

November Experiment: Fireworks in a Glass!

To support children's scientific learning outside of school, each month I'll be sharing a fun and easy experiment for families to try together.

This month, we're combining science with a little bit of art! November's experiment is called "Fireworks in a Glass" – it's colourful, exciting, and beautifully simple.

What You Need:

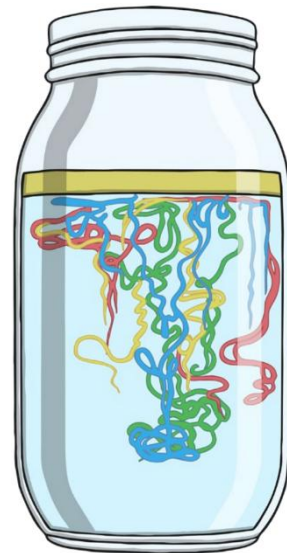
Food colouring (various colours)

Warm water

Oil

2 empty glasses

A fork



What To Do:

- 1) Start by making sure your glass is clean.
- 2) Pour warm water into one of the glasses until it's about $\frac{3}{4}$ full.
- 3) In the second glass, add a few spoonfuls of oil.
- 4) Add 4 drops of food colouring into the oil. Try using different colours!
- 5) Use the fork to gently mix the oil and food colouring together. The colours should break up into tiny droplets throughout the oil.
- 6) Now the exciting part – carefully pour the coloured oil into the glass of warm water.
- 7) Watch closely as the colourful drops begin to fall and explode like fireworks in the water!

What's Going On?

This experiment shows how liquids with different densities behave when they mix – or don't!

Oil is less dense than water, so it floats on top.

Food colouring doesn't mix with oil, but it does with water.

When you pour the coloured oil into the water, the droplets of food colouring sink through the oil and then burst into the water, spreading out in bright patterns that look like fireworks!

This is a great example of how different substances interact depending on their density and solubility.

Try Taking It Further:

What happens if you use cold water instead of warm water?

Does the size of the food colouring drops affect the fireworks?

Try different types of oil (e.g., olive, vegetable). Do the results change?

Can you slow down or speed up the reaction?

If you have any questions or want to share a photo of your colourful creation, I'd love to see it!

Email me at: newzealand@lainesmeadprimary.co.uk

Happy experimenting!

Mrs Smith