# Graph Selection Matrix

## Featured Relationships

### Time Series
Values display how something changed through time (yearly, monthly, etc.)
- **Points**: Yes (as a *dot plot*, when you don’t have a value for every interval of time)
- **Lines**: Yes (to feature overall trends and patterns and to support their comparisons)
- **Bars**: Yes (vertical bars only, to feature individual values and to support their comparisons)
- **Boxes**: Yes (vertical boxes only, to display how a distribution changes through time)

### Ranking
Values are ordered by size (descending or ascending)
- **Points**: Yes (as a *dot plot*, especially when the quantitative scale does not begin at zero)
- **Lines**: No
- **Bars**: Yes
- **Boxes**: 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)
- **Points**: No
- **Lines**: Yes (to display how parts of a whole have changed through time)
- **Bars**: Yes
- **Boxes**: No

### Deviation
The difference between two sets of values (for example, the variance between actual and budgeted expenses)
- **Points**: Yes (as a *dot plot*, especially when the quantitative scale does not begin at zero)
- **Lines**: Yes (when also featuring a time series)
- **Bars**: Yes
- **Boxes**: No

### Distribution
Counts of values per interval from lowest to highest (for example, counts of people by age intervals of 10 years each)
- **Points**: Yes (as a *strip plot*, to feature individual values)
- **Lines**: Yes (as a *frequency polygon*, to feature the overall shape of the distribution)
- **Bars**: Yes
- **Boxes**: 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
- **Points**: Yes (as a *scatter plot*)
- **Lines**: No
- **Bars**: Yes (as a *table lens*, especially when your audience is not familiar with *scatter plots*)
- **Boxes**: No

### Geospatial
Values are displayed on a map to show their location
- **Points**: Yes (as bubbles of various sizes on a map)
- **Lines**: Yes (to display routes on a map)
- **Bars**: No
- **Boxes**: No

### Nominal Comparison
A simple comparison of values for a set of unordered items (for example, products, or regions)
- **Points**: Yes (as a *dot plot*, especially when the quantitative scale does not begin at zero)
- **Lines**: No
- **Bars**: Yes
- **Boxes**: No