$\qquad$ Date: $\qquad$ Per: $\qquad$

M\&M Experiment Application: Describe each term as it is applies to THIS classroom demonstration. You do not need to write the definition of the term. You will only get credit for the description, not the definition.

1. Hypothesis
2. Population
3. Random Sample
4. Random Assignment (it might not apply to this activity, but describe what it is anyway)
5. Representative Sample
6. Ordinal Variable (numerical)
7. Categorical (Nominal)
8. Cross Section study
9. Descriptive Statistics
10. Inferential statistics
11. What is the difference between a bar chart and a histogram?

The M + Ms website no longer posts the proportions of colors found in bags of $M+M S$. The following is their response to the inquiry from the fall of 2008. Our color blends were selected by conducting consumer preference tests, which indicate the assortment of colors that pleased the greatest number of people and created the most attractive overall effect.
on overage, our mix of colors for M+M'S CHOCOLATE CANDLES is: M+M'S MLLK CHOCOLATE: $24 \%$ cyan blue, $20 \%$ orange, $16 \%$ green, $14 \%$ bright yellow, $13 \%$ red, $13 \%$ brown. Using your findings, EXPLAIN how does your data compare to the M\&M corporate data?
$\qquad$ Date: $\qquad$ Per: $\qquad$

## M\&M Study Data

Record your raw data in numbers below:

|  | Total per <br> bag | Brown | Green | Orange | Red | Yellow | Blue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| prediction |  |  |  |  |  |  |  |
| Member A |  |  |  |  |  |  |  |
| Member B |  |  |  |  |  |  |  |
| Member C |  |  |  |  |  |  |  |
| Member D |  |  |  |  |  |  |  |
| Member E |  |  |  |  |  |  |  |
| Actual |  |  |  |  |  |  |  |

Record your sample data in Percentages below:

|  | Blue | Brown | Green | Orange | Red | Yellow | Total |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| prediction | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $100 \%$ |
| Member A | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $100 \%$ |
| Member B | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $100 \%$ |
| Member C | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $100 \%$ |
| Member D | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $100 \%$ |
| Member E | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $100 \%$ |
| Actual | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $\%$ | $100 \%$ |
| Official <br> M\&M <br> Percentages |  |  |  |  |  |  |  |

