On 1, add the tablet to the paint (or water) and push the lid on tightly. Place the cannister lid facing downwards on a hard, flat surface.

STEP 4: Take a big step back and wait!

TIP: put your experiment on some paper to make art!

THE SCIENCE

Alka Seltzer tablets are **EFFERVESCENT**, this means that when added to water they create a gas (Carbon Dioxide in this case). Gas molecules are a bit like small children after eating sweets – they need lots of space to run around! When we close the lid on our cannister we trap the gas molecules inside and they really, really want to escape. The only way out is by pushing the lid of the cannister down (this is the **ACTION**). The **REACTION** is the pot and paint flying upwards!



SPLAT!

Check out Kristina's video to help you do this experiment!
bit.ly/FilmCannisterRocket