SCAFFOLDING TASK: Got Dots Revisited (11-20)

Approximately one day. This task contains numerous activities where students engage in activities. This task introduces students to numbers that are greater than 10.

STANDARDS FOR MATHEMATICAL CONTENT

MCCK.CC.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

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.

MCCK.CC.7 Compare two numbers between 1 and 10 presented as written numerals.

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

Many good number development activities involve multiple ways for students to identify number relationships. As children learn about ten-frames, patterned sets, and other relationships, dot cards provide a wealth of activities that allow students to develop their number sense. When students use these dot cards for almost any activity that involves number concepts, the cards make them think about numbers in many different ways. (Van de Walle, p.53)

ESSENTIAL QUESTIONS

- Why is counting very important?
- When do we use counting skills in everyday life?
- How can you know a quantity without counting each object?

MATERIALS

- Dot cards (printing multiple sets of cards on tag board and laminating is recommended)

GROUPING

Whole group and partner task

TASK DESCRIPTION, DEVELOPMENT, AND DISCUSSION

The following dots card activities can be introduced as a whole class and then repeated throughout the year through small group and stations/centers. Kindergarten students are extremely creative and continuously invent new games. Have students create a game using the cards and share with classmates.

- **Got Dots:** Many of the suggested activities for *Got Dots?* in unit 1can be used with *Got Dots Revisited.* The only difference is that the dot cards used in this activity are for numbers 11-20.

- **Before and After:** Cards are placed in a pile, face down. One player turns over the top card and the other player must the state the number that comes after that number, and the number that comes before. If the student is able to correctly identify all 3 numbers they keep the card. If they are unable to the card is placed at the bottom of the pile. The player with the most cards once no more cards are in the pile wins. *This game can be modified so that students can count two forward/backwards.*

- **Back to 10:** Cards are placed in a pile, face down. One player turns over the top card and the other player counts backwards to 10 from the number on the card. (*Example: if 16 was flipped over the student would count backwards from 16 to 10).*

Comment: As students practice backwards counting sequence, observe which students need to count forward to count backwards. *(Example: If a student flipped the 16 card, notice whether they need to count forward from a given number to identify that 15 comes before 16)*

- **Counting to Anchors:** Cards are placed in a pile face down. One player turns over the top card and states whether the number is closer to 10 or 20. The students must justify their reasoning. (*Example: I have 16 and I know that 16 is closer to 20 because 15 is halfway to 20 and 16 is more than 15).* Then, starting at the number card the student must count aloud to the nearest anchor. If the student is correct in their counting sequence they collect the number card. *Students can use a 0-99 chart as an intervention to assist with the forward and backward counting sequence.*

- **Dot-Card Train:** Make a long row of dot cards from 11-19

  Van de Walle's *Teaching Student Centered Mathematics K-3* lists numerous ways to incorporate subitizing activities into the classroom.

FORMATIVE ASSESSMENT QUESTIONS

- How do you know that you counted correctly?
- How many dots did you see?
- How do you know?
- What way did you see the dots grouped together?
- How many dots is 12 from 10? How many dots would you need to make 20? 25? (anchoring 5&10)

DIFFERENTIATION

Extension and Intervention

- Increasing or decreasing the quantity of dots on a card can help with differentiating subitizing activities.