Put M & M/ Mars to the Test

Subject: Mathematics

Grade Level: 6th

Rational or Purpose: This lesson uses the knowledge of mean, median, mode and percent in a real world application. The student will be able to find the mean, median, mode and percentages of collected data and relate this information to the real world.

TEKS:
111.22. Mathematics, Grade 6.
(6.10) (A-D)

Background Information:
The student needs to have working knowledge of mean, median, and mode and experience using the graphing calculator.

Materials:
One ten-ounce bag of M & M's per student
Graphing calculator
Student worksheet

Engagement: Hand out bags of M & M's and tell the student's not to open them. Ask "Is the M & M's / Mars Company really fairly accurate with their percentages of colors they report?"

Exploration: Students are to find the mean, median, and mode of the M & M's for the class and find the percentages of each color.

Explanation: After finding the mean, median, and mode of the number o M&M's finding the percentage of colors, and a discussion of similarities and differences, the students see how their results compare with that of the M & M's/ Mars Company.

Extension:
The students can make a plot and whiskers graph.
The students can make a bar graph.
The students can calculate the degrees of a circle for each color and make a circle graph.
The student can answer probability questions from the data collected.

References: Nancy Beben

Name: _____   Period: _____   Date:_____

M & M Lab

1. Estimate the number of M & M's in your package._____
2. Record the Number of M & M's in each person's package in the class. Compute the mean, median and mode of this data.

Number of M & M's in Each Person's Package					

Mean	Median	Mode

3.

Counts	Red	Green	Yellow	Orange	Brown	Blue	Total
Your Package							
Small group							
Total class							

Name: _____ Period: _____ Date:_____

4. Find the percent of each color and record the percents below.

Percent	Red	Green	Yellow	Orange	Brown	Blue	Total
Your Package							
Small Group							
Total Class							

a) Using the information in #2 above, estimate the number of M & M's in a bag that

weighs 32 ounces. _____

b) If brown M & M's were your favorite, how many would you get in a bag that weighs

32 ounces? _____

c) Using the information in #4 above for the class, find the number of each color in a

bag of M & M's with 32 ounces.

Red	Green	Yellow	Orange	Brown	Blue	Total

1. Answer the following questions:

a. How were your results similar to those of the entire class?

b. How were your results different from those of the entire class?

c. If all of the science classes conducted this activity, what results would you expect? Why?

d. The M & M/Mars Company colors M & M's according to the following specific percents

Red	Green	Yellow	Orange	Brown	Blue	Total
20%	10%	20%	10%	30%	10%	100%

How well do your results compare with the company's stated percent? Why?