M & M Candy Lab: Percent Composition

Problem: How can we analyze a bag of M&Ms?

Background: The Mars company (which makes M&Ms) follows a very structured manufacturing procedure for their different kinds of candy. M&Ms are packaged in specific amounts and in specific percentages of each color.

Percent composition is calculated by dividing the total of one color in the package by the total number of all the M&Ms in the package.
Multiply this number by 100%.

Predictions:
1. How many M&Ms are there in a package?
2. How many different colors are there?
3. Name the colors.
4. Which color is the most common in a package? Least common?

Experiment:
Data Chart

	Orange	Red	Brown	Blue	Green	Yellow	Total
Group #1							
Group #2							
Group #3							
Group #4							
Group #5							
Group #6							
Class total							

Conclusion:
A. Your group % composition
B. Class % composition

Discussion/Extension:
1. Why are our class results different/same as factory?

2. Why do you think we have different results for each group when compared to the combined class data?

3. On the back side of this sheet is a listing of the % composition of overall production. Comment on what similarities/differences you see in our sample versus their annual production.

Below are the results of what the Mars company produces for colors for each type of product:

Plain

Red – 20%
Blue   - 10%
Green – 10%
Orange – 10%
Yellow – 20%
Brown – 30%

Peanut

Red – 20%
Blue – 20%
Green – 10%
Orange – 10%
Yellow – 20%
Brown – 20%

Almond

Red – 20%
Blue – 20%
Green – 20%
Yellow – 20%
Brown – 20%

Peanut Butter

Red – 20%
Blue – 20%
Green – 20%
Yellow – 20%
Brown – 20%

Crispy

Red – 16.6%
Blue – 16.6%
Green – 16.6%
Orange – 16.6%
Yellow – 16.6%
Brown – 16.6%