



# Explore the Wonders of Chemistry: Magic Milk Experiment

Welcome to your family's new favourite tradition - Science Night! Dive into the mesmerising world of chemistry with this magical milk experiment. It's an easy and fun activity that demonstrates the interactions between different molecules, suitable for budding scientists of all ages.

Learn about surface tension and the chemical reactions between soap and milk to create a colourful masterpiece!



## Materials Needed:

- A shallow dish or pan
- Whole milk or any high-fat content milk
- Food colouring (various colours)
- Dish soap
- Cotton swabs

## Instructions:

### Set Up:

Pour enough milk into the dish to cover the bottom. Let it settle so it isn't swirling when you start.

### Add Colours:

Gently drop different colours of food colouring into the milk. Aim for the centre and refrain from stirring to see the best results. Be creative - you can place drops in a circle, random spots, or even try to create a pattern!

### Get Ready for Magic:

Dip a cotton swab into the dish soap, ensuring it covers the tip.

### Create the Magic:

Place the soapy cotton swab in the centre of the milk and watch what happens! The colours will begin to swirl and dance around the dish.

## Explanation:

Milk contains fat, and the dish soap's molecules interact with these fat molecules, reducing surface tension. This process causes the food colouring to move, creating swirling patterns that are beautiful to watch.

## Discussion Points:

- Notice how the movement continues until the soap is evenly mixed with the milk.
- Discuss why the effect might vary with different types of milk (whole, skim, cream).

## Safety Tips:

- Although this experiment is safe, remind children not to drink the milk solution.
- Supervise children throughout the experiment, especially when handling soap.

Reflect on the experiment and discuss any other questions or observations your child might have. Encourage them to think about what other science they might like to explore during your next Science Night!