Lesson Title: Oobleck
Length: 20 minutes
Age or Grade Intended: Second Grade
Source: Activities For Teaching Science As Inquiry page 30

Academic Standards:
- Science 2.1.3 – Describe, both in writing and verbally, objects as accurately as possible and compare observations with those of other people.
- Science 2.1.5 – Demonstrate the ability to work with a team but still reach and communicate one’s own conclusions about findings.

Performance Objects:
- Given an object, students will be able to list 10 properties of that object with 100% accuracy.

Assessment:
- I am trying to introduce the students to observing. Today I will assess their observation skills by looking at their list of properties they created in their groups. I will know they have mastered observing properties if they have listed at least 10 properties of Oobleck. If the students list properties that I did not think Oobleck had, I will ask the students explain where they got their ideas from so I can figure out whether the student does not understand the objective or whether Oobleck has a property that I did not know about.

Advanced Preparation by the Teacher:
- Materials:
  - Four boxes of cornstarch
  - Food Coloring
  - Plastic Bowl
  - Plastic Baggies for each student
  - Newspaper to cover each student’s desk
  - Large piece of paper for each group
  - Marker for each group
  - Bartholomew and the Oobleck (by Dr. Seuss)
  - Solid Object
  - Liquid Object
  - Paper Towel
- Oobleck Recipe
  - Two hours before class add 15 drops of food coloring to 4 ½ cups of water. Pour the light green water into a large bowl and add four boxes of cornstarch and another 2 ½ cups of water. Swirl and tip the bowl to level the mixture, and then set the bowl aside.
**Note**: The students could also measure out the Oobleck mixture ingredients. But, because of the time constraint of this lesson, the Oobleck was provided for the students.

Procedure:

**Introduction/Motivation:**
- Read *Bartholomew and the Oobleck*.
- Ask the students to predict what they believe the properties of Oobleck will be. Remember properties are anything that can be seen, heard, smelled, or felt by the senses or detected by instruments.
- Ask the students, what can you do to find out what the properties of Oobleck will be?

**Step-by-Step Plan:**
- Split the children into groups. Cover each desk with newspaper. Give each group a large sticky note and a marker. Give each student a bag of Oobleck.
- Tell the students they are to be a scientist and write down as many properties of Oobleck as they can discover.
- Tell students to put a star besides the properties they believe are most important.
- Ask each group to share their responses with the class.
- Show the students a solid object, and ask, What are the main properties of this object?
- Show the students a liquid object, and ask, What are the main properties of this object?
- Discuss with the class whether Oobleck should be called a solid or a liquid, or does it need a third category?
- Explain that the Oobleck is actually a non-Newtonian fluid, which means it changes properties like water.

**Closure:**
- Explain to the students that we have been scientists today. Ask students, What have you done that has been like a scientist?
- During the year, What else do you hope to be able to do as a scientist?

**Adaptations:** Since the autistic child in the classroom does not like to feel different textures, I will provide this child with her choice of disposable gloves to wear, or a spoon to play with the Oobleck.
**Enrichment:** Ask these students hypothesis what would happen to the Oobleck under different conditions (heating, freezing, water, air blowing, closed container, etc.). (Application Question). The students might try some of these experiments. Also ask the students to figure out what other items are non-Newtonian fluids. (Application Question).

**Self-Reflection:**