

CAPACITY

8.6.2018

Subject

Mathematics

Prepared By

[Instructor Name]

Grade Level

1

Overview

This lesson plan covers teaching content for;

1. Identification and naming of objects that can be used for measuring capacity
2. Ordering of containers based on their capacity
3. Activities for measuring capacity

Objectives

Students should be able to;

1. Identify and name objects that could be used for measuring capacity.
2. Compare, describe and solve practical problems for capacity and volume [for example, full/empty, more than, less than, half, half full, quarter.
3. Measure and begin to record the following; capacity and volume.

Teacher Guide

Day 1, Lesson 1- 15 Mins

1. Explain to students that today they are going to show you what they know about the capacity of an object, or the maximum amount an object can hold.
2. Let students know that today's class will be held outside in the playground.
3. Give the students 3-5 different containers, such as pudding containers, applesauce containers, and yogurt containers.
4. Give each student a scoop of some kind, such as measuring spoons.
5. Give students 5 minutes to make their estimates of how many scoops each container will hold.
6. Have students record their estimates in their journals.
7. After recording their estimations, students will take their containers and scoops to the playground and start filling them.
8. Remind the students to record the number of scoops for each container.

Teacher Guided Practice

Day 2 Lesson 2- 10 mins

1. To compare the capacities of the containers, students might fill one container with water, pour the water into the other container, and determine which container holds more water.
2. Students might also use a scoop to fill both containers with rice, and then determine which container holds more scoops of rice.

Day 3, Lesson 3 – 20 Mins

1. Organize the students into groups of three.
2. Provide each group with a small scoop, a container of a pourable material (e.g., water, rice, sand), and four empty plastic containers.
3. Have the groups use sticky notes to label the containers A, B, C, and D.
4. Explain that the students are to estimate the number of scoops that each container holds.
5. Use a scoop and a pourable material to measure the capacities of the containers;

Materials Required

- Containers
- Math Journals
- Scoops
- Water
- Rice
- Sand
- Beans

Additional Resources

- <https://mathsnoproblem.com/teaching>
- https://theappliciousteacher.com/capacity-prep/?utm_medium=social&utm_source=twitter
- <https://theimaginationtree.com/explor>
- http://www.proteacher.org/c/322_Cap
- <https://www.pinterest.com/pin/189991>
- <http://www.open.edu/openlearncreate>
- <https://www.pinterest.com/pin/189991>

Additional Notes

Objectives

Teacher Guide

9. Have students indicate which container has the greatest capacity and which container has the least capacity.
10. Ask students to answer these questions in their journal: Which container has the greatest capacity? How do you know?

Day 4, Lesson 4 - 20 Mins

1. Provide a wide variety of assorted containers for this investigation.
2. Each container should be labeled with a different letter A – H so that students can identify and talk about the containers easily.
3. Each group of 2 - 4 students should be given 2 containers. (Not all groups need to have the same two containers.)
4. The group should predict which one of the containers will hold more, which one will hold less, or if they think the containers will hold the same amount.
5. Predictions should be recorded.
6. After each group has made its prediction and recorded it on paper.
The groups can verify their prediction using the following procedure.
 - Give each group a dishpan (to catch any spills) and a Ziploc bag of dried beans, peas, rice, sand, or the like.
 - Each group will also need a funnel and a craft stick.
 - Have the group members directly compare the capacities by filling one container.

Teacher Guided Practice

- order the containers from least to greatest capacity.
6. After Sizing up the containers, instruct the students to;
 - Record their findings on the page.
7. Ask them the following questions:
 - “What strategy did you use to estimate the capacity of each container?”
 - “Which container, do you think, has the greatest capacity? Why?”
 - “Is your estimate reasonable? Why do you think it is reasonable?”
 - “How can you find the capacity of each container?”
 - “How can you measure accurately?”
 - “How can you order the containers from least to greatest capacity?”
8. After the students have ordered the containers from least to greatest capacity,
9. Have them record what they learned about measuring capacity.

Objectives

Teacher Guide

Teacher Guided Practice

- Leveling the contents with the craft stick once the first container is full, and then pouring the contents into the other container.
- Tell the students to see if the container holds the same amount, holds less, or holds more.

7.Allow students to trade containers with other groups until each group of students has had opportunity to investigate all the containers A – H.

8.Share the results of the investigation in a class discussion.

Introduction/Instruction

- 1.Capacity is the greatest amount that a container can hold.
 - 2.Students explore the capacity of containers, using materials that can be poured.
 - 3.Explain to your students the difference between capacity and volume.
 - 4.Let them know that when your container is full, the capacity is equal to the volume but when your container is empty the capacity is the same, but the volume is zero.
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Objectives	Teacher Guide	Teacher Guided Practice
Assessment Activity	Assessment Activity 1.	Assessment Activity 1.
Summary		