

Acquisition Lesson Plan Magical Science Day 1-Oobleck

Name	Teacher/Planner	Subject	Magical Science	Date	Monday
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9:30 Supervisor checks in students and takes attendance. Puts names in “Random Drawing” bucket for prizes later in week.

9:30 – 9:45 Breakfast Snack

Essential Question: How are solids and liquids different? Is oobleck a solid or a liquid?

9:45 – 10:00 Activating Strategy/Arrival Activity:

Teacher read aloud of the book “Bartholomew and the Oobleck”. Use the following questions as a way to discuss the story:

1. Why does the king get angry at the weather? Why does he wish for a change?
2. Who creates the oobleck and why?
3. What happens when the oobleck falls from the sky? Is this a good change or bad change in the weather? Why?
4. What does Bartholomew tell the king to do to get rid of the oobleck?
5. How does the king respond to Bartholomew’s suggestion?

Explain that today the students will be making their own oobleck and talking about its different properties.

10:00 – 11:00 Teaching Strategies:

Start with a discussion about the difference between solids and liquids. Make a list of characteristics of solids and a separate list for liquids (this list will be revisited later).

Begin the oobleck activity by passing out materials to students. Once students are ready, follow the steps for making the oobleck. This can be done step by step in a large or small group. If there are a large number of kids, consider making the oobleck in groups of 3 or 4 students.

1. Put 1 cup of cornstarch in a bowl and add 1-2 drops of food coloring (optional).
2. Slowly add up to $\frac{3}{4}$ cup water while mixing, until all the cornstarch is wet.
3. Keep adding water until the oobleck feels like a liquid when mixed slowly.
4. Oobleck is done when it is no longer powdery (needs more water) but doesn’t splash when hit with a spoon (needs more corn starch)

Allow students a few minutes to play around with their oobleck. Then, go back to the list of characteristics of solids/liquids and see if any of the characteristics are also true for oobleck. (Students should find that oobleck contains characteristics of both solids and liquids)

After establishing that oobleck can act like a solid and a liquid, explore how these behaviors relate to the “strain rate” – how fast you try to move the oobleck.

- a. Try stirring the oobleck with your finger. If you stir quickly, the oobleck should resist. If you stir slowly, the oobleck should give way.
- b. Try modeling quicksand by letting your fingers sink to the bottom of the bowl and trying to remove them quickly. What happens?
- c. Dip your fingers or a spoon into the oobleck and then quickly lift upward. You should be able to momentarily bring the entire container up in the air before it starts falling down.

- d. Pick up a handful and squeeze it. Stop squeezing and it will drip through your fingers.
- e. Take a blob and roll it between your hands to make a ball. Then stop rolling. The oobleck will trickle away between your fingers.

Have students pack up their oobleck in a sandwich bag or small container. If done in groups, kids will need to split up the oobleck to share with all. Consider providing a copy of the recipe for students to take home as well.

States of Matter matching game (could be done outside):

A. Short game. 1. There are three picture cards. Place them face down on the table. 2. Each player/group picks a picture card. 3. Shuffle the other cards and spread them face up on the table. 4. Take it in turns to pick a card. If it describes your picture card, keep it. If not, you must give it to the player who needs it! 5. The game continues until all the players have completed their sets. B. Longer game. Replace rule 5 with: If the statement describes your picture keep it. If not, put it back on the table face up.

Next, have students think back to the story Bartholomew and the Oobleck. Provide them with the following prompt (on worksheet): If you could have something different fall from the sky, what would it be? Have students respond by writing and/or drawing a response. Once finished, have students share their ideas.

If time allows during an appropriate time of the lesson, consider sharing the following videos of oobleck.

Oobleck on speakers (1.5 min): <http://youtu.be/3zoTKXXNQUIU>

Walking on oobleck (20 sec): <http://youtu.be/blOGL4eZnjs>

Sinking in oobleck (40 sec): <http://youtu.be/Lb9kt1z3jAA>

Formative Assessments: Classroom helpers sit near children during reading aloud or partner reading to help them attend to story. Questions posed throughout the activity will serve as a way to gauge student participation and understanding.

11:00 – Summarizing: Ask students to think about their list of characteristics of solids and liquids. On an index card, ask students to answer the essential question “Is oobleck a solid or a liquid?” Have them provide at least 2 examples of why they chose their answer. Teacher will collect and responses will be shared in a later lesson.

11:15 Bathroom break and hand washing

Wash hands and enjoy lunch together. Teachers and adult leaders model appropriate table manners and encourage children to taste foods. Children and adults throw their own trash away.

11:50 - After lunch, prior to dismissal:

Culminating Activity: Invite children to choose a used book to take home and encourage them to do some reading tonight.

