

Make a film canister rocket

Brief summary:

In this experiment you will make a rocket using a film canister, an antacid tablet and some water. **WARNING:** this is an explosive experiment; make sure you have safety goggles and the help of an adult!

You will need:

- Help from an adult!
- One empty 35mm plastic film canister and lid. These are getting harder to find, but stores that develop film should have some. (The white canisters work much better than the black ones do.) If you can't find any film canisters you can use a small empty soft drink bottle with the lid on very loose – if the lid is on too tight the bottle will explode.
- One fizzing antacid tablet (such as Mylanta or Quick-Eze)
- Water
- Safety goggles



What to do:

Step 1. Take all your equipment outside and put your safety goggle on.

Step 2. Break the antacid tablet in half.

Step 3. Remove the lid from the film canister and put a teaspoon (5 ml) of water into the canister.

Do the next 2 steps quickly!

Step 4. Drop the tablet half into the canister and snap the cap onto the canister (make sure that it snaps on tightly.)

Step 5. Quickly put the canister on the ground CAP SIDE DOWN and STEP BACK at least 2 metres.

Step 6. About 10 seconds later, you will hear a "pop!" and the film canister will launch into the air!

Caution: If it does not launch, wait at least 30 second before examining the canister. Usually the cap is not on tight enough and the build up of gas leaked out.

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Take it further:

- You can experiment controlling the rocket's path by making and adding fins and a nose cone.
- Does the water temperature affect how quickly the rocket launches? Repeat the experiment using hot and cold water.
- Does the size of the tablet affect how quickly the rocket launches? Repeat the experiment with tablet pieces of different sizes.

Big questions:

- Where does the carbon dioxide in our atmosphere come from?
- What other gases are in our atmosphere?



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