



PRACTICE TASK: Make Sets of Less/Same/More

Approximately one day (Adapted from Van de Walle's activity 2.1)

STANDARDS FOR MATHEMATICAL CONTENT

Work with numbers 11-19 to gain foundations for place value.

MCCK.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

MCCK.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality.

- a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

MCCK.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

BACKGROUND KNOWLEDGE

This task provides students with one of the many experiences he/she will need with sets of objects to be able to apply their understanding of the numeral 11-19 to compare one from another. Students aren't expected to be comfortable with this skill until the end of kindergarten. In this task, students create a set with counters, which gives them the opportunity to reflect on the sets and adjust them as they work.

ESSENTIAL QUESTIONS

- How did you count the dots?
- How did you know how many counters to put with the Less Card?
- How did you know how many counters to put with the More Card?
- Why wouldn't you count a dot more than once?
- How might you recognize the number of dots on a card without counting? (pattern)

MATERIALS

- Cards from *Numeral, Picture, Word*
- Set of Small Counters or Blocks
- Word Cards Labeled *More, Less* and *Equal*
- Word Cards Labeled *How many to 20?, Remove to 10*

GROUPING

Small Groups/Work Stations

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I

On index cards or sticky notes write the words “Less”, “More”, and “Equal”.

Provide students with the task cards from *Numeral, Picture, Word* and place them face down in a pile. Have students use a set of small objects to model numbers that are more, less and equal to the number shown on the card.

Lay the index cards side by side on the carpet or table. Students turn over a task card and next to each index card students must create a set of objects that match the post it. For example, if a student turned over a task card with 14 on it, the student would count out 14 objects and place them next to the “equal” index card. The students would then make a set that is “more than” and “less than” as it corresponds to the card turned over.

Part II

This version of the task is exactly the same as Part 1 except the index cards are different. Exchange the *less* and *more* cards to *remove to make 10* and *more to make 20*. In this part, students turn over a number card and make a set that is equal. Then students must identify how many counters need to be added to make 20 and removed to make a 10. The corresponding number of counters needed to be removed or added to the initial set is placed next to the index card.

FORMATIVE ASSESSMENT QUESTIONS

- How do you know the set is equal?
- What strategy are you using to show more or less?
- What strategy are you using to find out how to get to 10 or 20?
- Is ____ more or less than the than the number set you made?

DIFFERENTIATION

Extension

- Provide larger quantities of same items for students to compare.
- The more/less cards can be more specific. For example: instead of saying “more” the index card could say 2 more/2 less.

Intervention

- Model for students comparing with a one-to-one correspondence arrangement.
- Gradually reduce the comparison to “Less”. Once that is solidified, introduce comparing for “More”.
- Pair the student with a child who can work through the comparisons with him/her while articulating why he/she made the choices for the Less, More, and Same cards.