



Eruption - What happens when a volcano erupts?

Fact

- A volcano erupts when hot molten rock, called magma, bursts out of the earth's surface from deep underground.
- When the magma comes out of the ground it's called lava. The lava is hot melted rock that flows out of the ground cooling and hardening as it flows.
- Huge clouds of gas, ash, mud and rock get thrown into the air and out over the surrounding land.
- The whole shape of the land around where a volcano erupts can change completely.

Do you know

- Deep underground, under the earth's crust there is a layer of hot molten rock called magma. The hot melted rock is under pressure, so it tries to escape out through the earth's crust through cracks and holes called vents.
- When it does escape it often rushes out in an explosion throwing gas, lava, rock, mud and ash high into the air.
- Some volcanoes don't erupt violently they just flow out of the hole or crack in the earth's surface.
- White Island off the East Coast of the North Island is a live volcano which is constantly erupting.

Experiments you can do

Make your own sand volcano

What you need:

A sandpit

A spoon

Baking Soda

Vinegar

(a little food colouring or red paint powder if you want your lava red)

What you do:

Make a volcano shape using sand in the sandpit. Dig a little hollow in the top of the volcano to make the vent where the magma will burst through. Put a couple of spoons full of baking soda into the vent. If you're using red paint powder mix a tiny bit of it with the baking soda before you put it into the vent. If you're using red food colouring add a drop of it to the vinegar.

When you're ready for your volcano to erupt pour about half a cup of the vinegar into the vent, on top of the baking soda, and watch what happens.

The vinegar and baking soda cause a chemical reaction and form a frothy liquid that escapes up and out of the sand volcano vent.

A volcano isn't caused by baking soda and vinegar, but this is a fun volcano to make.

Other Investigations

FIZZY ERUPTION

What you need:

Get the OK from an adult that you can do this first :o)

A bottle of fizzy drink

A place outside that won't matter if it gets fizzy drink over it.

Old clothing that won't matter if they get fizzy drink over them

What you do:

Gasses inside magma are a little like the gasses in a bottle of fizzy drink. They're dissolved into the liquid but they're keen to escape and will use any opportunity to get out!

First ask an adult if you can do this. Get into some old clothes and take a bottle of fizzy drink outside to a place that won't matter if it gets fizz all over it. Give the bottle of fizzy drink a good shake. This will get those gasses excited! Open the bottle as quickly as you can and watch the gasses explode out of the bottle – it will make a mess!

UPSIDE DOWN MUDPOOLS

What you need:

a clear drinking glass (careful with the ol' glass now!)

water

¼ cup of cooking oil

a drop of food colouring (only if you want)

salt

What you do:

Fill the glass 2/3rds full with the water. Pour the oil into the glass too. What happens to the oil? When the oil has settled where does it sit – under or on top of the water? Why would that be?

Drop one drop of food colouring into the glass (it doesn't have to have the food colouring). What happens to it?

Now, sprinkle some salt onto the oil. What happens to the oil and the food colouring?

Keep sprinkling the salt to keep the action going.

Oil is lighter than water, so it sits on top of the water. Salt is heavier than the oil and the water, so it falls down to the bottom of the glass pulling some oil with it. When the salt dissolves in the water the oil floats back to the top of the glass again.

VOLCANO MAP

Find out where the nearest volcano is to you and mark it on a map. Most of the volcanoes in New Zealand are extinct. They haven't erupted for a very long time.

Scientists study volcanoes for volcanic activity with the hope that they'll be able to tell when one is going to erupt so they can warn people living nearby.

Jokes

What did the dad volcano say to the mum volcano? I lava you.

Why was the volcano being rude? It kept inter-rupting