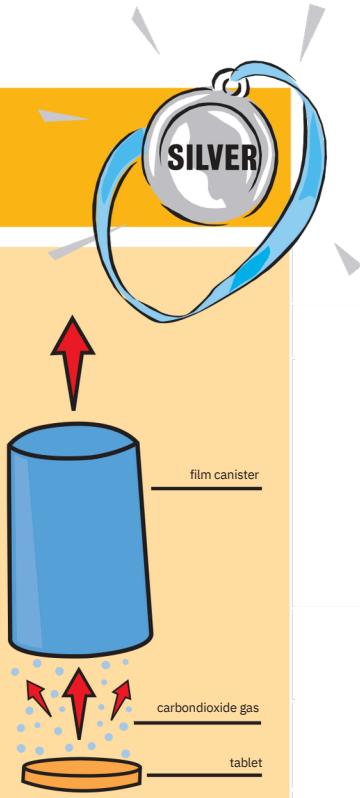
Make Rocket

Preparation

CLASS LEVEL	Fourth - Sixth classes
SKI LLS	Experimenting
CURRICULUM LINKS	English: Rockets and space can be used as a theme for differentstyles of writing aboutspace Geography Art
CONTENT	Materials and change Forces
MATERIALS/EQUIPMENT	Film canister (no hole),any tabletthatdissolves and fizzes e.g. Alka-Seltzer,Vitamin C tablets,blu-tack,water Collection ofmaterials,testthe activity.
PREPARATION	When water is added to the tabletthe gas carbon dioxide is released.The pressure of the carbon dioxide gas builds up inside the canister until itbecomes so greatthatit blowsthe canister from its lid.The gas rushing outof the end of the canister pushes itin the opposite direction.The 'rocket'can shootup to 5 metres into the air.
BACKGROUND INFORMATION	



Activity

TRIGGER QUESTIONS

	Whatis a rocket?Acylinder full of materials which can produce gases. Whatare rockets used for?Signalling;sending spacemachines with great force into the air to getoutside earth's gravity Whatgives a rocketits energy to 'blastoff'?Ajetofgases released from the back of the rocketsends itforwards. The children can blowup a balloon and letitgo.Ask them which direction the released air goes and which direction the balloon goes. They go in opposite directions. Note:You may have done the RocketLaunch activity in the Activity SupportBooklet. This works on the same principle.
SAFETY	Keep the children (and yourself) well back from this activity as the lid can take off with some force and could damage eyes and faces.This activity is probably bestdone outside – itcan be messy.

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ACTIVITY	Attach the tablet(one-quarter to one-half tablet) to the inside ofthe lid of the film canister. Putwater into the canister until itis aboutone-quarter full. Putthe lid (+ tablet) on the canister and turn itupside down. Wait! (The canister comes away from the lid with some force).
FOLLOW UP ACTIVITY	(1) Vary the temperature of the water and note if there is any difference in the heightto which the 'rocket'shoots. (2) Vary the 'fuel'mixture used in the 'rocket'(e.g.Vitamin C tabletand vinegar,and see if there is any difference in how the 'rocket'behaves).Be aware,vinegar leaves quite an odour! (3) Alaunch pad can be made using a cardboard tube (e.g.a toilet roll) and a paper plate.Cutthree slits about2.5 cm high in the bottom of a tube.Bend the cardboard strips so thatthey can be taped to a paper plate.Place the launch pad paper plate down and the film canister on top of the tube. Watch whathappens.

Review

FOLLOW-UP ACTIVITIES

Whatis a rocket? According to NASA itis a long,narrow,jet-propelled device or vehicle thatis used as a signal or weapon,for fireworks,or to provide the power for spacecraft. http://www.nasa.gov/audience/forkids/glossary/index_r_s.html

What does your dictionary say?

Did you know? Rockets are used to send flares as distress signals,in fireworks and to launch spacecraft.

Did you know? Fireworks are illegal, apart from licensed fireworks displays. Fireworks are dangerous and can cause accidents to people using them. They also upset blind people and dogs. For more information look up http://www.ispca.ie/behaviour/fireworks.html.

Read about Irish children travelling to NASA Cape Canaveral as part of the FÁSScience Challenge.http://www.fas.ie/science/primary_diary.html

Other types of rockets to make:

Lemon juice rocket
http://pbskids.org/zoom/activities/sci/lemonjuicerockets.html

Why nottry to make a straw rocket?
http://www.nasa.gov/audience/forkids/activities/A_Straw_Rocket.html

Here'samoreadvanced rocketto make:
Build a bottle rocket
http://teacherlink.ed.usu.edu/tlnasa/units/Rockets/18BottleRocket.pdf

See www.primaryscience.ie for flashbased version of activity.

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