

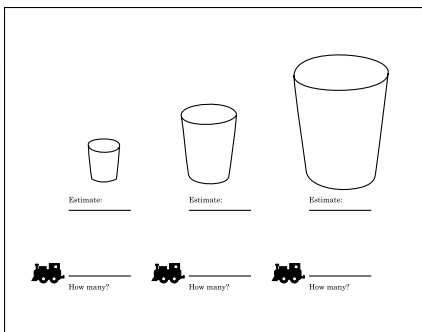
# 26. Growing Cups - Longer Trains

- ESTIMATE BY USING A REFERENCE
- COUNT TO NUMBERS IN THE 50'S
- WRITE THE NUMBER

## STUDENT NEEDS:

100 blocks  
small cup  
medium cup  
large cup  
worksheet

30 minutes



## HELPFUL HINTS:

A 5 oz. cup holds about 20 blocks.  
A 7 oz. cup holds about 30 blocks.  
A 9 oz. cup holds about 40 blocks.  
A 16 oz. cup holds about 60 blocks.

This is a good time to add in additional *Keep on Counting: How Many?* and *Trains of Ten* lessons so that the students become more comfortable counting to higher numbers.

## GROUP ACTIVITY:

1. Show students a small container filled with blocks and a larger container filled with blocks. (Note: These containers should be different from the cups the students will be using independently.)
2. Students take turns estimating how many blocks are in the small container, while the teacher writes the estimates on the board.
3. Volunteers make a train with the blocks and the class counts them; teacher writes the number on the board.
4. Students take turns estimating how many blocks are in the large container, using the small container as a reference, while the teacher writes estimates on the board.
5. Volunteers make a train with the blocks and the class counts them; teacher writes the number on the board.
6. Have a discussion about the estimates: Were estimates for the second jar more than for the first? Were the second estimates closer to the actual number than the first estimates?
7. Explain the worksheet.

## INDEPENDENT WORK:

1. Students fill a small, a medium and a large cup with blocks.
2. Students estimate how many blocks are inside the small cup and write their estimate on their worksheet.
3. Students make a train with the blocks from the small cup, count and write the number on their worksheet. (Students' answers will vary slightly)
4. Students repeat for the medium and large cups.

GROUP LESSON WRAP-UP WORK:

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1. Ask students to compare how many blocks they counted in each cup. Prompt them to notice that the small cup had the smallest number of blocks and the large cup had the largest number of blocks.
2. Ask students to compare their estimates to the actual numbers they counted. Were the estimates close to the actual numbers? Were the estimates for the small cups smaller than those for the large cups? Did the students use the count of the blocks in the small cup to help them estimate the number of blocks in the medium and large cups?
3. Point out that different students had slightly different numbers of blocks in each cup, but that all of the small cups had approximately the same number, etc.
4. *Optional:* Students explain why different students counted different numbers of blocks.

*Assessment:*

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DOES THE STUDENT:

- make logical estimates of how many blocks each cup contains
- count the blocks accurately
- write the correct number of blocks in each cup

*Differentiation:*

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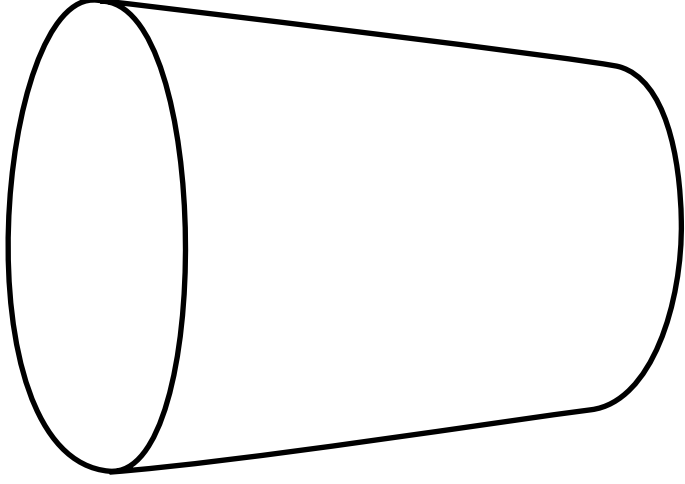
REINFORCEMENT:

- Complete the worksheet with students, discussing the estimation strategies you would use. Then, have students complete the worksheet again independently, using three different containers of blocks.

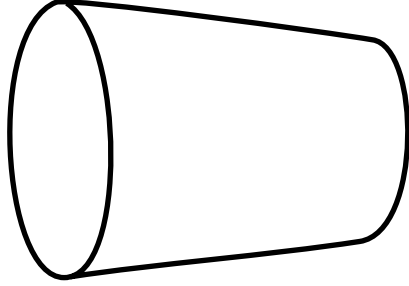
EXTENSION:

- Students calculate the difference between each of their estimates and actual numbers. (It may help to make a train for the number of blocks they estimated and compare it to a train with the number of blocks they counted.)
- Students compare their three trains and determine how many more blocks there were in the medium cup than the small cup and how many more blocks there were in the large cup than the medium cup.

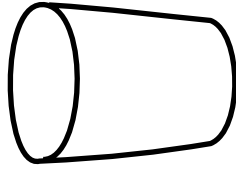
Name: \_\_\_\_\_



Estimate: \_\_\_\_\_



Estimate: \_\_\_\_\_



Estimate: \_\_\_\_\_



How many? \_\_\_\_\_



How many? \_\_\_\_\_



How many? \_\_\_\_\_