TIPS ON GRAPHS:

1. A graph is made up of two variables on a pair of axes namely:
   - ✓ Y-axis [vertical axis].
   - ✓ x- axis [horizontal axis].
2. On horizontal axis, the values of independent variable-the variable that causes effect on the values of vertical axis variables plotted.
3. On vertical axis, the values of dependent variable-the variable whose values are obtained as a result of variation in the values of independent variables plotted.

a) Plotting a graph:

A good graph should:

- Occupy at least three quarters of the page.
- Have a precise title describing what have been plotted.
- Have proper joining of the points-a straight line or curve, hence the correct shape.
- Have axes well labelled with the correct variables and their standard S.I units indicated/shown.
- Have points correctly plotted and clearly marked with dots (•) in chemistry & physics classes while in biology class with a cross (X).

b) Describing and explaining a plotted or sketch graph:

- To describe a graph is to answer the question 'How is the dependent variable affected by the independent variable'? Just mention the naked facts without accounting for the observation.
- When describing a graph, Points / Facts to notes are as follows:
  - ⇨ Define the starting point i.e what does it represent?
  - ⇨ Mention what has happened to the independent variable i.e increased or decreased. Then state its effect on the dependent variable i.e increase, decreased or remained unaffected/constant.
  - ⇨ Define the last point i.e what it represent?

- To explain a graph is to answer the question 'Why the dependent variable affected by the independent variable.
- This therefore calls for accounting of the changes caused on the vertical axis variable by horizontal variables plotted. It entails theoretical knowledge about that variables plotted.
- Describing a graph majorly deals with the portion of a graph, although in some cases, a point has to be explained with respect to other similar ones.
- The followings are the areas in a graph where vital pieces of information are obtained, and when describing and /or explaining a graph, they need to be touched.
- The slope / gradient of the graph.
- The intercept on both axes.
- Unique points on the graph-maximum, minimum or inflexion.
- Area swept by the graph, though not common in chemistry.