



DIY UNDERWATER FIREWORKS

You will need:

- Clear / transparent cup
- Oil ($\frac{1}{4}$ cup)
- Food colouring (as many colours as you want)
- Small dish
- Stirring stick
- Water ($\frac{2}{3}$ cup)



Procedure:

Step 1: Pour the water in the cup

Step 2: In the small dish place the oil and add a few drops of food colouring. Using your stirring stick mix in the food colouring and the oil.

Step 3: Gently pour the oil on top of the water

Step 4: Observe the colours traveling through the oil layer, and then mixing in the water

What happens if you have a layer of salty water at the bottom of the cup?

Can you compare the fireworks with hot and cold water?

The Science Explained:

The food colouring will dissolve in water but not in oil. Once the food colouring is mixed in the oil, the colours will mix and potentially create new colours (red+blue = purple...).

Water is denser than oil and so the oil stays on top of the water. The food colouring is denser than oil and travels through the oil layer. Once the colours touches the water they diffuse in the water.

