



## Geysers - How do geysers work?

### Fact

- Geysers need water, heat and pressure to work.
- A geyser is a hole in the ground that often releases bursts of steam and hot water.
- When water seeps into the ground it can get heated up deep beneath the earth's surface by boiling hot liquid rock – magma.
- When water gets heated it expands and rises. The water particles move around really quickly and the water rushes to escape.
- When the water finds a place to escape out of the ground it usually does it in a rush and that's when a geyser is formed.

### Do you know

- In New Zealand magma is formed where the Pacific plate is forced under the Indo-Australian Plate. The force of the two tectonic plates pushing against each other makes the rock heat up and melt.
- You find a lot of geysers in Rotorua where there has been a lot of volcanic activity in the past.
- The biggest geyser that ever erupted in New Zealand was the Waimangu Geyser. It hasn't erupted in nearly 100 years but it used to push water 450 meters into the air.

### Experiments you can do

Make a geyser, What you need:

A sipper water bottle

Water

A place outside that doesn't matter if it gets wet :)

What you do:

Fill your sipper bottle with water. Pull the nozzle up so it's ready to let the water out. Hold the bottle with both hands and imagine your hands are molten rock heating the water. Imagine that the water in your bottle is heating up and turning into steam that wants to escape from the bottle and in a hurry!

Build up pressure in the bottle by giving it a big squeeze with both hands. Tadah... you've just made a geyser erupt.

### Other Investigations

Next time someone's making porridge at your house have a look at how the porridge acts like a bubbling mud pool. As the heat builds up in the porridge steam builds up and rises through the porridge out into the air. As it escapes it bursts through the porridge making it pop like a mud pool. That's what happens inside a geyser too.

### Jokes

What did the girl hot pool say to the boy hot pools? You geyser full of hot air. (you guys are...)