Water Surface Tension 2

Experiment:

To destroy surface tension and see what happens when water's skin is damaged!

Materials:

You will need:

- Saucer
- Milk
- Food colouring
- Pepper (Ground)
- Eye Dropper
- Washing Up Liquid

Method:

1. Allow the milk to come to room temperature.
2. Fill your saucer or bowl with the milk.
3. Place five or six drops of food colouring anywhere in the bowl.
4. Shake some pepper over the surface.

What is happening?
Well, so far everything floats on the surface. Do you remember why? Now, lets see what happens if you destroy the tension (or skin) on the milk's surface.

1. Carefully, again using the eyedropper, place a single drop of washing up liquid in the centre of the bowl.

Result:

Food colouring and pepper 'shot' to the edge of the bowl.

Conclusion:

As the tension in the centre was damaged, the pepper and food colouring quickly went to where tension was strongest – ie. the edge of the bowl.
Soap does away with surface tension – that's why photographers use it as a wetting agent when processing film. It stops water forming drops (see Water Tension Exp. 3) and therefore drains water away, leaving no staining or marking on the negative.