

## **Graph Selection Matrix**

	Value-Encoding Objects			
	Points	Lines	Bars	Boxes
Featured Relationships	Scatter Plot  Only Plot  Scatter Plot  Scatt	Line Graph Line Graph with Points	Bar Graph (vertical)  Bar Graph (horizontal)	Box Plot (vertical)
Time Series Values display how something changed through time (yearly, monthly, etc.)	Yes (as a dot plot, when you don't have a value for every interval of time)	Yes (to feature overall trends and patterns and to support their comparisons)	Yes (vertical bars only, to feature individual values and to support their comparisons)	Yes (vertical boxes only, to display how a distribution changes through time)
Ranking Values are ordered by size (descending or ascending)	Yes (as a dot plot, especially when the quantitative scale does not begin at zero)	No	Yes	Yes (to display a ranked set of distributions)
Part-to-Whole  Values represent parts (proportions) of a whole (for example, regional portions of total sales)	No	Yes (to display how parts of a whole have changed through time)	Yes	No
Deviation  The difference between two sets of values (for example, the variance between actual and budgeted expenses)	Yes (as a dot plot, especially when the quantitative scale does not begin at zero)	Yes (when also featuring a time series)	Yes	No
Distribution  Counts of values per interval from lowest to highest (for example, counts of people by age intervals of 10 years each)	Yes (as a strip plot, to feature individual values)	Yes (as a frequency polygon, to feature the overall shape of the distribution)	Yes	Yes (when comparing multiple distributions)
Correlation  Comparison of two paired sets of values (for example, the heights and weights of several people) to determine if there is a relationship between them	Yes (as a scatter plot)	No	Yes (as a table lens, especially when your audience is not familiar with scatter plots)	No
Geospatial Values are displayed on a map to show their location	Yes (as bubbles of various sizes on a map)	Yes (to display routes on a map)	No	No
Nominal Comparison A simple comparison of values for a set of unordered items (for example, products, or regions)	Yes (as a dot plot, especially when the quantitative scale does not begin at zero)	No	Yes	No