Graphs help communicate a large body of data, very efficiently, in a small amount of space. It should be independent, self-explanatory, and illustrative.

1. Graph summarizes the data collected/noted in one or more experiments.
2. The goals and observations of the study are to be clearly conveyed in the graph.
3. All axes must be labeled with proper units and values.
4. All lines or curve types, and points must be defined.
5. Graph is often tailored to represent the data and highlight trends that are not obvious.
6. Graph may be re-drawn to evaluate specific models.
7. Every graph should have a concise caption to describe the graphic.
8. Number each graph sequentially in Arabic numerals.
9. All text should be of the appropriate font size so that it is clearly visible.

Take inventory of your data before plotting the graph:

a. Determine what is the independent variable and what is the dependent variable.
b. Decide the number of axes needed to draw the graph. 2-D is often used.
c. Choose the x-axis variable, its units, range of values.
d. Choose the y-axis variable, its units, range of values.
e. Evaluate what is interesting, intriguing and exciting impact point of the graph.
f. Choose the type of data points (squares, circles, triangles etc.,).
g. Choose proper colors or line-types (dashed, dotted, thin, thick etc.,)
h. Reduce clutter if there are too many curve types or overlapping labels.
i. Choose proper font size to clearly see.
j. Size the graph to fit in the allotted space and make sure that labels are legible.
k. Indicate proper units and labels on the axes.
l. Find ways to enhance the impact of the graph (adding a graphic).

Enhance the visual appeal by using color. Provide effective labels, display key values or equations, and be accurate. When integrated with text, a graph should fit into the body of the article seamlessly.

**In-class assignment:** Draw a graph with the data in the paragraph/table provided. Discuss the graph with your peers. Sometimes, the graph may be replaced by a chart.