

**Class I. Frequency Graphs:** display how many things fit a given characteristic or value; that is, how frequently those characteristics or values occurred

1. **Pictograph** - *Best for: eye-catching visuals (media)*
  - (a) Labeling: requires **title**, legend for symbols/pictures, name and labels on one axis
  - (b) Use good scale: all symbols should be the SAME size.
2. **Dot Plot** - *Best for: quick recording/display*
  - (a) Labeling: requires **title**, name and numbering on one axis
  - (b) Use good scale: numbering on the axis should be reasonably uniformly spaced
3. **Bar Graph** - *Best for: frequencies of categories (hair color, favorite pizza, etc.)*
  - (a) Labeling: requires **title**, names and numbering/labels on TWO axes
  - (b) Use good scale: spacing of the category labels and of the numbering should be fairly even
4. **Histogram** - *Best for: frequencies of number ranges (age groups, height groups, etc.)*
  - (a) Labeling: requires **title**, names and numbering/ranges on TWO axes
  - (b) Use good scale: Ranges MUST be equal size, and height markings should be fairly even
5. **Stem-and-Leaf Plot** - *Best for: 2- or 3-digit data (test scores, weights, heights, etc.)*
  - (a) Labeling: requires **title**, legend for “stem”-split (there are no labeled axes)
  - (b) Use good scale: try to keep digits lined up under/over those in nearby rows

**Class II. Relationship Graphs:** displays how two characteristics influence each other

1. **Line Graph** - *Best for: showing some characteristic or count changing over time*
  - (a) Labeling: requires **title**, names and numbering/sequence for TWO axes
  - (b) Use good scale: spacing of the labels on each axis should be fairly even
2. **Scatterplot** - *Best for: studying cause-effect*
  - (a) Labeling: requires **title**, names and numbering for TWO axes
  - (b) Use good scale: spacing of the labels on each axis should be fairly even

**Class III. Proportion Graphs:** behavior of certain data as a fraction/percentage out of all the data

1. **Circle Graph** - *Best for: displaying percents or fractions of the whole, NOT counting numbers*
  - (a) Labeling: requires **title**, names/legends for regions, percents/fractions for regions
  - (b) Use good scale: pie sections should be fairly close to the right size, and centered evenly
2. **Box-and-Whisker Plot** - *Best for: comparing performances of 2 or more groups*
  - (a) Labeling: requires **title**, numbering on ONE axis, and exact 5-Number Summary values
  - (b) Use good scale: axis markings should be fairly evenly spaced, and 5-Number Summary values should be positioned fairly accurately