

# \_\_\_\_\_

Scientist: Keep

Date: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ HR: \_\_\_\_\_

## How to Create Bar and Line Graphs

Step 1: Draw the axes

Step 2: Identify the axes

\*One way to remember which data goes on which axis is the acronym Dry Mix

D - Dependent

R - Responding

Y - Y Axis

M - Manipulated

I - Independent

X - X Axis

Step 3: Write an appropriate title for the graph at the top.

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

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

-The scale refers to the minimum and maximum numbers used on each axis. They may or may not begin at zero.

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

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

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

-Look at your min and max values you set up for both the Y and X-axis.

(For most bar graphs, the X-axis will not have numerical values.)

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

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

-The dependent variable must be specific and include the units used to measure the data

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

Title

A - Axis

I - Intervals

L - Labels

S - Scale

# Bar Graphs vs. Line Graphs

Bar graphs are descriptive.

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

Lines graphs show a relationship between the two variables.

- They show how/if the independent variable affects the dependent variable.
- Many times, the independent variable plotted on the X-axis is the same.
- They are useful for showing trends 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.

School Grade	Number of Absent Students
6th	5
7th	27
8th	14

- ① - Should this data be put into a bar graph or a line graph?  
*Bar Graph*
- ② - Create a graph to show how many students were absent in each grade.
- ③ - Make sure you include all of **TAILS!**

