

# COKE VOLCANO

## Dissolved Gas in Magma

When molten rock (magma) is underground it often has lots of gases dissolved in it, just like liquid coke is full of dissolved carbon dioxide gas. As magma rises closer to the surface the gas starts to escape (exsolve) from the magma, but what happens then?

In this experiment you can use coke to represent magma under a volcano and see what happens when all the dissolved gas is released!

### What you'll need:

- A bottle of fizzy drink (diet coke is good as it's less sticky, but any fizzy drink will do)
- A pack of mentos mints

### Instructions

Place your bottle of fizzy drink somewhere you don't mind getting wet (outside is good)!

Roll a scrap of paper into a mentos-sized tube and fill it with 3-4 mentos. Take off the lid of the bottle and quickly pour in the mentos! Jump back to avoid getting sprayed!





## What's happening?

Dropping a mentos into your coke releases the gas dissolved in it. Gas is much less dense than liquid so all the gas bubbles rise to the top of the bottle and escape, taking some of the liquid with them.

This is exactly the same as what happens in a volcano. When the gas comes out of the magma, it tries to escape upwards taking some of the magma with it, forming a volcanic eruption!



What do you think would happen if the escaping gas couldn't get out?



When dissolved gas comes out of a liquid it's called EXSOLVING

## KEY POINTS

- Volcanic eruptions are driven by gas dissolved in the magma escaping and moving upwards

## INFO FOR INTERESTED ADULTS

What are the gases that are dissolved in magma?



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