

Episode 2: DIY Lava Lamp Experiment



Different types of liquids are not all made up the same way. Some mix and some don't. Discover why liquids such as oil and water don't mix together in this fun and bubbly experiment. Michelle is glowing with excitement as she creates her own wibbly wobbly lava lamp!

Scientific concept: Exploring differences in liquid density.
Science process skills: Observing, comparing and classifying.
Let's investigate: *Why don't some liquids mix?*

Materials

- Vegetable oil
- $\frac{3}{4}$ cup water
- 1 x cup bi-carb soda
- $\frac{3}{4}$ cup white vinegar
- Food colouring
- Glass jar
- 2 x measuring jugs
- Torch



Experiment procedure

1. Measure out your liquids (water and vinegar) using separate measuring jugs.
2. Mix the vinegar with a few drops of blue food colouring. Observe how these liquids mix!
3. Place bi-carb soda in the bottom of a glass jar.
4. Add water to the jar of bi-carb soda. Next, pour in vegetable oil to fill the jar. Observe as water falls to the bottom of the jar and oil floats to the top.
5. Pour the blue-coloured vinegar water into the glass jar, to mix with the oil and water. The vinegar should react with the bi-carb soda in the jar to make the blobs of coloured oil float around.
6. Shine a torch underneath the jar and you've created your very own lava lamp!

Early Education links

Episode themes relate to [EYLF Learning Outcomes](#) 4.2, 5.1, 5.2 and 5.4. Exploring liquid density by observing what happens when different liquids are mixed can support science classification skills, by discovering and sorting liquids that mix and those that don't. Extend children's learning about why some liquids don't mix by encouraging them to feel and compare the textures of water, vinegar and oil.

Follow-up learning

Conduct a simple chemistry experiment to explore solids that dissolve in water and those that do not. Investigate whether different powders (e.g. sugar, salt, gelatin, flour, pepper) dissolve in warm water. If one substance in a mixture dissolves in the other, it's called a *solution*.

