CONSTRUCTING TASK: Our Favorite Candy

STANDARDS ADDRESSED

MCC.3.MD.3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

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

It is important for students to be able to gather their own data about a topic that is important to them. When students formulate the questions they want to ask, the data they gather become more and more meaningful. (Teacher Student-Centered Mathematics, John A. Van de Walle and LouAnn H. Lovin, 2006). How they organize the data and the techniques for analyzing them have a purpose. In this task students will collect data based their favorite candy.

ESSENTIAL QUESTIONS

- How do I decide what increment scale to use for a bar graph?
- How do you interpret data in a graph?
- How can I show data using a line plot graph?
- How do I decide what symbol to use when constructing a pictograph?

MATERIALS

- Chart paper/graphing paper

GROUPING

Individual/Partner Task

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I

Review with students how to collect data using a tally chart. Explain to students how to count tallys appropriately. Review the elements of a graph. Create a class graph as a model over something that is familiar to students; favorite cars, favorite game, etc.

Part II

Students follow the directions on the "Our Favorite Candy" recording sheet. Have students analyze the chart on the student recording sheet and complete the numbered tasks.

1. Organize the data by making a tally chart below to record the data.
2. Create a bar graph using the tally chart. Be sure to include a title, labels for the x and y axis, a scale, and accurate bars.
3. Write two statements that you can learn from analyzing (looking at) this data.

FORMATIVE ASSESSMENT QUESTIONS

- How do I decide what increment scale to use for a bar graph?
- How do you interpret data in a graph?
- How can I show data using a line plot graph?
- How do I decide what symbol to use when constructing a pictograph?

DIFFERENTIATION

Extension

- Have students survey a class for the same information. Have students compare the data from the original data set to the data they collected from another class.

Intervention

- Lessen the amount of data in the table in order to be more manageable for struggling students.

Name_____ Date_____

Our Favorite Candy

Ryan	Skittles
Mark	M & M's
Anthony	Gummy Bears
Sarah	Starburst
Jenise	Snickers Candy Bar
Annittra	Airheads
Janice	Skittles
Jasmine	M & M's
Teresa	Airheads
Lania	M & M's
Ronnie	Starburst
Jeremy	M & M's
Rick	Airheads
Khalil	Gummy Bears
Samantha	M & M's
Megan	Airheads
Joanie	Starburst
Kavon	Skittles
Stephanie	Skittles

1. Organize the data by making a tally chart below to record the data

2. Create a bar graph using the tally chart. Be sure to include a title, labels for the x and y axis, a scale, and accurate bars. Use your journal or another sheet of paper.

3. Write two things you can learn from analyzing (looking at) this data. Use complete sentences.