

# Lava lamps

## You will need:

- ✓ Water.
- ✓ A clean plastic bottle, try to use one with smooth sides
- ✓ Vegetable Oil (or you could use Mineral or Baby Oil instead)
- ✓ Fizzing tablets (such as Alka Seltzer)
- ✓ Food Colouring

## Instructions:

- 1) Fill the bottle up about 1/4th (1 quarter) with water.
- 2) Pour the vegetable oil in the bottle until it is almost full. You may want to use a measuring cup with a spout or a funnel. You may have to wait a couple of minutes for the oil and water to separate.
- 3) Add a few drops of your favourite food colouring. Watch as the colour sinks through the oil. Did your drops of colour mix with the water immediately or float in between for a few minutes?
- 4) Break your fizzy tablet in half and drop part of it into the bottle. Get ready ... here come the bubbly blobs!
- 5) You can even get a flashlight, turn off the lights and drop in another half tablet. This time shine the flashlight through the lava lamp while the blobs are bubbling!

When it stops bubbling, try sprinkling some salt into your lava lamp. What happens?

What happens if you put the cap on after dropping the fizzy tablet in?



## How does it work?

The oil floats on top of the water because it is less dense or lighter than water. The food colouring has the same density as the water so it sinks through the oil and mixes with the water. When you add the tablet it sinks to the bottom then starts to dissolve. As it dissolves it makes gas, carbon dioxide. Gas or air, is lighter than water so it floats to the top. The air bubbles bring some coloured water with them to the top.

