MILK RAINBOW

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a CHOKING HAZARD. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- Whole Milk
- Food Coloring
- Dish Soap
- Cotton Swab
- Deep Dinner Plate

INSTRUCTIONS

STEP 1: Fill the deep dinner plate with whole milk. Describe and classify the whole milk by its observable properties.
STEP 2: Add drops of different food coloring to the milk. Make sure the drops of food coloring are evenly spaced.
STEP 3: Dip the end of the cotton swab into the dish soap. Describe and classify the dish soap by its observable properties.
STEP 4: Touch the tip of the cotton swab, with dish soap, to the surface of the milk and observe. Describe the whole milk, with food coloring and dish soap, by its observable properties.

EXPLANATION

The milk contains water, proteins, and fats. Milk is mostly water and has surface tension. Surface tension is a force present within the surface layer of a liquid that causes the layer to behave as an elastic sheet. The dish soap reacts with the fat, in the milk, and reduces the surface tension, creating a milk rainbow.

SCIENCE BACKGROUND

Matter is anything that has mass and takes up space. Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. Measurements of a variety of properties can be used to identify matter. Different properties are suited to different purposes.

I CAN STATEMENTS

- ✓ I can plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

2 – Structure and Properties of Matter I Patterns