

A Density Column in a Glass

October 04, 2024 / DIY / STEM Activities / Chemistry / Ages 6 - 8 / Rainbow Rain In A Glass



Can you make rain in a bottle? And this rain is rainbow-coloured! Some people also call this experiment underwater fireworks. You can probably tell from the name just how wonderful this experiment is. With simple kitchen materials, you can easily create this at home.

- Age: 6-8
- Time: Less than 30 minutes
- Mess Level: Messy

Materials Needed:

Food colouring
Vegetable oil
Water
Clear glass
Stirring stick



Step-by-Step Instructions:

1. Drop different food colourings into the oil and mix well.



2. Fill 3/4 of the clear glass with water.



3. Pour the oil and food colouring mixture into the water and observe what happens.



The Science Behind It:

This involves the principle of density: when the oil mixed with food colouring is poured into the water, the oil, being less dense than water, will float on the surface, encapsulating the food colouring. However, because the food colouring is denser than both oil and water, after a short while, it will begin to sink into the water and dissolve, creating beautiful rainbow rain.