ANISHA ACCIDENTAL DETECTIVE

USBORNE

MAKE YOUR OWN LAVA LAMP

You will need:

- A clear plastic bottle or jar
- Some water
- Food dye or paint
- Vegetable or sunflower oil
- Baking powder

Instructions:

1. Put some water in the bottom of the bottle along with a few drops of food dye or a squirt of paint.
2. Carefully add the oil, stopping at least 3cm from the top of the bottle.
3. Add a heaped teaspoon of baking powder to the bottle. Remember to leave the lid off!
4. Watch as the coloured bubbles rise through the oil and sink back down — like wax in a lava lamp!
5. Once it stops bubbling, you can repeat the experiment immediately, or put on the lid and keep it for later.

What's going on?

Oil and water don't mix — the scientific word for this is "immiscible". The oil floats on top of the water because it has a lower density.

The carbon dioxide produced by the baking powder has the lowest density and rises to the top, carrying some of the coloured water with it — as if the water is wrapped up in a life jacket!

When the water and carbon dioxide reach the surface of the oil, the bubble pops, releasing the carbon dioxide into the atmosphere and the water then sinks back below the oil.