

Spectacular Science

Grab a grown up and become a scientist by following these simple instructions to perform exciting experiments at home!

Storm in a Glass

Materials

- Shaving cream
- Water
- A large glass
- Food coloring
- A small glass
- A spoon

Instructions

1. Fill the glass 1/2 full with water.
2. Spray some shaving cream on top of the water to fill the glass to 3/4 full.
3. Use your finger or a spoon to spread the shaving cream evenly over the top of the water. The top of the shaving cream should be flat.
4. Mix 1/2-Cup of water with 10 drops of food coloring in a separate container. Gently add the colored water, spoonful by spoonful, to the top of the shaving cream. When it gets too heavy, watch it storm!

How does it work?

Clouds in the sky hold onto water. They can hold millions of gallons! The layer of shaving cream is our pretend cloud in this experiment. The shaving cream layer can also hold onto water. Clouds can only hold so much water before getting too heavy. When that happens, the water falls out (precipitates) as rain, snow, sleet, or hail.

Milk Art

Materials

- A bowl
- Cotton swab
- 1/2 cup milk
- Food coloring
- Dish soap
- Ground Pepper (optional)

Instructions

1. Pour the milk into the bowl. Be careful not to move the bowl, you want the milk as still as possible.
2. Put one drop of each color in different places in the milk.
3. Put just a tiny amount of soap on the end of the cotton swab, then touch it to one of the colors.
4. Let the experimenting begin! Swirl it around, what happens? What do the colors do? Do not drink it!
5. To clean up, pour the milk down the drain.

How does it work?

Milk has fat in it and food coloring floats on top of the fat. The fat is all connected with bonds. Think of it like the little pieces of fat all holding hands with each other. Dish soaps are used on greasy or oily dishes because it breaks the bonds in fats allowing them to separate. When you add the dish soap to the milk, the fat separates and moves making your magical milk art!

Water Fireworks

Materials: Water, oil, food coloring, two 16 oz. clear glasses or jars, a fork

Instructions

1. Fill the tall glass almost to the top with room-temperature water.
2. Pour 2 tablespoons of oil into the other glass.
3. Add 2 drops of food coloring to the glass with the oil.
4. Stir the oil into the food coloring using a fork. Stop once you break the food coloring into smaller drops.
5. Pour the oil and coloring mixture into the tall glass.
6. Now watch! The food coloring will slowly sink in the glass, with each droplet expanding outwards as it falls. Looks like fireworks, right?

How does it work?

Food coloring dissolves in water, but not in oil. So when you pour in your food coloring/oil mixture the oil will float at the top of the water because it is less dense, and the food coloring will begin to dissolve once they sink through the oil and into the water.