Gold Seal Lesson

Author(s):			*Lesson Title:*			
Marsha Kucker			*An M&M® Bar Graph*			
Grade Span			*ICLE Application Model*			
K-4	*5-8*	*9-12*	*A*	*B*	*C*	*D*
X				*X*		

Instructional Focus:

Number Operation and Concepts Students use number, number sense, and number relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.
Writing Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.
Listening Students listen for a variety of purposes appropriate to the grade level.
Statistics and Probability Students use statistics and probability to analyze given situations and the results of experiments. Students communicate the reasoning used in arriving at a conclusion.

Performance Task

This lesson provides students with the basic math skills of counting and preparing a bar graph. Express to them that the sum of the parts (individual colors of the M&M's) equal the total. Divide the class into groups of 2 or 3.

1. Give each group a small bag of M&M® candy.
2. Ask the students to sort the M&M's ® by color.
3. Have them count the number of M&M's® of each color.
4. After discussing with the whole class the purpose and process for preparing a bar graph, have each group construct a bar graph showing the numbers of their different colored M&M® candies. Students should color the "bars" of the graph to correspond with the color of the M&M's®.
5. Prepare one large chart on the chalkboard representing the total of the data from the entire class
6. In their math journals, have the students compare and contrast their graph with the "whole class" graph. Have them explain why there are some differences in the two graphs.
7. If appropriate, show students how to compute a percentage for one color and have them compute the percentages for the rest of the colors.

ICLE Essential Skills

Perform operations with signed (positive and negative) numbers, including decimals, ratios, percents, and fractions. (m1)
Understand the best procedures for statistical data collection, organization, and display including making estimates and predictions and drawing inferences. (m5)
Use writing as a tool for learning in formats such as learning logs, laboratory reports, note-taking, journals and portfolios. (ela36a)
Follow oral or written directions. (ela4)
Participate, sometimes leading, in group meetings by contributing, taking turns speaking, and working toward a common goal. (ela20)
Gather information such as data, facts, ideas, concepts, and generalizations from oral sources. (ela51)

Scoring Guide:

See attachment: An M&M Bar Graph Scoring Rubric Chart

Keywords

English Language Arts	Mathematics	Science
Reading	**Algebra** Problem solving Math in daily life Graphs Manipulatives	**Earth Science**
Writing Compare/Contrast Journals	**Geometry**	**Life Science**
Communications Discussion Listening Visuals	**Statistics** Charts Data display Data analysis Data collection Graphs Problem solving Manipulatives	**Chemistry**
Literature	**Calculus**	**Physics**
Other	**Trigonometry**	**Other**
	Other	

Chart
SCORING RUBRIC

3	**BEYOND**	Analyzed and readily understood the task. Developed an efficient and workable strategy. Showed explicit evidence of carrying out the strategy. Synthesized and generalized the conclusion.
2	**AT LEVEL**	Understood the task. Developed a workable strategy. Inferred (some evidence) but not always clear. Connected and applied the answer.
1	**NOT YET THERE**	Partially understood the task. Appropriate strategy some of the time. Possible evidence of a plan – not clear. Partial connection of answer.
0	**FAR BELOW**	Totally misunderstood. Inappropriate, unworkable strategy. No evidence of carrying out a plan. No connections of answer. Blank.