How to Create Bar and Line Graphs

Step 1: __________ the axes

Step 2: ________________ the axes

*One way to remember which data goes on which axis is the acronym ________________

D - Dependent
M - Manipulated
R - Responding
I - Independent
Y - Y Axis
X - X Axis

Step 3: Write an appropriate ________ for the graph at the ____.

-The title should contain ___________ the independent and dependent variables.

Step 4: Decide on an appropriate ____________ for each axis.

-The scale refers to the _______ and _______ numbers used on each axis. They may or may not begin at ____________.

-The min and max numbers used for the scale should be a little _________ than the lowest value and a little _____________ than the highest value.

-This allows you to have a smaller range which ____________________________ the comparisons/trends in the data.

Step 5: Decide on an appropriate _______________ for the scale you have chosen. The interval is the _________________ between one value and the next.

-Look at your min and max values you set up for both the Y and X-axis.
(For ________ bar graphs, the _______________ will not have numerical values.)

-It is highly recommended to use a _________________ number for the interval such as 2, 5, 10, 25, 100, etc.

Step 6: Both axes need to be ________________ so the reader knows exactly what the independent and dependent variables are.

-The dependent variable must be _______________ and include the _________ used to measure the data

_______ - Another handy acronym to help you remember everything you need to create your graphs.

T - Title
A - Axis
I - Intervals
L - Labels
S - Scale
Bar Graphs vs. Line Graphs

__ are descriptive.

- They __________________________ groups of data such as amounts and categories.
- They help us make generalizations and see __________________________ in data.

_________ show a ____________________________ between the two variables.

- They show how/if the independent variable ___________________ the dependent variable.
- Many times, the independent variable plotted on the X-axis is the same.
- They are useful for showing _____________________ in data and for making predictions.

PRACTICE:
Mr. Cravotta asked the teachers to report the number of students absent in each grade during the past week. The data is recorded in the table to the right.

- Should this data be put into a bar graph or a line graph?

- Create a graph to show how many students were absent in each grade.

- Make sure you include all of TAILS!

<table>
<thead>
<tr>
<th>School Grade</th>
<th>Number of Absent Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>5</td>
</tr>
<tr>
<td>7th</td>
<td>27</td>
</tr>
<tr>
<td>8th</td>
<td>14</td>
</tr>
</tbody>
</table>