Practice Task: Candy

Approximately 1 day

STANDARDS FOR MATHEMATICAL CONTENT

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.

MCC1.OA.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

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 standard calls for students to work with categorical data by organizing, representing and interpreting data. Students should have experiences posing a question with 3 possible responses and then work with the data that they collect. For example:

Students pose a question and the 3 possible responses: *Which is your favorite flavor of ice cream? Chocolate, vanilla or strawberry?* Students collect their data by using tallies or another way of keeping track. Students organize their data by totaling each category in a chart or table. ***Picture and bar graphs are introduced in 2nd Grade.***

What is your favorite flavor of ice cream?	
Chocolate	12
Vanilla	5
Strawberry	6

ESSENTIAL QUESTIONS

- How do tables help you organize your thinking?

MATERIALS

- Snack size packs of Skittles or M&Ms, (one bag for each pair of students or small group) (may substitute buttons, or color tiles)
- Paper and pencils

GROUPING

Whole class/small group/partners

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I
Let students know that they will be collecting data on the different colors in the bag of M&Ms/Skittles. Ask the students to name the colors that they may find in the bag. Write the list on the board. Take a survey asking the class to vote for their favorite color. Display the data in a table using numbers or tallies. Ask the students to identify the 3 colors that were liked the best. Pose the questions, "Which color do the most students like?" "What is the second and third favorite in the class?" After each question have them explain how they knew that it was a favorite.

Part II
Students will be organizing data into three categories (the three favorite colors chosen in the opening). They will use the snack size bags to record the amount of each color that they bag contains.
Provide each pair of students with a snack size bag of M&Ms or Skittles. Instruct students to open the bag and pull the colors out that were decided in the opening (the three favorite colors). Students will count and record the amount of each of the three colors in a table.

Pose the following questions to the students:
- Which color has the most? How do you know?
- Which color has the least? How do you know?
- How can you figure out if a color has more or less?
- How many more of color A than of color B or C? How do you know?
- Do you think that all of the bags will have the same amount of each color? Why?
- How many of A, B, and C do you have?
- Is it more or less than 20? How many more would you need to make 20? How do you know?

Have students ask classmates these same questions.

FORMATIVE ASSESSMENT QUESTIONS

See questions suggested within task description.

DIFFERENTIATION

Extension:

- Allow students to create a table that represents all of the colors in the bag. Pose the same questions.

Intervention

- Allow students to place the candies on ten frames when determining the sums and differences.