CONSTRUCTING TASK: How Many Are Here Today?
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 had prior experiences and/or instruction with classifying and counting objects in a category in Kindergarten. Creating tally charts was not a standard in kindergarten; however, some students may be familiar with using tally marks to keep track of information for graphing.

ESSENTIAL QUESTIONS

- How can we use tally marks to help represent data in a table or chart?
- How do tables and charts help us organize our thinking?
- What information do we get from a table or chart?
- How can we use information from questions to create a table or chart?

MATERIALS

- *Tally O'Malley* by Stuart J. Murphy or similar book about tally marks
- chart paper for class graph

- dry erase board or scratch paper

GROUPING

Large Group

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I
Gather students together in a common place. Read aloud the book *Tally O'Malley* by Stuart J. Murphy. While reading, discuss how Tally keeps track of data. Tell students that today they will be keeping track of data using a tally chart. Review the format of tally marks and have students practice constructing a tally mark.
Ask the students, *"Why do you think we would make the fifth mark cross the other four?", "How does that help us count the tally marks?"*
Tell students that they will work together to determine the total number of students present today by creating a class tally chart. The teacher will start with having all the students close their eyes. Have the students predict how many students are present. Record the students' predictions on the board and discuss what an accurate prediction might be. On the large piece of chart paper, draw two columns, one for boys and one for girls. Allow each student to come to the front of the room and draw one tally mark on the chart in the correct column. Use this whole-group experience as an opportunity to discuss the proper formation of tally marks. Students should have previous knowledge from prior tasks but this is a great opportunity to review the formation with larger numbers. Once the chart is complete, generate a discussion using the formative assessment questions below about the attendance for today.

Part II
Next, the teacher will provide students with the following word problem. The students will act out the word problem and create a tally chart on the board. Discuss how the tally marks were created and how they can check to make sure they have the correct number for each animal.
At the Veterinarian Office today, the doctor saw 5 dogs, 8 cats and 2 birds. How many animals did the doctor see in all?
Provide students with additional word problems and allow them time to create a tally chart to represent the information from the problem. Put a problem on the board and ask the students to chart the tally marks on a scratch sheet of paper or on a dry erase board. There are 3 examples below about a Veterinarian Office.

1. At the Veterinarian Office today, the doctor saw 7 dogs and 13 cats. How many animals did the doctor see in all?
2. At the Veterinarian Office today, the doctor saw 11 dogs, 6 cats and 9 birds. How many animals did the doctor see in all?
3. At the Veterinarian Office today, the doctor saw 22 animals. Draw a tally chart and show how many dogs and cats the doctor could have seen.

Part III
Students will play the number tally game. Players will play on their own with a dice. Roll the dice and record one tally mark for the number rolled. The tally mark represents that the number has been rolled one time. Students should continue playing until a number has been rolled 10 times. Students will answer the two questions at the bottom of the chart and play again. Are the results the same or different this time? Why do you think this is the case?

FORMATIVE ASSESSMENT QUESTIONS

- How many are here today?
- How can we find out how many boys are present today?
- How can we find out how many girls are present today?
- What makes counting our tallies easier?
- How does this help?
- Why are we putting tally marks? What is the purpose of the tally marks?
- How could we find the total number of students present today?
- How can we find the number of students who are absent?
- Why do you think a tally chart is a good way to present this information?
- Can you think of other times when using tally marks would be helpful?

DIFFERENTIATION

Extension
- Students may be given the opportunity to create a graph with tally marks that represents the number of students present in class, students who like particular objects or have certain hobbies. This will require the teacher to allow time for the students to survey their peers regarding the chosen topics.
- Create a class collection of questions they could answer through the use of tally marks and tally charts.

Intervention
- Fold a sheet of paper in half and label one side red and one side blue. Fill a container with up to 20 cubes, some red and some blue. Have the student take out one cube at a time and record the color they selected with a tally mark. Repeat this activity until they can demonstrate that they understand that the tally mark represents the item they selected.

Number Tally

1	2	3	4	5	6

Which number scored 10 tally marks first?_____

Which number scored the least amount of tally marks?_____

1	2	3	4	5	6

Which number scored 10 tally marks first?_____

Which number scored the least amount of tally marks?_____