

VINEGAR VOLCANO

Escaping Gas and Eruptions

Volcanoes form when hot molten rock (magma) under the ground erupts at the surface, but what causes the molten rock to erupt? Eruptions are often driven by gases escaping...

In this experiment you can start a chemical reaction that creates a gas, and see how the gas escaping drives an eruption.

What you'll need:

- A 1L plastic drinks bottle (eg tonic)
- A pair of scissors
- A few tsps bicarbonate of soda
- A splash of vinegar
- Centre-page volcano cut-out
- Bluetack



Instructions

1. Create your volcanic cone

Ask an adult to cut the plastic bottle in half, 15cm below the lid, and then to cut off the top of the bottle 5cm below the lid, as in the photo above. Turn the lid piece upside down and place into the top of the bottle.

2. Decorate your volcano

Cut out the volcano outline in the centre of this booklet and decorate it. Fold it into a cone and secure it with tape/glue. Position it inside your bottle and seal the top with bluetack to protect your artwork!

3. Start the eruption!

Load the bottle lid with bicarbonate of soda. Then you're ready to quickly pour in a big splash of vinegar and watch what happens!



What's happening?

When the vinegar and bicarbonate of soda come into contact a chemical reaction takes place, producing a gas. The gas is much less dense than the surrounding liquid so it tries to escape upwards carrying lots of the liquid with it, forming the bubbly fizzing eruption you see.

This is very similar to what happens in a volcano when escaping gases try to rise up and out...they take the molten rock with them, resulting in a volcanic eruption!



KEY POINTS

Volcanic eruptions are often driven by gases trying to escape

INFO FOR INTERESTED ADULTS

What happens if molten rock is erupted under a glacier?

Make your own volcano!

- 1) colour in your volcano
- 2) cut around the thick black lines
- 3) bend into a cone shape
- 4) place inside bottle and make an eruption!

