

Oily Divers!

Experiment:

To show that different liquids can have different weights and densities.

Materials:

You will need:

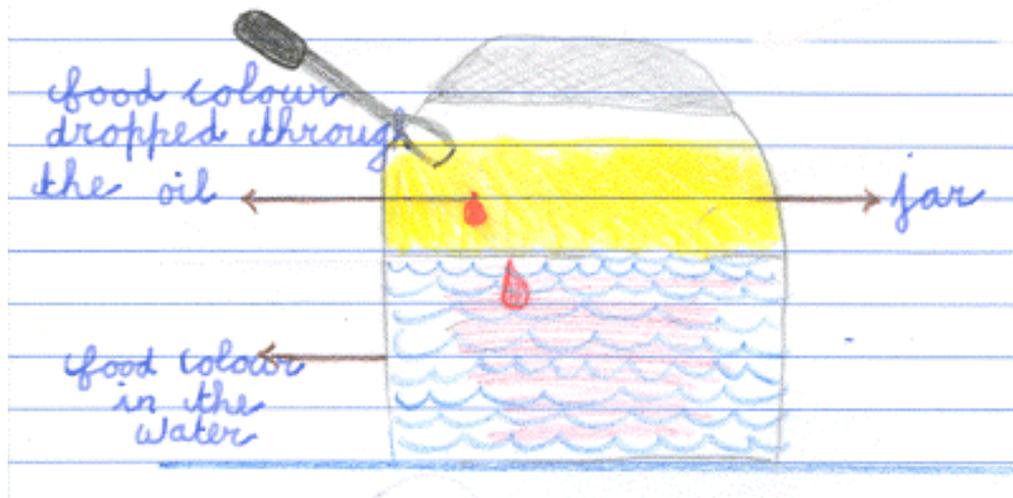
- A jam jar with lid
- Cooking Oil
- Food Colouring
- Eye Dropper



Method:

What you have to do:

1. Half fill the jam jar with water.
2. Tilt it to one side as you pour in some cooking oil.
3. Using an eye dropper, put one or two drops of food colouring in. Screw on the lid and watch what happens.



Result:

The food colouring gently rested on the top of the water - the water's skin. After a short time, it broke through the skin and 'exploded' into the water like a firework or lava lamp!

Conclusion:

All liquids have a skin. Some insects use it to their advantage and skate over the top of water. The food colouring is heavier than the oil, so therefore it sank and rested on the

water's skin. Did you notice that oil has a skin too - as you dropped the food colouring into the jar?

So, we can conclude that water has a skin and is definitely heavier than oil.

Now try this -

Fill the jar to the very top with oil - have a tissue handy to clean up any mess and be careful of your clothes!

Screw the lid on the top and tilt the jar backwards and forwards. You have made a simple wave machine!

AND NOW:

Try this: Syrup is a very heavy and dense liquid. Pour some into a jam jar. Next pour in some water. This will float on the syrup. Now pour some lighter liquid over the water - yes, the oil. You now have three levels of liquid. FINALLY, take it a stage further - pour some surgical spirit (available from chemists) over the oil and note what happens!!