

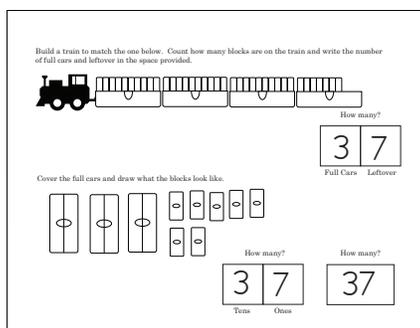
# 27. Packing Up the Train: Making Blocks-of-10

- INTRODUCE TEN ONES AS ONE TEN
- INTRODUCE THE VOCABULARY “BLOCK-OF-10”
- IDENTIFY THE PLACE VALUE OF THE DIGITS

TEACHER NEEDS:  
train of 28

STUDENT NEEDS:  
30-50 blocks  
worksheet

 25 minutes



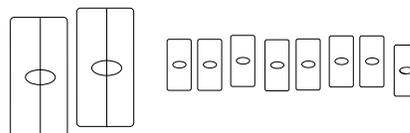
Students' answers will vary.

TEACHER NOTE:  
In this lesson, students transition from counting “full cars” to counting tens, called blocks-of-10.

GROUP ACTIVITY:

1. Position a train of 28 blocks where all can see it.
2. Ask for a volunteer to count the train. (28)
3. Record the number on the chalkboard. (28)
4. Explain to the students that you are going to look at the number a different way. Pick up one of the full cars and ask how many blocks are in the full car. (10) Show the students how to cover the full car and tell them we call this “**packing**” the blocks.
5. Hold up the block and ask how many are inside. (10) Allow for a discussion that comes to the conclusion that the bigger blocks are **blocks-of-10**. When we cover a full car, we call it a **block-of-10** because it contains 10 single blocks.
6. Place the block on the worksheet and repeat for the remaining full cars.
7. When you get to the car of eight, ask students if you can cover it. (No, it will fall apart.) Demonstrate that this is true. We can only make a block-of-10 when there are 10!
8. Explain to students that when we look at the number this way, with **packed blocks** or blocks-of-10, we dump out the leftover blocks and put them after the bigger blocks, just as we always put the leftover blocks at the end of the train. We do it this way because now we are looking at tens and ones and looking at it this way helps us understand the pattern of our entire base ten number system as we learn larger and larger numbers.

9. The collection should look like this:



10. Ask the children how the blocks are like the train and how they are different. (Full cars are blocks-of-10 and the leftovers come after them; you can't see all the blocks.)
11. Ask a volunteer to remove the blocks from the worksheet and to draw what the blocks look like.
12. Point out that the worksheet now shows two pictures of blocks. Ask if both pictures show the same number. (Yes)
13. Ask a volunteer to count the train again and a volunteer to count the packed blocks. (The count will be the same - 10,20,21,22,23,24,25,26,27,28.)

INDEPENDENT WORK:

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1. Students build a train for the given picture.
2. Students count the train and record the number.
3. Students cover the full cars and place them in the space provided.
4. Students dump out the leftover blocks and place them to the right of the blocks-of-10.
5. Students remove the blocks and draw what the packed blocks look like.

*Assessment:*

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DOES THE STUDENT:

- count the given train correctly
- write the correct number
- draw the packed blocks correctly

*Differentiation:*

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REINFORCEMENT:

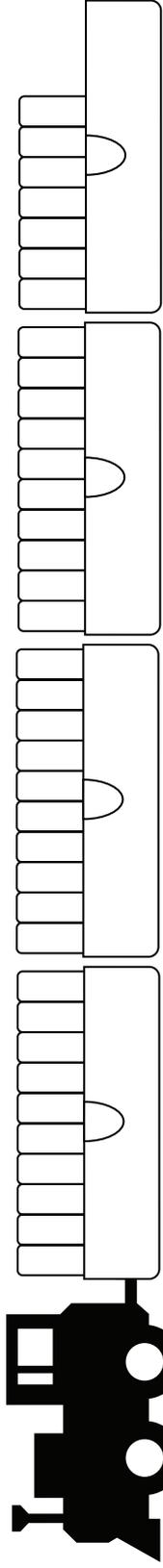
- Work with a small group all using the same number and count in unison.

EXTENSION:

- Use several sheets and when complete put the numbers in order from greatest to least.

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

Build a train to match the one below. Count how many blocks are on the train and write the number of full cars and leftover in the space provided.



How many?

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Full Cars    Leftover

Cover the full cars and draw what the blocks look like.

How many?

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Tens    Ones

How many?

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