



The Tie Dyed Milk Experiment

The Challenge:

The art and science worlds collide with this colour changing experiment that teaches you about primary and secondary colours using the property of surface tension.

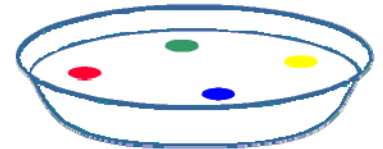
Materials Needed:

- Shallow bowls (white is best)
- 2% and homogenized milk
- Food colouring (primary and other colours)
- Liquid dish soap
- Toothpicks, swabs or droppers



Method:

1. Pour 1-3 cm of milk into a shallow bowl.
2. Suspend 2 drops of food colouring in the milk on opposite sides of the bowl. Use a different colour on each side (e.g., use blue and yellow to make green).
3. Use a toothpick, swab or dropper to place a drop of soap in the centre of the bowl.
4. Watch with amazement as the colours mix to make another colour! Observations to record: What happens when the colours are added to milk? After soap is added? Which way does the colour move? Does it move forever? What happens when another drop of soap is added?
5. Repeat, changing food colouring, to create new colours. Record your observations.
6. For extra fun, investigate variables such as milk with different fat contents, milk of different temperatures or other kinds of liquids.



How Does This Work:

Water molecules at the surface are attracted downward by the molecules below them. This strong attraction causes water to behave as if it has an invisible skin. This property is called surface tension. Soap decreases the surface tension of water, allowing the colours suspended in the milk to mix.

