



RANDOM ACTS OF SCIENCENESS

Lesson: Milk Separation

CURRICULUM REFERENCE: Pure Substances and Mixtures

LESSON OBJECTIVE

Watch how chemicals react to one another using milk separation.

THE SCIENCE BEHIND

Soap is hydrophobic, which is a fancy way of saying that it doesn't like water. And milk is about 98% water. So, when you put a drop of soap to a tray of milk, the soap will search out all of the non-water parts of the milk and latch on to them. This movement is what creates the cool designs on your plate.

VIDEO: <https://youtu.be/81taXNFohsg>



FOLLOW-UP QUESTIONS

1. How does changing the amount of solute or solvent affect the solution?
2. What variables can we change for different results?
3. Does colour matter? Does it react differently?

LEARNING OUTCOMES

- Investigate processes (e.g., filtration, distillation, settling, magnetism) used for separating different mixtures.
- Use scientific inquiry/experimentation skills to investigate the properties of mixtures and solutions.



RANDOM ACTS OF SCIENCENESS

Lesson: Milk Separation

MATERIALS (PER PERSON)

- Milk
- Plate
- Food colouring
- Q-tips
- Dish soap

INSTRUCTIONS

1. Pour milk into a plate without it spilling over.
2. Add differently coloured drops of food colouring onto the milk.
3. Take a Q-tip and dip it into a container of dish soap.
4. Then with the dipped Q-tip, touch it into the milk with food colouring and watch the colours separate.

VIDEO: <https://youtu.be/BhXT-Uby8mo>

