



# Milk & Soap

*How do different molecules react when they encounter each other? We will learn about this using a plate of milk and some soap to observe them react*

## Overview & Purpose

Molecules, molecules, molecules. They are everywhere we look, but we can't see them? Why? Because molecules are so small even the most advanced microscopes have difficulty "seeing them". So what is a molecule? A molecule is a group of atoms bonded together to form something. For example: when 2 Hydrogen atoms and 1 Oxygen atom join together, they form  $H_2O$ ...otherwise known as WATER! Today we will learn about moving molecules and using whole milk and soap. We will observe how the fat in the milk, reacts to the molecules in dish soap when they encounter each other. !

## Ingredients

- 1 Plate
- 3 or more different food coloring
- 2-ounce cup
- Dish soap
- Whole milk (needs to be whole milk for full effect).
- Q - tips

## Get started

1. Pour the whole milk on the plate, careful to not over spill.
2. Add the drops of food coloring, be sure to space the different colors apart.
3. Add the dish soap to the 2 ounce cup.
4. Dip one end of the q - tip into the dish soap.
5. Place the q - tip with the soap into the milk, and observe what is happenings

## Questions:

- Why do you think the milk moved?
- Did the milk move fast or slow?
- Can you think of any other molecules that may react the same way? Or opposite ways (join together)?

