Exploring Bar Graphs and Pie Graphs

This activity will teach the student how to describe and use the graphical representations of categorical data.

In this example, we will use M&M data. The chart below gives the counts for the colors of m&ms in a sample.

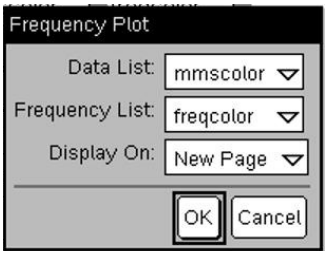
M&M Color	Blue	Brown	Yellow	Red	Orange	Green
Frequency	36	20	21	19	30	24

Insert a *Lists & Spreadsheet*.

Name column A: **mmscolor** and column B: **freqcolor**. Enter the data from the chart above into the lists. *NOTE:* To enter the color names, be sure to use quotes.

Now we can create a plot of the colors using the names and the counts.

In your Lists & Spreadsheet page, press (menu) → *Data* → *Summary Plot*. Select the **mmscolor** for *Data List* and **freqcolor** for *Summary List*. Also select ***new page*** for *Display On*. (tab) to [OK] and press (enter).



Draw this graph in the space below and describe it.

Press (menu) and select *Plot Type* then select *Bar Chart*. Arrow over each bar and press [ ].

Describe what happens.

When you want to "unhighlight" a bar, arrow to an empty section and press [ ].

STATISTICS with the TI*nspire*

Press (menu) and select *Plot Type*, then *Pie Chart*. Arrow over each sector and press [ ].
You can "unhighlight" a sector using the same method from the bottom of the previous page.

Describe what you see when you do this. List the information you are given and make a statement about the distribution of colors of M & Ms.

Is this what you expected from this bag of M&Ms? If you are not sure about the actual percentages of colors in each bag, here is the information from their website:

M&M'S PLAIN: 24% cyan blue, 20% orange, 16% green, 14% bright yellow, 13% red, 13% brown

How do these percentages compare to the percentages from the website?

Open your bag of plain M&Ms and sort them by color. Create a bar chart and pie chart and sketch your screen shot of each chart below. Describe the distribution of M&Ms versus the original bag from data file.