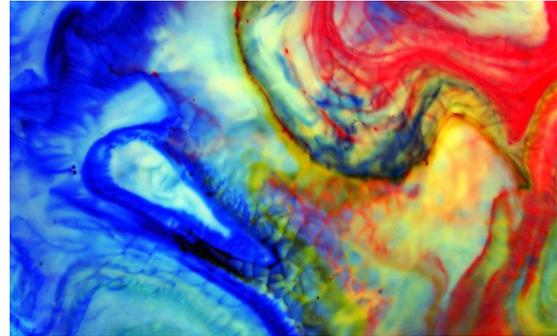


Milk Swirl Experiment

Experiment with how dish soap and fat interact in this colorful experiment for young learners. This time you're allowed to play with your food!



Materials:

- Whole milk or 2% milk- the higher the fat content the better.
- Wide bowl/ Plate- or any surface to put a thin layer of milk on
- Food coloring
- Cotton swab
- Dish soap

Steps:

1. Pour a shallow layer of milk (whole or 2%) into a wide bowl or plate.
2. Add a few drops of food coloring into your milk.
3. Dip a cotton swab into dish soap.
4. Predict what will happen when you put your cotton swab in the milk.
5. Dip (do not stir) the soapy end of your cotton swab into the food coloring in the milk.
6. Watch the colors push outwards and swirl around.

What is happening?

Dish soap likes to combine with fats. When you put dish soap into milk, the soap tries to join together with the fat in the milk. At the same time, the soap is also pushing away the water in the milk. The food coloring is sitting on top of the milk as all of this is happening, so as the soap is racing to mix in with the milk fat and push away the water, we see the colors spread outwards.

Caregiver Tip:

Have your young learner practice their science skills. Before starting, ask them to make a hypothesis about what they think will happen when they put their food coloring into the milk and soap. After doing the experiment, ask them why they think the color spread the way that it did, then explain the “what is happening” section.



Get creative! What other experiments does your young learner want to try with their milk? What happens if they use multiple colors in the milk? What happens if they use more or less soap? What kinds of patterns can they make?