Objective

By the end of this lesson, you will understand the scientific method and be able to conduct experiments using oobleck.

Materials and Prep

- Cornstarch
- Water
- Bowl
- Food coloring (optional)
- Measuring cups and spoons
- Stirring utensil
- Apron or old clothes (oobleck can get messy!)

No prior knowledge is required for this lesson.

Activities

1. Mixing Oobleck: In a bowl, combine 1 cup of cornstarch with ½ cup of water. Stir until the mixture resembles a gooey substance. Add food coloring if desired. Explore the unique properties of oobleck by squeezing it, poking it, and letting it drip from your hands.
2. Oobleck Dance: Place a small amount of oobleck on a speaker or subwoofer. Play some music with strong bass and observe how the oobleck reacts to the vibrations.
3. Oobleck Race: Set up a race track using a flat surface and create two lanes with masking tape. Place a small amount of oobleck in each lane and tilt the surface to see which oobleck reaches the end first.
4. Oobleck Sculptures: Mold the oobleck into different shapes and sculptures. Experiment with different techniques and observe how the oobleck holds its form or flows like a liquid.

Talking Points

- "The scientific method is a step-by-step process that scientists use to investigate and understand the world around us."
- "First, we make observations and ask questions about something we want to learn more about. For example, we might wonder what happens when we mix cornstarch and water."
- "Next, we form a hypothesis, which is an educated guess or prediction about what will happen in our experiment. In this case, our hypothesis could be that the mixture will create a substance that is both solid and liquid."
- "Then, we conduct experiments to test our hypothesis. We mix the cornstarch and water to create oobleck and observe its properties."
- "During our experiments, we collect data by making careful observations and measurements. We can note things like the texture, consistency, and behavior of the oobleck."
- "After collecting data, we analyze it to draw conclusions. We determine whether our hypothesis was supported or not based on the results of our experiments."
- "Finally, we communicate our findings by sharing what we learned. We can do this through discussions, presentations, or even creating a report or poster."