Objective

By the end of this lesson, you will be able to understand and create Ooblek, a non-Newtonian fluid that acts like a solid when pressure is applied and like a liquid when left alone.

Materials and Prep

- Cornstarch
- Water
- Large mixing bowl
- Measuring cups and spoons
- Food coloring (optional)
- Apron or old clothes to protect from mess

Make sure to cover the working area with a plastic tablecloth or newspapers to make cleaning up easier.

Activities

• Activity 1: Mixing Ooblek

In the large mixing bowl, mix 1 cup of cornstarch with 1/2 cup of water. Stir the mixture slowly until it becomes a thick, gooey substance. You can add a few drops of food coloring to make it more colorful if you'd like.

• Activity 2: Exploring Ooblek's Properties Take a small handful of Ooblek and roll it into a ball. What happens when you squeeze it tightly? Now, try to let the Ooblek flow through your fingers. What happens? Observe how the Ooblek behaves differently depending on the amount of pressure applied.

Activity 3: Ooblek Art Use your hands or tools (like spoons or cookie cutters) to shape and mold the Ooblek into different forms. Can you make a pancake shape? How about a tower? Get creative and see what you can create!

Talking Points

- Ooblek is a special substance called a non-Newtonian fluid.
- When we mix cornstarch and water together, they form a mixture that has properties of both a liquid and a solid.
- When you squeeze or apply pressure to Ooblek, it feels solid and resists your force.
- When you let Ooblek rest or flow through your fingers, it behaves like a liquid and drips down.
- Ooblek gets its unique properties from the way cornstarch particles interact with water molecules.
- Scientists use Ooblek to study how materials can have different states and properties.
- Have fun experimenting with Ooblek and see what cool things you can create!