



Hands on activities

Here is a selection of science experiments and activities that you can do in Labs. One or more of these is recommended in each session, but feel free to choose whichever is appropriate to your space, resources and team.

Experiment 1

Film canister rockets

What you need

- camera film canisters (available online)
- antacid or vitamin tablets (fizzing ones, such as Alka Seltzer)
- water
- safety goggles
- outside space

What you do

- 1 Give each Scientist a film canister. Show them how to take the top off the canister and put one teaspoon of water in the bottom.
- 2 Give everyone half an antacid tablet. In turn, wearing a pair of safety goggles, invite each Scientist to drop the half tablet in the canister and snap the lid on very quickly. Turn the canister upside-

down (so that the lid is on the floor) and retreat to a safe distance. After around ten seconds, the canister will fly into the air with a pop! (If the rocket doesn't pop, wait about 30 seconds before going back to it.)

- 3 You could add extra bits on to your canisters (such as fins made of card or extra decoration) to see if it improves the flight of the rocket! (But make sure you still place the lid on quickly!)

The science bit: when the water touches the antacid tablet, it starts to dissolve it, giving off carbon dioxide. The carbon dioxide gas builds up in the canister until the pressure is so great that it blasts the canister into the air! If the rocket doesn't work, the cap probably wasn't on properly, allowing the gas to escape.

Litmus test

What you need

- pH test paper (available cheaply online)
- around ten different liquids to test
- yogurt pots
- pens
- paper

What you do

- 1 Before the session, gather together some different common liquids to test with the paper, eg milk, water, brown sauce, passata or tomato juice, puréed broccoli, lemon juice, washing-up liquid. Put them in the (clean) yogurt pots and label them 1 to 10.
- 2 Invite the Scientists to form pairs, and give each pair some pH test paper, a litmus colour chart, a sheet of paper and a pen. Encourage them to draw a two-column table on the sheet of paper and write 'Number of pot' at the top of one column and 'pH number' at the top of the other.

