

Graphing

Mr. Sudbury

Why Graph?

- ▶ A graph is a visual representation of data you have collected.
- ▶ We graph data to help us see trends or patterns in the data we have collected.
- ▶ Good graphs allow us to make predictions:
 - Interpolation-- finding points between points.
 - Extrapolation-- finding points beyond the last point

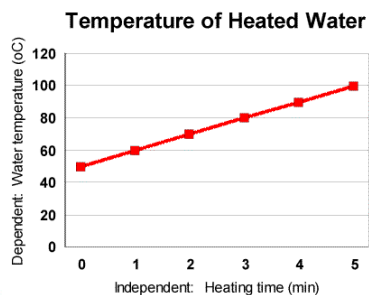
Types of Graphs

- ▶ Line Graph
- ▶ Bar Graph
- ▶ Circle Graph (AKA Pie Chart)

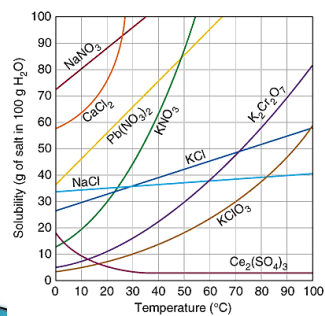
Line Graphs

- ▶ Line graphs compare 2 variables.
 - Independent Variable on X-Axis (time)
 - Dependent Variable on Y-Axis
- ▶ Show trends in data.
- ▶ Show specific values.
- ▶ Enable you to make predictions.

Line Graph Sample



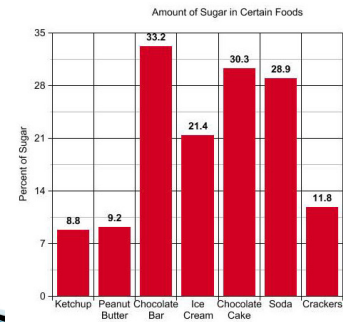
Line Graph - Solubility Curve



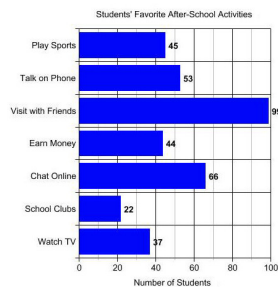
Bar Graph

- ▶ A bar graph is a visual display used to compare the amounts or frequency of occurrence of different characteristics of data.

Bar Graph

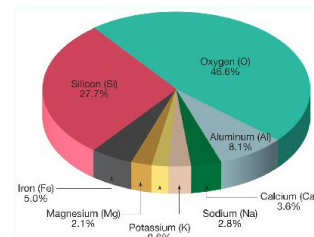


Bar Graph – Sideways

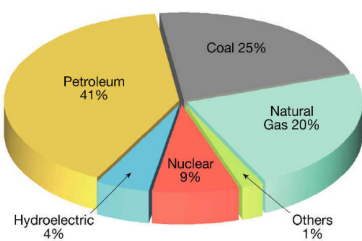


Circle Graph

- ▶ A circle graph compares percentages of a whole.



Circle Graph



How to Graph

- ▶ Every graph needs a title.
- ▶ Every axis needs a label AND a unit.
 - Ind. Var. on X-axis.
 - Dep.Var. on Y axis.
- ▶ Select a scale that will fill the majority of the graph area with your largest data point.
- ▶ Carefully plot your points.
- ▶ If a line graph is used, draw a "line of best fit" through the data points and DO NOT "connect the dots."

Interpreting Graphs

- ▶ Look for patters.
 - Extrapolate
 - Interpolate
- ▶ Trends:
 - ▶ Direct Relationship
 - ▶ Inverse Relationship
 - ▶ Slope

Reading a Line Graph



Mr. Davis on Graphing