PROFESSOR PETE'S MESSY SCIENCE

# LAVA LAMP

**What you need:**

- Clear oil (such as baby oil or cooking oil)
- Glass of water
- Food colouring
- Clear plastic bottle
- Effervescent tablets (such as Alka Seltzer)

**What to do:**

1. Pour the oil into the plastic bottle, until it is about half full.
2. Add some food colouring the glass of water
3. Carefully pour some of the coloured water into the bottle, until it is about three quarters full.
4. Break an effervescent tablet into pieces and drop them into the bottle. You can do this as many times as you like.

**What happens?**

The water sinks to the bottom of the bottle. When you drop in the tablet, bubbles form and lift droplets of the coloured water up through the oil.

**Why does this happen?**

Because of something called **intermolecular polarity** the water and oil molecules don't like to mix, so they form two separate layers. The water sinks because it is heavier, or more **dense**, than the oil.
The tablet reacts with the water to make bubbles of carbon dioxide. The bubbles attach themselves to blobs of coloured water and lift them to the top of the bottle. When the bubbles pop, the weight of the water causes the blobs to sink back to the bottom of the bottle.

West Sussex Library Service