Good graphics

Simplicity of design
and complexity of data

Quality presentations of data —

• Take advantage of how people process information

• Reduce the number of thought processes required to understand the data

• Tear down some fundamental obstacles to understanding

Statistical graphics —

• show the big picture

• are paragraphs of data

• are best constructed to convey one finding or concept

When do you use tables?

• 10 or fewer data points

• Exact numerical data

• Localized comparisons

Types of graphics —

Continuous variables

• line graphs

• area charts

• scatter plots

• maps

Categorical variables

• bar graphs

• maps

• diagrams

Not recommended

• pie charts

• stacked bar graphs

• stacked line graphs

Hierarchy of graphical perception

• Position along a common scale

• Position along identical

• nonaligned scales

• Length

• Angle - slope

• Area

• Volume

• Color - hue

**Tips for statistical graphics**

**Make all verbal tasks easy to understand**
- Do not use abbreviations
- Avoid acronyms
- Write labels left to right
- Use proper grammar
- Do not use legends except on maps

**Avoid optical illusions and graphical puzzles**
- Use solids for line styles and fills
- Avoid data point markers on lines
- Use the appropriate aspect ratio
- Start the scale at zero
- Use only one unit of measurement per graphic
- Use 2 dimensional designs for 2 dimensional data

**Summary**

**Highlight the data**

**Present logical visual patterns**

**Let the data lead you to the best method of presentation**

**Avoid nondata ink and chartjunk**

**Strive for clarity in all elements of your presentation**

**Use those graphical elements that are highest on Cleveland's perception scale**

**Do the work for your audience so that they can easily understand your point**

**Sources**


See also: