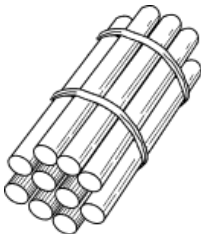

PRACTICE TASK: Group It and Move It

Approximately 2 days

STANDARDS FOR MATHEMATICAL CONTENT

MCC1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

MCC1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

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

Students should have experience representing numbers through models and objects. Students should also be able to count to 100 by tens and ones. This activity may be many students' first experience with place value. Its purpose is to provide students with a hands-on, conceptual way of experiencing place value.

ESSENTIAL QUESTIONS

- How can we represent a number using tens and ones?
- How many ones do we use to create a ten?
- What happens when we collect ten ones?

MATERIALS

- Large sheet of butcher paper cut to form a tens and ones place value chart
- Student size place value chart
- Large dice or regular dice (1-6)

- Ten sets of two small dice or number cards
- Base-ten blocks
- At least two ropes for grouping students in sets of ten (jump ropes or ribbon work well)

GROUPING

Large Group, Partners

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I

Gather students together in a common area. Tell the students you have a story to tell them so they need to listen carefully.

"I have a story to tell you about my nephew Aaron. His mom told him he had too many video games. Aaron said, "No, I do not!" Aaron tried to count them, but he lost count around 33 when his sister walked in and asked him a question. So Aaron decided that there must be a better way to count the video games. Can you all help Aaron solve his problem?"

Students should talk with their elbow buddies then share with the group. At least one group should suggest making groups of 10. If not, you may need to lead this to this strategy. Discuss how Aaron could use the groups of 10 to help him keep track of his counting. Have counters available for a student to model how to make groups.

Part II

Create a large place value chart on the floor (using butcher paper, masking tape, or using sidewalk with chalk and play the game outside). Create a large tens frame with chart paper or masking tape in the ones column. Make sure the chart is largest enough to fit a tens frame for students to sit inside of in the ones column and 2 groups of ten in the tens column. Using a large die, roll a number. Ask the class for volunteers and have that number of students sit in the ones column. Explain that each student will sit in one spot in the tens frame. Roll or draw another number. Ask for more volunteers and add that many more students to the ones column. The area might be getting a little more crowded now. If the group consists of ten or more then have ten students link their arms and wrap a length of rope around those 10 students and move them to the tens place. The teacher will tell the students that the 10^{th} student in the ones column picks up the group and moves over to the tens column. It is important that the students understand that this student does not sit. This gives a false impression that ten ones "fit" in the ones column. If there are any extra students, ask "Where will these students go? Why don't they go in the tens column? Will they ever get to the ten's column? When?"

Example: If a 6 is rolled, six students go into the ones column. If a five is rolled next ask, "Can 11 ones fit into the ones column? What happens when we have 11?" You may want to use a large piece of string to "rope" the group of ten into the tens column. Repeat the game as needed until students have a good understanding of the transition of numbers into the tens column. It is very important to stress that when the tens frame is full, it must move over to the tens column. The full tens frame is 1 ten. Continue with the game by rolling the die until all the students are standing on the board. Have

students explain what is happening and why groups are moving. While playing the game, ask the following questions as appropriate.

- What will happen when 10 people get into the ones column?
- Is there room for any more students in your column? How do you know?
- How do you know that more students can join you in the ones column?
- How many students are now in the ones column?
- Do we have enough students to make a group of ten?
- Are there any students left over?
- Where do these students go?
- How many more students do we need before we can make a group of ten?

Part III Game-Build 30

Gather the students in a common place and model the game prior to students playing independently. They will need to have a clear understanding of how to model each number and record each turn on the recording sheet.

Each group will need 2 place value charts, 2 recording sheets, base ten blocks and a die. The first player will roll the die and place that many units in the ones column on their place value chart. They will also record this representation on their own recording sheet. The next student will take a turn, rolling the die and making the number on his or her own place value chart and filling in their own recording sheet. When the students have reached ten ones then they must trade for one ten rod. You will need to model this trade for the students to ensure they understand that the ten rod replaced the ones. The students will take turns rolling, trading their ones and tens rods, and recording on their own sheet. The first student to reach thirty wins. While students are playing, circulate the room asking questions to ensure understanding. You may extend the game to 50 once students have a deep understanding.

FORMATIVE ASSESSMENT QUESTIONS

Part II

- How many students are now in the ones column?
- Do we have enough students to make a group of ten?
- How many more students do we need before we can make a group of ten?
- Why have we moved this group to the ten's place?
- Where will these students go? Why don't they go in the tens column?
- Will they ever get to the ten's column? When?

Part III

- What number is now represented on the place value chart?
- How many units are now in the ones column?
- Do you have enough units to make a group of ten? How do you know?
- Why have you moved this group to the ten's place?

- What number is now represented on the place value board? Explain how you determined the number.
- How would you write this number? What do these two digits stand for?
- What is the amount in the tens place?
- What is the amount in the ones place?
- Why do we group numbers by tens?

DIFFERENTIATION

Extension

- Some students may be developmentally ready to work with numbers larger than 30. These students can play the game Race to Fifty or Race to One Hundred. Students continue playing the game until someone reaches one hundred by having ten base ten blocks in their tens place. Once the students reach one hundred, the teacher can introduce the students to the regrouping of their ten tens into a hundred flat.

Intervention

- Use connecting cubes to aid students in connecting single units to create a ten rod. Use a tens frame in the ones column to help students understand when to group and move.

Name:_____ **Date:**_____

Build 30!

Roll #	Number rolled	Tens	Ones	Number