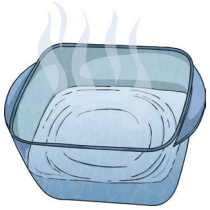
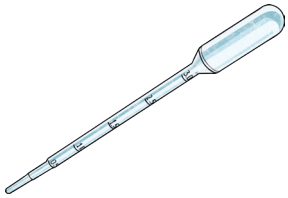
Spectacular Soap

Equipment you will need:



2 shallow dishes

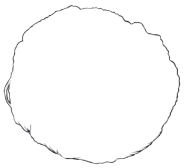
Plastic cup



Pipette

Milk

Food colouring



Cotton wool balls

Dish soap

Method:

1. Pour some milk into one of the shallow dishes. Ensure that you cover the base of the dish completely. Allow the milk to settle. Do not move on to step two until the milk is still in the dish.
2. Using the pipette, add three or four drops of food colouring into the milk. Repeat with each colour.
3. Prepare your dish soap by pouring some into the plastic cup. Add a small amount of water and mix.
4. Soak the top of your cotton ball in the dish soap. Carefully lift it out, ensuring that it is not dripping too much.
5. Place the soaked piece of cotton wool in the center of the milk. Do not move it around, simply place it in the middle of the dish.
6. Repeat the experiment in your second dish, using water instead of milk.
7. Compare the results.

The Science Behind It

Different liquids react differently when mixed. Milk consists mainly of water. It also contains fat. Some fluids will be repelled by one another, moving away from one another. Others will be attracted to one another and form bonds.

The soap in the cotton ball is designed to break and split fat up, which is why we use it for washing plates. When the soap interacts with the fat in the milk it breaks its bond with the water and appears to push it to the side of the dish. This is because it has broken the surface tension of the water.