

Science Time

Volcanoes

Children are born scientists – they love to explore and discover. There are many activities that you can enjoy doing at home with your little scientist.

QUESTIONS

- What is a volcano?
- Where can we find volcanoes?
- What is lava?

TRY THIS AT HOME

Bi-carb Soda Volcano

See a video demonstration of this Science Time activity at www.questacon.edu.au

You Will Need

- Vinegar
- Bi-carb soda (otherwise known as sodium bicarbonate or baking soda)
- Red food colouring
- Three plastic cups
- Foil
- Plastic plate
- Sticky tape

WHAT TO DO

1. Do this activity outside with adult supervision
2. Tape a plastic cup right-way up to the middle of the plate.
3. Lay foil over the top of the cup and fold it around
4. Make a hole in the centre and fold the foil to the inside of the cup. Stick it all down. This is your volcano.
5. To make it erupt, use the second plastic cup. Fill it about $\frac{1}{3}$ full with bi-carb soda.
6. Place the cup of bi-carb soda into the volcano.
7. In the third cup, pour in some vinegar and add red food colouring. This will make it look like red lava when the volcano erupts.
8. Now you're ready. Pour the vinegar slowly into the volcano and watch it erupt!



WHAT'S HAPPENING?

The vinegar and bi-carb cause a chemical reaction. This reaction produces a gas called carbon dioxide, which fizzes and bubbles through the liquid.

DISCOVER MORE

- Try using different amounts of bi-carb soda and vinegar and see what difference it makes to the eruption.
- Do you have any pumice stone in your bathroom? Does it float or sink in water?

Open 9am – 5pm every day.
Closed Christmas Day.
Admission fees apply.
King Edward Terrace, Canberra
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Australian Government
Department of Innovation
Industry, Science and Research

Questacon
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DID YOU KNOW?

- Molten rock has two different names. If it is underground we call it magma. Once it has erupted and is above the ground we call it lava.
- Real lava is made from melted rocks. It heats up deep underground, and the rocks turn into lava, just like the way ice turns into water.
- Pumice stone is volcanic rock with air bubbles trapped inside. The air inside gives it a low density, and it floats in water. Get some pumice stone and play with it in the bath!

TRY THESE OTHER ACTIVITIES

- Make a Lava Lamp: place a few teaspoons of bicarb soda into the bottom of a plastic container. Half fill the container with cooking oil, covering the bicarb. Fill a cup $\frac{1}{3}$ full of water, and add a tablespoon of vinegar and some food dye. Pour the vinegar mixture into the first container. The water/vinegar will sink to the bottom and react with the bicarb. Blobs of the water/vinegar mixture will rise and fall like lava!
- Pet rocks: collect nice looking rocks. Decorate and glue eyes on them to make a pet rocks.

READ BOOKS

Have fun finding more at your local library, book store or online.

- *The Magic School Bus: Voyage to the Volcano* by Scholastic Publishing
- *National Geographic Readers (Kids) Volcanoes!* by Anne Schreiber
- *The Best Book Of Volcanoes* by Simon Adams
- *Volcano* by DK Publishing

GO ON AN EXCURSION

Go on a volcanic excursion! Here are some suggestions in the Canberra region.

- Geoscience Australia Education Centre
www.ga.gov.au

INVESTIGATE WEBSITES

There are also many websites for children about volcanoes. We suggest you start with:

- **Questacon** Watch the Science Time Volcanoes video at www.questacon.edu.au
- **The Magic Bus Episode** www.veoh.com
- **Savage Earth Volcanoes** www.thirteen.org
- **Geoscience Australia** www.ga.gov.au
- **Youtube** Search for Volcanoes and even the Mentos fountain www.youtube.com