The 5 Parts of a Graph

Basic Format of Graph:

1. **Axis labels:** Normally you plot the independent variable (the one over which you have control, the inputs) on the horizontal axis (x-axis) and the dependent variable (the one you are measuring, the outputs) on the vertical axis (y-axis). Write a short descriptive label that represents each axis. The label is written vertically from the bottom up.

2. **Units:** Write the units in parenthesis after the axis label—often this is an abbreviation.

3. **Intervals:** Choose intervals that make it easy to read and so the data occupies the majority of the graph. You can include a break in the axis if there is a large gap between zero and the data points. Be careful not to exaggerate the variations in the data if you do this.

4. **Data:** Plot the data points on the graph. You do not normally connect the dots. Decide whether the origin (0,0) is a valid data point. If the data points show a correlation you may add a trend line (line of best fit) or a smooth curve that represents the overall pattern. If it’s linear, this typically can be added by using a ruler and “eyeballing” it. A trend line is a nice way to illustrate the basic relationship between the two variables. You may need to find the equation of the trend line.

5. **Title:** Choose a title for the graph that uniquely identifies it. The title should not just repeat the labels, but add information specific to what the data represents.
Examples:

**splat widths for a water drop released from various heights onto a counter top**

![Graph](image1)

**drop height vs bounce height for a rubber ball off a tile floor**

![Graph](image2)