

Make A Lava Lamp

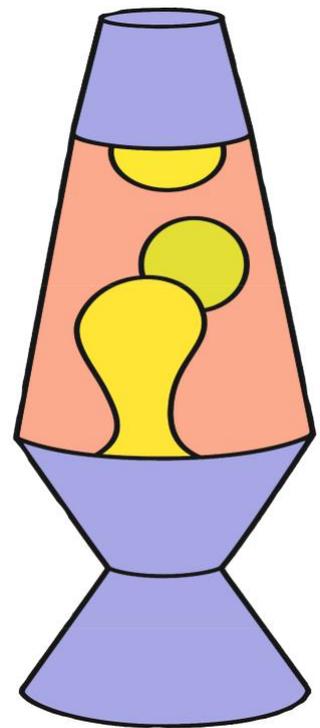
In the play, Susie dreams of getting a lava lamp for her office. In this science experiment, you can make your very own lava lamp!

You will need:

- A clean plastic bottle – recycle a used bottle. Smooth sides work best.
- Water
- Vegetable Oil (roughly half of the volume of the water bottle i.e. if your water bottle is 500 ml, you should use 250 ml of vegetable oil)
- Food Colouring (colour of your choice!)
- Alka Seltzer fizzing tablets

Instructions:

1. Fill one quarter of the bottle with water.
2. Tell the students you are about to add the vegetable oil. Ask them what they think will happen to the water and the oil?
3. Pour the vegetable oil into the bottle. Observe the results. Ask the students what happened?
4. Wait until the water and oil separate. Add a few drops of food colouring. Does the colour mix with the oil? Does it mix with the water?
5. Break your fizzy tablet in half. Tell the students you will drop this into the water. Ask them to predict what will happen. Drop half of the fizzy tablet into the water. Observe the results. Ask the students what they saw.
6. If you like, you can repeat the above in the dark. Turn off the lights and shine a torch on the lava lamp.



How does it work?

The oil floats on top of the water because it is lighter (less dense) than water. The food colouring has the same density as water so it sinks through the oil and mixes with the water.

The tablet is denser than the oil. It sinks to the bottom and starts to dissolve. As it dissolves it makes a gas called carbon dioxide.

Gas is lighter than liquid. It floats up to the top. The air bubbles bring some coloured water with them. When the air comes out of this blob, the water will sink back down to the bottom.

This happens over and over again until the tablet is completely dissolved.