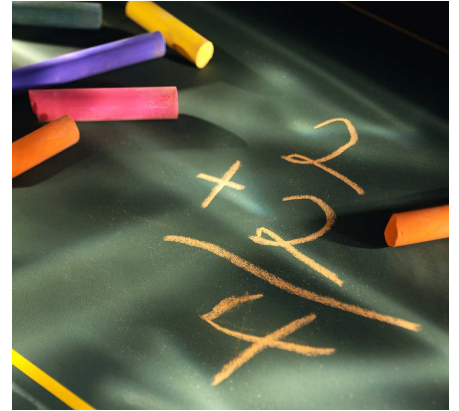# Algebra/ Geometry Institute Summer 2007

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5th Grade Math

Teaching Objectives

➢ The student will gather, organize, and display data in an appropriate chart or graph.

➢ Read, interpret, and predict data from charts

➢ **Prerequisite:** Calculate and apply basic probability (see other plan).

$$\text{Probability} = \frac{\text{favorable outcomes}}{\text{total \# of possible outcomes}}$$

➢ **Prerequisite:** Use equivalent fractions to write percentages.

Instructional Activities

Bell ringer: The teacher will place the following problem on the board.

➢ Question #1
Mike has a bag of marbles. In the bag, he has seven red marbles, two blue marbles, and five green marbles. If Mike reaches into the bag without looking, what is the probability that he will choose a green marble? (Prerequisite: Probability)

➢ Questions #2
Write the following fractions as percentages? (Prerequisite: Equivalent fractions)

a) $\frac{1}{2}$ b) $\frac{3}{4}$ c) $\frac{7}{8}$ d) $\frac{12}{25}$

➢ The teacher will discuss/explain the bell ringer.

➢ The teacher will explain purpose for the use of graphs and charts.
  o Graphs are used to show data.
  o There are three basic types of graphs
➢ The teacher will explain the different types of graphs and what information they are used to display.

- o The **bar graph** is used to show relationships between groups or frequency of data characteristics. The groups do not have to be affected by each other.
- o The **line graph** is used to show continuous data and how one thing affects another.
- o The **pie/circle graph** is used to show how something relates to the whole.
- ➢ The teacher will take a brief survey of the students' favorite ice cream.

Ice cream flavors	*Number of students*
Vanilla	
Strawberry	
Chocolate	

- ➢ The teacher will make a bar graph displaying the information from the survey taken and discuss parts and labeling of the graph.

- ➢ The teacher will give directions for the activity (see attachments).

- ➢ The teacher will issue packages of colored candy pieces to each student to use with the activity.

Materials and Resources
- ➢ Colored Candy Pieces
- ➢ Dry Erase Board
- ➢ Construction Paper
- ➢ Paper
- ➢ Pencil
- ➢ Computer
- ➢ Graph worksheet (attached)- teacher created
- ➢ Markers

Assessment
- ➢ The teacher will observe students as they complete the activity.

- ➢ The students will complete the worksheet activity.

* This activity may be completed in a group or independently.

Graphs & Probability

Directions: Complete the following chart.

Colored Candy

Candy Color	Number of Candies
Red	
Yellow	
Blue	
Green	
Brown	

Use the chart above to create a bar graph.

Directions: Complete the following questions.

1. What is the total number of candy pieces in the bag? _____

2. How many red or green candy pieces are in the bag? _____

3. If you reach into the bag without looking, what is the probability of pulling a blue candy? _____

4. What percentage of the colored candy is yellow? _____

5. What percentage of the colored candy is brown? _____

6. What percentage of the colored candy is red? _____

7. Write a paragraph in the space provided below explaining the results of your data collection and display.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____