Better than Magic: Chemistry Show

The Rainbow Rain Experiment

Materials

- Water
- 2 oz of vegetable oil
    - Remember to dispose of the oil in the trash, not down the drain!
- Food dye (water-based)
    - Food dye can stain some surfaces so its recommended that a parent handle this.
- Clear container (like a large cup or vase)
    - We recommend a container that can hold 10x the amount of oil used. For example, if 2 oz of oil is used, find a container that can hold about 20 oz of water with room for the oil.
- Container to mix oil and food coloring

Directions

1. For the best results, choose a clear container for your water that can hold 10 times the amount of water. For example, if your using 2 oz of oil you need a container that holds 20 oz of water, etc. A tall, wider container (similar to a vase or a large clear cup) would be perfect for this experiment.

2. Fill the container with as much water as it will hold, leaving room for the oil at the top.

3. Set the filled container aside and get ready to prep the oil and food dye mixture.

Preparing oil and food dye mixture:

4. In a cup or other small container, add 2 oz of oil.

5. Add 21-30 total drops of food coloring to the oil. We recommend using multiple colors. For example, 7 drops each of red, blue, and yellow food coloring.

6. Now stir the oil and food dye together to break up the large drops of food dye into smaller droplets of food dye.

7. Now that the dye mixture is ready, get the container with water and follow along with Alma and Emily in the video.

Hint for Success: The secret to this experiment is to gently pour the oil and dye mixture into the water so that the dye doesn't mix with the water early. We recommend a parent or older sibling due this step.

8. Gently pour the oil and dye mixture into the container with the water and watch as the oil remains at the top of the glass and the water stays clear.

9. Watch and observe the rainbow rain!

Instant Tie-Dye

Materials

- Q-tips (2 or 3)
- Dish soap (example: Dawn dish soap)
- Food dye (water-based)
- Plate that can hold a small layer of milk
- Milk (whatever kind you have)

Directions

1. Add a small layer of milk to a plate

2. Add drops of food coloring to the surface of the milk. Try to think about what cool patterns you want to make.

3. Dip the Q-tip in some dish soap

4. Make patterns with food dye by touching the soapy Q-tip to the surface of the milk and watch what happens!

Oobleck

Materials

- Cornstarch
- Water
- Container to mix/hold mixture
- Food dye (optional)

Directions

1. Start by adding equal volumes of water and cornstarch to a container. Mix the two ingredients together with your hands.

If the mixture is too watery, add more cornstarch. If the mixture is solid, add more water.

2. Adjust the mixture until it is at a consistency where you poke the mixture and its solid and when you pick up a small amount of oobleck, it gently flows out of your hand.