

## Activity 8

Name: \_\_\_\_\_

1. m&m candies have published the distribution of colors for the m&m's they sell. Go to their website, choose the type of m&m's you have and look up the distribution.

<http://global.mms.com/us/about/products/index.jsp>

Write down the percents here:

Percent:

Brown:

Yellow:

Red:

Green:

Blue:

Orange:

2. Open your packs of candy. Before eating any candy, count the number of each color of m&m's and enter your counts into the following table. Include your partners' counts in your table.

	<b>Brown</b>	<b>Yellow</b>	<b>Red</b>	<b>Green</b>	<b>Blue</b>	<b>Orange</b>	<b>Total</b>
<b>Number of candies observed</b>							

3. To find the number of candies expected for each color, multiply the total number in your sample by the percent given. For example, if you count 50 candies total, you would expect  $50 \times .30 = 15$  brown m&m's.

	<b>Brown</b>	<b>Yellow</b>	<b>Red</b>	<b>Green</b>	<b>Blue</b>	<b>Orange</b>	<b>Total</b>
<b>Number of candies expected</b>							

4. We will use a Chi Squared goodness of fit test to see if the distribution you found is similar to what is reported on the website. First, state the null and alternative hypotheses.

5. Calculate the Chi-Squared Goodness of fits test statistic.

6. The degrees of freedom for a 1 x 6 table are 5, resulting in a cutoff value of 11.07. State your conclusions in terms of the problem.