Eureka Math

Kindergarten Module 3 Lesson 14

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Reflecting your Teaching Style and Learning Needs of Your Students

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Materials

- Hidden Numbers Template
- Small Ball of Clay
- Student Materials:
 - \circ 2 cups of rice
 - Clear containers (if possible) with varying diameters (e.g. a glass, small bowl, small vase with an interesting shape, bottle, mug)
 - Tray
 - o funnel
 - Spoon
 - Recording sheet
- Teacher Materials:
 - Set of student materials for demonstration

Icons





Read, Draw, Write











Manipulatives Needed







Lesson 14

Objective: Explore conservation of volume by pouring.

Suggested Lesson Structure

Total Time	(50 minutes)
Student Debrief	(6 minutes)
Concept Development	(28 minutes)
Application Problem	(5 minutes)
Fluency Practice	(11 minutes)





I can explore conservation of volume by pouring.



You've gotten so good at counting to ten. It's time to review counting higher!

Ten 1

Say that for me



We can show it on our hands like this:

Ten (push out both hands, palms out, as if doing a push-up exercise in the air, and then pause with closed fists close to body)

1 (push out the right hand pinky finger)



It's your turn. Ready?

Ten (push out both hands, palms out, as if doing a push-up exercise in the air, and then pause with closed fists close to body)

1 (push out the right hand pinky finger)



Next is ten 2. We do it like this

Ten (push out both hands as if doing a push-up exercise in the air) and (closed fists, close to body)

2 (push out the right hand pinky and ring fingers)



Say Ten Push-Ups (3 min)

Next is ten 3

Ten (push out both hands as if doing a push-up exercise in the air) and (closed fists, close to body)

3 (push out the right hand pinky, ring, and middle fingers)



Say Ten Push-Ups (3 min)

Your turn!

Ten (push out both hands as if doing a push-up exercise in the air) and (closed fists, close to body)

3 (push out the right hand pinky, ring, and middle fingers)



Find two's, three's four's, and five's:





Double 5-Groups (3 min)

How many dots are on the top card? (Wait for all hands to go up, and then give the signal.) Ready?

This is the bottom card.

How many dots are on the bottom card?

Application Problem (5 min)

With your clay, make a bowl big enough to hold a yummy strawberry. Now, make a little vase just the right size for a tiny flower. Which one do you think would have more capacity?

Compare your containers to those of your friend's. Do they look alike? Do you think hers would have more capacity?

Concept Development (28 min)

In the last lesson, we talked about the capacities of our containers. I wonder what the capacity of this bowl is. How could I find out?





Concept Development

Tell me when to stop! (Use spoon to fill bowl.) There. Let me draw how the rice looks in this bowl on my recording sheet.

Name	Date	
My cup of rice looks like:		
Now it looks like:		
Now it looks like:		
Now it looks like:		

volume recording sheet



Concept Development

Look at this bottle. I wonder if the capacity of the bottle is more or less than the capacity of the bowl. How could we find out?

I will use a funnel so I don't lose any. What do you notice?





I didn't spill any. What do you think happened?

The capacity of the bottle is more than the capacity of the bowl. Let me draw how the rice looks in the bottle. (Draw.) What will happen if I pour the rice back into the bowl?



Let's test your guess! You were right! I'm going to let you experiment with your containers now.

Fill your small bowl with the rice, and then notice how that same amount of rice looks in the other containers.

On your recording sheet, draw what you see. Pour the rice carefully so that you don't lose any between containers. If you do, scoop it up from your tray and put it in to make sure that your tests are fair!



Who would like to share something they learned during the experiment?



Problem Set (10 min)

ooks like:	
e:	

volume recording sheet



Debrief (6 min)

- Look at your Recording Sheet. In which container did it look like you had the most rice?
- In which container did it look like you had the least rice?
- Did the amount of the rice ever change?
- Were the shapes of the containers the same? Describe them to your partner.
- Does the shape of the container make the amount of the rice seem different? Why?
- What math vocabulary did we use today to communicate precisely?