

## Explore Task

### Lava Lamp

#### Materials:

- A clean plastic bottle, try to use one with smooth sides
- water
- 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 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!

### How it Works:

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 sink 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. When the air comes out of the coloured water blob, the water gets heavy again and sinks. It does this over and over again until the tablet is completely dissolved.