

29. Understanding Two Representations of a Number: Linear and Base Ten

- INTRODUCE DIFFERENT REPRESENTATIONS OF A NUMBER
- IDENTIFY THE PLACE VALUE OF THE DIGITS

TEACHER NEEDS:

train of 42
3 single blocks
5 blocks-of-10

STUDENT NEEDS:

worksheets
digit flip cards

 25 minutes

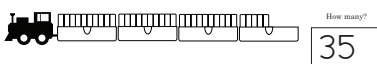
TEACHER NOTE:

The train represents the “linear” or “counting” view where each block can be seen as a single block. The packed blocks represent the “base ten” view where each block-of-10 is seen as a single entity which represents a value of ten.

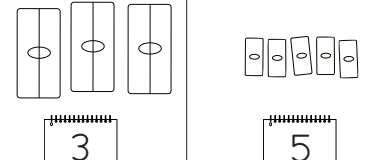
GROUP ACTIVITY:

1. Show the students a train of 42 blocks.
2. Ask a volunteer to describe what the packed blocks would look like. (Four blocks-of-10 and two leftover)
3. Position four blocks-of-10 and two singles beneath/next to the train.
4. Ask, “Which is more, the train or the packed blocks?”
5. Make sure everyone agrees they are the same.
6. Pack the blocks on the train to check.
7. Show a collection of packed blocks - five blocks-of-10 and three ones.
8. Ask a volunteer to describe what the train would look like. (Five full cars and three leftover)
9. Ask, “Which is more, the train or the packed blocks?”
10. Make sure everyone agrees they are the same.
11. Unpack the blocks to make a train to check.

Count how many blocks are on the train and write the number of full cars and leftover in the space provided.



Predict and draw what the packed blocks would look like.



INDEPENDENT WORK:

1. Students count the blocks on the given train and write the number.
2. Students predict what the packed blocks will look like on the mat and draw the blocks accordingly.
3. Students write the digits for the collection of packed blocks on the mat.

If a student makes an incorrect prediction, have him correct the prediction (picture) by doing the exercise with blocks and drawing the result.

Assessment:

DOES THE STUDENT:

- count the train correctly
- write the number from the train
- draw the correct blocks for the number
- write the number correctly

Differentiation:

REINFORCEMENT:

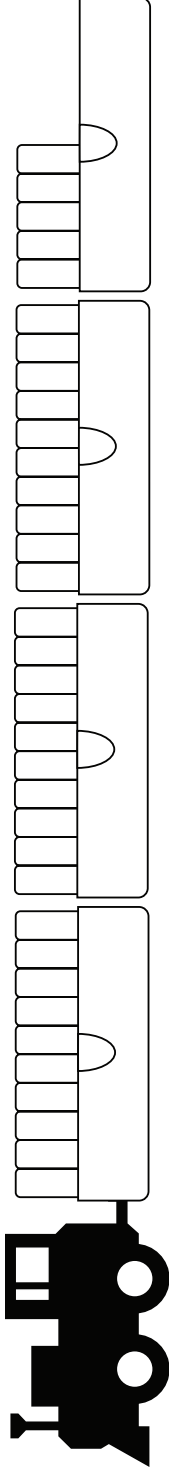
- Use trains and packed blocks of the same number and work together with a small group.
- Provide stamps for those children who have fine motor issues for whom it is difficult to draw the blocks.

EXTENSION:

- Use the worksheets for "Counting Trains" and have students draw the blocks for each train.

Name: _____

Count how many blocks are on the train and write the number of full cars and leftover in the space provided.



How many?

Predict and draw what the packed blocks would look like.

