Milk Art

Sections

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Cub Scouts
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Rover Scouts

Scouts VICTORIA

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Challenge Areas

COMMUNITY
CREATIVE
OUTDOOR
PERSONAL GROWTH

Scout Method Elements

COMMUNITY INVOLVEMENT
LEARNING BY DOING
NATURE AND THE OUTDOORS
PROMISE AND LAW
PERSONAL PROGRESSION
PATROL SYSTEM
SYMBOLIC FRAMEWORK
YOUTH LEADING, ADULTS SUPPORTING

SPICES Growth Areas

CHARACTER
EMOTIONAL
INTELLECTUAL
PHYSICAL
SOCIAL
SPIRITUAL

The Adventure

Learn about the concept of surface tension and what chemicals like what in this colourful experiment with things you will find in your kitchen.

Plan

1. Investigate the properties of milk. What makes up milk and what are the properties of these different components?
2. Learn about how dish soap works and the effect it has on different chemicals.
3. What do you think will happen to the milk and food colouring once the dish soap is added? Why?
4. Collect the materials required for the experiments and recording your results. Communicate with your patrol and leaders if you need to bring items from home. You will need a bowl or flat container, milk, food colouring, a cotton swab, and dishwashing liquid.
5. Develop hypotheses regarding what you think will happen when the milk and soap mix and why.
6. Read the safety requirements and discuss with your leaders/adult supervisors what supervision and safety requirements might be needed.

Do

1. Set up the experiment and record materials and hypotheses.
2. Make sure everyone is aware of the safety rules.
3. Pour some milk into a wide bowl or flat container, enough to cover the base. Be careful not to move the bowl, you want the milk as still as possible.
4. Put one drop of food colouring in different places in the milk, use different colours to make your art extra colourful.
5. Using a cotton swab covered in dish soap, put a small amount of dish soap into the milk by touching the surface using your soap coated swab. Experiment with adding the dish soap in different places in the milk, including in the food colouring, to see the effect it has.
6. Watch as the colour spreads and your milk art come to life!
7. To clean, just pour your milk art down the sink. Make sure no one drinks the milk art.
8. Make sure you record the results of your experiment. Think about what you observe using your 5 senses.

Review

1. Why do you think the food colouring floats on top of the milk but mixes with liquids such as water?
2. Why do you think the food colouring reacts with the dishwashing liquid?
3. Evaluate your hypotheses. What reaction did the dish soap cause? Why?

Safety

- Allergen Warning: While no one in the group should consume their milk art, those with sensitivities to the ingredients used should be extra cautious.
- Consumption warning: No one should consume any part of their milk art. Make sure younger participants, in particular, are aware.

Variations

- Try using pepper instead of food colouring to make your milk art.
- Try the experiment with different temperatures of milk, does temperature change what happens?
- Try the experiment with different types of milk such as whole and skim.
- A larger program can be built using other ‘Chemical Properties’ or chemistry challenge cards.