Data Visualization Checklist

Checklist Items ranked by importance.

Scoring:

2 - All requirements are met; **1** - Requirements are partially met; **0** – Requirements are not met

Number	Description	2	1	0	N/A
1	**The type of graph is appropriate for data:** Data are displayed using a graph type appropriate for the relationship within the data. For example, change over time is displayed as a line graph, area chart, slope graph, or dot plot.				
2	**Graph highlights significant finding or conclusion:** Graphs should have a practical or statistical significance (or both) to warrant their presence. For example, contextualized or comparison data help the viewer understand the significance of the data and give the graph more interpretive power.				
3	**Individual chart elements work together to reinforce the overarching takeaway message:** Choices about graph type, text, arrangement, color, and lines should reinforce the same takeaway message.				
4	**Remove Chart Junk** Remove unnecessary labels, graphics, images, numbers, boarders, or animations				
5	**Short Descriptive Title at Top Left Corner:** Short titles allows readers to quickly comprehend takeaway messages even when skimming the graph. Try to avoid generic phrase.				
6	**Proportions are accurate:** The length or area of the graph should match the relationship in the underlying data. Y-axis scales should be appropriate.				
7	**Data are intentionally ordered:** Data should be displayed in an order that makes logical sense to the viewer. Use an order that supports interpretation of the data.				

8	**Graph has appropriate level of precision:** Use a level of precision that meets your audiences' needs. Few numeric labels need decimal places, unless you are speaking with academic peers. Charts intended for public consumption rarely need p values listed.				
9	**Text Size is Hierarchical and Readable:** Text sizes from largest to smallest: Title, subtitle, label, axis label, and source information. The smallest text - axis labels - are at least font 9 on paper, or 20 on screen				
10	**Color is used to highlight key patterns:** Action colors should guide the viewer to key parts of the display. Less important, supporting, or comparison data should be a muted color, like gray.				
11	**Data are labeled directly:** Position data labels near the data rather than in a separate legend. Eliminate/embed legends when possible because it can interrupt the brain's attempts to interpret the graph.				
12	**Labels are used sparingly:** Focus attention by removing the redundancy. For example, in line charts, label every other year on an axis. Do not add numeric labels *and* use a y-axis scale, since this is redundant.				
13	**Color is legible for people with colorblindness:** Avoid red-green and yellow-blue combinations when those colors touch one another.				
14	**Axis intervals are equidistant:** The spaces between axis intervals should be the same unit, even if every axis interval isn't labeled. Irregular data collection periods can be noted with markers on a line graph, for example.				
15	**Graph is two-dimensional:** Avoid three-dimensional displays, bevels, and other distortions.				
16	**Color scheme is intentional:** Colors should represent brand or other intentional choice, not default color schemes.				
17	**Text sufficiently contrasts background:** Black/very dark text against a white/transparent background is easiest to read.				

18	**Gridlines, if present, are muted:** Color should be faint gray, not black. Full points if no gridlines are used. Gridlines, even muted, should not be used when the graph includes numeric labels on each data point.				
19	**Graph does not have border line:** Graph should bleed into the surrounding page or slide rather than being contained by a border.				
20	**Axes do not have unnecessary tick marks or axis lines:** Tick marks can be useful in line graphs (to demarcate each point in time along the y-axis) but are unnecessary in most other graph types. Remove axes lines whenever possible.				

This checklist is based on the information from: http://stephanieevergreen.com/wp-content/uploads/2016/10/DataVizChecklist_May2016.pdf